



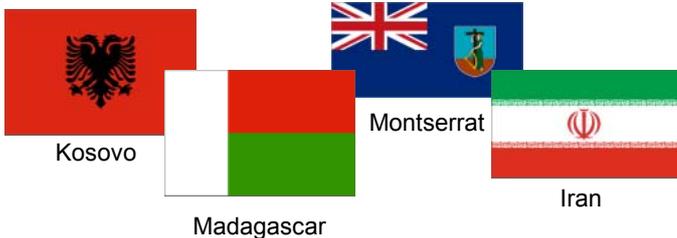
Celebrating our 40th country...

In this, our 3rd issue of "On the Leading Edge", we celebrate commencing work in the 40th country in which we have provided aviation services - Madagascar. The truly global reach of LEAPP has become apparent. In the past 12 months, we have worked on every continent except Antarctica!

Victor Craig – President and Managing Director
(victor.craig@leapp.com)

New Flags In The Past Year

In keeping with our tradition of acquiring the national flags of each nation in which we work, we have added four new flags since our first issue in 2002. We have now reached a total of 40 countries.



Presentations & Conferences

Loughborough University - Airport Design Course 2003

LEAPP Director Philip Craig gave 3 lectures at the 2003 Airport Design Course run by Loughborough University. These covered "Terminal Sizing", "Airside Capacity", and "Influencing Factors of Airside Capacity". Terminal sizing was described using examples of passenger terminals, in which the concept of level of service and factors that impact on the size of the terminal was explored, while methods used to size terminals were analysed. The airside capacity lectures focussed on both the theoretical and practical analysis of airside capacity, using examples from some of the world's major airports. The emphasis was on developing an understanding of what can be done at the planning stages to safeguard and enhance long term airside capacity of an airport.

Project Updates

Australia

- Sydney International Airport
Master Plan Project for Development of the International Terminal Building

Iran

- Qeshm Free Area International Airport, Strait of Hormoz
Long-range Airport Master Plan Development

Ireland

- Cork Airport
New Air Traffic Control Tower & Operations Building - Wind Turbulence Testing
- Dublin International Airport
Terminal Area Master Plan - Testing of Wind Turbulence Effects from Proposed Remote Parking Aprons
- Sligo Airport
Annex 14 Compliance Inspection & Airport Upgrading

Kosovo

- Kosovo Civil Aviation & Pristina Airport
Operational Audit of Civil Aviation & Pristina Airport for UN Mission in Kosovo

Madagascar

- Civil Aviation Authority of Madagascar
Development of a Computerised Management Information System for CAA Regulatory & Operations Management

ACI "Safeport" Conference – Dubai, UAE 2003

Held in conjunction with an ICAO Seminar on Airport Certification, the ACI Safeport conference focussed on the implications of Amendment 4 to Annex 14 on Aerodrome Certification, and the requirement for airports to develop Safety Management Systems. LEAPP Managing Director, Victor Craig, addressed the Conference on the topic of "Risk Management at Airports in the Context of the Safety Management System". Using illustrations of potential contributory causes of accidents at airports, his presentation highlighted the role of hazard identification and risk assessment in the SMS. Two SMS risk assessment case studies were described where, despite full compliance with Annex 14, unacceptable hazards have been found in the design of the two airports presented.

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Upgrading Cambodia's Airports for Mekong River Tourism



As an extension to the Asian Development Bank's Mekong River Tourism Development Project, being undertaken by UK consultants, Scott Wilson Kirkpatrick, LEAPP was retained to review the possibilities for upgrading two airports in North East Cambodia – Rattanakiri and Stung Treng Airports. Both receive direct air services from Phnom Penh with 50-passenger AN-24 aircraft, and the objective of the ADB is to upgrade these airports to meet Annex 14 standards, and permit a wider range of domestic and regional international air services. With expanded air access to NE Cambodia, the Mekong River region of Cambodia and Southern Laos can be made more accessible generally, and especially accessible for eco-tourism related to one of Asia's primary waterways.

Upgrading these airports presents a considerable challenge, as both suffered from a total lack of maintenance through Cambodia's internal military conflicts, and require extensive rehabilitation. LEAPP carried out inspections of the airports, established the criteria for upgrading the sites to meet international standards, carried out development feasibility studies, and prepared the initial development plans and cost estimates.



