

## CHANGE AUTHORISATION NOTE

Change Authorisation Note 001	Title: Project Panther	Date: 15 <sup>th</sup> October 2019
Agreement relating to aerial surveillance dated 19 March 2019 (the "Agreement")	Type of Change: Contract Change	
<p><u>Detailed description of the Change and wording of related changes to the Agreement</u></p> <p>The following changes to the Agreement shall take effect from the date on which this Change Authorisation Note has been signed by the Authority and the Supplier and shall expire on 31 March 2020 unless otherwise agreed between the Parties:</p> <p>1. The definition of "Services" in Schedule 1 of the Agreement shall be amended as per the underlined and italicised wording below:</p> <p><b>"Services"</b> means any and all of the services to be provided by the Supplier under this Agreement, including those set out in Schedule 2 (Services Description) <u>and Schedule 2A (Project Panther Services)</u></p> <p><b>"Service Requirements"</b> means the requirements set out in the first column of the table in Schedule 2 (Services Description) <u>and the requirements set out in Schedule 2A (Project Panther Services).</u></p> <p>2. The following definitions shall be added to Schedule 1 of the Agreement:</p> <p><b>"Flying Hour Charge"</b> means the sum of the Hourly Flying Rate multiplied by the number of hours flown by the Supplier in the relevant month in performance of the Project Panther Services;</p> <p><b>"Fuel Burn Rate"</b> means 150 litres of fuel per hour;</p> <p><b>"Fuel Charges"</b> means the aircraft fuel charges incurred by the Supplier in providing the Project Panther Services multiplied by the Fuel Burn Rate;</p> <p><b>"Hourly Flying Rate"</b> means: <span style="border: 1px dashed black; padding: 2px;">S&amp;I</span> (exc. VAT);</p> <p><b>"Livery Removal Cost"</b> means: <span style="border: 1px dashed black; padding: 2px;">S&amp;I</span> (exc. VAT);</p> <p><b>"Project Expenses"</b> means any landing and handling fees, parking, out of hours operation fees, aircrew accommodation and expenses incurred in the performance of the Project Panther Services;</p> <p><b>"Project Panther Cap"</b> means <span style="border: 1px dashed black; padding: 2px;">S&amp;I</span> (exc. VAT);</p> <p><b>"Project Panther Commencement Date"</b> the date on which Change Authorisation Note 001 was signed by the Authority and the Supplier;</p> <p><b>"Project Panther Expiry Date"</b> means 31 March 2020;</p> <p><b>"Project Panther Services"</b> means the services set out in Schedule 2A (<i>Project Panther Services</i>);</p>		

“**Project Plan**” means the plan set out at Appendix A of the Change Authorisation Note 001;

“**Standing Charge**” means: S&I (exc. VAT);

3. The following additional clause 45 shall be inserted into the Agreement:

**“45 Project Panther**

45.1 The Supplier shall comply with the Project Plan.

45.2 The Supplier shall provide the Project Panther Services from the Project Panther Commencement Date until the Project Panther Expiry Date in accordance with the Project Plan.

45.3 The Supplier shall ensure that the Project Panther Services:

45.3.1 comply in all material respects with Schedule 2A (Project Panther Services); and

45.3.2 are supplied in accordance with Schedule 5A (Project Panther Solution) and the provisions of the Agreement;

45.4 Subject to Clauses 45.6 of the Agreement, in consideration of the Supplier providing the Project Panther Services, the Authority shall pay in accordance with Annex B (Additional Flying Charges) to Schedule 10 (Charges and Invoicing):

45.4.1 the Standing Charge, the Flying Hour Charge and the Fuel Charges to the Supplier; and

45.4.2 all reasonable and evidenced Project Expenses

less any Deductions.

45.5 Following the Project Panther Expiry Date or if the Agreement is terminated prior to the Project Panther Expiry Date for any reason, the Authority shall pay the Livery Removal Cost to the Supplier within 30 days of receipt of a valid invoice from the Supplier.

45.6 If the Agreement is terminated prior to the Project Panther Expiry Date for any reason other than a Supplier Termination Event, the Authority shall pay any outstanding Standing Charge to the Supplier in accordance with Annex B (Additional Flying Charges) to Schedule 10 (Charges and Invoicing).

45.7 If the Agreement is terminated prior to the Project Panther Expiry Date as a result of a Supplier Termination Event, then Annex B (Additional Flying Charges) to Schedule 10 (Charges and Invoicing) shall not apply and the Authority shall pay:

45.6.1 such portion of the Standing Charge;

45.6.2 such portion of the Flying Hour Charge;

45.6.3 such portion of the Fuel Charges; and

45.6.4 all reasonable and evidenced Project Expenses

as are calculated as being due for the period from the last payment made by the Authority in accordance with Annex B (Additional Flying Charges) to Schedule 10 (Charges and Invoicing) until the Termination Date within thirty (30) days of receipt of a valid invoice from the Supplier.

45.8 Notwithstanding the Authority's payment obligations under this Clause 45, the Authority shall not be obliged to pay more than the Project Panther Cap.

45.9 The Authority may, at any time prior to the Project Panther Expiry Date, notify the Supplier that it wishes to extend the Project Panther Expiry Date.

45.10 If the Authority exercises its right to extend the Project Panther Expiry Date under Clause 45.9, the Parties shall comply with the Change Control Procedure and, provided that there is no change to the Project Panther Services, the Supplier agrees that it shall not be entitled to claim more than **S&I** (exc. VAT) as the revised monthly standing charge."

4. The following amendments shall be made to the Schedules of the Agreement:

Appendix B to this Change Authorisation Note shall be added as a new Schedule 2A of the Agreement.

Appendix C to this Change Authorisation Note shall be added as a new Schedule 5A of the Agreement.

Appendix D to this Change Authorisation Note shall be added as a new Annex B to Schedule 10 of the Agreement.

