

Register Before 22 January 2016, save SGD500!

AERODROME SAFEGUARDING 2016

18 - 22 APRIL 2016, SINGAPORE

Exclusive !!!

In-depth Focus on Obstacle Limitation Surface (OLS) Surveying & Analysis

WHO SHOULD ATTEND?

Directors, Heads, Managers, Engineers, Inspectors, Surveyors and Specialists of:

- Aerodrome Operations
- Aerodrome Safety & Standards
- Airside Operations
- Safety & Risk Management
- Engineering

From (but not limited to) the following:

- Civil Aviation Authorities (CAAs)
- Airport Operators
- Airport Engineering Contractors/Vendors

KEY ISSUES TO BE ADDRESSED AT THIS PROFESSIONAL TRAINING

- **Ensuring aerodrome operations are in compliance** with ICAO Annex 14 standards
- **Exploring types of Obstacle Limitation Surfaces** and its relationships towards daily airport operations
- **Assessing the impacts of penetrating objects** towards aerodrome safety and **establishing proactive measures**
- **Enhancing accuracy on reporting and analysis** of Obstacle Limitation Surface (OLS) surveying
- **Implementing strategic aerodrome management** upon Construction Work in Progress (WIP)
- **Conducting quality assurance audits and corrective action plans** as part of aerodrome Safety Management System (SMS)
- Developing **effective wildlife hazard control & management**

BENEFITS OF ATTENDING

- **Boosting aerodrome operational efficiency** with effective risk management system
- **Aligning aerodrome inspection objectives** in accordance with **organisational safety goals**
- Implementing **reactive and proactive hazards identification** process to achieve **maximum safety level**
- Understanding **aerodrome auditing principles, techniques and procedures** to enhance **aerodrome operational performance**
- **Conducting periodic data analysis** from OLS Surveying to review the overall **effectiveness of obstacle control process**
- **Identifying potential risks and hotspots** through aerodrome operational risk assessment
- **Hands-on exercises, deal analyses, examples and case studies** on aerodrome safeguarding to reinforce concepts and achieving solutions

Researched & Developed By:

EQU**IP**
GLOBAL

Aerodrome Safeguarding Masterclass

COURSE OVERVIEW

Aerodrome Safeguarding holds a crucial role in increasing the reliability and sustainability of airport operation. Given the continuously growing demand for air traffic, a high concentration of movements and a limited place available to handle operations, it is required for airport operators to implement optimised safety procedures within their everyday operations. With that being said, Obstacle limitation surface (OLS) surveying is one of the most significant parts in aerodrome safeguarding process in ensuring the vicinity of the aerodrome is free from any obstacle that might bring potential hazards. Other issues including technical, physical safeguarding as well as wildlife management also poses significant challenges for airport operators & aviation authorities. Therefore, strategic aerodrome inspection has to be planned and implemented in a timely manner to ensure the airport is operating within maximum safety level.

COURSE OBJECTIVES

The **Aerodrome Safeguarding Masterclass 2016** is a comprehensive 5-day program designed to provide a complete guide on improving aerodrome safeguarding methods with the emphasis on Obstacle Limitation Surface (OLS) Surveying as well as equipping delegates with updated knowledge on the global legislative requirements for aerodrome certification. This course is a truly hands-on and practical experience that will inform, challenge and equips you with the necessary skills to understand the fundamental importance of proper aerodrome safeguarding planning in order to mitigate risk and improve aerodrome operational efficiency to achieve maximum safety level.

Through this masterclass, participants will be able to:

- Redefine the management roles and responsibilities to enhance aerodrome safeguarding process
- Implement ICAO Standards and Recommended Practices pertaining to aerodrome certification
- Set up aerodrome inspection objectives in accordance with organisational safety goals
- Implement reactive and proactive hazards identification process follow by corrective approaches
- Establish sound risk management and mitigation process to improve aerodrome operation
- Conduct thorough safety audits and performance monitoring

WHY YOU SHOULD NOT MISS THIS EVENT?

