



Ministry  
of Defence



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**ANNEX A – STATEMENT OF REQUIREMENT**  
**HELICOPTER UNDERWATER ESCAPE TRAINING MODULES**

**CONTRACT NUMBER**  
**700261343**

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## **ANNEX A - STATEMENT OF REQUIREMENT**

### **PART 1 – BACKGROUND**

#### **Introduction**

1. This Statement of Requirement (SOR) describes the requirement for Underwater Escape Training (UET) Modules. The modules are required as a fundamental part of the Royal Navy Centre of Maritime SERE and Underwater Escape Training (RNCMSUET) facility at Royal Naval Air Station (RNAS) Yeovilton. Two new Modules are required to replace the existing UET modules.

#### **Single statement of User need**

2. The Authority requires a supported solution [Modules] that will deliver UET at RNAS Yeovilton.

#### **Context**

3. The RNCMSUET has a requirement to train circa 7000 personnel per year and provide representative training for all in-Service Rotary Wing (RW) aircrew until 2047<sup>1</sup>.

#### **System boundary**

4. The potential scope of the contracted element of the UET Modules is:

- a. The provision of fit for purpose<sup>2</sup> Modules to meet Authority requirements as stated at Part 2.
- b. All scheduled maintenance, provision of spares, repair / overhaul activity and fault rectification on site.
- c. Provision of technical advice, information, publications and other activities (fault investigation and ad hoc tasking as requested by the Authority).
- d. Modifications.

5. Not in scope:

- a. Daily maintenance and preparing the Modules for use shall always be the responsibility of the Authority.

#### **In Service Date (ISD)**

6. The target ISD is seven months after contract award.

#### **Requirement definitions**

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<sup>1</sup> Forecast out of service date (OSD) for the RNCMSUET facility. This does not necessarily establish a requirement for an individual Module to be in-Service for the entire period; e.g. multiple Modules could be procured throughout the facility's life.

<sup>2</sup> Fit for purpose is a balance between availability, reliability and maintainability. It also includes evidence of safety to ensure a system is ready to use Forward.

7. Definitions used within the requirement set are:
- a. **The System.** A set of interrelated items, equipment or services which collectively fulfil a requirement; use of the term 'System' is not necessarily exclusive to an individual piece of equipment or service and should be interpreted within the context of the requirement; in the majority of cases with respect to this SOR, the System should be read as the Module(s).
  - b. **The Module.** Reference to 'the Module' is used to focus the requirement context solely to the training equipment which is being procured as part of the System. Its boundary stops at the connection point to the crane and covers only that which is suspended below, including jettisonable items.
  - c. **The User.** The MOD; owners of the requirement and users of the System.
  - d. **The Authority.** The Merlin Delivery Team (MDT); MOD enablers of the System.
  - e. **Forward.** Those logistic processes and functions that are focused on, and/or provide immediate support to, the operating environment or are optimised effectively best at the point of use. This is best summarised as within the security fence surrounding the RNCMSUET facility.
  - f. **Depth.** Those logistic processes and functions that underpin the support of Platforms and associated equipment, or by their nature, are optimised best not in the location of use, and includes all logistic elements not in Forward support.
  - g. **Required Activity Level (RAL).** This is the required number of training places per year in order meet demand across the MOD. The number is established in the yearly issue of the Statement of Training Requirement (SOTR).

### Assumptions

8. The Project's Master Data and Assumptions List (MDAL) provides the list of assumptions and will be populated with the selected bidders agreed assumptions.

### Structure of Requirement Document

9. This SOR shall adhere to the following structure:
- a. **Part 1.** Background
  - b. **Part 2.** Contracted Requirements.
  - c. **Part 3.** Context Documents.
  - d. **Part 4.** Glossary.
  - e. **Part 5.** Deliverable Documentation & Delivery Dates.

## PART 2 – CONTRACTED REQUIREMENTS

	<p><b>STATEMENT OF REQUIREMENT HELICOPTER UNDERWATER ESCAPE TRAINING MODULES INVITATION TO TENDER REFERENCE NUMBER 700261343 SURVIVAL SYSTEMS LIMITED'S (SSL) RESPONSE TO INDIVIDUAL SRD'S</b></p>
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With appreciation Survival Systems Limited (SSL) thanks the Authority for providing the opportunity to bid on the referenced project.

Before proceeding into SSL's SRD responses contained within the matrix provided by MoD and immediately following this introduction we draw to your attention to the points below; namely a) and b).

- a) The [REDACTED] prepared for MoD is 123 pages and is referenced multiple times in support of various SRDs. As such, we have provided one print of SSL's METS® Safety Case in each of SSL's priced and not priced submissions to adhere to the 11 kg weight restriction.

SSL's [REDACTED] is first referenced at SRD 02-03-02. Thereafter and within SSL's SRD responses every reference to the Safety Case will be found at SRD 02-03-02.

The same approach has been taken with regard to other SSL SRD responses that include supporting reference materials where each evidence item appears in print once only but is or may be referenced multiple times.

