

THE UK CONFIDENTIAL HUMAN FACTORS INCIDENT REPORTING PROGRAMME FOR AVIATION

INTRODUCTION

The aim of the UK Confidential Human Factors Incident Reporting Programme for aviation, known by the acronym CHIRP, is to contribute to the enhancement of flight safety in the UK commercial and general aviation industries, by providing a totally independent confidential reporting system for all individuals employed in or associated with the industries. The Programme is available to engineers and technical staff involved with the design and manufacturing processes, flight crew members, cabin crew members, air traffic controllers, licensed engineers and maintenance/engineering personnel and individual aircraft owners/operators. CHIRP complements the CAA Mandatory Occurrence Reporting system and other formal reporting systems operated by many UK organisations, by providing a means by which individuals are able to raise safety-related issues of concern without being identified to their peer group, management, or the Regulatory Authority. A separate Confidential Hazardous Incident Reporting Programme is also managed by the Trust, serving the maritime transport sectors; this utilises similar processes and procedures as those developed for the aviation programme

CHIRP is a totally independent programme for the collection of confidential safety data, and when appropriate, acting or advising on information gained through confidential reports. Independent advice is provided on aeromedical and Human Factors aspects of reports, involving such topics as errors, fatigue, poor ergonomics, management pressures, deficiencies in communication or team performance. The sensitivity of these topics requires that the anonymity of the reporter must be, and always has been, fully protected.

The CHIRP organisation is comprised of a small team of specialists with professional and technical expertise in commercial aviation, maritime operations and Human Factors. The Programmes are also able to draw on the assistance of a wide range of individual experts and specialist bodies across the spectrum of aviation and maritime sciences in order to promote the resolution of issues raised.

HISTORY

CHIRP was formed in 1982 as a result of a joint initiative between the Chief Scientific Officer Civil Aviation Authority (CAA), the Chief Medical Officer CAA and the Commandant Royal Air Force Institute of Aviation Medicine (IAM). The programme was based on the Aviation Safety Reporting System (ASRS) that had been formed in the United States of America in 1976 under the management of National Aeronautical and Space Administration (NASA). ASRS was introduced in response to a recommendation from the National Transportation Safety Board (NTSB) following an investigation into a Controlled Flight into Terrain major accident involving a US airline, which revealed that a number of previous near accidents with similar causal factors had occurred but had not been reported through the formal systems that existed at that time.

The CHIRP organisation was initially formed as a research project within the IAM, Farnborough, which continued to provide management for the Programme until 1994. In 1986, following representation from several professional bodies, CHIRP was expanded to include the processing and analysis of reports from air traffic control officers. In April 1994, following the formation of the Defence Research Agency (DRA) as a Fund Agency, several of the IAM functions were transferred to the DRA. As part of this process, management responsibility for CHIRP was transferred to DRA/Centre for Human Sciences where it remained until 31 December 1995.

In 1994 a comprehensive, independent, review of CHIRP was conducted by the Guild of Air Pilots and Air Navigators (GAPAN). The review was conducted against the background of an increasing level of concern among professional bodies in several of the major aviation nations that, whereas the air transport accident/incident rate due to technical failures had declined progressively to an extremely low level, the accident rate due to Human Factors related causal factors had remained essentially constant and consequently had become a much more dominant cause in major accidents.

One of the principal recommendations of the GAPAN review was that the programme be restructured to enable it to make a more effective contribution to the resolution of important safety related issues in the UK air transport industry. Following the restructuring of the Programme, as described below, in mid 1997 the programme was extended to incorporate licensed engineers and Approved Maintenance Organisations. During 1998/1999, the Programme was made available to the General Aviation sectors of the aviation industry. On 1 July 2001 the Programme was further extended to include Cabin Crew.