- **IN-DEPTH CASE STUDIES** on aerodrome safeguarding to enhance risk management and mitigation process towards potential hazards
- **PRACTICAL EXERCISE** on each phase of effective aerodrome management comprises of Obstacles Limitation Surface, Wildlife Management and Technical Safeguarding
- **SPECIAL! PRE-COURSE QUESTIONNAIRE** to ensure you gain maximum value from this course by addressing your specific challenges in your current aerodrome safeguarding management
- **DETAILED COURSE DOCUMENTS** so that you receive in-depth information on what you have learned & to help you digest the subject matter
- **UNIQUE INTERACTIVE CLASS** which discusses the key issues faced and the learning outcomes at the end of each training day to achieve maximum learning experience

Course Format

This course will be held in a highly interactive workshop format with Role Simulation Exercises based on real world examples. Places are limited to ensure all participants gain maximum insight into world class strategic thinking.

Pre - Course

A Pre-Course Questionnaire will be sent to you prior to the workshop. The Trainer will customize the training to suit your specific needs.

Certificate

Upon completion of the course, you will receive a Certificate of Attendance bearing the signatures of both the Trainer and the Course Organizer. This Certificate will testify to your professional development and assist in your advancement.

Program Schedule (Day 1 to Day 5)

| | |
|-------------------|--------------------------|
| 08:00am | Registration |
| 08.30am | Morning session begins |
| 10.20am – 10.40am | |
| | Morning teabreak |
| 12.30am | Lunch |
| 13.30pm | Afternoon session begins |
| 15.20pm – 15.40pm | |
| | Afternoon teabreak |
| 17.30pm | End of Day/Course |

Would You Like To Run This Course In-House? (Save Up To 15%)

This course can be presented exclusively for your organisation on an in-house basis, tailored to meet your specific needs, at a place and time of your convenience. If you have a team of 10 or more interested in this course, let's discuss how we can work together to meet your training needs. Please contact us and we will be pleased to assist.



About your Expert trainer:

Keith Tonkin

Managing Director, Aviation Projects Pty Ltd

With more than **30 years of experience**, Keith is an **eminent pilot, consultant as well as expert in aviation design, safety and risk management**. Previously, he was working with the Air Force where he flew Caribou and F-111 aircraft. He has also operated B747 internationally and B737 domestically in Australia as an international and domestic airline pilot with Qantas. Nevertheless, the interest in aviation safety and risk management as well as the passion for doing things safely and efficiently led to his concurrent work as an Air Force Reservist and ad-hoc consulting projects before the establishment of Aviation Projects in 2003. Since then, Keith has applied his knowledge of flying and airport operations to the task of planning and implementing airport-related projects.

Keith obtained his **Bachelor of Science Degree in Mathematics** from the **University of New South Wales Canberra** at Australian Defence Force Academy (ADFA), **Graduate Certificate of Spatial Science Technology** from **University of Southern Queensland** and **Master in Business Administration majoring Aviation Management** from **RMIT University**. In addition, he was also a **Certified Practising Risk Manager** of Risk Management Institution of Australasia and an **approved person to conduct safety inspections at registered and certain other aerodromes** certified from Civil Aviation Safety Authority of Australia.

Having been involved in numerous airport planning and upgrade studies, provided operations and management expertise to airports around Australia and the South Pacific, Keith has a unique understanding of the airport planning and operational issues. Throughout his expert journey, he has been providing expert opinions in consulting and training on the areas of **aerodrome safeguarding & OLS** for the following organisations:

- **Ballina Byron Gateway Airport** (Project planning for apron extension and Airport Master Plan implementation)
- **Busselton Regional Airport** (Airport Master Plan 2011-2031, Noise management and flight path optimisation)
- **Clarence Valley Regional Airport** (Aerodrome Upgrade Project)
- **Cairns Airport** (Helicopter precinct planning)
- **Dubai Airports** (Aviation risk management)
- **Emerald Airport** (Apron Extension Project)
- **Gladstone Airport** (TSP Audit, SMS review and AEP operational readiness)
- **Gold Coast Airport** (Crane operations risk management program, Review of aeronautical study)
- **Mackay Airport** (Specification of design task for preparation of PANS-OPS surfaces and review of airport safeguarding measures)
- **Nauru Airport** (Survey of aeronautical and obstacle data and design of obstacle limitation surfaces and assess frangibility requirements)
- **Roma Airport** (Roma Airport Master Plan 2013-2032)
- **Sunshine Coast Airport** (Risk assessment of issues associated with runway width, runway strip width and obstacle limitation surface requirements)
- **Wellcamp Airport** (Advise on planning & design, construction and commissioning of new airport at Wellcamp and prepare Type A chart)
- **Christmas Island Airport** (Runway end safety area investigation)
- **Port Macquarie Airport** (Risk assessment of issues associated with runway strip width and obstacle limitation surface requirements)
- **Townsville Airport** (Aeronautical study – decommission Aerodrome Beacon and SMS Review)
- **Moro Aerodrome** (Aviation operations advice, ongoing compliance with CAR Part 139, annual obstacle survey)
- **Mount Gordon Aerodrome** (Preparation for aerodrome certification)
- **Toowoomba Aerodrome** (Toowoomba Aerodrome Emergency Planning) and amongst others...