- b) The RNCMSUET at Yeovilton has an existing Survival Systems Limited (SSL) [CAGE Code L1685] Twin Gantry Hoist (TGH™) that is used for lifting the two currently SSL-leased Modular Egress Training Simulators [REDACTED] and Model 5 per these photos: [REDACTED].

### SSL ADDITIONAL GLOSSARY

Acronym	Description
ICS™	Integrated Control System
METS®	Modular Egress Training Simulator
M40	METS® Model 40
M5	METS® Model 5
POI	Program of Instruction
SSL	Survival Systems Limited
STST™	Survival Training Simulation Theater
TGH™	Twin Gantry Hoist

UET	Underwater Egress Trainer/Underwater Egress Training
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ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 01-00	<b>CAPABILITY</b>				
SRD 01-01	The System shall consist of 2 Modules; one [large] to represent Merlin Mk2 and Mk4/4A, and one [small] to represent Wildcat Mk1 and Mk2 rotary wing aircraft to a sufficient level to enable underwater escape training (UET).	The following aspects of the Modules are to be accurately represented for in-scope aircraft: -Seat position -Harness -Location of escape exits -Size of escape exits -Operation of exit release mechanism -Merlin Mk2 mission booth egress bar and mission console.	As Threshold plus representative internal layout, and external and internal snagging hazards.	In-scope aircraft in order of priority: Merlin Mk2/Mk4/Mk4A Wildcat Mk1 and Mk2  'Representative' is to be agreed by the Authority prior to contract award.  The Module design shall comply with the current Lifting Operations & Lifting Equipment Regulations (LOLER).	
SRD 01-02	The Module [large] shall be able to accommodate up to a maximum of X trainees seated for concurrent UET in the large Module.	X = 16.	X = 28.	UET Staff numbers are covered in SR 01-04 The Module should therefore be capable of accommodating total trainees and staff (when considering structural strength - seats/representative elements are not required by staff).  Weight per trainee is assumed to be 90kgs.  Merlin Mk4/4A troop carrying capacity is 24 Plus, a minimum of 4 aircrew = 28 The numbers reflected in the MOE does not include UET staff.	
SRD 01-03	The Module [small] shall be able to accommodate up to a maximum of X trainees seated for concurrent UET in the small Module.	X = 8.	X = 12.	UET Staff numbers are covered in SR 01-04 The Module should therefore be capable of accommodating total trainees and staff (when considering structural strength - seats/representative elements are not required by staff).	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				Weight for trainees is assumed to be 90kgs.  Wildcat troop carrying capacity is 6 Plus, a maximum of 2 aircrew = 8 The number reflected in the MOE does not include UET staff.	
SRD 01-04	The Module shall be able to accommodate 2 UET staff.	As Requirement.	N/A.	Not seated; standing only required.	
SRD 01-05	The System shall enable submersed escape from all exits at no less than 1 metre below the surface of the water at all roll angles.	As Requirement.	N/A.	To ensure the system can represent realistic scenarios and to provide high value training of clearing the aircraft correctly when egressing.  Regardless of system orientation, crane interface, system depth, etc., the uppermost point of exit cannot be less than 1 metre deep E.g. the uppermost part of a window exit, regardless of orientation, must be capable of submerging greater than 1 metre below the surface of the water.	
SRD 02-01	The System shall be able to be controlled to provide representative ditching characteristics.	Roll control from 000 degrees to 180 degrees and any point in between in either direction.	N/A.	To enable controller to represent a realistic ditching scenario.  Roll speed control is linked at SRD 02-02.	
SRD 02-02	The System shall be able to roll 180 degrees within 5 seconds.	As Requirement.	N/A.	To enable controller to represent a realistic ditching scenario.  Policy: Students must be able to commence escape procedure between 5 - 8 seconds. Up to 3 individuals must be able to escape from a single exit within 5-8 seconds.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				Current training policy is for trainees to wait for all motion to cease prior to commencing their egress; therefore, the system must have reached the controllers demanded position within 5 seconds to ensure up to 3 trainees can egress within 8 seconds.	
SRD 02-03	The System shall be capable of sustaining an impact with the surface of the water at a speed representative of a rotary wing aircraft in an autorotative flared landing.	31 metres per minute.	N/A.	Linked to crane speed (31m/min).	
SRD 02-04	The System shall be capable of being submersed at a speed of 31 metres per minute.	As Requirement.	N/A.	<p>To enable the Module to be controlled during submersion and raising.</p> <p>To ensure Module does not float or remain on the surface - out of control.</p> <p>To enable progressive training - semi-submerged through to a rapid full submersion.</p> <p>Maximum submersion speed linked to crane speed at SRD 02-03.</p> <p>The rate of water ingress (as measured against the speed the system 'fills' up internally) shall be consistent at any angle of roll and regardless of escape exit covering.</p>	
SRD 02-05	The System shall allow water ingress at a rate equal to the speed of controlled submersion The ingress speed of water shall be consistent at any angle of roll.	As Requirement.	N/A.	<p>Safety.</p> <p>Controllability - repeatability of training and swift descent to allow required pace of training.</p> <p>Reduce risk of 'build-up of pressure' against the exits.</p>	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				As the Module descends below the water line, the cabin area shall fill to match the depth below the surface. There should be not be more than half a second delay or disparity of water line between the pool surface and the water within the Module.	