Adjustment to the Charges resulting from the Contract Change

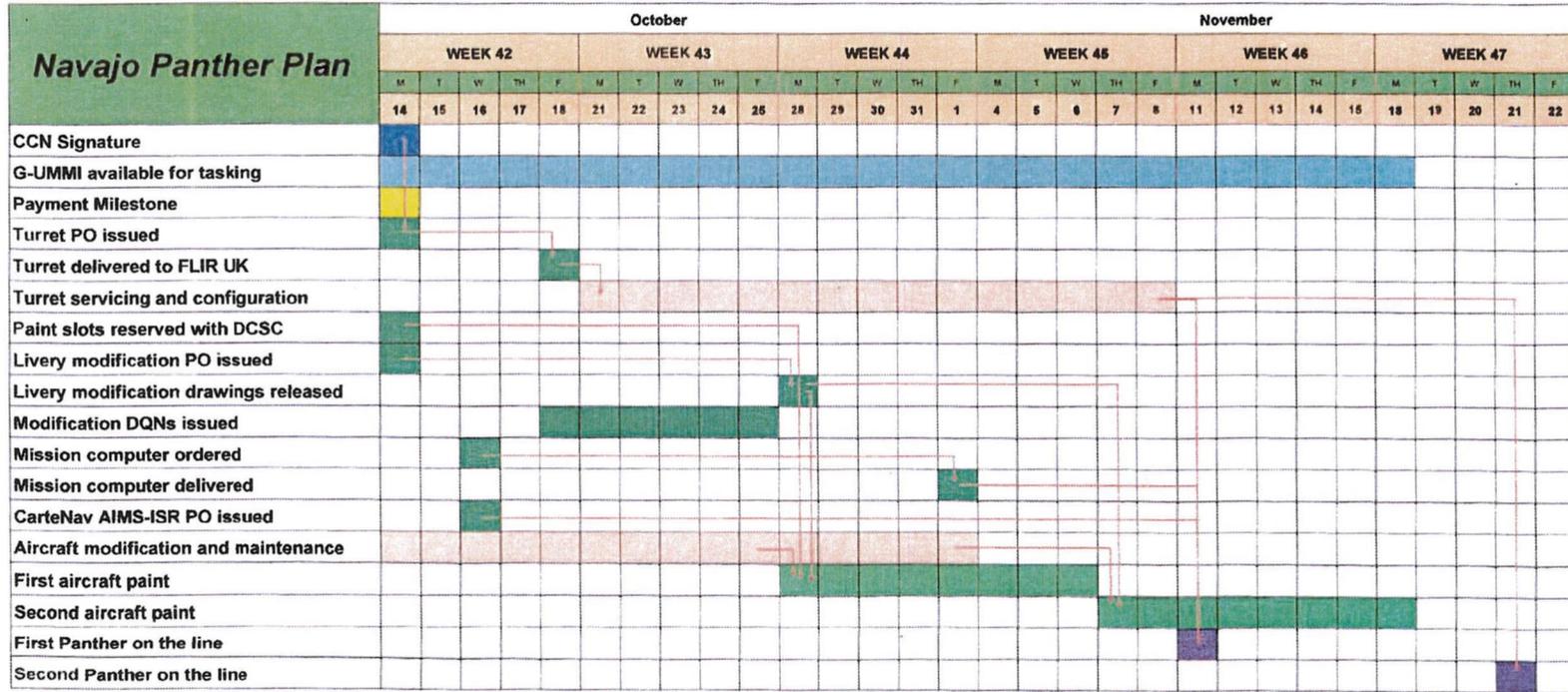
The Parties agree that they shall each bear their own costs of preparing and/or negotiating this Change Authorisation Note.

Signed for and on behalf of the Authority	Signed for and on behalf of the Supplier
Signature:  <b>Personal Data</b>	Signature:  <b>Personal Data</b>
Name: <b>Name</b>	Name: <b>Name</b>
Position: Commercial and Programmes Director	Position: <b>Name</b>
Date: 15/10/19	Date: 15/10/19

Appendix A

Project Plan

Annex A -- Project Plan



**Appendix B**

**Additional Schedule 2A of the Agreement**

## 1 Definitions

1.1 In this Schedule the following initialisms, acronyms and definitions shall apply:

“**Accepted**” means the Supplier has accepted any Task which can only be refused by the Supplier on safety or meteorological grounds and “**Accept**” and “**Acceptance**” shall be construed accordingly;

“**ACRO**” means ACRO Criminal Records Office;

“**AIS**” means the automatic identification system used for shipping;

“**AOC**” means Air Operator's Certificate;

“**ARCC**” Aeronautical Rescue Coordination Centre;

“**Available**” means the System is fully serviceable, including all role equipment, capable of legal flight and ready to take off from the base with a full complement of crew;

“**Baseline**” means Baseline Security Clearance;

“**BF**” means Border Force;

“**BLOS**” means Beyond Line of Sight;

“**Co-Ordinating Authority**” means the ARCC, the relevant OGD or an emergency service as confirmed by the Tasking Authority;

“**CTC**” means Counter-Terrorism Clearance;

“**Daylight**” means sunrise to sunset;

“**EPIRB**” means Electronic Position Indicating Radio Beacon;

“**Media**” means data storage material including disks, tapes, CDs and DVDs;

“**MMO**” means Marine Management Organisation;

“**Night Time Hours**” means any hour or time which is not Daylight;

“**OGD**” means Central Government Bodies other than the Authority;

“**Oil**” means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products;

“**Planned Tasks**” means Tasks included in the Programme;

“**PLB**” means Personal Locator Beacon;

“**Pollutant**” means substances which are likely to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate users of the sea;

“**Programme**” means the programme of Tasks provided by the Authority to the Supplier each month as updated from time to time;

“**ROA**” or Radius of Action means the maximum distance of the airborne system at cruise speed in still air with 30 minutes on scene to include hover, searching and winching, followed by landing at the point of departure with VFR fuel minima; to be calculated at sea level in ISO conditions;

“**SAR**” means Search and Rescue;

“**SART**” means SAR transponders capable of being detected;

“**SP**” means Service Point;

“**System**” means the entire system including any assets, equipment, hardware, software and personnel that will deliver the capability;

“**Target**” means the subject of a Task including a beacon, casualty, survivor, vessel, vehicle, wreckage or any other object or person;

“**Task**” means an activity included in the Programme and/or instructed by the ARCC;

“**Tasking Authority**” has the meaning given to it in paragraph 2.1 of this Schedule 2.1 (*Service Requirements*);

“**UKEEZ**” means UK Exclusive Economic Zone as illustrated at <https://www.gov.uk/guidance/uk-maritime-limits-and-law-of-the-sea>;

“**UKSRR**” means UK Search and Rescue Region as set out in Annex A of the following link:  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/593127/mca\\_uksar.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/593127/mca_uksar.pdf);

“**Unplanned Tasks**” means Tasks which are not included in the Programme;

“**VMS**” means Vessel Monitoring System which is a satellite-based monitoring system which at regular intervals provides data to the fisheries authorities on the location, course and speed of fishing vessels;

“**WGS84**” means World Geodetic System 1984 which is a standard that provides Latitude, Longitude and date/time stamp for position fix of the Target.

## 2 **Introduction**

- 2.1 The Authority requires the Supplier to provide a non-military aerial surveillance service in the UK to the Authority. The Authority requires an all-weather 24/7 capability to provide aerial surveillance, tracking, detection, observation, support to SAR and counter pollution operations within the UKEEZ and UKSRR. This service shall be interoperable with OGDs and neighbouring nations. The Authority, through the ARCC, will act as the sole tasking authority (“**Tasking Authority**”) but the Task may be co-ordinated by any Co-Ordinating Authority, as directed by the Tasking Authority, dependent upon the Task.

### 3 Services Description

UR No.	Service Requirement	Service Points
<b>1.0</b>	<b>Availability</b>	
	The Supplier shall provide a System which is available 95.98% of the time	<p>5 SPs where the System is available less than 95.98% of the time in the Service Period but equal to or greater than 94% of the time in the Service Period.</p> <p>7 SPs where the System is available less than 94% of the time in the Service Period but equal to or greater than 90% of the time in the Service Period.</p> <p>10 SPs where the System is available less than 90% of the time in the Service Period but equal to or greater than 70% of the time in the Service Period.</p> <p>15 SPs where the System is available less than 70% of the time in the Service Period.</p>
<b>2.0</b>	<b>Tasking</b>	
<b>2.1</b>	The Supplier shall only Accept Tasks from the ARCC which may be by any auditable means (including by telephone and email) or if the System is already tasked by the most appropriate means.	3 SPs for each failure
<b>2.2</b>	The Supplier shall liaise with the relevant Co-Ordinating Authority after issue of the Task and shall comply with the instructions of the Co-Ordinating Authority.	3 SPs for each failure