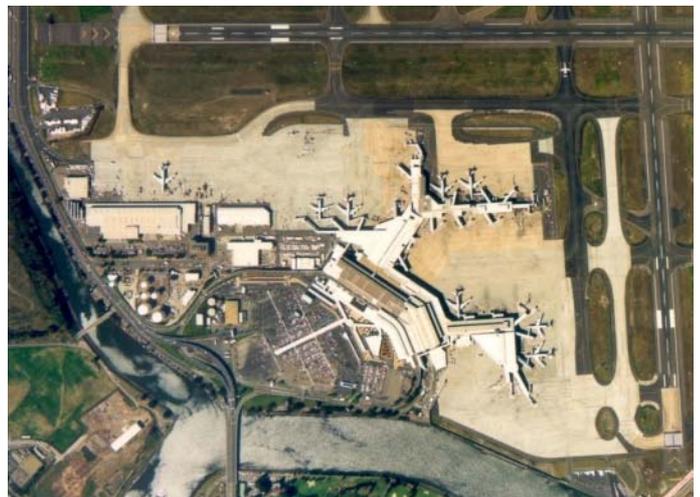
The magnificent wooden terminal at Rattanakiri Airport will sadly have to be demolished to upgrade the airport to meet ICAO standards.

Masterplanning Sydney's International Passenger Terminal

As part of an updating of the Airport Master Plan, the Sydney International Airport Corporation (SACL) is undertaking an intensive study of the development of the international passenger terminal. Presently, the International Terminal processes some 9 million annual passengers, which is forecast to increase to over 28mppa in 20 years time. With 37 gates now available, Sydney's international traffic will require 70 gates to accommodate forecast growth in this period.



Occupying a very constrained corner of the airport lands, and with no possibility to expand the site, any substantial long-term growth in international traffic will be a challenge to accommodate in the present terminal area.



Sydney's International Terminal Complex is constrained by runways and site limitations.

An essential part of the initial planning work for Phase I of the international terminal project has been the analysis of passenger traffic and assessment of future processor and space requirements. As part of the terminal planning team, alongside URS Corporation, LEAPP has carried out capacity analysis of the terminal complex, and developed space and processor requirements for the master plan period. The project now progresses into conceptual planning of a future international terminal building, and development of the apron and gate arrangements to accommodate the 20-year planning horizon.

Rehabilitating Angola's Air Transport Infrastructure

Some 25 years of civil war in Angola has devastated the nation's transport infrastructure to the extent that air transport remains virtually the only means of accessing the interior of the country – and even that is hazardous given the state of the domestic airports. Together with Sypher of Canada, LEAPP became involved in Angola during the latter days of rebel activity, to address one of the high priority airport rehabilitation projects for ENANA, the national airports authority. With local agriculture severely reduced by the presence of land mines, the population of the interior has been reliant on the World Food Programme and the supply of food aid by air. High on the list for airport rehabilitation is the airport serving the central Angolan city of Huambo, a major distribution centre for the WFP, and for air supply of other materials, including diesel and gasoline fuels.

As the first stage of the Huambo Airport rehabilitation project, the consulting team carried out a full inspection of the airport, its pavements and facilities, concluding that most of the buildings were beyond repair, and a major reconstruction of the runway and taxiways would be needed for safe use of the airport. From this, a master plan has been prepared for the long-term upgrading and development of the airport, aimed at permitting its use for flight diversions from the capital, Luanda, and for commercial domestic and regional African air services to be established. The project is intended to proceed to construction in the near term, allowing future visitors to experience one of Africa's best kept secrets.



The effects of civil war have left the Huambo Airport terminal in need of major rehabilitation.



Airlift of food by World Food Programme 727's is vital in Angola.

Bringing Donegal's Airport into Compliance

Issues of non-compliance with Annex 14, raised by the Irish Aviation Authority, resulted in a full inspection being carried out by LEAPP at Donegal Airport, the most northerly airport in the Republic of Ireland.



Donegal Airport terminal and apron.

Located on a narrow sand peninsula, with the Atlantic Ocean and sand dunes rising to 30m on one side of the airport, and a river mouth on the other side of the property, Donegal Airport occupies a constrained site. Its 1496m instrument runway serves commercial airline traffic by F50 aircraft, offshore oil industry support and corporate and general aviation. Instrument operations and the runway thresholds are affected by local hills and nearby mountains. Approach and departure area obstacles, and the close-in location of the airport's passenger terminal building and apron, caused the review to conclude that the runway would have to be designated as Code 2, and aircraft restricted in size. Within these parameters, LEAPP has optimised the runway configuration to maximise take-off and landing distances within the Code 2 standards, and so ensure continued commercial air services.

What is wrong with this photograph?



Safety Issue

Answer:

Annex 14 recommends that "the operational objective of the rescue and fire fighting service should be to achieve response times of 2 minutes and not exceeding 3 minutes, to each end of the runway, as well as to any other part of the movement area in optimum conditions of visibility and surface conditions".

At this airport, which has only one fire vehicle (even though it should have two), the response time to an aircraft accident would be seriously affected by the need to move the pavement roller out of the way, in order to dispatch the fire vehicle. "Now who has the key for this thing...?"