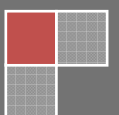


Final

Sydney Airport Runway Safety

Sydney Airport Community Forum
Submission to SACL on Draft MDP

This is a submission by the Sydney Airport Community Forum on the Draft Major Development Plan for the Runway Safety Enhancement Project which was placed on public exhibition by Sydney Airport Corporation Limited on 19 March 2008 as required under the Airports Act 1996 with public comment invited until Wednesday 18 June 2008.



Summary of Submissions

1.

Every reasonable endeavour should be made by SACL to maximise the availability of the east-west runway, for noise sharing purposes, during all phases of RESA construction.

1.1

A displaced threshold should be created at the western end of the east-west runway consistent with the requirements of CASR MOS-139.

1.5

It is essential that the east-west runway be made available to the maximum extent practicable, throughout the entire construction period, in order to provide for periods of respite. As a minimum, this should occur from the end of the construction working week, every Saturday at 1900 hours, until the beginning of the following week at 0700 hours.

2.

In addition to simple plain language summary information, the MDP should provide detailed and comprehensive referenced information sufficient to allow informed judgements to be made; independent evaluations of the facts; reliable assessments by decision-making authorities; and for consent conditions to be formulated where appropriate.

3.

As the designated proponent for the Runway End Safety Enhancement Project, SACL should accept responsibility for ensuring that all feasible and prudent measures are taken to mitigate detrimental impacts which are unavoidable.

5.

SACL should acknowledge that the severity of impacts, as a consequence of aircraft noise, is likely to be worse than presented in the Draft MDP. In particular social consequences which were experienced following the opening of the third runway could be expected to reoccur if the Project were to proceed as currently proposed.

6.

SACL should acknowledge that, if the Project is allowed to proceed as currently proposed, the virtual total loss of respite, as a consequence of aircraft noise, will not be confined to just the suburbs of Marrickville and Sydenham, as stated in the Draft MDP.

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Signatories

Submitted for and on behalf of the SACF membership listed below.

Please note, Members Hoenig, Balding, Warfield and Bennett have abstained.



.....
Mr Vic Smith, SACF Chair

Mr Vic Smith, Chair
Community Representative, East

Cr Barry Cotter
Community Representative, North

Ms Maria Patrinos
Community Representative, West

Mr Kevin Hill
Community Representative, South

The Hon John Murphy MP
Federal Member for Lowe
Nominee: Mr John Glyde

The Hon Tanya Plibersek MP
Federal Member for Sydney
Nominee: Cr Damian Copley-Finch

The Hon Peter Garrett MP
Federal Member for Kingsford Smith
Nominee: Mr Rowan Darke

The Hon Tony Burke MP
Federal Member for Watson
Nominee: Mr Stathis Toumasatos

The Hon Robert McClelland MP [7.1]
Federal Member for Barton
Nominee: Mr Chris Connolly

The Hon Joe Hockey MP
Federal Member for North Sydney
Nominee: Mr Bob Hayes

The Hon Maxine McKew MP
Federal Member for Bennelong
Nominee: Dr Elizabeth Wulff

The Hon Dr Brendan Nelson MP
Federal Member for Bradfield
Nominee: Mr John Clarke

The Hon Malcolm Turnbull MP
Federal Member for Wentworth
Nominee: Mr Thomas Tudehope

Mr Scott Morrison MP
Federal Member for Cook
Alternate: Mr Trevor Davis

The Hon Kristina Keneally MP
State Member for Heffron
Alternate: Ms Kaila Murnain

The Hon Frank Sartor MP
State Member for Rockdale
Nominee: Ms Maree Keft

The Hon Carmel Tebbutt MP
State Member for Marrickville
Alternate: Ms Mary O'Sullivan

Ms Clover Moore MP State Member for
Sydney and Lord Mayor of Sydney
Nominee: Ms Tammie Nardone

Cr Dimitrios Thanos
Mayor of Marrickville
Nominee: Mr Kendall Banfield

Cr Ted Cassidy
Mayor of Ashfield

Cr Robert Furolo
Mayor of Canterbury
Nominee: Mr Greg Ritchie

Cr Ron Hoenig (ABSTAINED)
Mayor of Botany Bay
Nominee: Mr Peter Fitzgerald

Cr Carolyn Allen
Mayor of Leichhardt
Alternate: Mr Shane McArdle

Cr David Redmond
Mayor of Sutherland
Alternate: Cr Kevin Schreiber

Mr Russell Balding (ABSTAINED)
CEO Sydney Airport Corporation Ltd
Nominee: Mr Rod Gilmour

Captain Murray Warfield (ABSTAINED)
Qantas

Mr Warren Bennett (ABSTAINED)
Board of Airline Representatives
of Australia (BARA)

[7.1] indicates qualified endorsement by a SACF Member – see Dissenting Statements on page 27 for details

This Map shows all three levels of Government at which there is representation of airport affected communities on SACF.

The purpose of this map is to show the relationships and extent of overlap, where this occurs, so that affected residents may identify their elected representative(s).

Commonwealth Electorate District (CED) boundaries are shown in red with the name in red uppercase letters.

State Electorate District (SED) boundaries are shown as a white line bounded by two blue lines. Each SED is filled with blue dots and the name is in uppercase blue letters.

Local Government Area (LGA) boundaries are shown with a thin black line and are filled with a lime green colour. LGA names are in lower case black letters.