UR No.	Service Requirement	Service Points
2.3	The Supplier shall complete (as determined by the ARCC or the Co-Ordinating Authority) all Planned Tasks in accordance with the Programme. The Programme will be provided to the Supplier by the Authority no later than ten (10) Working Days prior to start of the calendar month in which the Planned Task was programmed.	1 SP for each failure
2.4	The Supplier shall complete (as determined by the ARCC or the Co-Ordinating Authority) all Unplanned Tasks having confirmed Acceptance	2 SPs for each failure
2.5	The Supplier shall ensure that the System shall be airborne and in transit to each Accepted Unplanned Task within 60 minutes of notification by the Tasking Authority between 08:00 and 22:00 local time.	2 SPs for each failure
2.6	The Supplier shall ensure that the System shall be airborne and in transit to each Accepted Unplanned Task within 120 minutes of notification by the Tasking Authority between 22:01 and 07:59 local time.	2 SPs for each failure
2.7	The Supplier shall comply with any requirement of the Authority to reschedule or re-task Planned Tasks to be commenced between 08:00 – 22:00 local time provided the Authority has given at least 6 hours' notice of such rescheduling or re-tasking.	1 SP for each failure
2.8	The Supplier shall comply with any requirement of the Authority to reschedule or re-task Planned Tasks to be commenced between 22:01 and 07:59 local time provided the Authority has given at least 10 hours' notice of such rescheduling or re-tasking.	1 SP for each failure

UR No.	Service Requirement	Service Points
2.9	Whilst engaged upon non- routine Tasks, the Supplier shall utilise opportunities to conduct concurrent or subsequent routine activity	3 SPs for each failure
2.10	The Supplier shall ensure that the System produces plans to support the Task.	1 SP for each failure
2.11	The Supplier shall ensure that the System displays on the aircraft and shares in near real time off aircraft the plan to support the Task.	2 SPs for each failure
2.12	The Supplier shall ensure that the System calculates and promulgates the planned probability of detection and produces and displays on the aircraft <del>and shares electronically in near real time off aircraft</del> overlays of the area covered by all sensors to support the Task.	2 SPs for each failure
2.13	The Supplier shall ensure that the System responds to an incident that requires operations over an extended timeframe in a geographical area whilst minimizing the effect upon existing and Planned Tasks.	4 SPs for each failure
2.14	The Supplier shall where required conduct two concurrent Tasks (whether Planned Tasks or Accepted Unplanned Tasks or both).	2 SPs for each failure
<b>3.0</b>	<b>Operations</b>	
3.1	The Supplier shall ensure that the System operates throughout the UK EEZ.	5 SPs for each failure
3.2	The Supplier shall ensure that the System operates, upon request, in neighbouring states in compliance with all relevant laws and regulations of such states.	4 SPs for each failure

UR No.	Service Requirement	Service Points
3.3	The Supplier shall ensure that the System detects targets and areas of interest anywhere in the UK EEZ within <del>150</del> 180 minutes of take-off.	5 SPs for each failure
3.4	The Supplier shall ensure that the System remains on scene once transit to area of interest is complete for a minimum of 120 minutes	5 SPs for each failure
3.5	The Supplier shall ensure that the System operates in all UK weather conditions.	5 SPs for each failure
3.6	The Supplier shall ensure that the System operates day or night in Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) conditions with no restrictions.	5 SPs for each failure
3.7	<p>The Supplier shall communicate any limitations on System performance including:</p> <ul style="list-style-type: none"> <li>• platform</li> <li>• sensors</li> <li>• personnel</li> <li>• support equipment</li> <li>• infrastructure</li> <li>• climatic conditions</li> </ul> <p>immediately to the Authority by:</p> <ul style="list-style-type: none"> <li>• telephone;</li> <li>• email; and</li> <li>• web based application</li> </ul>	5 SPs for each failure
3.8	The Supplier shall provide near real time asset position information to the Authority electronically in a format that is available on the Authority's system(s). Positional information shall comply with WGS84 standard and provide latitude, longitude and date/time stamp for position fix. Examples of the data sources the Authority's systems can accept include "SATCOM Direct" and "Skytrac" systems.	2 SPs for each failure over 15 minutes in duration

UR No.	Service Requirement	Service Points
3.9	The Supplier shall ensure that the System overlays the area covered by all sensors upon the aircraft track.	2 SPs for each failure
3.10	The Supplier shall ensure that the System detects, categorises and tracks <del>up to two</del> target vessels in all light <del>and weather</del> conditions <del>and makes available the information to the Authority in near real time.</del>	3 SPs for each failure
3.11	The Supplier shall ensure that the System detects and categorises <del>up to two</del> static Targets; on land, on sea and in air, in all light <del>and weather</del> conditions <del>and makes available the information to the Authority in near real time.</del>	3 SPs for each failure
3.12	The Supplier shall ensure that the System detects, categorises and tracks <del>up to two</del> moving Targets; on land, on sea and in air, in all light <del>and weather</del> conditions <del>and makes available the information to the Authority in near real time.</del>	3 SPs for each failure
3.13	The Supplier shall ensure that the System detects and localises thermal variances and provides a report to the Authority, with imagery, identifying hot spots on board a casualty vessel or the extent of Oil / chemical product spills.	3 SPs for each failure
3.14	The Supplier shall ensure that the System identifies and homes on up to two transponders and emergency emitters (including AIS, Aircraft Transponders, PLB, SARTs, EPIRB, VMS) <del>and makes available the information to the Authority in near real time.</del>	3 SPs for each failure
3.15	The Supplier shall ensure that the System captures video and still high definition (HD) imagery in all light levels at all stages of flight. Images/videos shall be date time, and position stamped in accordance with PACE and disclosure principles for	4 SPs for each failure

UR No.	Service Requirement	Service Points
	<p>evidential purposes. Such imagery shall identify vessels via PLN (Port Letter Numbers) or name as displayed on the side (specified in EC Regulation 1381/1987 Annex 2). Data provided shall be fully compliant with EU Inspire directive. Positional information (of target and capture system) shall comply with WGS84 standard and provide Latitude, Longitude and date/time stamp for position fix of the target.</p>	
<p><b>3.16</b></p>	<p>The Supplier shall ensure that imagery captured shall be viewable in flight on board the aircraft and viewable in near real time on the Authority's tasking/coordination system.</p> <p>Such imagery shall identify vessels via PLN (Port Letter Numbers) or name as displayed on the side (specified in EC Regulation 1381/1987 Annex 2). Data provided shall be fully compliant with EU Inspire directive. Positional information (of target and capture system) shall comply with WGS84 standard and provide Latitude, Longitude and date/time stamp for position fix of the target.</p>	<p>4 SPs for each failure</p>
<p><b>3.17</b></p>	<p>The Supplier shall ensure that the HD imagery captured shall be viewable on the Authority's tasking/coordination system within 45 minutes post flight.</p> <p>Such imagery shall identify vessels via PLN (Port Letter Numbers) or name as displayed on the side (specified in EC Regulation 1381/1987 Annex 2). Data provided shall be fully compliant with EU Inspire directive. Positional information (of target and capture system) shall comply with WGS84 standard and provide Latitude, Longitude and date/time stamp for position fix of the target.</p>	<p>4 SPs for each failure</p>