SRD 02-06	The System shall allow water to egress at a rate equal to the depth and speed of surfacing. The egress speed of water shall be consistent at any angle of roll.	As Requirement.	N/A.	Safety - water must egress quickly in an emergency raise.  Controllability and to allow required pace of training.  Water egress must be sufficient to ensure the Module, when clear of the surface of the water, does not exceed 50% of the crane safe working load - linked to SR17-02.	
SRD 02-07	The System shall enable escape training when partially submerged, fully submerged and at any selectable depth to the maximum.	As Requirement.	N/A.	Instructor defined training. .  Flexibility to allow evolvement of training procedures and trials.	
SRD 03-01	The Module shall be compatible with in-Service Aircrew Equipment Assemblies (AEA).	As Requirement.	N/A	AEA: Aircrew helmet, body armour, gloves, boots, flying suits, immersion suits, FACs, LCJs (all mks), rubber pistols.  As shown in ICD Annex C	
SRD 03-02	The Module shall be compatible with in-Service passenger Personal Protective Equipment (PPE).	As Requirement.	N/A.	PPE: Troops helmet, body armour, gloves, boots, immersion suits, rubber pistols/rifles, Short Term Air Supply System (STASS), Passenger - STASS and working dress, as shown in Appendix A to this document (Interface Control Document)	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				Route to include future PPE must be simple, only the introduction of PPE which would require significant modification to the Module shall be cost-able.	
SRD 03-03	The Module shall be able to represent in-scope aircraft Chemical, Biological, Radiological and Nuclear (CBRN) PPE/AEA stowage.	As Requirement.	N/A.	Increased representativeness.  Removable stowage and connecting assemblies to enable training flexibility.	
SRD 03-04	The Module shall be compatible with aircraft specific Survival Equipment (SE)	MS10/5, Emergency Egress Lighting System (EELS) or similar representative.	N/A.	Increased representativeness.  EELS is an electrically powered and operated luminescence set of strips which aid egress from the aircraft at night. Where possible, the location of EELS is to be replicated; however, they do not need to be electrically operated. Any EELS replica shall operate, or be supported, until the out of service date (e.g. . changing illuminated strips during scheduled servicing, or, an illuminated strip which can last until the out of service date without replacement are acceptable).	
SRD 03-05	The System shall be able to represent aircraft specific role equipment.	Dispatcher harness securing points.	As Threshold including (as many as possible): Crew Served Weapons (M3M, GPMG), internal cargo nets (including loads secured by nets), fast ropes, sonobouy A-frames.	Increased representativeness.	
SRD 04-01	The System shall be able to be reconfigured to represent escape exit	Merlin all Mks, Wildcat all Mks,	N/A.	Increased representativeness and minimum standard required	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
	size and location for the following aircraft types:			for training in order to achieve ALARP/Tolerable.  Aircrew and passengers require normal aircraft operating locations to be as comparable to their respective aircraft type as possible.	
SRD 04-02	The Module shall be able to be reconfigured to represent escape exit operating mechanism action and location for the following aircraft types:	Merlin all Mks, Wildcat all Mks,	N/A.	Increased representativeness and minimum standard required for training in order to achieve ALARP/Tolerable.  Aircrew and passengers require normal aircraft operating locations to be as comparable to their respective aircraft type as possible.	
SRD 04-03	The Module shall be able to be reconfigured to represent the seat harnesses for the following aircraft types:	Merlin all Mks, Wildcat all Mks,	N/A.	Increased representativeness and minimum standard required for training in order to achieve ALARP/Tolerable.  Aircrew and passengers require normal aircraft operating locations to be as comparable to their respective aircraft type as possible.	
SRD 04-04	The System shall be able to be reconfigured to represent each aircraft type within X hrs.	X = 4.	X = 2.	To achieve schedule underpinning the Training Plan.  Link to SRs 04-01, 02, 03.	
SRD 04-05	The System shall be able to be reconfigured between aircraft type representation by 2 trained and qualified RNCMSUET staff members.	As Requirement.	N/A.	To align with RNCMSUET manning levels and achieve a level of supervision with regards to standards and practices.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 04-06	The System shall be able to change between different Modules within 30 minutes.	As Requirement	N/A.	The Module needs to be designed such that a pre-configured Module change (on-the-hook to on-the-hook) can be conducted within 30 mins.	
<b>SRD 05-00</b>	<b>OPERABILITY</b>				
SRD 05-01	The System shall be able to be stopped during training at any point and returned to the starting configuration.	As Requirement.	N/A.	Standard training requirement -flexibility required for Instructor controlled training.  The 'starting configuration' refers to harnesses, escape mechanisms, exits, role equipment and other training aids at a configuration to commence training with the module above the water in the upright position.	
SRD 05-02	The Modules' jettisonable elements must sink to the pool floor but able to be recovered and re-fitted by 1 x UET staff diver.	As Requirement.	N/A.	Realism. Safety - jettisonable items should not float and cause risk of injury to personnel. To enable timely transition (SR05-04) between training events.	➤
SRD 05-03	The Modules' jettisonable elements must be able to be re-fitted easily and quickly whilst in or above the pool or on the pool-side.	As Requirement.	N/A.	Enable training programme to be completed in required time, with minimum time between training runs. 'Quickly' = Achieving SR 05-04	
SRD 05-04	The System shall be able to be reset to starting configuration in X minutes between training runs.	X = 2.	X = 1.	The 'starting configuration' refers to harnesses, escape mechanisms, exits, role equipment and other training aids at a configuration to commence training with the module above the water in the upright position.	➤