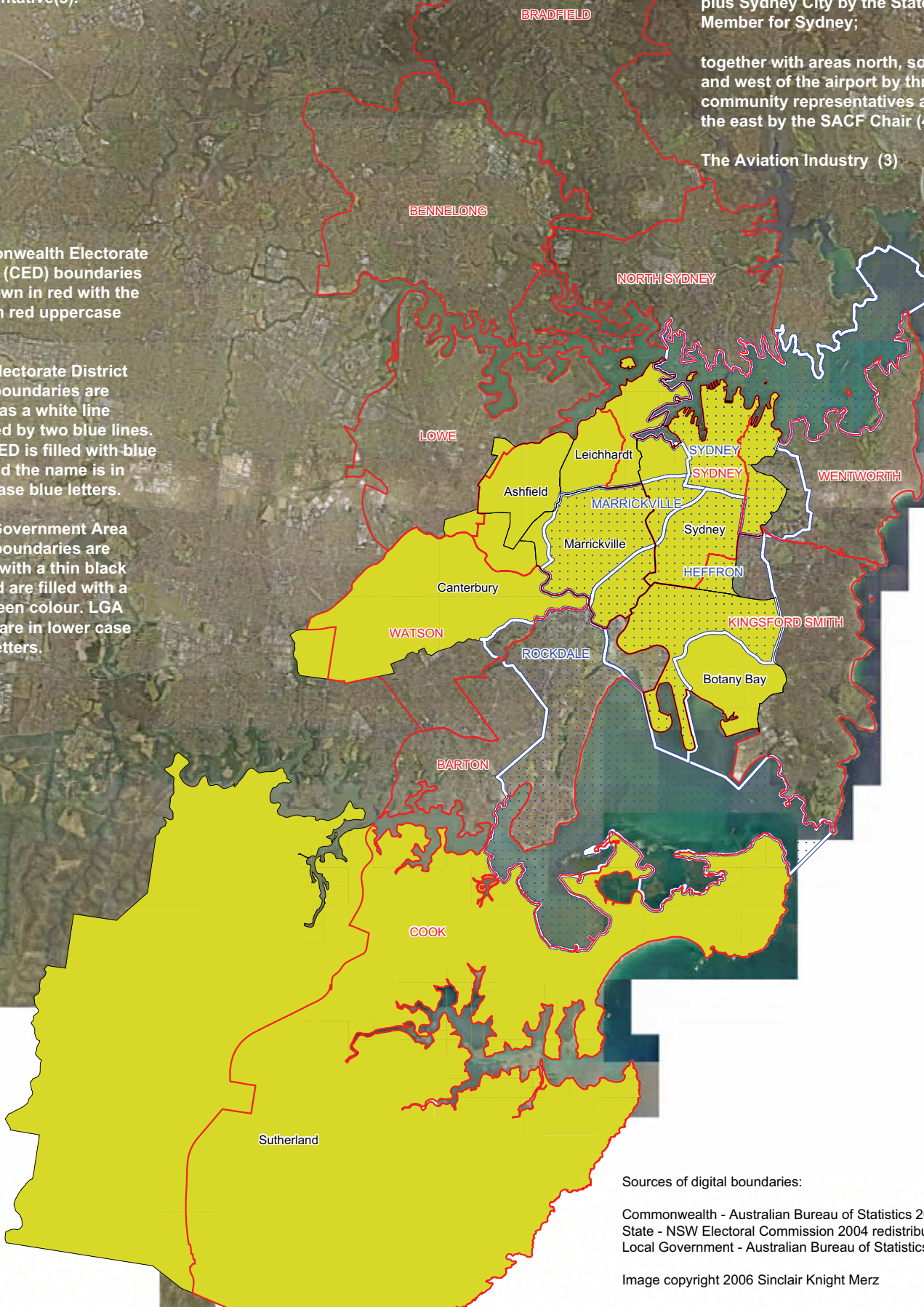
SYDNEY AIRPORT COMMUNITY FORUM

representation:

Commonwealth Electorates (10)
State Electorates (4)
Local Government Areas (6)
plus Sydney City by the State Member for Sydney;

together with areas north, south and west of the airport by three community representatives and the east by the SACF Chair (4)

The Aviation Industry (3)



Sources of digital boundaries:

Commonwealth - Australian Bureau of Statistics 2006 Census
State - NSW Electoral Commission 2004 redistribution
Local Government - Australian Bureau of Statistics 2006 Census

Image copyright 2006 Sinclair Knight Merz

Aviation Community Advocate aca@eir.com.au 2008-05-19

Foreword by Members

The Clean Air and Clean Water Acts passed in the mid 1970s introduced important environmental standards for industry and the wider community and penalties for those who pollute. No longer could factories spew emissions into the atmosphere from chimney stacks or drain toxic effluent into waterways. Across the globe, governments established minimum environmental standards that no reasonable person would dispute and compliance was mandated for individuals and industries.

High levels of aircraft noise can also be unacceptable pollution.

Aircraft noise can seriously impact on families and the general community as well as the physical environment.

No stone should be left unturned in the effort to minimise aircraft noise for residents around Sydney airport.

Under the current draft proposals for the RESA construction project, aircraft noise will probably get worse. Unless there is a proactive, collaborative and creative approach to solving the problems arising from the RESA project, the quality of daily life for many Sydney residents may get worse for a period of eighteen months. This is a serious and unacceptable environmental impact.

This submission recognises the need for the RESA to be constructed in order to comply with international safety standards. But it urges all responsible parties to pursue every avenue in the effort to minimise the impact of the project. It proposes certain areas which we believe should be investigated in-depth in an attempt to avoid worsening Sydney's aircraft noise pollution. This will require "thinking outside the square" and an open and honest commitment by all parties to obtaining an acceptable environmental outcome.

Executive Summary

Areas surrounding the airport may be classified into three groups each representing the impact which the Runway Safety Enhancement Project will have. Since this is a submission from the Sydney Airport Community Forum, there may be some value in understanding the categorisation of each geographical area represented by a Member of SACF.

Table: Impact Groups - Areas Represented by SACF Members

LEVEL	Virtual total loss of respite	Increased impact	Reduced impact
FEDERAL	Sydney Lowe Kingsford Smith	Cook Wentworth North Sydney Bennelong Bradfield	Watson Barton
STATE	Marrickville Heffron	Sydney	Rockdale
COUNCIL	Marrickville Leichhardt Sydney City Ashfield Botany Bay	Sutherland	Canterbury
COMMUNITY	North	South East	West

SACF accepts the need for runway safety enhancement to be provided but Members need to be satisfied that the impacts on surrounding areas are minimised and where they cannot be avoided, that mitigating measures are implemented to the maximum extent practicable.

SACF accepts the only contribution SACL can make towards minimising aircraft noise impacts is by maximising the availability of the east-west runway for noise sharing purposes.

While the expertise to develop and the authority to implement mitigation measures both rest almost entirely with Airservices Australia, responsibility for ensuring that this occurs remains with Sydney Airport Corporation, as the designated proponent.

1. Maximise East-West Runway Availability during all Phases of Construction

Every reasonable endeavour should be made by SACL to maximise the availability of the east-west runway, for noise sharing purposes, during all phases of RESA construction.

This can apparently be achieved (at least to some extent) during the Phase 3 “period of restricted operations” which are described in section 4.2 on page 40 of the Draft MDP. However what makes this possible during Phase 3 but impossible during Phase 2 is not made clear. The only way in which aircraft noise impacts can be reduced is if the availability of the east-west runway can be increased. This becomes a critical issue during the Phase 2 period of total runway closure.

The Draft MDP states that total closure of the runway is unavoidable.

October 2008 through to May 2009 – for this period Runway 07/25 will be closed for this eight month period. Construction activities will include the building up of the ground level and new pavement from the existing runway end to bridging the SWSOOS. At the same time piling activities for M5 and perimeter road using piling rigs and cranes in excess of 30m high and other large pieces of plant which will for both aviation and construction safety prevent the runway operating. (MDP page i)

To meet safety and environmental objectives, options for the RESA’s construction have been carefully considered by SACL in consultation with design consultants, construction contractor, CASA and Airservices Australia (AsA), the agencies responsible for air safety and air traffic control at Sydney Airport. Together with the potential adverse noise impacts on residential areas in Kyeemagh, the construction safety issues in this site context are so pronounced that it is not possible to construct the substantial bridge and engineering structure only during the Airport’s curfew (from 11pm to 6am). In particular, these safety issues include the difficulty of guaranteeing the safety of workers at night given the complex infrastructure, the use of substantial pieces of plant and equipment (some extending over 30 metres high for long periods), the lifting of bridge beam components weighing 35 tonnes on site and the impossibility of establishing and disestablishing this plant and equipment daily. (MDP pages 2-3)

This unavoidable closure will affect aircraft operations at Sydney Airport and, as a result, there will be off-airport aircraft noise impacts. (MDP page 34)

The next few pages of this submission address each of the elements of construction which the Draft MDP appears to identify as preventing use of the east-west runway. The measures which might reasonably be taken to overcome potential problems are described with respect to:

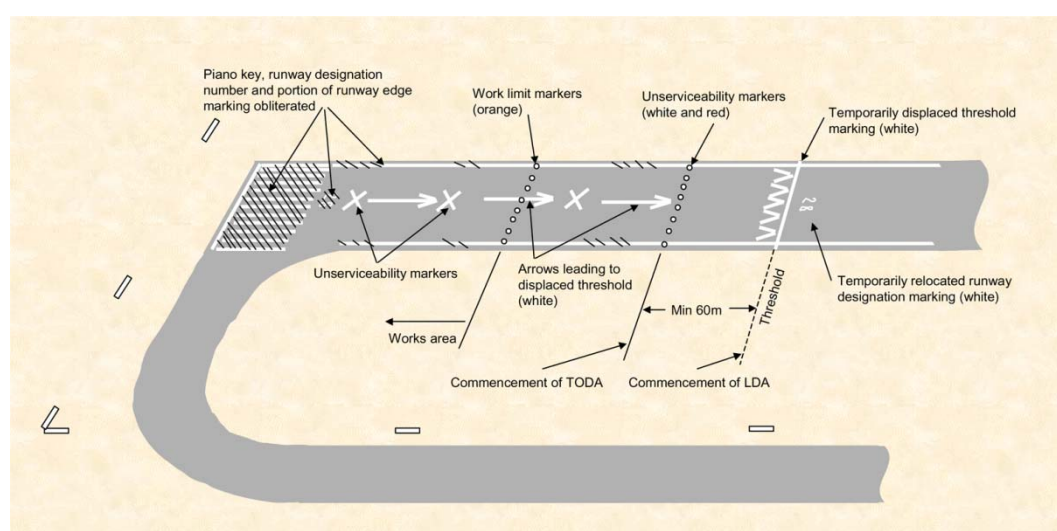
- dismantling of the continuous flight auger;
- lowering large cranes etc and relocating these if necessary;
- minimising potential OLS penetrations by construction works;
- doing all that is necessary to re-instate the runway compliance.

1.1 Displaced Threshold

A displaced threshold should be created at the western end of the east-west runway consistent with the requirements of CASR MOS-139.

The diagram below has been extracted from the Civil Aviation Safety Authority, Civil Aviation Safety Regulations, Manual of Standards – Part 139 Aerodromes, Chapter 8: Visual Aids Provided by Aerodrome Markings, Markers – Signals and Signs. This should be read in conjunction with the relevant text: 8.3.9 Temporarily Displaced Threshold Markings.

Figure: Markings for a temporarily displaced threshold due to works on the runway for a period in excess of 30 days



Source: CASA MOS-139 Page 8-24 Figure 8.3-14

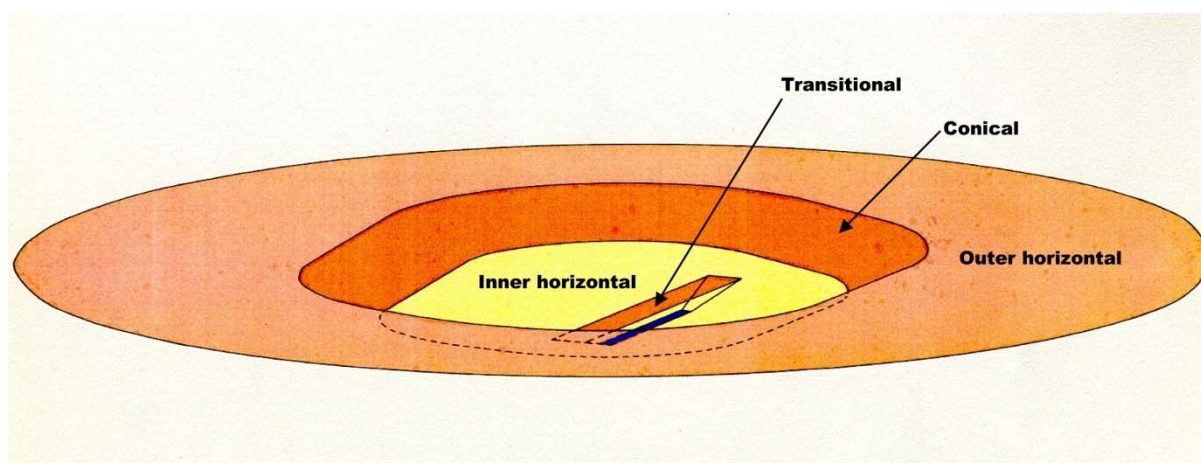
In determining both timing and extent (distance) of a displaced threshold, the following considerations should be taken into account:

- The option for continued use of the east-west runway be conducted in accordance with CASA requirements rather than as allowed due to an exemption
- That work should be undertaken and completed as soon as possible, so that mode 14a, which was made unavailable as of 3 May 2008, by CASA at the request of SACL, may be reinstated
- Whether threshold displacement might be effective in allowing runway use for 07 Arrivals (mode 14a) during Phase 2 (31 Oct 2008 to 1 July 2009) and whether this should determine the displacement distance
- The need to minimise the nature and extent of construction works so that the necessary displacement distance is minimised
- The need to plan construction such that, in preparation for programmed availability of the east-west runway, penetrations of OLS are removed and the lateral extent of works (particularly to the east), after 'cleaning up' has taken place, is minimised

- The fact that a displaced threshold of 100m already exists at the eastern end of the east-west runway and a displacement of 97m, or thereabouts, would provide equivalent takeoff and landing distances available in both runway directions
- Taxiway exit positions may not be ideal but will still function
- As a worst case, use of the runway will be possible for Dash 8 and all smaller sized aircraft
- Whether a single displacement might best serve all three phases of the RESA Project

1.2 Obstacle Limitation Surface

Obstacle Restriction and Limitation requirements are set out in Chapter 7 of the Civil Aviation Safety Authority, Manual of Standards, Part 139. The requirements for Obstacle Limitation Surfaces are set out in section 7.3.

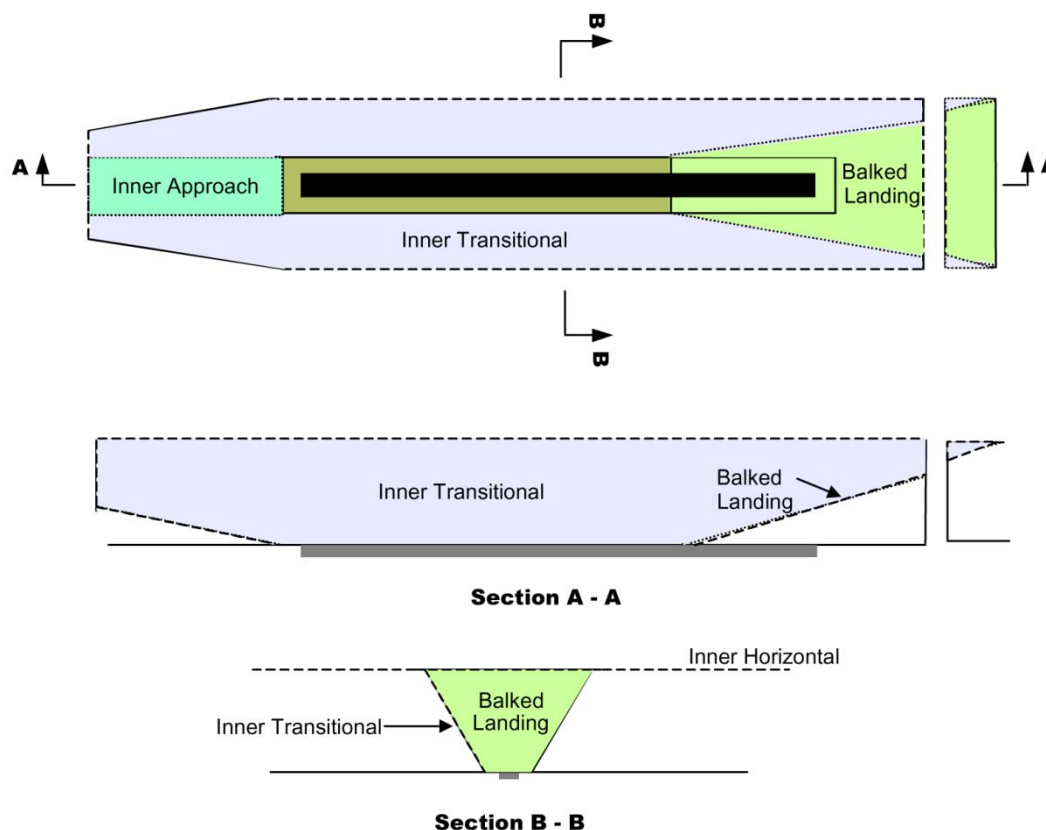


Source: Figure 7.3-1 Relationship of outer horizontal, conical, inner horizontal and transitional surfaces.