UR No.	Service Requirement	Service Points
3.18	<p>The Supplier shall ensure that the System detects and classifies Oil in all light levels by day and night and provides a report to the Authority classifying:</p> <ol style="list-style-type: none"> <li>1. by Daylight only, the Oil by type, thickness and coverage within an hour of finding the Oil;</li> <li>2. by Night Time Hours, a report to the Authority of the location and coverage of the Oil within an hour of finding it.</li> </ol>	3 SPs for each failure
3.19	<p>The Supplier shall ensure that the System detects and classifies any Pollutants (other than Oil) in all light levels, by Daylight and Night Time Hours, and provides a report to the Authority classifying the Pollutant(s) by physical nature and coverage within an hour of finding the Pollutant(s).</p>	3 SPs for each failure
3.20	<p>The Supplier shall ensure that the System detects the presence of Oil (beyond a sheen) and Pollutants within the search area at least at the sea surface coverage rate per hour specified in the Supplier's Solution.</p>	3 SPs for each failure
3.21	<p>The Supplier shall ensure that the System states and promulgates the actual probability of detection achieved to the Authority.</p>	4 SPs for each failure
3.22	<p>The Supplier shall ensure that the System produces a report of the areas covered by the sensors, overlaid onto the aircraft track, viewable on the aircraft and shared electronically in near real time with the Authority.</p>	5 SPs for each failure
3.23	<p>The Supplier shall ensure that all data captured by the System sensors is stored off aircraft post flight and made available in a web-based application to the Authority immediately upon request. On expiry or termination of this Agreement the Supplier shall ensure that all data is handed over to the Authority for continued storage.</p>	5 SPs for each failure

UR No.	Service Requirement	Service Points
3.24	<p>The Supplier shall ensure that the System safely deploys items from the aircraft in flight, including:</p> <ol style="list-style-type: none"> <li>1. a first aid kit;</li> <li>2. a communication device; and</li> <li>3. method of marking position from the aircraft to the surface in support of the mission</li> </ol>	5 SPs for each failure
4.0	<b>Equipment and Support</b>	
4.1	The Supplier shall ensure that assets engaged in the delivery of this capability shall be immediately visibly identifiable and include HMCG branding as per Appendix A and OGD branding.	5 SPs for each failure
4.2	The Supplier shall ensure that the System complies with SD-2018/001.	5 SPs for each failure
5.0	<b>Communications</b>	
5.1	<p>The Supplier shall ensure that the System shall communicate by voice LOS and BLOS allowing communications between:</p> <ul style="list-style-type: none"> <li>• the Tasking Authority;</li> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Air Traffic Services;</li> <li>• surface vessels and installations;</li> <li>• emergency responders;</li> <li>• military assets;</li> <li>• ground assets;</li> <li>• persons in distress or potential distress equipped with mobile phones;</li> <li>• Linking communications between the Co-Ordinating Authority and vessels/aircraft/assets; and</li> <li>• any other third parties as required by the Authority.</li> </ul>	1 SP for each failure

UR No.	Service Requirement	Service Points
5.2	<p>The Supplier shall ensure that the System shall communicate LOS and BLOS securely by voice to facilitate safe operation and conduct of the Task allowing communications between:</p> <ul style="list-style-type: none"> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Emergency responders; and</li> <li>• Equipped surface vessels</li> </ul>	1 SP for each failure
5.3	<p>The Supplier shall ensure that the System sends and receives digital information including images, documents and video in near real time LOS and BLOS with:</p> <ul style="list-style-type: none"> <li>• the Tasking Authority and the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Air Traffic Services;</li> <li>• surface vessels and installations;</li> <li>• emergency responders;</li> <li>• military assets;</li> <li>• ground assets;</li> <li>• persons in distress or potential distress equipped with mobile phones; and</li> <li>• any other third parties as required by the Authority.</li> </ul>	2 SPs for each failure
5.4	<p>The Supplier shall ensure that the System sends and receives secure digital information including images, documents and video in near real time LOS and BLOS with:</p> <ul style="list-style-type: none"> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• emergency responders; and</li> <li>• Border Force cutters</li> </ul>	2 SPs for each failure
5.5	<p>The Supplier shall ensure that the System provides concurrent voice and data communications with one voice and one data channel.</p>	3 SPs for each failure

UR No.	Service Requirement	Service Points
	The Supplier shall ensure that safe aircraft operations shall remain unaffected by this requirement.	
<b>6.0</b>	<b>Personnel</b>	
6.1	The Supplier shall ensure that all personnel handling sensitive information shall hold appropriate security clearance and that all foreign nationals must be cleared via ACRO in addition to Baseline or CTC checks.	5 SPs for each failure
6.2	The Supplier shall ensure that the System carries one supernumerary crew upon request.	5 SPs for each failure
6.3	The Supplier shall ensure that System operators shall be trained and warranted as Marine Enforcement Officers.	5 SPs for each failure
<b>7.0</b>	<b>Reporting</b>	
7.1	The Supplier shall ensure that the daily crew list is submitted to the ARCC through a web based application at the beginning of the shift, and notify the ARCC of any crew changes during a given shift.	1 SP for each failure
7.2	<p>The Supplier shall ensure that pre-mission daily reports are submitted to the ARCC through a web based application for non- operational and planned flights including the following:</p> <ul style="list-style-type: none"> <li>• training flights;</li> <li>• all other flying (take-off and landing times and an outline purpose of the flight to be provided).</li> </ul>	1 SP for each failure

<b>UR No.</b>	<b>Service Requirement</b>	<b>Service Points</b>
7.3	The Supplier shall ensure that, on the conclusion of any Task, a Post Task Report is submitted to the Authority through a web based application within one (1) Working Day.	2 SPs for each failure
7.4	The Supplier shall ensure that monthly Flying Activity Returns are submitted to the Authority through a web based application.	5 SPs for each failure
7.5	The Supplier shall ensure that training achievement records are readily available for audit purposes through a web based application.	2 SPs for each failure
7.6	The Supplier shall provide to the Authority through a web based application all Mandatory Occurrence Reports. This information will be a copy of that reported to the regulatory authority and the Supplier's head office.	5 SPs for each failure
7.7	The Supplier shall provide to the Authority through a web based application a report on all hazards and safety issues.	4 SPs for each failure
7.8	The Supplier shall provide details to the Authority through a web based application all quality issues directly related to the service and its delivery.	3 SPs for each failure

Appendix A

Her Majesty's Coast Guard Livery Example





# Marine Management Organisation

To be placed either side of the cockpit. The size of the logo shall

Appendix C

Additional Schedule 5A of the Agreement

UR No	Service Requirement	Supplier Solution
1.1	The Supplier shall provide a system which is available 98% of the time	<p><u>Description</u></p> <p>The Service will be delivered with two dedicated PA-31 Navajo 'Panther' aircraft, based at 2Excel's 24hr operational base at Doncaster Sheffield Airport (DSA), painted in the Authority livery, equipped with industry-leading sensors and operated by exceptional crews.</p> <p><u>Removal of Third-Party Risk</u></p> <p>High levels of availability and readiness will be achieved, in part, by the removal of third-party risk. 2 Excel has invested considerably over the past decade to bring the following capabilities in-house:</p> <ul style="list-style-type: none"> <li>• Design and certification</li> <li>• Production</li> <li>• Maintenance</li> <li>• Operations</li> <li>• Ground support</li> <li>• Training</li> <li>• CAMO</li> </ul> <p>The aircraft will be owned by 2Excel, the staff will be employees not contractors, no sub-contracts will be let; the whole Service will be designed, built and delivered in-house.</p> <p><u>Platform Description</u></p> <p>Both aircraft are modified with mission power and communications systems and be fully capable of delivering the requirement. Each day, one of the aircraft will be declared as the Primary and the other as the Secondary. There will be periods when the Secondary aircraft is in maintenance (discussed later in this section). Measured on a calendar-month basis, 2Excel will provide 98% availability of 1 aircraft, and 75% availability of 2 aircraft.</p>