In 2003, at the invitation of the UK Department for the Environment, Transport and the Regions, Maritime CHIRP was established

STRUCTURE

CHIRP was established in its present form, as a registered charitable company, limited by guarantee, on 1 November 1996. As such, The CHIRP Charitable Trust is subject to UK Corporate Law and also the additional requirements of the Charity Commissioners. This corporate structure was selected from several options as it provided the following:

- An independent organisational structure, with defined management responsibilities and accountabilities.
- A legal limitation on the liabilities of members.
- Formal fiscal and management audit processes.
- Regulatory oversight by Companies House and the Charity Commissioners.

As a registered charity, the Trust is exempted from Corporation Tax and is not VAT registered.

FUNDING

The Aviation Programmes are sponsored by a grant of funding from the Civil Aviation Authority (Safety Regulation Group), which in turn is funded by the UK civil aviation industry. The Maritime Programme is funded by a grant of funding from the Department for Transport (Shipping Sector).

MANAGEMENT

Management and fiscal responsibilities for the Programme are held by an independent Board of Trustees. The Board comprises four ex-officio trustees; Chief Inspector Air Accidents, Chief Inspector Marine Accident, Chief Executive Maritime and Coastguard Agency, Head Flight Operations Directorate, CAA, and ten independent members all of whom have held senior operational regulatory or vocational appointments in the relevant industry. The Chairman is Mr Ken Smart, who in 2005 retired from the post of Chief Inspector of Air Accidents. The Chairman of the Board is elected by the Trustees.

The current Board membership is shown in Figure 1.

The Board's responsibilities include:

- Monitoring Programme performance against defined objectives.
- Setting annual business plan targets and budgets.
- Audit tracking and submission of corporate accounts and reports.

Captain Nigel Palmer holds the legal appointment of Company Secretary to CHIRP.

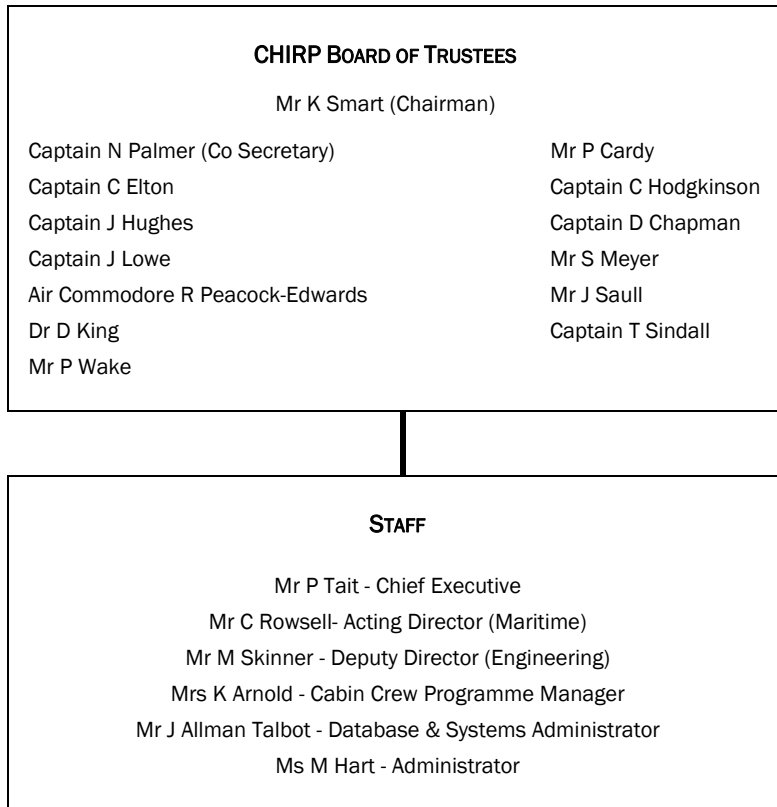
CHIRP employs a permanent staff of six under the management of a full-time Chief Executive.