The term OLS is used to refer to each of the imaginary surfaces which together define the lower boundary of aerodrome airspace, as well as to refer to the complex imaginary surface formed by combining all the individual surfaces. The OLS comprises the following: (a) outer horizontal surface; (b) conical surface; (c) inner horizontal surface; (d) approach surface; (e) inner approach surface; (f) transitional surface; (g) inner transitional surface; (h) baulked landing surface; and (i) take-off climb surface.

In the context of the Draft MDP, a number of the above would appear to be relevant. If SACL continues to maintain that total runway closure for 8 months is unavoidable due to penetrations of the OLS, then the Corporation must now produce the relevant OLS diagrams together with details of all penetrations. This detail must include precise descriptions, dimensions, locations, and the time any object will need to be in such a position. This information should be supplemented by critical path or similar analysis detailing both preceding and following works. The opportunity for temporary removal of objects and clean up of works must also be explored.

Obstacle-Free Zone. The inner approach, inner transitional and baulked landing surfaces together define a volume of airspace in the immediate vicinity of a precision approach runway, which is known as the obstacle-free zone. This zone must be kept free from fixed objects, other than lightweight frangibly mounted aids to air navigation which must be near the runway to perform their function, and from transient objects such as aircraft and vehicles when the runway is being used for precision approaches. (CASA MOS-139 par 7.3.2.7)



Source: Figure 7.3-5: Inner approach, inner transitional and baulked landing obstacle limitation surfaces

SACL may intend to maintain that it would be impossible or even unacceptably inconvenient, to temporarily reduce the height and/or remove all obstructions which are removable and to restrict the extent of other works, so as to minimize the effect on runway usability. However, if the Corporation does so, then it must provide detailed OLS drawings (such as shown above) for every case and circumstance, with all relevant dimensions (and their source in MOS-139). All obstacles which the Corporation maintains cannot be readily reduced in height or removed must be fully described, related to a project task by number, and shown on each relevant OLS drawing with all three dimensions given both as absolute values and as penetrations of the OLS.

1.3 Continuous Flight Augers

References, in the Draft MDP, to piling rigs in excess of 30m high, are presumably a reference to the continuous flight auger (CFA) similar to the type pictured below. It is asserted that these are impossible to establish and disestablish daily (MDP page 3).



Source: Frankipile Brochure

CFA's are used to create piles up to 32m long where fast vibration free installation is required in difficult ground conditions. The drilling process is suitable for penetrating dense layers and is unaffected by ground water or collapsing soil conditions. The pile is formed by first drilling into the ground with a continuous flight auger. Cement-sand grout or concrete is then injected under pressure through the auger's hollow stem as it is being withdrawn. The grout or concrete pressure is maintained during the auger withdrawal so that it assists the extraction as well as exerting a lateral pressure on the surrounding soils. On completion of this operation, a reinforcing cage is placed into the fluid column of grout or concrete.

SACF has been provided with expert advice from one of Australia's oldest, largest and most experienced providers of this type of equipment. The advice was that they have actually used CFA's on an airport job. When a runway was called into service, at short notice, due to a change in wind direction, it was standard practice, in the middle of a working day, to drill the augers into the ground, knock out a couple of connecting pins, and remove the rig leaving only 4.5m projecting above ground level. This may require appropriate machinery and suitably skilled operators.

1.4 Large Mobile Cranes



Source: Gillespies Brochure

The Draft MDP mentions a crane twice in connection with potential OLS penetration (on pages i and 25). The type of crane which might be used for the purposes described is presumed to be similar to the one which is illustrated here. These cranes are lowered at the end of each working day, as a matter of course. They are also clearly mobile and can readily be relocated clear of where they might otherwise cause a problem.

1.5 Minimum Respite Every Weekend

It is essential that the east-west runway be made available to the maximum extent practicable, throughout the entire construction period, in order to provide for periods of respite. As a minimum, this should occur from the end of the construction working week, every Saturday at 1900 hours, until the beginning of the following week at 0700 hours.

Respite depends on the availability of the east-west runway. Availability of the east-west runway essentially depends upon four factors:

- the extent to which temporary obstructions can be reduced and/or removed so as to minimise the extent to which each OLS may be penetrated;
- the extent to which each individual OLS may be repositioned by movement of the 07 arrival threshold and/or variations to the Landing Distance Available or Takeoff Distance Available in both the 07 and 25 directions – such that obstructions which can not be readily removed or reduced in height will not penetrate an OLS;
- the development and use of Area Navigation (RNAV) Global Navigation Satellite System (GNSS) approaches, for runways 07 and 25 to avoid the need for navigational aids to be repositioned or adjusted, or some other option;
- the days and hours on which work is required on relevant construction tasks.

SACF expects SACL to take steps to provide all physical airport resources that will allow for maximum periods of use of the east-west runway for both arrivals and departures, in both directions. Consistent with both SACL's general undertaking to continue consultation with key stakeholders and the Corporation's specific undertaking to provide SACF with such further information as may be requested, the Forum requires that advice be provided on what physical resources would need to be altered to maximise east-west runway availability.

Preferably, all LTOP Modes which currently utilise the east-west runway, for noise sharing purposes, should continue to be available. These are modes 5, 7 and 14a together with 12 and 13. No reason has been presented in the Draft MDP as to why arrivals on runway 25 would be prevented by the proposed works. If SACL intends to maintain that CFA's and cranes can not be dropped at the end of each week (or even more frequently), this needs to be stated and compelling reasons need to be provided. The Draft MDP identifies no other plant, equipment or element of construction which could penetrate either the 25 arrival or baulked landing OLS.

The practicality of requiring that all high boring rigs and cranes be dropped and/or relocated at the end of each week was also accepted and confirmed in a recent meeting with the Consulting Engineer advising the Department of Infrastructure and with a senior officer of the Department. In the absence of any clear statement to the contrary, it must be assumed that bored, sheet and screwed piling operations will not present any risk of an OLS penetration which can not be readily overcome. Of the 242 days on which the MDP states the east-west runway must be unavoidably closed, CFA's are programmed to be used on only 69 days. Only 58 of these days are critical and of these, only 39 are critical to the 8 month period of total closure.

1.6 Project Construction Time Versus Respite

The provision of respite, as discussed previously, should not add to the period of time required to construct the RESA. However, ensuring that periods of respite are provided may constrain the extent to which it might be possible to reduce the construction period from the time currently proposed.

The MDP should provide an informed basis on which judgement can be exercised in arriving at an appropriate balance between mitigating the impacts of this project, by the provision of respite, and minimising the period of time these impacts are imposed on residents.