SRD 05-05	The System shall be able to be reset to the starting configuration by 1 x UET instructor between training runs.	As Requirement.	N/A.	The 'starting configuration' refers to harnesses, escape mechanisms, exits, role	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				<p>equipment and other training aids at a configuration to commence training with the module above the water in the upright position.</p> <p>'Resetting' the System in this context does not include the winch controlling staff.</p> <p>Assumption: The jettisonable elements will sink to the pool floor and be collected by UET staff diver(s) for re-setting between runs.</p>	
SRD 05-06	The System shall be able to be locked, at the selected roll angle for the run and when lifting between training runs.	As Requirement.	N/A.	Safety feature to prevent roll during lifting. During an emergency raise the module needs to maintain its attitude and not right itself until it has been evacuated and is clear of the water. This also needs to be the case during air supply failure therefore the brakes need to fail on.	
SRD 05-07	The System shall use gravity-driven self-righting.	As Requirement.	N/A.	<p>Instructor control of resetting Module is desirable</p> <p>The System shall be manually returned to the upright position between training runs.</p> <p>All Modules self-right due to weight distribution</p> <p>Controlled by winch position and speed of raise.</p>	
SRD 06-01	The emergency release seat harness (SR 24-01) System must be able to be reset between training runs.	As Requirement.	N/A.	This should not significantly increase times specified in SR 05-04.	
SRD 07-01	The UET staff shall be provided with secure hand-holds and good visibility to all students inside the Module	2 specific internal UET Staff positions.	N/A.	Safety of instructors and trainees within the System.	
SRD 08-01	The UET Staff (not including those in the water or System) shall be able to remotely monitor training within the Module.	Pool-mounted cameras to provide monitoring within Module.	Internal cameras to provide remote view and recording of training.	Safety of instructors and trainees within the System.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 09-01	The System will allow UET staff to communicate effectively with the staff at the control position.	By voice while above water.	As Threshold plus emergency raise light signal from submerged System.	Safety of instructors and trainees within the System.	
<b>SRD 10-00</b>	<b>AVAILABILITY</b>				
SRD 10-01	The System shall be able to support the Required activity level (RAL).	RAL = 7000 training places per year.	N/A.	Statement of training requirement (SOTR), training year 2019/20.	
SRD 11-01	The System shall ensure that each configured Module is available for training for 5 consecutive or non-consecutive working days per week.	As Requirement.	N/A.	In order to achieve RAL.	
SRD 11-02	The System shall be available for 5 consecutive or non-consecutive hours per working day.	As Requirement.	N/A.	In order to achieve RAL..	
SRD 11-03	The System shall be available for 45 weeks per year.	As Requirement.	N/A.	In order to achieve RAL.	
SRD 12-01	The System be able to support surged training requirements by increasing availability (hours per day) by X% per day for up to Y weeks.	X = 100% including training outside normal working week hours and weekends. Y = 2 weeks.	X = 100% including training outside normal working week hours and weekends. Y = 4 weeks.	To meet surge requirements.  Normal working hours means Mon – Fri 0800 – 1700. Average Evolutions per day = 6; an Evolution is 1 Module 'dunk'.	
SRD 13-01	In the event the Authority hold title of the System [Module], they shall be required to conduct representative UET until RNCMSUET OSD 2047.	As Requirement.	N/A.	To maintain ALARP/Tolerable mitigation for RtL.  Training systems are required until RMCSUET OSD 2047. Therefore the design and manufacture of the modules should be capable of supporting this OSD	
<b>SRD 14-00</b>	<b>RELIABILITY</b>				
SRD 14-01	The System shall be reliable and able to meet Availability requirements with minimum maintenance.	As Requirement.	N/A.	In order to achieve Availability for RAL.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 14-02	The System shall be constructed of materials suitable for the demands of UET.	As Requirement.	N/A.	In order to achieve Availability for RAL.	
<b>SRD 15-00</b>	<b>MAINTAINABILITY</b>				
SRD 15-01	The System shall require minimal maintenance on a daily and weekly basis Forward, maintenance activity should not impact training availability.	As Requirement.	N/A.	In order to ensure the System remains suitably reliable.  Minimal maintenance is as close to no maintenance as is possible – any daily and weekly maintenance proposed by the Contractor must be justified prior to contract award.	
SRD 15-02	The System shall be able to be maintained with appropriate access to first line spares.	As Requirement.	N/A.	In order to ensure the System remains suitably reliable.	
SRD 15-03	The System shall be maintained by standard tooling or supplied with any specialist tooling.	As Requirement.	N/A.	In order to ensure the maintenance activity can be conducted Forward.	
SRD 15-04	The System shall be supplied with Technical publications to support maintenance.	As Requirement.	N/A.	In order to ensure the maintenance activity can be conducted Forward.	
SRD 15-05	The System shall be supplied with movement instructions and data.	As Requirement.	N/A.	In order to ensure the maintenance activity can be conducted Forward.	
SRD 15-06	The System's daily maintenance shall be conducted within the RNCMSUET facility.	As Requirement.	N/A.	In order to ensure the maintenance activity can be conducted Forward.	
SRD 16-01	The System's daily maintenance requirements shall be carried out by a maximum of 2 RNCMSUET Staff.	As Requirement.	N/A.	In order to ensure the maintenance activity can be conducted Forward.	