		<p><u>Surveillance Capability</u></p> <p>The primary sensor (EO/IR sensor turret) is mounted under the chin of each aircraft under existing STCs owned by 2EA.</p> <p><u>Access to the 2Excel Fleet</u></p> <p>It is assumed that the Authority cannot accept capability gaps for aircraft down-time. 2Excel will guarantee the provision of a Service by providing access to the wider fleet of surveillance aircraft.</p> <p>In the unlikely event of both Panthers being unavailable, a supplementary service will be provided using another 2Excel surveillance aircraft. The primary option will be a PA-31 Navajo, equipped with a sensor turret, mission system and satellite and VHF communications.</p> <p>After contract award, there will be a period of approximately 4 weeks during which the Panther aircraft are prepared for service. In this period, service delivery will be provided using other Navajo aircraft with the same mission capability as the Panthers.</p> <p><u>Basing</u></p> <p>DSA is a 24/7/365 international airport with excellent road and rail links. It has full IFR facilities and robust snow and ice clearing equipment and plans. Unlike similar airports in the UK, DSA is not subject to slot-time restrictions, enabling rapid response ops to take place without restriction.</p> <p><u>Personnel</u></p> <p>2Excel would roster 1 crew per day, every day – on commencement this will be a 12hr night-shift (2000-0800), but as the service develops additional crew may be recruited and trained to provide additional lines of tasking by day and night (subject to contract amendment). Sufficient crews will be employed and trained to cover unexpected absences such as sickness. The flight-crew will work to the Company's existing approved FTL scheme. No changes are required for this contract. Accommodation will be provided close to the airport to minimise fatigue and ensure the most efficient use of crew.</p> <p><u>Company Structure and Management</u></p>
--	--	---

COMMERCIAL IN CONFIDENCE

		<p>The Service will be managed and delivered using 2Excel's existing framework. As an AOC holder, and Part SPO operator, 2Excel has all overhead functions required to ensure the successful delivery of this Contract. Customer liaison, contract management, CAMO staff and other support personnel are all located at DSA.</p>
2.1	<p>The Supplier shall only Accept Tasks from the ARCC which may be by any auditable means (including by telephone and email) or if the System is already tasked by the most appropriate means.</p>	<p>2Excel Ops controllers will accept tasking from the ARCC through auditable means. Ops SOPs will be followed to ensure that tasking is understood, recorded and auditable.</p> <p>On a daily basis, tasking from the Authority will be accepted by 2Excel Ops, through the most suitable means (e.g. email, telephone etc). If the aircraft is already airborne, direct tasking from the ARCC or via 2Excel Ops (via satphone) can be used. The Spidertracks text facility can be used.</p>
2.2	<p>The Supplier shall liaise with the relevant Co-ordinating Authority after issue of the Task and shall comply with the instructions of the Co-ordinating Authority</p>	<p>After issue of the task, liaison with the relevant Co-ordinating Authority will be the responsibility of the Duty Ops Controller, assisted where required by the Duty Manager and Liaison Officer.</p> <p>Once a task has been accepted, the instructions of the Co-ordinating Authority shall be followed.</p>
2.3	<p>The Supplier shall complete (as determined by the ARCC or the Co-ordinating Authority) all Planned Tasks in accordance with the Programme. The Programme will be provided to the Supplier by the Authority no later than ten (10) Working Days prior to start of the calendar month in which the Planned Task was programmed.</p>	<p>On receipt of the Programme, the Liaison Officer, in conjunction with the Planning Cell (a 2Excel Management Team), will produce the Flying Programme for the coming month. The Flying Programme will be held on LEON, 2Excel's Ops Management Software application. On a day-to-day basis, changes to the flying programme to achieve the task will be made depending on weather and other factors. A review of the tasks achieved vs. the programme will be made weekly, and the flying programme updated accordingly.</p>
2.4	<p>The Supplier shall complete (as determined by the ARCC or the Co-ordinating Authority) all Unplanned Tasks having confirmed Acceptance</p>	<p>Task acceptance will be confirmed by 2Excel Ops, which will initiate the dispatch. The flight crew will then conduct all unplanned tasks in accordance with the direction of the ARCC.</p>
2.5	<p>The Supplier shall ensure that the System</p>	<p>The aircraft will be on 60 mins notice from ARCC tasking to airborne by day. Additional time may be</p>

COMMERCIAL IN CONFIDENCE

	shall be airborne and in transit to each Accepted Unplanned Task within 60 minutes of notification by the Tasking Authority between 08:00 and 20:00 local time.	required in the event of complex tasking (noting that a 'Rescue' callsign is unlikely to be assigned to this service, and so complex flight planning may be required).  Aircraft shall always be fuelled for immediate dispatch.
2.6	The Supplier shall ensure that the System shall be airborne and in transit to each Accepted Unplanned Task within 120 minutes of notification by the Tasking Authority between 20:00 and 07:59 local time	The aircraft will be on 120 mins notice from ARCC tasking to airborne by night. Additional time may be required in the event of complex tasking (noting that a 'Rescue' callsign is unlikely to be assigned to this service, and so complex flight planning may be required).  Aircraft shall always be fuelled for immediate dispatch.
2.7	The Supplier shall comply with any requirement of the Authority to reschedule or re-task Planned Tasks to be commenced between 08:00 – 22:00 local time provided the Authority has given at least 6 hours' notice of such rescheduling or re-tasking.	The Supplier shall comply with any requirement of the Authority to reschedule or re-task Planned Tasks to be commenced between 08:00 – 22:00 local time provided the Authority has given at least 2 hours' notice of such rescheduling or re-tasking.
2.8	The Supplier shall comply with any requirement of the Authority to reschedule or re-task Planned Tasks to be commenced between 22:00 and 08:00 local time provided the Authority has given at least 10 hours' notice of such rescheduling or re-tasking.	The Supplier shall comply with any requirement of the Authority to reschedule or re-task Planned Tasks to be commenced between 22:00 – 08:00 local time provided the Authority has given at least 2 hours' notice of such rescheduling or re-tasking.
2.9	Whilst engaged upon non-routine Tasks, the Supplier shall utilise opportunities to conduct concurrent or subsequent routine activity	During unplanned tasking, opportunities to achieve routine tasking will be taken; the 2Excel Ops team will identify these tasks and relay them to the crew before flight, or via the satcom.
2.10	The Supplier shall ensure that the System	For pre-planned tasks, flight planning will be completed by the flight-crew and Ops staff, using a

	produces plans to support the Task.	<p>system called Rocket Route (RR) for IFR sectors, and SkyDemon for VFR tactical planning.</p> <p>For reactionary tasking, a basic flight-plan will be created by the Ops staff, with flight-crew completing tactical plans en-route to the task.</p> <p>The plans will be uploaded to the crew EFBs before departure.</p>
2.11	The Supplier shall ensure that the System displays on the aircraft and shares in near real time off aircraft the plan to support the Task.	<p>The planned track and sensor search patterns will be displayed on the AIMS Mission Management System (MMS) on the aircraft. AIMS output cannot be shared in near-real time.</p> <p>The AIMS MMS is discussed in more detail in the UR3.0 Response</p>
2.12	<p>The Supplier shall ensure that the</p> <p>System calculates and promulgates the planned probability of detection and produces and displays on the aircraft overlays of the area covered by all sensors to support the Task.</p>	<p>The System will determine the PD by evaluating the sensor detection performance against the specified target and search area uncertainty volume. This will produce a PD value.</p> <p>The AIMS MMS is discussed in more detail in the Section 3 Response.</p>
2.13	The Supplier shall ensure that the System responds to an incident that requires operations over an extended timeframe in a geographical area whilst minimizing the effect upon existing and Planned Tasks.	<p>In the event of an ongoing task, 2Excel will use the second Panther and its extended surveillance fleet to ensure that appropriate assets are allocated to each task.</p> <p>If the Primary asset is repeatedly tasked to a single incident, the delivery of the pre-planned Programme can be continued using the second Panther or another 2Excel aircraft. The choice of aircraft type would be agreed between the 2Excel Duty Manager/Liaison Officer and the Authority; King Airs and Navajos would be available, with varying sensor fits possible.</p>
2.14	<p>The Supplier shall, where required,</p> <p>conduct two concurrent Tasks (whether Planned Tasks or Accepted Unplanned Tasks or both).</p>	<p>The supplier will have the capability to conduct concurrent ops, using aircraft from the wider 2Excel surveillance fleet. Liaison between the ARCC and the 2Excel Liaison Officer would ensure that the best-suited platform is allocated to each task.</p>