It would go some way towards achieving this objective if three scenarios were to be presented in the MDP:

(a) Maximum Respite

This scenario would maximise periods of respite for residents exposed to aircraft noise from parallel runway operations up to the point at which this exposure is equitably shared between the north, east and west. This would occur after SODPROPS had been utilised to the maximum extent practicable. It might be achieved by weekend respite together with one additional day in the middle of the week. It would not be easy to achieve and would require the availability of all LTOP noise sharing modes and some work at night to make up for time which would otherwise be lost.

(b) Minimum Construction Time

This scenario would be based on the proposition that periods of respite were not achievable or were less desirable than minimising the construction time and the impacts this will inevitably have. Although the information which has been made available in the Draft MDP falls well short of providing sufficient information for an informed judgement to be reached, it does appear that savings in time might be made by one or a combination of:

- Extended working hours
- Additional resources
- Altered construction methodology

(c) A Combination of Respite and Reduced Construction Time

Consideration should also be given to some combination of both respite and reduced construction time. Innumerable possibilities clearly exist. It is suggested, however, that the minimum period of respite every weekend, which has previously been described, should be one component of this scenario. This minimum period has attracted strong support from within SACF and is founded on the recollections which many members have of the period following the opening of the third runway just over a decade ago.

2. Information Sufficient for Informed Judgements and Assessment

In addition to simple plain language summary information, the MDP should provide detailed and comprehensive referenced information sufficient to allow informed judgements to be made; independent evaluations of the facts; reliable assessments by decision-making authorities; and for consent conditions to be formulated where appropriate.

Particular care should be taken to ensure this is done with respect to aspects of the proposal which are contentious such as whether total runway closure for 8 months is unavoidable. Failure to provide this level of information in the Draft MDP has compromised the effectiveness of public exhibition and comment.

2.1 Simple Language

There can be no argument that 'simple language' should be a component of the MDP presentation, particularly with the requirements of lay persons in mind. However, this should be 'in addition to' rather than 'instead of' other information which is presented in sufficient detail and with sufficient precision for it to be properly assessed by a person with knowledge in the field. The agreed need for simple language should not be an excuse for failing to provide necessary information.

2.2 Draft MDP - Final MDP

The other excuse which has been made, on more than one occasion, is that the identification of deficiencies in the Draft MDP are welcomed because this will enable corrective action to be taken in the Final MDP. The problem with this approach is that it subverts the process of public exhibition and comment. This opportunity only exists with the Draft MDP and is lost if information which ought to be provided is withheld for any reason.

One example of this is any impediment to use of the east-west runway during the proposed periods of both 'total closure' and 'restricted operations'. This is the most critical aspect of the MDP. However, it is impossible to discern from the MDP documentation, precisely which elements of plant, equipment, or construction operations might potentially penetrate the OLS. For this to be properly understood, Transitional OLS diagrams are required, with the locations of plant, equipment and works precisely shown in three dimensions. Alternatives need to be identified, where they exist, even though these may cost more or take additional time. The time these elements need to be in position should be identified within a 'critical path' or similar framework. Constraints which might prevent or limit the extent to which runway compliance might be temporarily restored also need to be detailed. Where the advice of experts is relied upon, that should be disclosed together with the qualifications of the person concerned.

3. SACL Responsibility for Aircraft Noise Mitigation Measures

As the designated proponent for the Runway End Safety Enhancement Project, SACL should accept responsibility for ensuring that all feasible and prudent measures are taken to mitigate detrimental impacts which are unavoidable.

The undertakings given by SACL in the Draft MDP are acknowledged:-

“SACL will also work with AsA to help AsA manage the environmental impacts of changes to the pattern of aircraft noise exposure for areas beyond the Airport” (MDP page 3)

“SACL will ask AsA to advise what measures may be implemented by AsA throughout the period of the project, consistent with air safety and noise sharing considerations to mitigate noise impacts.” (MDP page 40)

As Designated Proponent for the Project, it is not enough for SACL just to say mitigation measures are all up to Airservices Australia. Work has already commenced on the project and an LTOP noise sharing mode has already been made unavailable as a consequence, without any consideration being given to the mitigation of noise impacts. These discussions should have commenced a year ago or more. The Draft MDP should be representing the results of these discussions not the prospect of them occurring at some time in the future. Mitigation measures need to be documented in the same way that it is proposed that a Construction Environmental Management Plan be produced (although this too should already be completed and presented for public comment).

It is proposed that a Taskforce of the Airservices Australia, Implementation and Monitoring Committee be established by the IMC Chair immediately:

- membership should include Airservices, SACL, SACF and Industry
- meetings should initially be held weekly
- for at least 1 and up to 3 hours
- until an aircraft noise mitigation plan is complete
- then once a month to oversight the monitoring of implementation
- individual measures should be implemented as soon as agreed
- Ministerial Direction(s) should be issued to Airservices if required

Some fundamental principles should apply:

- increased use of SODPROPS during noise sensitive hours
- equal time utilisation for Modes 9 & 10 during each separate period
- equitable allocation of aircraft operations to runways to share noise
- minimisation of exposure on successive days and mornings after nights
- avoidance of multiple mode use during noise sensitive hours
- monitoring of outcomes and reporting on a daily basis

All SACF Members should be able to propose measures for consideration.

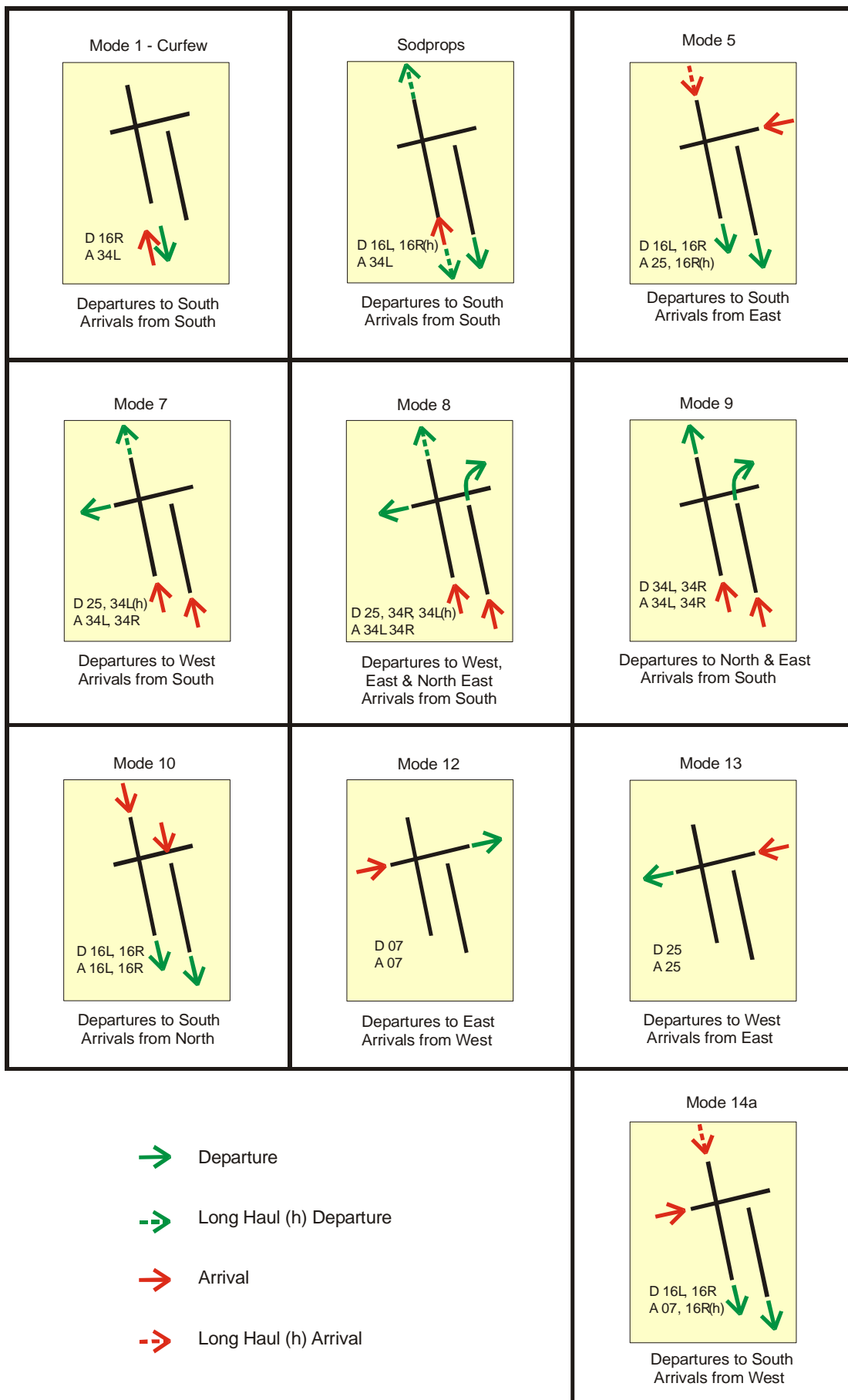
At the first meeting of the reconstituted SACF, the Department of Infrastructure was requested to explore the prospect of the allowable downwind for arrivals on the main long runway 34L being increased from 5 knots to 10 knots. This was in order to facilitate more frequent utilisation of SODPROPS i.e. Simultaneous Opposite Direction Runway Modes of Operation (both arrivals and departures over the south). Members were aware of the fact that a 10 knot downwind is allowed during the curfew at Brisbane. During the curfew at Sydney, when no downwind limit is specified, aircraft frequently arrive on runway 34L with a downwind in excess of 10 knots.