Furthermore, Keith has also been an **expert witness** in various matters before the **Planning and Environment Court in Queensland as well as the Land and Environment Court in NSW**. In addition to an enduring passion for safe and efficient flying operations, Keith is an economic rationalist who enjoys the challenge of ensuring airports meets all stakeholder needs.

MODULE 1: Aerodrome Safeguarding Focusing on Obstacle limitation Surfaces (OLS)

Session 1

STRATEGIC AERODROME INSPECTION PLANNING AND MANAGEMENT

- Redefining the management roles and responsibilities to enhance aerodrome safeguarding process
- Establishing aerodrome inspection objectives in accordance with organisational safety goals
- Ensuring aerodrome operations are complied with ICAO Annex 14 standards
- Appointment of safety committees within the organisation to initiate safety culture and improve total aerodrome safeguarding process
- Emphasising individual responsibilities in implementing aerodrome safety measures
- Training high competency level of aerodrome personnel through continuous improvement programs
- Recognising vital steps involved in achieving aerodrome certification

Session 2

PREVENTING OBSTACLE LIMITATION SURFACES (OLS) FROM INFRINGEMENTS AS A SIGNIFICANT PART OF AERODROME SAFEGUARDING

- Overview of Obstacle Limitation Surfaces and the relationships of these standards towards daily airport operations:
 - Inner Transitional Surface
 - Transitional Surface
 - Inner Approach Surface
 - Approach Surface
 - Inner Horizontal Surface
 - Conical Surface
 - Outer Horizontal Surface
 - Baulked Landing Surface
 - Take-Off Climb Surface
- Looking into the significant criteria for inspecting each Obstacle Limitation Surface
- Methods of detecting the infringements of the obstacle limitation surfaces by any object, building, structure or terrain
- Explaining the consequences from infringements of the obstacle limitation surfaces
- Assessing the impacts of penetrating objects towards aerodrome safety and developing the appropriate proactive measures

Session 3

OBSTACLES IDENTIFICATION AND ASSESSMENT TO AVOID POTENTIAL HAZARDS

- Identifying types of obstacles:
 - I. First obstacles in the take-off climb surfaces
 - II. Lines of pylons close to the aerodrome surfaces
 - III. High ground that may affect the circuit height
 - IV. Obstacles (chimney, mast and etc.) within the circling area that are significantly higher than the aerodrome elevation
 - V. Lit aerodrome features or large single objects that may not necessarily be infringements
 - VI. Transient Obstacles
 - VII. Fences
 - VIII. Hazardous Objects below the OLS
- Implementing corrective approaches when objects become obstacles:
 - Assessment on the effect of obstacles towards aircraft operations
 - Decision on whether the obstacles should be prevented, removed or accepted
 - Marking and lighting of obstacles that have intruded into navigable airspace
- Analysing Aerodrome Obstacle Charts, i.e. Type A & B Charts
- Implementing reactive and proactive hazards identification process including regular safety assessments and trend monitoring

Aerodrome Safeguarding Masterclass

TRAINING AGENDA DAY 1 - 5

Session 4

EFFECTIVE MARKING AND LIGHTING OF OBSTACLES TO INCREASE ITS PRESENCE AND REDUCE HAZARDS

- Ensuring highly visible marking and lighting to denote obstacles within the Obstacle Limitation Surfaces
- Making sure signing and marking are clearly visible to pilots in all weather and visibility conditions
- Continuous review on signing and marking plan to meet ICAO and local authorities requirements
- Implementing inspection across all obstacle lights and markings within the vicinity of the aerodrome from time to time