SRD 16-02	The System's scheduled maintenance requirements shall be conducted by X.	X = Staff specified by the User.	X = System Contractor staff.	In order to ensure the maintenance activity can be conducted Forward.	
SRD 16-03	Any System fault rectification shall be conducted by X.	X = Staff specified by the User.	X = System contractor staff.	In order to ensure the maintenance activity can be conducted Forward.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 16-04	Fault rectification shall be completed within a timescale which does not adversely affect training output.	5 working days.	3 working days.	In order to achieve Availability for RAL.  Only applies to Contractor-delivered fault rectification.	
<b>SRD 17-00</b>	<b>INTERFACE</b>				
SRD 17-01	The Module must not yaw to the extent that any part of it comes within X of the pool side.	X = 2m.	X = 2.5m.	The Modules must not contact the poolside or trap any person or object against the poolside.  Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-02	The System shall be compatible with the current facility infrastructure; HP air Systems, electrical power and lifting equipment.	As Requirement.	N/A.	In order to ensure the System can integrate with existing infrastructure.  Appendix A to this document (Interface Control Document) specifies the connections required.	
SRD 17-03	The Module shall be able to sink at a rate that is compatible with the supporting cable.	As Requirement.	N/A.	Tension must be maintained on the cable to prevent loading issues with the cable and crane.  Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-04	The Module shall not pitch beyond set limits irrespective of unevenly-distributed student placement.	20 degrees from horizontal.	10 degrees from horizontal.	Minimum depth limits for UET and floor impact prevention. Training requires rear troop drills only and front seat aircrew only leading to uneven internal weight distribution.  Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-05	The Module shall not yaw beyond set limits.	30 degrees of centreline.	15 degrees of centreline.	Refer to: Appendix A to this document (Interface Control Document)	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 17-06	The Module shall descend to no closer than 1 metre from the bottom of the pool.	As Requirement.	N/A.	Safety - personnel cannot be trapped beneath the System.  To prevent damage to the facility.  Refer to: Appendix A to this document (Interface Control Document)  This does not include jettisonable items which are permitted to descend to the bottom of the pool so long as there is no possibility of damage to either the pool or the jettisonable item.	
SRD 17-07	The System shall have a selectable manual locking System to prevent the crane connection point moving when powered off in storage on the poolside.	As Requirement	N/A.	For storage and runs.  Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-08	The System shall be able to connect and disconnect the Modules from a position accessible at ground level, to avoid Working At Height restrictions during Module changes.	As Requirement.	N/A.	To remove working at height restrictions.  Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-09	The System shall be able to be stored within the facility storage area.	As Requirement.	N/A.	In order to provide protection from the effects of weather and to facilitate easy transition between training events.  Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-10	The System shall be able to be manoeuvred around the storage area safely by 2 staff.	As Requirement.	N/A.	Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-11	The System shall be able to enter and exit the building via the existing doors and clear any height restrictions in the pool hall.	As Requirement.	N/A.	In order to ensure the Module can enter the building.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-12	The System shall be constructed of materials suitable for long term use in the RNCMSUET facility pool environment.	As Requirement.	N/A.	Refer to: Appendix A to this document (Interface Control Document)	
SRD 17-13	The System shall not contaminate the RNCMSUET pool.	As Requirement.	N/A.	Refer to: Appendix A to this document (Interface Control Document)	
<b>SRD 18-00</b>	<b>SUPPORTABILITY</b>				
SRD 18-01	The System shall be supported by provision of System-specific spares at a scale suitable to meet the availability and required activity level.	As Requirement.	N/A.	In order to achieve Availability for RAL	
SRD 18-02	The System-specific tooling shall be supported.	As Requirement.	N/A.	In order to achieve Availability for RAL.  Only applies if the contractor is supplying specific tooling SR 15-03.	
SRD 18-03	The System shall be supplied with Ground Support Equipment (GSE) if required.	As Requirement.	N/A.	For example; storage, transportation, movement.	
<b>SRD 19-00</b>	<b>TRAINING</b>				
SRD 19-01	The RNCMSUET Staff shall be trained in the operation of the System.	A training course for all required UET Staff to be delivered at the RNCMSUET facility, with supporting course material, to enable subsequent train-the-trainer.	All staff trained on delivery of the System, at the RNCMSUET facility, and any subsequent new staff while the System is in-Service.	Safe and efficient operation of the System.	
SRD 19-02	RNCMSUET Staff will be trained to conduct reconfiguration of the System between representative aircraft types.	A training course for all required UET Staff to be delivered at the RNCMSUET facility, with supporting course material, to enable subsequent train-the-trainer.	All staff trained on delivery of the System, at the RNCMSUET facility, and any subsequent new staff while the System is in-service.	Safe and efficient operation of the System	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 19-03	The RNCMSUET staff shall be trained in the ground handling of the System.	A training course for all required UET Staff to be delivered at the RNCMSUET facility, with supporting course material, to enable subsequent train-the-trainer.	All staff trained on delivery of the System, at the RNCMSUET facility, and any subsequent new staff while the System is in-service.	Safe and efficient operation of the System.	