The Forum has yet to be provided with any evidence that a 10 knot allowable downwind, for arrivals, only on this long runway, and only in conjunction with SODPROPS, would be unsafe or should not be allowed for any valid reason.

It is therefore submitted that this "10 knot allowable downwind" proposal would contribute significantly to the mitigation of aircraft noise impacts and should therefore be supported by the SACL MDP.

One Member of SACF has expressed concern that capacity limits will inevitably require that access to Sydney Airport be more tightly controlled. It has been proposed that a move in this direction now would provide an additional mitigation measure which is within the control of SACF. The specific submission is that consideration should be given to the diversion of international air freight bound for Sydney to another airport such as Canberra International, where no current curfew is in place.

4. Maps of Runway Modes of Operation



Source: Airservices Australia Sydney Airport Operational Statistics

5. Severity of Aircraft Noise Impacts Worse than Indicated

SACL should acknowledge that the severity of impacts, as a consequence of aircraft noise, is likely to be worse than presented in the Draft MDP. In particular social consequences which were experienced following the opening of the third runway could be expected to reoccur if the Project were to proceed as currently proposed.

This section describes the most significant detrimental impacts which the RESA Proposal will have, if allowed to proceed as presented in the Draft MDP.

Experience following the opening of the third runway, on 4 November 1994, demonstrates the community reaction which can be expected. The social consequences of exposure to virtually unremitting aircraft noise are well documented by the Report of the Senate Select Committee on Aircraft Noise in Sydney, *Falling on Deaf Ears*, November 1995.

5.1 Generally

The principal effect of the RESA Proposal will be reduced east-west runway availability, for noise sharing purposes, during Phases 1 and 3 and total unavailability during Phase 2 when it is intended that the runway be closed at all times.

Unavailability of the east-west runway will inevitably require greater use of parallel runways. This will be particularly noticeable and will have a greater impact during the noise sensitive early morning hours 0600 to 0700 and late evenings 2000 to 2300.

The direct impact will be experienced most severely as a loss of respite. This is a loss of time otherwise free of disturbing noise levels from aircraft over flights. In addition, the number of instances residents are exposed for days in succession and during evenings followed by mornings will also increase as will the duration of these instances.

Secondary impacts will be severe, and in some cases critical, for residents who are already unable to cope with existing noise exposure. For some, the threshold of tolerance has already been reached and the impact of the RESA Proposal will be intolerable. Learning in schools and both physical and mental health will be affected. The worst cases are almost certain to develop into mental instability with serious work, family and other consequences for the broader community which include both threats and actual violence.

Noise levels, from construction activity, at the nearest residences which are already insulated against aircraft noise, will be nowhere near as loud as the same location would experience from a large aircraft either arriving or departing. Construction noise would be continuous but for limited hours which do not include the more noise sensitive early mornings and late evenings.

5.2 Respite

LTOP considered whether it was preferable to have a lower level of exposure to aircraft noise for a continuous period of time or a higher level over short periods interspersed by periods almost free or totally free of aircraft noise – described as periods of respite. It was concluded by the LTOP Taskforce, accepted by most residents and decided by the Government that the latter option was preferable. It was also accepted that the concept required further analysis and would need to be refined based on actual experience. This has yet to occur. The Airservices Australia, Noise Enquiry Unit monitors, calculates and reports on ‘respite’ in their monthly Operational Statistics reports for Sydney Airport. This has been done since the publication of the first such report in August 1998, following the implementation of LTOP. No criticism is made of the basis upon which this has been done. However the simplified methodology which has been necessary for monthly reporting falls well short of constituting an appropriate single descriptor for the impact of the RESA.

The first issue is what constitutes an event. If this is aircraft noise in excess of an agreed level, then this level must be stated in the MDP. The corridor within which a particular group of aircraft may operate could be 20 kilometres wide or more. While the concept of a complete hour free of any aircraft over flights is useful, it tells less than a complete story. In March 2007, modes other than parallels were used during the first hour on 22 days but on only 6 of these days was a single non-parallel mode used for the entire hour. When calculating the loss of respite, should this be 22 days or only 6. The MDP uses the 6 day figure and this clearly understates the loss. Most alternative mode use, when it does occur, is useful and appreciated for the relief which is provided. It is therefore suggested that better indicator of lost respite during the first hour is provided by simply counting mode utilisation during that hour.

Table: LTOP Modes Used 0600 to 0700 hrs in 2007 (early mornings)

MODE	1	3/4	5	7	8	9	10	12	13	14a	AVG
Jan	0	3	3	5	0	13	11	1	0	3	3.9
Feb	0	5	6	7	0	10	9	0	0	3	4.0
Mar	0	7	6	10	0	10	13	0	0	1	4.7
Apr	0	3	1	17	0	3	13	0	0	0	3.7
May	0	1	0	24	0	10	4	0	1	0	4.0
Jun	0	1	0	13	0	2	15	0	1	0	3.2
Jul	0	0	6	21	0	6	7	0	0	0	4.0
Aug	0	0	2	23	0	4	10	0	0	0	3.9
Sep	0	0	4	14	0	5	13	0	0	1	3.7
Oct	0	3	8	8	0	9	10	0	0	5	4.3
Nov	0	2	9	5	0	4	18	0	0	2	4.0
Dec	0	5	5	6	0	9	13	0	0	4	4.2
AVERAGE	0	3	4	13	0	7	11	0	0	2	4.0

Source: Sydney Airport Operational Statistics (produced by the Airservices Australia, Noise Enquiry Service)
<http://www.airservices.gov.au/reports/saos.asp?id=2007>

From the table above, the following monthly averages can be derived:

- On 18 days parallel runways were used (modes 9 & 10)
- On 19 days the east-west runway was used (modes 5, 7 & 14a)
- On 3 days arrivals & departures were both to the south (mode 4)

It may be concluded from this information that, if the east-west runway were to be totally closed, then the effective use of parallel runways would approximately double, unless the use of SODPROPS can be increased. On the 19 days, residents affected by parallel runway operations get some relief from being woken up, kept awake or otherwise disturbed by noise from aircraft over flights. This is what will be almost totally lost if the east-west runway is allowed to be totally closed. The Draft MDP does not provide sufficient information for any conclusions to be made as to the extent of lost respite which would be caused by the unspecified restrictions on east-west runway use during Phase 3 of the RESA construction.