Session 5

ENHANCING ACCURACY ON OBSTACLE LIMITATION SURFACE (OLS) SURVEY REPORTING AND ANALYSIS

- Conducting safety trend analysis
- Continuous monitoring on safety performance
- Conducting periodic data analysis to review the overall effectiveness of the obstacle control process
- Safety management log for incident reporting to aid in further investigation
- Employ modern technology to provide real time information for greater accuracy

Session 6

CONDUCTING QUALITY ASSURANCE AUDITS AND CORRECTIVE ACTION PLANS AS PART OF AERODROME SAFETY MANAGEMENT SYSTEM (SMS)

- Understanding the auditing principles, techniques and procedures involve
- Achieving continuous improvements in safety through auditing processes and procedures
- Ensuring process control and regulatory compliance through constant verification from auditing and monitoring process
- Recognising the significance to audit, review and revalidate procedures and all methodologies on a regular basis to ensure that they are current and effective

Session 7

RISK MANAGEMENT AND MITIGATION PROCESS FOR IMPROVED AERODROME OPERATION

- Conducting risk assessment on identified potential risks and hotspots
- Develop mitigating measures to in addressing the potential risks
- Setting up risk control measures through the utilisation of collision risk model, aeronautical studies and safety assessment
- Establishing emergency planning upon situations such as low visibility and adverse weather operations

Session 8

IMPLEMENTING STRATEGIC AERODROME OPERATIONS UPON CONSTRUCTION WORK IN PROGRESS (WIP) CLOSE TO THE VICINITY OF THE AERODROME

- Understanding the minimum regulatory requirements as per EASA CS Aerodromes/ICAO Annex 14, associated with the physical characteristics of the aerodrome during Work In Progress (WIP)
- Managing contractors and their activities whilst conducting work on the aerodrome, in accordance with local requirements, regulatory requirements and industry good practice
- Discussing policies and procedures with reference to the undertaking of airfield minor works and maintenance
- Learning the different methods and channels of reporting safety incidents and observations during airside Work In Progress (WIP)

Session 9

PLOTTING AERODROME EMERGENCY PLANNING AND IMPLEMENTATION

- Drawing the strategic emergency planning blueprint in accordance with Standards and Recommended Practices (SARPs) from ICAO Annex 14
- Undergoing periodic testing on emergency plan and evaluating its effectiveness for continuous improvement measures
- Recognising the corrective actions to be taken upon the following emergencies:
 - I. Emergencies involving aircraft
 - Aircraft incident on & off airport
 - Aircraft incident in flight (turbulence, decompression, structural failure and sabotage/bomb threats)
 - Aircraft incident on ground
 - II. Emergencies within the vicinity of the Aerodrome
 - Structural fire
 - Natural disaster
 - Hazardous goods within aircraft fuelling facilities
- Coordinating participation of existing agencies and ensuring clear understanding on responsibility and role respectively
- Incident plotting on grid maps of aerodrome and identify the immediate vicinity that might be affected along with preventive action plans

MODULE 2: Aerodrome Safeguarding Focusing on Wildlife Control Measures

Session 10

AERODROME WILDLIFE HAZARD CONTROL & MANAGEMENT

- Looking into the law and regulations impacting airport wildlife hazard management globally
- Emphasising the importance of wildlife hazard control through case studies on significant wildlife strikes
- Recognising the strategic implementation approaches involve in wildlife management within the vicinity of the aerodrome
- Understanding the impacts that wildlife hazard could create within the vicinity of the aerodrome
- Establishing Bird Control Management Plan (BCMP) as part of an aerodrome's Safety Management System (SMS)
- Taking into consideration the key elements involve in establishing the organisation's wildlife control committee as part of aerodrome safeguarding

Session 11

UNDERSTANDING AERODROME TOPOGRAPHY AND ITS EFFECT TOWARDS INCREASING WILDLIFE HABITATION

- Understanding how habitat management can assist in reducing the wildlife hazard within the aerodrome
- Preventive approach implementation within key areas that promotes wildlife habitation within the aerodrome:
 - Aerodrome landscaping
 - Airport structures: Perching, nesting, and denning
 - Aerodrome's surrounding agriculture
 - Water resources: Wetlands and marshes
- Implementing environment management and site modification within the aerodrome by focusing on:
 - Airfield Grass Management
 - Landscape Management
 - Solid Waste Management
 - Wastewater Management