COMMERCIAL IN CONFIDENCE

3.1	The Supplier shall ensure that the System operates throughout the UK EEZ.	The System can operate throughout the whole UK EEZ, all of which falls within 2 Excel's existing AOC region.  The Panther has a Radius of Action (ROA) of 450 nautical miles (nm).
3.2	The Supplier shall ensure that the System operates, upon request, in neighbouring states in compliance with all relevant laws and regulations of such states.	A fully compliant Service can be provided in neighbouring states.  The operation would be conducted in accordance with EASA Part SPO, allowing unrestricted operations in all EASA states.  In the event that the UK is not a member of EASA, then a permit may be required for operations in the third country; however, from the airworthiness, compliance, licensing and insurance viewpoints, there would be no obstacles to obtaining such permissions, e.g. the aircraft would not be restricted to operations within UK airspace.
3.3	The Supplier shall ensure that the System detects targets and areas of interest anywhere in the UK EEZ within 180 minutes of take-off.	The Panther has a Radius of Action of 450 nautical miles (nm) and a maximum continuous cruise of 180kts True Airspeed. From our Main Operating Base (MOB) at Doncaster Sheffield Airport the aircraft can fly to any point within the EEZ within 180 minutes of take-off, and use the sensors to detect targets of interest.
3.4	The Supplier shall ensure that the System remains on scene once transit to area of interest is complete for a minimum of 120 minutes	The Panther has a Max Useable Fuel of 650Litres, and a loiter burn rate of 90L/hr. The System can remain on scene in excess of 120 minutes.
3.5	The Supplier shall ensure that the System operates in all UK weather conditions.	The aircraft is certified and approved to operate day or night in all UK weather conditions, including known icing conditions.
3.6	The Supplier shall ensure that the System operates day or night in Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) conditions with no restrictions.	The aircraft is certified and approved to operate day or night in both VFR and IFR conditions. 2 Excel is certified and approved for VFR and IFR operations.
3.7	The Supplier shall communicate any	At the start of each day 2 Excel will submit a Report to the Authority detailing the status of the Service.

	<p>limitations on System performance including:</p> <ul style="list-style-type: none"> <li>• platform</li> <li>• sensors</li> <li>• personnel</li> <li>• support equipment</li> <li>• infrastructure</li> <li>• climatic conditions</li> </ul> <p>immediately to the Authority by:</p> <ul style="list-style-type: none"> <li>• telephone;</li> <li>• email; and</li> <li>• web-based application</li> </ul>	<p>Any deficiencies at that time, or that emerge throughout the subsequent period, will be communicated by all required means.</p>
3.8	<p>The Supplier shall provide near real time asset position information to the Authority electronically in a format that is available on the Authority's system(s). Positional information shall comply with WGS84 standard and provide latitude, longitude and date/time stamp for position fix. Examples of the data sources the Authority's systems can accept include "SATCOM Direct" and "Skytrac" systems.</p>	<p>The aircraft will be fitted with a Spidertracks GPS tracking system, which uses the Iridium network. The system provides a continuous GPS position and track which can monitored from any internet connected device.</p> <p>The system provides lat/long/date/time and all flights are automatically archived. Third parties (e.g. OGDs) can be given logins to track the aircraft from their devices (PC, tablet, phone etc).</p>
3.9	<p>The Supplier shall ensure that the System overlays the area covered by all sensors upon the aircraft track.</p>	<p>Sensor footprint overlays are one of the core features of AIMS. The system will display these on the aircraft in real-time.</p>
3.10	<p>The Supplier shall ensure that the System detects, categorizes and tracks target vessels in all light conditions.</p>	<p>The FLIR Star Safire 380HD EO/IR sensor turret is a high-end military surveillance system, as good as any currently in-service in the UK, and can deliver this requirement.</p>

3.11	The Supplier shall ensure that the System detects and categorizes static Targets; on land and on sea and in all light and weather conditions.	Targets are detected and categorized using the EO/IR turret, which has TV, IR and low-light EO sensors. The sensors are effective in all light conditions, clear of cloud and significant precipitation in the air.
3.12	The Supplier shall ensure that the System detects, categorises and tracks moving Targets; on land, on sea and in air, in all light and weather conditions.	Targets are detected and categorized using the EO/IR turret, which has TV, IR and low-light EO sensors. The sensors are effective in all light conditions, clear of cloud and significant precipitation in the air.
3.13	The Supplier shall ensure that the System detects and localises thermal variances and provides a report to the Authority, with imagery, identifying hot spots on board a casualty vessel or the extent of Oil / chemical product spills.	<p>The aircraft will be installed with an FLIR Star Safire 380HD EO-IR turret, a high-performance airborne surveillance system.</p> <p>The FLIR 380HD features a high-performance gimbal and associated 4-axis stabilisation for excellent long-range/high magnification performance. With high quality optics, this results in industry leading target detection, recognition and identification ranges for a 15" class turret. A built-in Inertial Measurement Unit (IMU), mounted directly to the optical bench, provides for highly accurate target localisation of targets. The system also features advanced image processing for real-time image enhancement on all sensors, including high-performance haze penetration and improved feature recognition and Identification</p> <p>The system's integrated advanced multi-mode video tracker provides for robust target tracking overland or sea, supported by intelligent break-lock/coast functionality to ensure rapid re-acquisition.</p> <p>The main sensor is a Mid-Wave IR (MWIR – 3 to 5 µm) Thermal Imaging (TI) camera, which is capable of long-range hot spot detection and high-resolution imaging of persons and objects.</p> <p>Also refer to Response 3.18.</p>
3.14	The Supplier shall ensure that the System identifies and homes on up to two transponders and emergency emitters (including AIS)	The aircraft will be equipped with AIS, fully integrated with the Mission System, enabling sensor handover and video and data recording. The system cannot home onto emergency transponders.

