

# Sonistics SMERAS Capabilities 2016

## Submarine Escape, Rescue, Abandonment and Sea Survival Systems (SMERAS) Subject Matter Experts

Experience and a Working Knowledge available:

### 1. **Submarine Guardbook** (UK BR 241-3)

The Guardbook is a simple but comprehensive guide to Submarine Escape, Rescue, Abandonment and Survival (SMERAS) following a submarine incident.

It is used as the last resort guide and instruction manual when all normal command and control has been lost due to the incident.

Within the Royal Navy familiarisation of the contents the Guardbook form the basis of much of the SMERAS training delivered at SETT, Gosport.

Sonistics has authored the Astute, Vanguard and Trafalgar Class Guardbooks (GB) for the RN, the Walrus Class GB for the Royal Netherlands Navy and the Sauro Class GB for the Italian Navy.

Sonistics SMEs have directly advised the Australian, Canadian, Norwegian and Swedish Navies in their GB production.

SMERAS training aspects derived from the GB will include the following:-

- Dissub Initial Actions
- Immediate Tower Escape
- Rush Escape
- Planned Tower Escape
- Tower Escape Time Guide
- Rescue Preparations
- Waiting Limits
- Tower Venting
- CO<sub>2</sub> Limits
- Senior Survivors Guide
- Water and Rations
- Communication Codes
- Escape Tower Preparations
- Unmanned Tower Run
- Tower Flood Cycle – Manned
- Draining Down the Tower
- Last Man out Drills
- ELSS Pod Receiving
- Rescue by Submersible Preparations
- Escape Stores and Equipment
- Atmosphere Monitoring Instructions
- Control of Carbon Dioxide
- Control of Oxygen
- Chlorine Gas Monitoring
- Air Purification Stores Locations

## 2. SMERAS Training

Sonistics has contributed to the current SMERAS TNA, designed subsequent training courses and delivered the training to customers in several countries.

Training delivered has been in accordance with JSP 822.

Sonistics has delivered bespoke SMERAS Training to all levels of submariner of many nationalities. (Training has also been delivered to civilian contractors as required.)

Escape training delivered in the past has been both pressurised and non-pressurised.

### **Examples of SMERAS training courses designed and delivered:-**

- Senior Survivor
- SM Requalification
- Pre-qualification
- Sea Survival
- Sea Survival Equipment Maintainer
- Hyperbaric Chamber Operator
- Atmosphere Monitoring and Control
- Nuclear Monitoring
- International Training
- SF Training
- Diver Training
- SMERAS Training (Submarine Based) in Faslane, Devonport and Barrow.
- SETT Instructor Qualification Training Courses

## 3. Training Facilities

Sonistics has had direct input into the requirements of the build of the latest SMERAS and diver training facility to be built internationally. This facility is currently under construction in Den Helder, in the Netherlands. The facility will be commissioned in August 2013.

Sonistics has detailed knowledge and experience of the development and maintenance of the current SETT (Submarine Escape Training Tank) in Gosport.

## 4. Training Exercises

**Escapex** – Conducted escape training exercises from RN, RNLN and ITN submarines

**Rescuex** – Sonistics has direct experience, including operational, of rescue training exercises utilising many submarine rescue services operating with various nationality submarines

**Abandonex** – Conducted abandonment training from RN submarine.

**Survivex** – Conducted prolonged survival training exercise on RNLN submarine. This exercise replicated survival in a DISSUB (Distressed Submarine) and included all aspects of atmosphere monitoring and control using emergency stores.

**International NATO SMERAS Training Exercises** – Organised and participated in many aspects of multi-national SMERAS exercises such as Sorbet Royal and Bold Monarch

## 5. SMERAS Equipments

Sonistics has an in-depth working knowledge and experience of the following SMERAS equipments. (This includes all training associated with these equipments.)

- Hale Hamilton Escape Air Systems
- Habetas Escape Air Systems
- Escape Towers – Single and two man from various classes of submarine from many navies
- Rush Escape Equipment
- Submarine Escape Suits – manufactured by RFD Beaufort, Texcon, BFA and Mustang.
- Atmosphere Monitors – fixed ships systems and portable devices.
- Atmosphere Control Systems
- Atmosphere Control – Emergency Stores e.g. Micropore, Molecular, Analox and Draeger
- Alertment/Communication Devices – Includes SEPIRBs, PLBs, tethered buoys and GateWay Buoys
- Rescue Seats
- Rescue Systems – Includes all international rescue capability
- Hyperbaric Transfer under Pressure Systems
- Hyperbaric Portable Stretchers
- Hyperbaric Shore based Chambers
- ELSS Pods and Receiving Bags
- Mini Pods
- Abandonment Suits
- Abandonment Liferafts – Undercasing – manufactured by Babcock or HDW
- Abandonment Inflatable Freeboard Extender

## 6. MoD Procurement Process –

Sonistics has direct knowledge and experience of the MoD procurement Process having participated in the procurement processes for the following:-

- Astute Class SMERAS Capability
- NATO submarine rescue system (NSRS)
- Submarine escape air systems
- Abandonment systems – Undercasing liferafts and Inflatable Freeboard Extender
- Escape suits
- Abandonment suits
- Lifejackets
- Atmosphere monitoring and control systems
- Emergency atmosphere monitoring and control stores
- Survival stores
- Chilled water plants
- Aerosol fire fighting system