Table: LTOP Modes Used 2000 to 2300 hrs in 2007 (late evenings)

MODE	1	3/4	5	7	8	9	10	12	13	14a	AVG
Jan	31	0	4	3	0	20	3	1	0	11	7.3
Feb	27	0	1	1	0	16	9	0	0	12	6.6
Mar	30	0	8	4	0	13	14	0	1	6	7.6
Apr	30	5	7	1	0	8	15	0	0	8	7.4
May	31	7	8	9	0	12	5	0	0	9	8.1
Jun	30	3	11	9	0	6	16	0	1	1	7.7
Jul	30	4	16	7	0	9	8	0	1	2	7.7
Aug	31	5	12	9	0	9	10	0	0	6	8.2
Sep	29	1	7	3	0	14	8	0	0	10	7.2
Oct	30	1	7	8	0	16	11	0	1	9	8.3
Nov	29	0	2	1	0	12	18	0	0	11	7.3
Dec	31	1	4	2	0	15	10	0	0	14	7.7
AVERAGE	30	2	7	5	0	13	11	0	0	8	7.6

Source: Sydney Airport Operational Statistics (produced by the Airservices Australia, Noise Enquiry Service)
<http://www.airservices.gov.au/reports/saos.asp?id=2007>

From the table above, the following monthly averages can be derived:

- On 24 days parallel runways were used (modes 9 & 10)
- On 20 days the east-west runway was used (modes 5, 7 & 14a)
- On 2 days arrivals & departures were both to the south (mode 4)

It may be concluded from this information that, if the east-west runway were to be totally closed, then the effective use of parallel runways would almost double, unless the use of SODPROPS can be increased. On the 20 days, residents affected by parallel runway operations get some relief from being woken up, kept awake or otherwise disturbed by noise from aircraft over flights. This is what will be almost totally lost if the east-west runway is allowed to be totally closed. The Draft MDP does not provide sufficient information for any conclusions to be made as to the extent of lost respite which would be caused by the unspecified restrictions on east-west runway use during Phase 3 of the RESA construction.

What is necessary to be provided is not just a measure of the ultimate outcome but also a measure of change. Both need to be taken into account when considering the effect this is likely to have on residents. Time of occurrence is also a critical factor. In both early mornings and late evenings background noise levels are likely to be as low as 35 or 40 dB(A). Aircraft noise levels which exceed background by 15 dB or more will wake many residents. Others will be kept awake or otherwise disturbed by even lower differences and absolute levels.

5.3 Repetition

SUCCESSIVE DAYS MODE 10 USED ANY TIME FROM 6 AM to 7 AM IN 2007										Mode 3/4 all hour	
	1	2	3	4	5	6	7	8	9		Total
Jan	4	2	1							11	1
Feb	1	3	1							10	2
Mar	4	1	2							12	1
Apr	3	2	2							13	1
May	2	1								4	0
Jun	2			1					1	15	0
Jul	1		2							7	0
Aug	2	1				1				10	0
Sep	4	1					1			13	0
Oct	7	1		1						13	0
Nov	3	1	2			1				17	1
Dec	1	2	1		1					13	1
Total	34	30	33	8	5	12	7	0	9	138	7
2006	25	16	9	0	5	6	7	0	0	68	1

Source: Sydney Airport Operational Statistics (produced by the Airservices Australia, Noise Enquiry Service)
<http://www.airservices.gov.au/reports/saos.asp?id=2007>

In the table above, it can be seen that during the 2007 calendar year, mode 10 was utilised on 9 consecutive days during June and for a maximum of 17 days during November. This is already excessive but will only get worse if the RESA Proposal is allowed to proceed as currently proposed.

5.4 Numbers of Aircraft Operations

Considerable care should be exercised in interpreting the average numbers per hour which are given below. The hours, when any runway is not in use, reduce these averages to what might be perceived as a misleadingly low number. These averages are useful for comparison purposes only. It needs to be realised that during any period when a runway is actually in use, the number of aircraft over flights will be considerably higher than the average numbers might suggest.

Table: First morning hour 0600 to 0700 in calendar years 2006 and 2007

RUNWAY	ARRIVALS		DEPARTURES	
	total	avg/hr	total	avg/hr
07	301	0.41	7	0.01
25	611	0.84	1,377	1.89
16L	2,932	4.02	2,511	3.44
16R	1,038	1.42	3,719	5.09
34L	6,088	8.34	479	0.66
34R	1,212	1.66	636	0.87
Total	12,182	16.69	8,729	11.96

Source: analysis of annual aircraft movement data provided to ACA by Airservices Australia

Of particular note are the relatively low numbers of departures to the north. Parallel runways are often used in conjunction with the east-west runway, during this time

period, for arrivals (mode 7) and for departures (modes 5 and 14a). In addition SODPROPS probably accounts for about 2% of total movements. If all departures were to occur on parallel runways, and modes 9 and 10 were to be utilised an equal amount of time, this would cause an increase in departures to the north. This increase would be proportionally greater and would have a more significant impact than is presented in the Draft MDP documentation.

Arrivals on parallel runways would also increase. Relatively low numbers on the east-west runway (rwy's 07+25 = 911) would not contribute greatly. The affect of any redistribution between modes 9 and 10 would also be less noticeable. However, any correction of the disparity between 34L and 34R arrivals would be significant.

Table: Late evening hours 2000 to 2300 in calendar years 2006 and 2007

RUNWAY	ARRIVALS		DEPARTURES	
	total	avg/hr	total	avg/hr
07	6,598	2.46	89	0.04
25	2,019	0.75	4,155	1.90
16L	5,717	2.13	11,037	5.04
16R	6,014	2.24	2,076	0.95
34L	11,164	4.17	4,391	2.01
34R	3,354	1.25	3,534	1.61
Total	34,866	13.00	25,282	11.54

Source: analysis of annual aircraft movement data provided to ACA by Airservices Australia

Total arrival and departure numbers are, on average, more balanced than during the first morning hour.

The relatively high and approximately equal number of arrivals on 34L and departures on 16L are indicative of more frequent utilisation of SODPROPS during these evening hours than in the morning. The use of SODPROPS needs to be increased.

A redistribution of east-west traffic during these three hours is less likely to be perceived as a significant change than is likely to be the case during the first morning hour 0600 to 0700. This is provided that any redistribution is subject to consultation with affected communities and is undertaken on a demonstrably equitable basis.

6. Loss of Respite will be more Widespread than Indicated by Draft MDP

SACL should acknowledge that, if the Project is allowed to proceed as currently proposed, the virtual total loss of respite, as a consequence of aircraft noise, will not be confined to just the suburbs of Marrickville and Sydenham, as stated in the Draft MDP.