The Chief Executive is responsible to the Trustees for the management of the Aviation and Maritime Programmes, which includes the following:

- Promoting the submission of safety related reports.
- Processing and analysis of reports.
- Definition of corrective actions.
- Co-ordination with relevant third party operational managements and regulatory agencies.
- Editing, publishing and distribution of the various FEEDBACK newsletters and other safety related information.

- Financial management.
- Business planning.
- Liaison with other safety agencies and organisations.

ORGANISATION



CHIRP ADVISORY BOARDS

AIR TRANSPORT			
Captain M Alder	British Air Line Pilots Association	Mr B Johnston	Guild of Air Traffic Control Officers
Captain E Bewley	Head Flight Ops Inspectorate (1) CAA	Mr P Jones	National Air Traffic Services
Mr R Bradbury	Guild of Air Traffic Control Officers	Captain L Jordan	Flt Ops Safety & Stds Mgr, easyJet
Mr C Brown	BA Engineering/UKOTG	Mr J McKenna	Head of Strategy, Policy and Standards for Airworthiness Division CAA (SRG)
Captain A Davis	British Helicopter Advisory Board	Mr M Newman	Assoc Licensed Aircraft Engineers
Air Cdre I Dugmore	D MARSG	Captain E Paintin	UK Flight Safety Committee
Captain J Batty	British Business & General Aviation Assoc.	Captain R Screen	Flight Operations Liaison Group
Mr C Hague	Society of British Aerospace Companies	Mr A Shaw	Inspector ATS (Ops), ATSD CAA (SRG)
Captain D Harrison	Independent	Captain S Solomon	Director Flt Ops MyTravel/BATA
Mr M Bailey	British Business & General Aviation Assoc.		

GENERAL AVIATION		CABIN CREW	
Captain A Robinson	Chairman	Ms S Knight	Chairman
Mr P Barker	Helicopter Club of Great Britain	Ms C Button	Cabin Crew Manager - Titan Airways
Mr J Broad	Light Aircraft Association	Miss A Clark	Eastern Airways
Mr J Brownlow	AOPA	Mrs H Corcoran	Cabin Safety Officer - MyTravel Airways
Mr D Cockburn	Editor - GASIL, GA Department CAA	Ms J Dawson	Safety Training Manager - bmi
Captain C Elton	Independent	Mrs J Fisher	Manager Cabin Safety Office CAA
Mr K Fairbank	Air Accidents Investigation Branch	Miss M Gooding	Cabin Safety Manager - Virgin Atlantic
Captain D Felix	Independent	Miss S Graysmark	Cabin Safety Officer CAA
Mr M Gunston	British Balloon & Airship Club	Mrs J Hamilton /	
Mr G Hackemer	General Aviation Safety Council	Mr A Price	IFS Safety & Quality - British Airways
Mr K Mitchell	Guild of Air Traffic Control Officers	Mr C Hewitt /	
Mr B Penfold	British Gliding Association	Mrs B Else	Cabin Quality and Standards - easyJet
Mr A Sephton	Independent	Mr S Jones	Safety, Recruitment & Training Manager - flybe
Mr J Stewart-Smith	Independent	Captain L Jordan	Independent Flight Crew (easyJet)
Mr G Weighell	British Microlight Aircraft Association	Mr D Kelly	Regional Officer - Unite/Amicus Section
		Ms V Robertson	Cabin Safety Manager - Thomsonfly
		Captain K Sachedina	Independent Flight Crew (Monarch Airlines)
		Mr I Newman /	
		Mr I Tanner	Unite/Amicus Section
		Mrs D Warren-Price	Unite/T&G Section

ADVISORY BOARDS

Three Aviation Advisory Boards, comprised of nominees from all of the principal relevant aviation interests in the UK together with the Aviation Trustees, provide specialist expertise in the definition and resolution of Human Factors issues. The role of the Advisory Boards are to review reports and issues raised through the Programme and to provide counsel on the most appropriate way in which specific issues might be resolved. The Advisory Boards also provide feedback on the performance of the Programme.