<p>3.15</p>	<p>The Supplier shall ensure that the System captures video and still high definition (HD) imagery in all light levels at all stages of flight. Images/videos shall be date time, and position stamped in accordance with PACE and disclosure principles for evidential purposes. Such imagery shall identify vessels via PLN (Port Letter Numbers) or name as displayed on the side (specified in EC Regulation 1381/1987 Annex 2). Data provided shall be fully compliant with EU Inspire directive. Positional information (of target and capture system) shall comply with WGS84 standard and provide Latitude, Longitude and date/time stamp for position fix of the target.</p>	<p>The FLIR 380HD Electro-Optic Turret, incorporates High Definition (HD) IR and EO sensors. The TI features a 1280 x 1024 pixel cooled MWIR sensor; a HD (1920 x 1080) continuous zoom colour camera is supported by a narrow field HD (1920 x 1080) spotter camera.</p> <p>Fields of view for the sensors:</p> <ul style="list-style-type: none"> <li>• TI 35.5° to 1.2°</li> <li>• Daylight Zoom 31.2° to 1.8°</li> <li>• Daylight Spotter 1.1° to 0.43°</li> </ul> <p>These fields of view facilitate operator Situational Awareness (SA) and the ability to discern fine detail, such as vessel lettering at typical (mission specific) stand-off ranges.</p> <p>Video overlay shows time, own ship position and target position (in WGS84 format, selectable), which may be continuously recorded to various hard media.</p> <p>Refer to 3.16 for data recording.</p>
<p>3.16</p>	<p>The Supplier shall ensure that imagery captured shall be viewable in flight on board the aircraft and viewable in near real time on the Authority's tasking/coordination system. Such imagery shall identify vessels via PLN (Port Letter Numbers) or name as displayed on the side (specified in EC Regulation 1381/1987 Annex 2). Data provided shall be fully compliant with EU Inspire directive. Positional information (of target and capture system) shall comply with WGS84 standard and provide Latitude, Longitude and date/time</p>	<p>The aircraft system operator will be provided a high-brightness HD (1920 x 1080) monitor, capable of displaying all sensor outputs and matched to the FLIR 380HD native EO sensor resolution.</p> <p>Sensor output will be routed, by the operator, via the Mission Management System (MMS) and recorded for analysis and evidentiary purposes.</p>

	<p>stamp for position fix of the target.</p>	
<p>3.17</p>	<p>The Supplier shall ensure that the HD imagery captured shall be viewable on the Authority's tasking/coordination system within 45 minutes post flight.</p> <p>Such imagery shall identify vessels via PLN (Port Letter Numbers) or name as displayed on the side (specified in EC Regulation 1381/1987 Annex 2). Data provided shall be fully compliant with EU Inspire directive. Positional information (of target and capture system) shall comply with WGS84 standard and provide Latitude, Longitude and date/time stamp for position fix of the target.</p>	<p>HD imagery will be uploaded to the SharePoint site within 45 mins of arriving on-blocks. The System will be capable of capturing vessel PLNs and data will be EU Inspire compliant. WGS84 standards will be used, and imagery metadata will include positional and time information.</p>
<p>3.18</p>	<p>The Supplier shall ensure that the System detects and classifies Oil in all light levels by day and night and provides a report to the Authority classifying:</p> <ol style="list-style-type: none"> <li>1. by Daylight only, the Oil by type, thickness and coverage within an hour of finding the Oil;</li> </ol> <p>by Night Time Hours, a report to the Authority of the location and coverage of the Oil within an hour of finding it</p>	<p>Detection and classification of Oil will be achieved using the EO and MWIR cameras. Crew-members are trained to classify and quantify oil-spills visually, in accordance with Bonn Agreement protocols.</p> <p>By day the System will classify oil by type, thickness and coverage, within 1 hour of detection. By night, the sensor suite will be capable of detecting the location and coverage of the oil within 1 hour of detection.</p> <p><u>Detection</u></p> <p>If an accurate position of the spill can be provided, the System can rapidly detect the oil and commence surveillance. If the precise location is unknown, the System would use all its onboard sensors to locate the spill:</p> <p><u>Narrow-area surveillance</u></p> <p>Accurate quantification of the spill is achieved using the FLIR 380HD sensors.</p> <p>The FLIR 380HD is an industry leading surveillance sensor turret, used extensively by military and other</p>

		<p>government users across the world. The daylight HD EO sensor image is displayed to the crew via AIMS-ISR on HD screens in the cabin. The Medium Wave Infra-Red (MWIR) sensor would be used in conjunction with the EO; in our experience MWIR is good for identifying thicker areas of pollution, and by combining these outputs through the mission software, highly accurate quantification is achieved. Using Bonn Agreement protocols, the crew would assess oil coverage and thickness</p> <p>By day, the EO and MWIR sensors (by night MWIR only) would be used to trace the perimeter of the spill, which is automatically logged (drawn) onto the AIMS-ISR mapping system; the area of the spill can be quickly established and reported to the ARCC.</p> <p>Mapping System and Mission Integration:</p> <p>CarteNav AIMS-ISR is at the heart of the mission-system. For oil-spill surveillance, it provides a superb capability to map and quantify pollution. The crew would use camera boresight to draw a real-time virtual-reality perimeter around the oil-spill. Different perimeters are created around differing pollution areas, the volume of these areas is automatically calculated, then by using the Bonn Agreement classifications, thickness and quantity is calculated.</p> <p>An AIMS-ISR software licence would also be provided for the Authority, and over the satellite link Authority personnel would be able to observe the mission in near-real-time. Aircraft tracks, AIS contacts, radar imagery, spill perimeters, EO/IR snapshots, target locations, sensor footprints, and reports are all shared over the link, through AIMS. 2Excel uses exactly this system on its existing oil-spill surveillance platform; the ability to datalink the mission in near real-time to clients on the ground has proven to be an excellent capability, enhancing situational awareness in ops rooms as well as on the aircraft.</p>
3.19	<p>The Supplier shall ensure that the System detects and classifies any Pollutants (other than Oil) in all light levels, by Daylight and Night Time Hours, and provides a report to the Authority classifying the Pollutant(s) by physical nature and coverage</p>	<p>Unspecified pollutants will be detected utilising EO/IR sensors, supported by visual identification where practicable.</p> <p>The Mission Management system incorporates automatic compilation/reporting function, which facilitates near real-time transmission via the satcom, if time critical, or onward dissemination post-sortie.</p>

	within an hour of finding the Pollutant(s).	
3.20	The Supplier shall ensure that the System detects the presence of Oil (beyond a sheen) and Pollutants within the search area at least at the sea surface coverage rate per hour specified in the Supplier's Solution.	The sea-surface coverage rate will be achieved using the EO/IR sensors.
3.21	The Supplier shall ensure that the System states and promulgates the actual probability of detection (PD) achieved to the Authority	The System will determine the PD by evaluating the sensor detection performance against the specified target and search area uncertainty volume. This will produce a PD value which can be promulgated to the Authority via the MMS.
3.22	The Supplier shall ensure that the System produces a report of the areas covered by the sensors, overlaid onto the aircraft track, viewable on the aircraft.	The CarteNav AIMS-ISR mission-management system will provide a display of sensor footprint, referenced to aircraft position and track.
3.23	The Supplier shall ensure that all data captured by the System sensors is stored off aircraft post flight and made available in a web-based application to the Authority immediately upon request. On expiry or termination of this Agreement the Supplier shall ensure that all data is handed over to the Authority for continued storage.	<p>2Excel will use the Acronis cloud data service, an ISO 27001 accredited data service using FIP140-2 encryption to ensure compliance with the requirements of an 'Official' protective marking.</p> <p>The Authority will be provided with Acronis account log-ins, which can be used at any time to access the data.</p> <p>On completion of the contract the data will be downloaded and handed over to the Authority, or the Authority could choose to maintain the Acronis service.</p>
3.24	The Supplier shall ensure that the System safely deploys items from the aircraft in flight, including: <ol style="list-style-type: none"> <li>1. a first aid kit;</li> <li>2. a communication device; and</li> </ol>	Not applicable