SRD 19-04	The RNCMSUET Staff shall be trained in the attachment and disconnection of the System to the crane.	A training course for all required UET Staff to be delivered at the RNCMSUET facility, with supporting course material, to enable subsequent train-the-trainer.	All staff trained on delivery of the System, at the RNCMSUET facility, and any subsequent new staff while the System is in-service.	Safe and efficient operation of the System	
SRD 20-01	RNCMSUET Staff will be trained to conduct first line maintenance (to include limited fault rectification) of the System.	A training course for all required UET Staff to be delivered at the RNCMSUET facility, with supporting course material, to enable subsequent train-the-trainer.	All staff trained on delivery of the System, at the RNCMSUET facility, and any subsequent new staff while the System is in-service.	Safe and efficient operation of the System.	
<b>SRD 31-00</b>	<b>QUALITY</b>				
SRD 31-01	The Contractor shall demonstrate compliance to ISO9001:2015 (quality management System) in the relevant fields to the System.	ISO9001:2015 complaint.	ISO9001:2015 certified.		
SRD 31-02	The Contractor shall provide the Authority, prior to contract award, a quality assurance management plan.	As Requirement.	N/A.		
SRD 31-03	The Contractor shall provide the Authority, prior to contract award, an operating safety management plan	As Requirement.	N/A.		
<b>SRD 21-00</b>	<b>HUMAN FACTORS</b>				
SRD 21-01	The System shall accommodate the anthropometric and physical characteristics of the specified user population.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the design of the System accommodates the	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				physical dimensions and physical abilities of the target users. It includes both the 'static' dimensions and the 'dynamic' range of movement of body parts and how these must be accommodated in design. It also includes human capabilities and limitations in terms of strength, dexterity and physical workload.	
SRD 21-02	The System shall accommodate the communication needs of the specified user population.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the System is designed to support human means of communicating (including verbal and non-verbal means).	
SRD 21-03	The System shall provide appropriate working spaces for humans in the System.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that both the immediate working area (workspace) and the wider working environment is designed to accommodate the physical characteristics of the users (e.gfit, comfort, visibility of displays) and to support the overall layout of the area for a range of aspects such as access, emergency egress and the need for team working. The physical environment, including thermal and lighting needs are also included.	
SRD 22-01	The System shall provide appropriate means for the human to make control inputs to the System.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the System is designed	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				to provide the most appropriate means of making control inputs and the configuration of the control device, whether mediated through a physical device or through a graphical user interface. The focus of this requirement is on the transmission of user intent to the System and the feedback that the System provides to the user.	
SRD 22-02	The System shall facilitate the human contribution to maintenance and support operations.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the System design accommodates the need for maintenance activities that will be conducted through its lifecycle (e.g. access to compartments and units) and to ensure that support activities (e.g.the provision of resupply routes on board naval vessels) have been adequately addressed.	
SRD 23-01	The System shall protect the human from the effects of workplace hazards.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the needs of workplace health and safety are addressed, including working at height, manual handling and all other aspects of the Health and Safety Act.	
SRD 24-01	The System shall integrate humans in ways which minimise the opportunity for human error.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the System is designed so that it does not induce either human errors or	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
				behavioural violations and allows the System to recover from those errors where they are committed.	
SRD 25-01	The System shall optimise manpower numbers and structures required to deliver the capability across its lifecycle.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the System is designed to address the capability need in terms of manpower provision.	
SRD 25-02	The System shall be coherent with the development of the training solution.	As Requirement.	N/A.	DEFSTAN 00-251 Part 3 Human factors integration for Defence Systems.  This requirement ensures that the design of the System is coherent with the design of the training solution (e.g. does not impose additional training burden) and that the training solution itself is designed in accordance with human factors principles.	
<b>SRD 24-00</b>	<b>HEALTH, SAFETY &amp; ENVIRONMENTAL</b>				
SRD 24-02	All seat harnesses need to have an emergency release mechanism separate to the QRF.	As Requirement.	N/A.	Safety of trainees within the System	
SRD 26-01	The System shall ensure that Short Term Air Supply System (STASS) - assisted submerged escape are from a depth no more than 1.5 metres.	As Requirement.	N/A.	Medical Standards - BR1750A Information leaflet 12.	
SRD 26-02	The System shall comply with all relevant Health and Safety regulations.	As Requirement.	N/A.	Defence Safety Authority 01.1.	
SRD 27-01	The System shall be supplied with Health and Safety documentation.	Safety documentation supplied as stated in the latest version of DEFSTAN 00-056. Currently Issue 7, Part 1, paragraph 7.6.	N/A.	DEFSTAN 00-056 Defence Safety Authority 01.1.	