Advisory Board members act as individual expert advisers and not as representatives of their sponsoring organisations. Report information is formally submitted to the Advisory Boards on a confidential basis and all personal details are deleted from reports prior to discussion. The composition of the Board is reviewed regularly to ensure that the membership is appropriate to the scope of the Programme and retains relevant current operational expertise.

A separate Maritime Advisory Board, similarly constituted, assists with the Maritime Programme.

WHAT ARE 'HUMAN FACTORS'?

The subject of Human Factors deals with all the human elements of people in man-machine systems. It is not confined to the traditional design and layout of equipment and workplaces, but also covers aspects of manpower, organisation, management, allocation of responsibility, automation, communication, skills, training, health, safety, and the prevention of errors or accidents.

The people concerned are all those associated with the total system, not merely the front-end users such as pilots and air traffic control officers, but also designers, equipment suppliers, maintainers, support personnel, instructors and so on.

Thus the concept of a 'Human Factors incident' is extremely broad, and the pivotal tenet is that wider knowledge and understanding of the scope and causes of such incidents, caused by human error or failings, will reduce the chances of future accidents.

THE AVIATION PROGRAMMES

CHIRP receives confidential incident reports from all of the previously mentioned groups in the UK aviation industry. On being received, reports are acknowledged, where necessary discussed with the reporter either by letter, telephone call or in a small number of cases by a face-to-face interview, and validated as far as is possible. The report information is then reviewed with the objectives of determining a cause and identifying corrective action(s). After ensuring that the report contains all the relevant information, if the reporter consents, the concern is represented to the appropriate agency and the reporter is subsequently advised of any action taken in response to the report. The report is then closed and all personal details are returned to the reporter. Confidentiality of the reporting system is maintained by not retaining any personal details on the report database. Each report is allocated a unique reference identification; thus, after the return of personal details, CHIRP is unable subsequently to contact the reporter; however, the reporter may, if he/she wishes, contact the CHIRP office by using the report reference identification.

When appropriate, issues raised in reports are discussed directly with the relevant agency(ies). Only depersonalised data are used in discussions with third party organisations, thus assuring the confidentiality of the reporter in any contact with an external organisation. Anonymous reports are not normally acted upon, as they cannot be validated.

Depersonalised data is recorded in a database at Farnborough for analysis of key topics and trends. Disidentified data is submitted on a regular basis to the CAA (SRG) Safety Investigations and Data Department. Further disidentification (for instance of time and place, company, reporter's gender) is usually undertaken before publication in FEEDBACK or making data available to other agencies.

A newsletter, FEEDBACK, covering current topics from disidentified reports and including new report forms, is sent four times a year directly to all commercially licensed pilots, air traffic controllers and engineering personnel, a mail circulation of around 32,500. Some reports are disidentified further (e.g. time and place, company, reporter's gender) before being published in FEEDBACK, or making any data available to other agencies. FEEDBACK maintains an awareness of Human Factors issues among the flying, air traffic controller and aircraft maintenance communities and provides a forum for discussion. Separate newsheets titled CABIN CREW FEEDBACK and GA FEEDBACK containing reports of particular relevance to cabin operations and light aircraft operations/leisure flying are distributed separately to the cabin crew and general aviation communities.

In addition to maintaining contact with relevant agencies through the Advisory Board nominees, CHIRP maintains regular contact with the principal agencies in the commercial and general aviation industries through visits and presentations.

CHIRP is represented on a number of UK aviation safety bodies, including the UK Flight Safety Committee and maintains a close liaison with other UK and international Human Factors groups.

FOR MORE INFORMATION ON THE PROGRAMME, CONTACT:

CHIRP, BUILDING Y20E, ROOM G15, CODY TECHNOLOGY PARK, IVELY ROAD, FARNBOROUGH, GU14 OLX. TEL: +44 (0)1252-395013; FAX: +44 (0) 1252394290 OR ON THE WEB www.chirp.co.uk.