The prospect of virtually no respite, and the social consequences which it is known this will cause (from previous experience following the opening of the third runway) both give rise to very significant concern among potentially affected communities.

The Draft MDP Appendix B (page 20) considers loss of respite during three periods:

- Monday to Friday (par 7.3.1)
- Weekends (par 7.3.2)
- Sunday Mornings (7.3.3)

With respect to all three periods which are considered – the following statement is made:

In the suburbs under the flight-path below flight track A (ie Marrickville and Sydenham) there is a virtual total loss of respite during the morning, day and evening period.

If the Runway Safety Enhancement Project proceeds as described in the Draft MDP, then in at least the 29 suburbs north of the airport, which are listed below and shown on the following map (highlighted in red) it can be expected that a significant number of residents will regard themselves as having experienced “a virtual total loss of respite during the morning, day and evening period”.

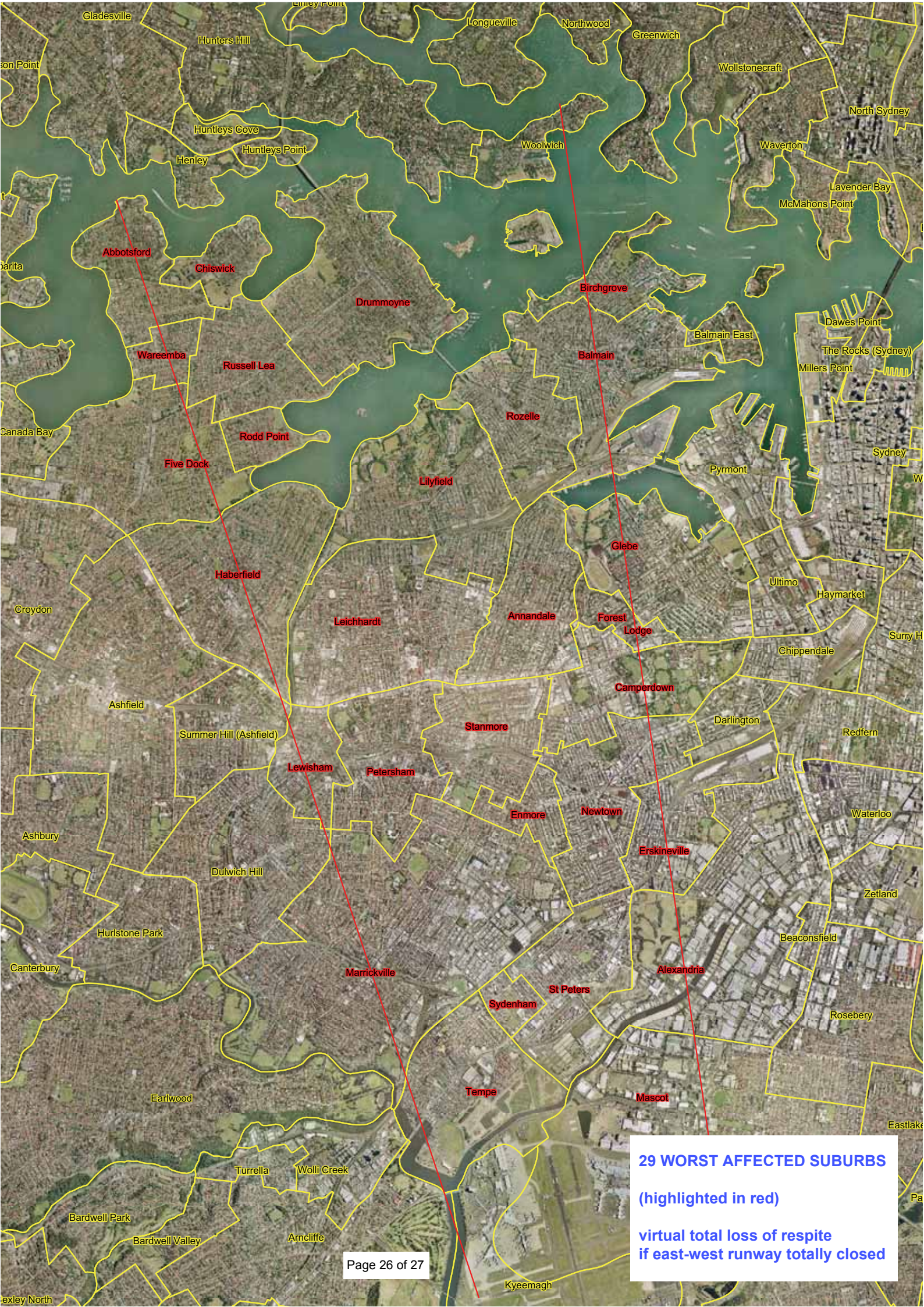
Abbotsford	Five Dock	Petersham
Alexandria	Forest Lodge	Rodd Point
Annandale	Glebe	Rozelle
Balmain	Haberfield	Russell Lea
Birchgrove	Leichhardt	St Peters
Camperdown	Lewisham	Stanmore
Chiswick	Lilyfield	Sydenham
Drummoyne	Marrickville	Tempe
Enmore	Mascot	Wareemba
Erskineville	Newtown	

These suburbs may reasonably be described as potentially the “worst affected” by the RESA Project. While there will be some, within this zone, who will not feel this way, there will be many others in adjoining suburbs, outside the zone, who will consider themselves to have suffered a virtual total loss of respite.

Noise levels from both arriving and departing aircraft, which are in excess of background noise levels in primarily residential areas, extend well beyond the flight-path or track flown by an aircraft. The full extent of this will vary depending on a number of factors which include: operation, aircraft type, load, thrust, height and local conditions.

Noise levels from aircraft, both arriving and departing over the north, will exceed background levels, particularly in the early mornings and late evenings, well beyond the zone which comprises the 29 suburbs. Many residents in areas outside the zone are likely to be disturbed by these noise levels and can also be expected to react to the increased frequency of occurrences.

The Draft MDP provides no basis upon which the geographical distribution of lost respite can be determined. It is proposed that a starting point should be the population exposed to aircraft noises levels at or above 70 dB(A) from both arrivals and departures as represented by the 2006 ANEI. If it is considered that some aircraft operations only occur on particular days or during particular times of the day, then grounds for excluding these operations from the calculation of contours would need to be established.



29 WORST AFFECTED SUBURBS
(highlighted in red)
virtual total loss of respite
if east-west runway totally closed

7. Dissenting Statements

7.1 The Hon Robert McClelland MP, Federal Member for Barton

Mr McClelland has registered his dissent to Summary Submission 1.5 which specifies times when the east-west runway should be available for respite. While he has no objection to the runway being available for respite during construction work, he feels that specifying times when it should be available will create an expectation that it has to be used at those times. This would create unacceptable levels of noise stress on the most sensitive sleeping night of the week on a weekly basis.

He acknowledges that during this minimum period, when the SACF Submission calls for the east-west runway to be made available:

- SODPROPS (Simultaneous Opposite Direction Parallel Runway Operations) with both arrivals and departures over the south – would remain the preferred mode and would hopefully be utilised more frequently than is currently the case;
- Mode 5 would be available, subject to appropriate weather, and this mode does not involve operations over the west;
- The two modes which would involve operations over the west are mode 7 (departures over the west and arrivals over the south) and mode 14a (arrivals over the west and departures over the south);
- It could be expected that SACF representatives on the Implementation and Monitoring Committee would be resolute in endeavouring to ensure that unavoidable aircraft noise during this period would be equitably shared and that repetitive exposure on days and/or nights would be kept to a minimum.