ID	System Requirement	Threshold MOE	Objective MOE	Remarks	Tenderer's response
SRD 28-01	The System shall comply with all relevant Environmental regulations.	As Requirement.	N/A.	Defence Safety Authority 01.1 DEFSTAN 00-035, 00-051.	
<b>SRD 29-00</b>	<b>SECURITY</b>				
SRD 29-01	The System shall comply with all relevant security regulations.	As Requirement.	N/A.	DEF CON 659A – Security Measures  DEF CON 660 – Official-Sensitive Security Requirements.	
SRD 30-01	The System shall comply with all relevant Cyber Security regulations.	As Requirement.	N/A.	DEFSTAN 05-138 – Cyber Security for Defence Suppliers DEF CON 658 (Cyber). Detail any Cyber risks posed by the system.	

## **PART 3 – CONTEXT DOCUMENTS**

Annex A to  
Schedule A HUETM Contract 700261343 dtd 13 May 2020

ID	Document	Reference
08	UK Defence Standardization	STANMIS Toolset
09	Defence Standard 00-003, Design Guidance for the Transportability of Equipment	DEF STAN 00-003 Issue 6, dated 28 Feb 17
10	Defence Standard 00-251, Part 0 - Human Factors Integration for Defence Systems, Contracting for Human Factors Integration in Defence Systems	DEF STAN 00-251 Part 0, Issue 1, dated 05 Feb 16
11	Defence Standard 00-251, Part 1 - Human Factors Integration for Defence Systems, Early Lifecycle Human Factors Integration Process Requirements	DEF STAN 00-251 Part 1, Issue 1, dated 05 Feb 16
12	Defence Standard 00-251, Part 2 - Human Factors Integration for Defence Systems, Human Factors Integration Process Requirements for the Solution Provider	DEF STAN 00-251 Part 2, Issue 1, dated 05 Feb 16
13	Defence Standard 00-251, Part 3 - Human Factors Integration for Defence Systems, Human Factors System Requirements	DEF STAN 00-251 Part 3, Issue 1, dated 05 Feb 16
14	Defence Standard 00-056, Part 1 – Safety Management for Defence Systems, Requirements & Guidance	DEF STAN 00-056 Part 1, Issue 7, dated 28 Feb 17
15	Defence Standard 00-600, Integrated Logistic Support. Requirements for MOD Projects	DEF STAN 00-600, Issue 4, dated 28 Nov 16
16	Defence Standard 01-005, Fuels, Lubricants and Associated Products	DEF STAN 01-005, Issue 18, dated 31 Aug 16
17	Defence Standard 05-057, Configuration Management of Defence Materiel	DEF STAN 05-057, Issue 6, dated 7 Mar 14
18	Defence Standard 05-061, Part 1 - Quality Assurance Procedural Requirements, Concessions	DEF STAN 05-061 Part 1, Issue 6, dated 31 Mar 16
19	Defence Standard 05-061, Part 4 - Quality Assurance Procedural Requirements, Contractor Working Parties	DEF STAN 05-061 Part 4, Issue 3, dated 25 Oct 02
20	Defence Standard 05-135, Avoidance of Counterfeit Material	DEF STAN 05-135 Issue 1, date 10 Jul 14
21	Defence Standard 05-138, Cyber Security for Defence Suppliers	DEF STAN 05-138 Issue 1, dated 21 Aug 15
22	Defence Standard 81-041, Part 1 - Packaging of Defence Materiel, Introduction to Defence Packaging Requirements	DEF STAN 81-041 Part 1, Issue 9, dated 14 Dec 16
23	Defence Standard 81-041, Part 2 - Packaging of Defence Materiel, Design	DEF STAN 81-041 Part 2, Issue 9, dated 14 Jan 17
24	Defence Standard 81-041, Part 3 - Packaging of Defence Materiel, Environmental Testing	DEF STAN 81-041 Part 3, Issue 6, dated 12 Jun 14