COMMERCIAL IN CONFIDENCE

	<p>3. method of marking position from the aircraft to the surface in support of the mission</p>	
4.1	<p>The Supplier shall ensure that assets engaged in the delivery of this capability shall be immediately visibly identifiable and include HMCG branding as per Appendix A.</p>	<p>Both Panther aircraft will be painted in the Authority livery.</p>
4.2	<p>The Supplier shall ensure that the System complies with SD-2018/001.</p>	<p>Not applicable</p>
5.1	<p>The Supplier shall ensure that the System shall communicate by voice LOS and BLOS allowing communications between:</p> <ul style="list-style-type: none"> <li>• the Tasking Authority;</li> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Air Traffic Services surface vessels and installations;</li> <li>• emergency responders;</li> <li>• military assets;</li> <li>• ground assets;</li> <li>• persons in distress or potential distress equipped with mobile phones;</li> <li>• Linking communications between the Co-Ordinating Authority and vessels/aircraft/assets; and</li> <li>• any other third parties as required</li> </ul>	<p>2Excel's communications solution for the System consists broadly of 3 elements; capable and reliable aircraft systems, a marine-band VHF radio and fully installed satphone.</p> <p>Aircraft communications will be augmented with a PS Engineering PAC 45 audio controller which will allow for flexible, configurable communications (transmit and receive) for all crew members.</p>

	<p>by the Authority. Supplier shall ensure that the System shall communicate by voice LOS and BLOS allowing communications between:</p> <ul style="list-style-type: none"> <li>• the Tasking Authority;</li> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Air Traffic Services</li> </ul> <p>The Supplier shall ensure that the System shall communicate by voice LOS and BLOS allowing communications between:</p> <ul style="list-style-type: none"> <li>• the Tasking Authority;</li> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Air Traffic Services;</li> </ul>	
5.2	<p>The Supplier shall ensure that the System shall communicate LOS and BLOS securely by voice to facilitate safe operation and conduct of the Task allowing communications between:</p> <ul style="list-style-type: none"> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Emergency responders; and</li> <li>• Equipped surface vessels</li> </ul>	Secure comms are not provided
5.3	<p>The Supplier shall ensure that the System sends and receives digital information including images, documents and video in</p>	There is no dedicated satellite data capability except for the Spidertracks text facility (an Iridium service)

	<p>near real time LOS and BLOS with:</p> <ul style="list-style-type: none"> <li>• the Tasking Authority and the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• Air Traffic Services;</li> <li>• surface vessels and installations;</li> <li>• emergency responders;</li> <li>• military assets;</li> <li>• ground assets;</li> <li>• persons in distress or potential distress equipped with mobile phones; and</li> <li>• any other third parties as required by the Authority.</li> </ul>	
<p>5.4</p>	<p>The Supplier shall ensure that the System sends and receives secure digital information including images, documents and video in near real time LOS and BLOS with:</p> <ul style="list-style-type: none"> <li>• the Co-Ordinating Authority;</li> <li>• other air vehicles;</li> <li>• emergency responders; and</li> <li>• Border Force cutters</li> </ul>	<p>There is no secure data capability.</p>
<p>5.5</p>	<p>The Supplier shall ensure that the System provides concurrent voice and data communications with one voice and one data channel. The Supplier</p>	<p>The System incorporates concurrent voice and data communications – the only data communications are through the Spidertracks text facility.</p> <p>The suite of aircraft, tactical and SATCOM communications integrated through the PAC45</p>

COMMERCIAL IN CONFIDENCE

	shall ensure that safe aircraft operations shall remain unaffected by this requirement.	allows for simultaneous and independent transmit and receive for all crew members.  Aircraft safety is paramount, and every element of the System will be airworthy and 100% compliant with the relevant regulations, including thorough EMI/EMC testing.
6.1	The Supplier shall ensure that all personnel handling sensitive information shall hold appropriate security clearance and that all foreign nationals must be cleared via ACRO in addition to Baseline or CTC checks.	All personnel handling sensitive information shall hold the appropriate security clearance. Foreign nationals will be cleared via ACRO in addition to Baseline or CTC checks.
6.2	The Supplier shall ensure that the System carries one supernumerary crew upon request.	The aircraft shall be able to carry one supernumerary crewmember
6.3	The Supplier shall ensure that System operators shall be trained and warranted as Marine Enforcement Officers.	System Operators shall be trained and warranted as Marine Enforcement Officers
7.1	The Supplier shall ensure that the daily crew list is submitted to the ARCC through a web-based application at the beginning of the shift and notify the ARCC of any crew changes during a given shift.	A monthly roster will be produced 2 weeks prior to the start of each month. Crew composition will be confirmed daily, and any changes occurring during the day notified to the ARCC.
7.2	The Supplier shall ensure that pre-mission daily reports are submitted to the ARCC through a web-based application for non-operational and planned flights including the following:  - training flights;	Weekly and Daily Reports will be published containing details of all planned flying. The report will include aircraft tail number, timings, crew composition and purpose of the flight.  Plans will be distributed by email and a SharePoint site.

	- all other flying (take-off and landing times and an outline purpose of the flight to be provided).	
7.3	The Supplier shall ensure that, on the conclusion of any Task, a Post Task Report is submitted to the Authority through a web-based application within one (1) Working Day.	For routine tasking, a Post-Flight Report (PFR) will be submitted to the Authority by SharePoint within 1 day.  For Emergency Response (e.g. SAR or oil-spill) PFRs will be actioned immediately to inform the ARCC and enable planning for subsequent missions.
7.4	The Supplier shall ensure that monthly Flying Activity Returns are submitted to the Authority through a web-based application.	A Monthly Report will be distributed by email and SharePoint by the 5 <sup>th</sup> day of each month. It will detail all completed flying activity in the previous month, highlight achieved tasking and training, and forecast activity in the forthcoming period.
7.5	The Supplier shall ensure that training achievement records are readily available for audit purposes through a web-based application.	All flight-crew training records will be accessible on CENTRIK, 2Excel's web-based management system.
7.6	The Supplier shall provide to the Authority through a web-based application all Mandatory Occurrence Reports. This information will be a copy of that reported to the regulatory authority and the Supplier's head office.	The Authority shall have read access to Mandatory and Voluntary reports as they are submitted. This will be achieved using CENTRIK, the means by which MORs are submitted to the CAA and distributed to 2 Excel management.
7.7	The Supplier shall provide to the Authority through a web-based application a report on all hazards and safety issues.	The Authority shall have access to 2 Excel's hazard and safety issue management system through CENTRIK.
7.8	The Supplier shall provide details to the Authority through a web-based application all quality issues directly	The Authority will be provided with all relevant Compliance (Quality) audits completed internally, by external 3 <sup>rd</sup> party auditors (e.g. ISO) and the UK CAA.

COMMERCIAL IN CONFIDENCE

	related to the service and its delivery.	
--	--	--

**Appendix D**

Additional Annex B to Schedule 10 of the Agreement

<b>Earliest date for submission of an invoice</b>	<b>Required Evidence</b>	<b>Date for payment</b>
The date on which the CAN001 is signed by both Parties	<ul style="list-style-type: none"> <li>• the Authority or its representative has carried out an inspection of each Navajo Panther aircraft, their equipment and crew and is satisfied that the Supplier will be able to deliver the Services; or,</li> <li>• If a physical inspection is not possible, such documentary evidence regarding the Panther Aircraft, its equipment and crew as the Authority reasonably requires to be satisfied that the Supplier will be able to deliver the Project Panther Services.</li> </ul>	Within 14 days of receipt of the invoice or provision of the required evidence (whichever is the latter)
31 <sup>st</sup> October 2019	N/A	Within 30 days of receipt of the invoice
30 <sup>th</sup> November 2019	N/A	Within 30 days of receipt of the invoice
31 <sup>st</sup> December 2019	N/A	Within 30 days of receipt of the invoice
31 <sup>st</sup> January 2020	N/A	Within 30 days of receipt of the invoice
29 <sup>th</sup> February 2020	N/A	Within 30 days of receipt of the invoice
31 <sup>st</sup> March 2020	N/A	Within 30 days of receipt of the invoice