Session 12

WILDLIFE STRIKE REPORTING AND DATA ANALYSIS

- Understanding the international and state regulations for wildlife strike reporting
- Identification a list of wildlife attractants within and surrounding the aerodrome
- Identifying the characteristics of the problem species to aid in curbing the increase in its population
- Finding out what data should be gathered and how the data should be deployed to help identify hazardous risks
- Analysing wildlife strike database to determine the reoccurring patterns follow by mitigating actions

Session 13

LATEST TECHNOLOGY APPLICATION IN WILDLIFE CONTROL PROGRAM

- Recognising the latest equipment involve in the deterrence of active wildlife
- Learning the effective methods and techniques to curb the issue on increasing wildlife population in the vicinity of the aerodrome
- Recognising what's work best for your organisation: Conducting research on suitability and effectiveness of various wildlife population curbing techniques as part of wildlife control program

MODULE 3: Technical Safeguarding in Aerodrome Operations

Session 14

SAFEGUARDING AIRCRAFT NAVIGATIONAL EQUIPMENT AGAINST INTERFERENCE FROM OBSTACLE

- Approaches in maintaining the accuracy of the information displayed on the radar screens to maintain safe separation between aircraft
- Ensuring safeguarding process is protecting the installations from:
 - Radio frequency interference from other sources of radio emissions
 - Radio signal reflections or diffractions caused by physical objects
- Implementing corrective action plan to mitigate the potential impact from wind turbine and solar panel developments towards radar performance

Session 15

CONDUCTING THOROUGH SAFETY AUDITING AND PERFORMANCE MONITORING ON TECHNICAL EQUIPMENT TO ENSURE FUNCTIONALITY AND EFFECTIVENESS

- Setting up audit objectives based on quality management in order to meet overall safety goals
- Strategic planning and implementation of audits along with relevant stakeholders
- Establishing quality management system on navigational equipment to promote accuracy on aeronautical data and information
- Refining of audit criteria from time to time for maximum accuracy towards functionality of technical equipment
- Conducting audit analysis follow by identification of correction measures
- Evaluation of audits planning to track its effectiveness follow by proactive and continuous improvement approaches

AERODROME SAFEGUARDING 2016

18 - 22 APRIL 2016, SINGAPORE

Please complete in BLOCK CAPITALS as information is used to produce delegates badges

Please photocopy for multiple bookings. Your priority registration code is printed below. Please quote it when registering – Event Code: CS10044.001

TRAINING COURSE PACKAGE PRICING STRUCTURE

| TRAINING COURSE | EARLY BIRD PRICE | STANDARD PRICE | Equip Global recognises the value of learning in teams |
|--|---|----------------|---|
| 5 Day Training Course 18 – 22 April 2016 | SGD 6,499 Payment by 22 January 2016 | SGD 6,999 | Group bookings at the same time from the same company receive the following: 3 or more at 7% off; 5 or more at 10% off This offer is exclusive of the early bird discount. Call us for a special discount rate for teams of 8 and above. * Singapore companies, please add prevailing GST. |
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| Title: | |
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| Card Number: | | | | |
| Name on Card | | CVC Code | | |
| Signature | | Date | | DD/MM/YYYY |

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All bank charges to be the payer. Please ensure that Equip Global receives the full invoiced amount.

PAYMENT TERMS & CONDITIONS

All 'Early Bird', 'Super Saver' Discounts or any discounts offered by Equip Global require payment at time of registration and before the cut-off date in order to receive any discount. All discount offers cannot be combined with any other offer. - 100% payment is required upon receipt of invoice and includes lunches, refreshments and detailed conference materials. - Registration made within 14 working days of the conference/training must be paid by credit card. - No delegate will be allowed into the conference or training unless all payments are received prior to the conference or training - Discounts do not apply to workshop(s) only bookings. - Please note that credit card payments will incur a paypal charge of 3.4% + SGD0.50. - Payment not made at the time of registration will be subject to a SGD99 processing fee

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