Annex A to  
Schedule A HUETM Contract 700261343 dtd 13 May 2020

25	Defence Standard 81-041, Part 4 - Packaging of Defence Materiel, Service Packaging Instruction Sheet (SPIS)	DEF STAN 81-041 Part 4, Issue 8, dated 16 Oct 15
26	Defence Standard 81-041, Part 5 - Packaging of Defence Materiel, Packaging Processes	DEF STAN 81-041 Part 5, Issue 8, dated 14 Jan 17
27	Defence Standard 81-041, Part 6 - Packaging of Defence Materiel, Package Marking	DEF STAN 81-041 Part 6, Issue 9, dated 9 Oct 15
30	NATO STANdardisation AGreement	STANAG Index
31	NATO STANdardisation AGreement (STANAG) 1414 – Guidelines to Ensure that Contractors Design and Supply New Equipment Capable of Using Standardized Fuels, Lubricants & Associated Products	STANAG 1414, Edition 3, dated 25 May 09
32	Acquisition System Guidance (ASG)	ASG Website
33	ASG Defence Conditions	ASG DEF CONS
34	ASG Human Factors (HF)	ASG HF Integration Management System
35	Defence Condition 117 – Supply of Information for NATO Codification & Defence Inventory Introduction	DEF CON 117, dated Oct 13 (Edn. 11/17 SC2)
36	Defence Condition 129 - Packaging (For Articles Other Than Munitions)	DEF CON 129, dated 18 Nov 16 (Edn. 07/19)
37	Defence Condition 602B – Quality Assurance (with Deliverable Quality Plan)	DEF CON 602B (Edn. 12/06)
38	Defence Condition 608 – Access & Facilities To Be Provided By The Contractor	DEF CON 608, dated Oct 14 (Edn. 10/14)
39	Defence Condition 611 – Issued Property	DEF CON 611, dated Feb 16 (SC2 Edn. 02/16)
40	Defence Condition 627 – Quality Assurance - Requirement for a Certificate of Conformity	DEF CON 627, dated Dec 10 (Edn. 12/10)
41	Defence Condition 659A – Security Measures	DEF CON 659A, dated Feb 17 (Edn. 02/17)
42	Defence Condition 660 – Official-Sensitive Security Requirements	DEF CON 660, dated Dec 15 (Edn. 12/15)
43	Defence Condition 661 - Issued Property	DEF CON 661, dated Feb 16 (Edn. 10/06)
44	Defence Condition 694 – Accounting For Property Of The Authority	DEF CON 694, dated Mar 16 (Edn. 08/18 SC2)
47	Aircrew Equipment Assemblies: General & Technical Information.	DAP108B-0001-1.
48	Quality Management System.	ISO9001:2015.

## PART 4 – GLOSSARY

<b>Acronym</b>	<b>Description</b>
AESAS	Air Engineering Support and Airfield Services
AEA	Aircrew Equipment Assemblies
ASG	Acquisition Support Guidance
AH	Attack Helicopter
CAP	Capability
CSAV	Carrier Strike Aviation
CtS	Commitments
DACOS(AV)	Deputy Assistant Chief of Staff (Aviation)
DEFSTAN	Defence Standard
DEF CON	Defence Condition
DE&S	Defence Equipment and Support
DH	Duty Holder
FOC	Full Operating Capability
HF	Human Factors
HUET	Helicopter Underwater Escape Trainer
Hels OC	Helicopters Operating Centre
ISD	In Service Date
ICD	Interface Control Document
IT	Information Technology
JHC	Joint Helicopter Command
JSP	Joint Service Publication
MDT	Merlin Delivery Team
MK	Mark
MOD	Ministry of Defence
NDT	Non-Destructive Testing
NCHQ	Navy Command Headquarters
NVG	Night Vision Goggles
OSD	Out of Service Date
PPE	Personal Protective Equipment
RAL	Required Activity Level
RNCMSUET	Royal Navy Centre of Maritime SERE and Underwater Escape Trg

RtL	Risk to Life
RNAS	Royal Naval Air Station
RW	Rotary Wing
SERE	Survive Evade Resist Extract
SE	Survival Equipment
SOTR	Statement of Training Requirement
SRD	Systems Requirements Document
SSON	Single Statement Of (User) Need
STASS	Short Term Air Supply System
TAA	Typed Airworthiness Authority
TL	Team Leader
Trg	Training
UET	Underwater Escape Training
URD	User Requirements Document

## PART 2 – DELIVERABLE DOCUMENTATION

1. The table below lists the contract deliverable documentation with required delivery date or delivery point After Contract Award (ACA)

<b>Deliverable</b>	<b>Quantity</b>	<b>Delivery Date</b>	<b>Notes</b>
Health & Safety Management Plan	1	2 months ACA	Contents to be tailored with Authorities HS&E representative
Equipment/System Safety Case	1 PDF copy	3 months ACA	For review
Equipment/System Safety Case	3 hard copies	At equipment delivery	
Environmental Management Plan	1	2 months ACA	Contents to be tailored with Authorities HS&E representative
Progress Reports	Refer to Condition 20.b		
Quality Plan	Refer to Condition 21		
Hazardous Contractor Deliverables, Materials and Substances	Refer to Condition 24		A completed declaration provided as part of tender submission and included within Schedule 6 of Contract.
Timber and Wood-Derived Products	Refer to Condition 25		A completed declaration provided as part of tender submission and included within Schedule 7 of Contract.
Training Documentation	1 PDF copy	3 months ACA	For review
Training Documentation	3 hard copies	At equipment delivery	
Operational Documentation	1 PDF copy	3 months ACA	For review
Operational Documentation	3 hard copies	At equipment delivery	
Service and Maintenance Documentation	1 PDF copy	3 months ACA	For review
Service and Maintenance Documentation	3 hard copies	At equipment delivery	
Master Parts List	1	3 months ACA	To include Spares Pack contents.