

# Strategic Consulting

## Safety Management System Development



## Development and delivery of an Integrated SMS in partnership with Brunei Shell Petroleum (BSP) Aviation Department

Brunei Shell Petroleum Company, Sendirian Berhad, Aviation Department engaged Baines Simmons to assist them in enhancing and improving their existing Safety Management System and create a world-class Integrated Safety Management System that covered all operations at their Anduki base in Brunei. The 18-week project was successfully completed within agreed timescales and with agreed measurable deliverables.

### Client Profile

Brunei Shell Petroleum Company, Sendirian Berhad, Aviation Department supplies aviation services in support of Brunei's exploration and production of crude oil and natural gas from onshore and offshore fields from the Anduki airfield. The business encompassed the operation and maintenance of three Sikorsky S92 Helicopters and a dedicated airfield operation which included ATC, Fuel Farm, Fire service, Ground Handling, Security and Passenger Terminal services.

### The Challenge

To enhance the existing safety systems within BSP Aviation department by developing an Integrated Safety Management System (ISMS) which was inclusive of the entire operation at Anduki Airport and complied with ICAO 9859 standard and best practice.

### The Solution

**Safety Management Diagnostic (SMD):** A team of experienced SMS Consultants conducted an initial SMD at the Anduki Airport site. A gap analysis exercise was undertaken which comprised interviews with a representative number of personnel across all areas of the business (Pilots, Engineers, ATCO, Refuellers, Ground Operations and Managers) and a desk-top review of company manuals and applicable regulation was also performed. A detailed report of observations and recommendations (47 in total) was sent to the Accountable Manager. The recommendations were incorporated as appropriate into the Integrated SMS (ISMS).

**ISMS development and implementation:** In partnership with the highly experienced personnel from Brunei Shell Petroleum Aviation Department, the ISMS manual was written during the project and built upon as each phase and section was agreed. The content of the manual was written taking into consideration the existing Shell group Requirements for Aircraft Operations, HSE safety case, BDCA, UKCAA and ICAO requirements. These requirements and their relationships were described throughout the manual. The project plan was amended to meet the implementation needs and updated versions compiled by the project manager were sent to all parties. In order to satisfy the Tier one approved manual requirements, a description section regarding the ISMS was written for inclusion. This manual amendment linked the approved manuals to the ISMS and vice-versa.

*"Baines Simmons' Consultants were able to apply their practical expertise to help create a world-class Safety Management System that would dovetail with Shell's existing excellent corporate safety systems."*

*"We gained a wealth of experience during this project working with an already safety sophisticated client in developing a truly integrated Safety Management System. The project enabled us to understand the differing needs within the worlds of Flight Operations, ATC, Maintenance, Ground Operations and Passenger Handling, and develop solutions to enable those worlds to interrelate on safety issues."*

*"Working on the Shell Brunei project has allowed us to advance our own thinking in the field of ISMS with very successful outcomes."*

Jez Last, Project Leader, Baines Simmons

# Strategic Consulting

## Safety Management System Development



As a result of the establishment of the ISMS meeting structure, the first **Safety Review Board (SRB)**, under the direction and guidance of a Baines Simmons Consultant, was convened just 3 months after the ISMS was set up with the following agenda:

- ▶ SRB and SAG terms of reference
- ▶ Safety & Quality Policy
- ▶ Objectives
- ▶ Key Performance Indicators (KPIs)
- ▶ Performance Monitoring
- ▶ Safety Champions
- ▶ Integrated Safety Management System (manual)
- ▶ Training
- ▶ AOB

From the SRB, KPIs were developed, the establishment of Safety Champions agreed and the other agenda items reviewed and accepted.

**Training:** A Training Needs Analysis (TNA) was developed and bespoke course material was developed in conjunction with BSP SAV following a site visit and discussions with the client. Baines Simmons created a 2-day Introduction to SMS course to provide a revision of SMS concepts and an understanding of the importance of Human Factors and Error Management – the cornerstones of a Safety Management System. A total of 105 people were trained (78% of total BSP Aviation department employees) over a ten day period.

## Deliverables

The project delivered the foundations of an ISMS which could be built on and continuously developed by Brunei Shell Petroleum Aviation Department. Working in partnership with BSP Aviation Department, the following SMS elements were developed by adapting many of the safety management features and processes already in place, and delivered as part of the project:

Safety & Quality Policy	Safety Audit checklists
Safety Principals including Safety leadership	Training Effectiveness
Safety Organisation & Accountabilities	Evaluation of Individual's Performance Regarding Safety Responsibilities
The ISMS Organisation	FOQA (Flight Operations Quality Assurance) procedures
Personal Accountabilities and Responsibilities	SMS Management Review
Safety Meetings	Safety Training
SMS and Emergency Response relationship	Safety Promotion
Hazard Identification & Risk Management	Disseminating Safety Information
Basic safety Assessment and Occurrence Report	Terms of Reference for the SRB
Handling procedures	Terms of Reference for the SAGs
Hazard Identification & Risk Management Process	Hazard Register
Management of Change process	Training Needs Matrix
Risk Evaluation and Risk Action	ISMS Meeting Structure model
Incident causation and Control Assurance	Consequence Management Decision Tree (Fairtool©)
Internal Safety Investigation process	Key Performance Indicators
Departmental Safety Review and Reporting	
Safety Performance Monitoring	
High Level safety Objectives	
Safety Performance Indicators	
Safety performance Targets	
Setting Performance Indicators and Targets	

## The Outcome

As a result of our partnership with BSP Aviation Department, a fully integrated SMS was developed which created a solid basis for ongoing development and improvement. BSP Aviation Department has subsequently requested that Baines Simmons provide safety management continuation training and has developed a LOSA programme subsequent to sending some of their Safety team to Baines Simmons Academy for training.