

Un-manned Aerial Vehicles (Drones)

Subject: Procurement Report
Date: 28th August 2018
Reference: HWFRS/55

1. Background

Over recent years many emergency services throughout the UK have introduced Drones or UAVs (un-manned aerial vehicles) as an operational asset. Drones have been proven to be very beneficial at operational incidents that include, missing persons, hazardous materials, large building fires, Road Traffic Collisions and during spate flooding. Drones are capable of being positioned to provide a bird's eye view of an incident that gives a commander deployment awareness of both crews and resources which may assist to resolve incidents quickly and efficiently, whilst also identifying a need to implement further safety measures.

In addition Drones can be equipped with specific cameras that are capable of providing video, photographic and thermal imagery that can be down loaded or relayed to commanders at a separate location. Aside from the given operational advantages these functions can be used for both evidence gathering as well as future incident command training.

Hereford & Worcester Fire and Rescue Service (HWFRS) must keep pace with modern, user-oriented models of operating in order to address changes in the expectations of our workforce and providing our communities with sustainable, high quality firefighting, rescue and preventative services, so HWFRS are invested in New Technology.

Hardware and software technological solutions are developing at a significant rate and replacement technological solutions procured today will need to be replaced more regularly.

This document aims to provide a clear and transparent rationale for how the appropriate supplier has been selected to supply Drones. The Service has assessed the appropriate procurement routes, the appropriate available partners and the relevant costs of those partners.

2. Service Review

Provision of Drones within HWFRS is a new requirement/business need and which will ensure that service delivery continues to progress by meeting objectives that are set out under the HWFRS organisational [strategy](#).

Integrating of two Drones into our service will improve operational safety and effectiveness, whilst developing better collaboration paths with other agencies.

Benefits

1. Improvement to Fire-fighter and public safety- By means of identifying hazards
2. Incident awareness and overview
3. Improvement in service delivery- through advancing operations by use of available technology
4. Cost effectiveness of Fire and Rescue Services (FRS) through early incident closure.
5. Reduces economic impact to businesses that may have been affected by FRS incidents
6. Assistance to intelligence gathering of risk sites

7. Increases options to collaboration with other agencies, by providing drone operational capability to assist Police/Highways/EA to resolve various types of incidents

Research into this project was carried out via varying forms of consultation including visits, meetings, demonstration events, phone conversations and internet research.

Following engagement with service delivery via the Fleet Equipment Steering Group (FESG) the user need/ operational requirements were agreed and captured within the User Specification inline with current legislation. See **Appendix 1**- Specification.

West Mercia Police (WMP) and HWFRS have both identified an interest to collaborate within this area of operations. However given that each are at different stages in procurement, it might best be suited that the collaboration be based upon a Memorandum of Understanding (MOU) to function on a request for Drone support, in the event of being unable to mobilize their own asset for reasons of pilot availability or maintenance issues. Given the above MOU, it would make practical and operational sense that HWFRS and WMP both purchase the same units. This would enhance the shared drone availability across the counties we serve.

As part HWFRS review and finalising the process the following documents were agreed.

Finalising of Tender Documents

1. Invitation to Quote **Appendix 2**
2. Evaluation Criteria **Appendix 3**
3. Pricing Schedule **Appendix 4**

The specification was agreed by the WC Operational Policy and service delivery representatives included the following headings:-

- **Price (60%)**
- **Time of Delivery (Pass/Fail)**
- **Technical and Quality (40%)**
 - Airframe (20%)
 - Batteries (25%)
 - Camera (20%)
 - Control Unit (15%)
 - Carry Case 1 (10%)
 - Carry Case 2 (10%)

The Authority requires a one off purchase for the supply and delivery of 2 drones.

3. Procurement

The Quotation for the provision of drones was despatched on 18th July 2018, with a closing date for applications on 15th August 2018.

This was undertaken as a 3 quote exercise, using suppliers identified through market research:-

1. iRed Ltd
2. Colena Ltd t/a Heliguy
3. Martek Drones Ltd t/a Coptrz

4. Evaluation Stage

Evaluation Stages

- Stage 1- Evaluated Price (60%)
- Stage 2- Evaluated structured response to questions; Technical & Quality (40%) and Delivery (Pass/Fail)
- Stage 3- HWFRS requested no further amplification/clarification questions

Evaluation questions were based on the following overarching criteria and weighted scores:

Award Criteria	Weightings
Price	60%
Delivery	Pass/Fail
Technical Merit and Quality (Meeting Specification)	40%
TOTAL	100%

Quotes were received from all three suppliers.

Stage 1- Price (60%)

A full cost evaluation was carried out on both of the suppliers returned pricing schedules based on the purchase price of the drones and accessories.

Stage 2- Technical & Quality (40%) and Delivery (Pass/Fail)

Technical & Quality

The suppliers tenders submissions were reviewed against the above criteria and specification (**Appendix 2-3**) with the evaluation panel consisting of WC Operational Policy and Procurement and Contracts Manager, agreeing, through consensus, an overall score for each question.

Delivery (Pass/Fail)

Each of the suppliers confirmed with supporting evidence that they were able to meet our delivery requirement of delivering the drones and accessories within the 6 week timeframe.

The below table summaries the weighted scores achieved by each of the three suppliers

Question	Martek Drones Ltd t/a Coptrz	Colena Ltd t/a Heliguy	iRed Limited
Price (60%)	46.81%	60%	46.40%
Delivery (Pass/Fail)	PASS	PASS	PASS
Technical Merit & Quality (40%)	39.04%	39.04%	39.84%
1.1 Airframe (20%)	19.20%	18%	20%
1.2 Batteries (25%)	25%	25%	25%
1.3 Camera (20%)	20%	20%	20%
1.4 Control Unit (15%)	15%	14.60%	14.60%
1.5 Carry Case 1 (10%)	9.60%	10%	10%
1.6 Carry Case 2 (10%)	8.80%	10%	10%
Total score	85.85%	99.04%	86.24%

5. Recommended Decision

Colena Ltd t/a Heliguy is appointed for the provision of Matrice 210 Drones, Zenmuse XT Camera, Zenmuse Z30 and X4S Camera.

Contract Value would be £28,858 (one off purchase) which will commence 3rd September 2018.





6. Project Efficiencies.

By purchasing and expanding the use of this unit will benefit HWFRS as many FRS already uses this unit, which will in turn expand knowledge/experiences that can be shared, resulting in resilience and interoperability through the Joint Emergency Services Interoperability Programme (JESIP) and concept of operations- UK FRS the National Fire Chiefs Council set up the Drone working group that produced the FRS National Drone Capability.

The aim of the Concept of Operations is to establish the provision and maintenance of a National Drone Capability that that will be able to respond to major incidents following a request from National Resilience fire control to support other FRS. Under the Concept of Operations and depending on its capability levels, a FRS may or/may not choose to register themselves with NFCC as a national asset.

7. Full Audit trail (including Specification/Scoring matrix)

<http://sharepoint1/sites/Procurement/Contracts/OperationalEquipment/HWFRS55%20Drones/Forms/AllItems.aspx?RootFolder=%2Fsites%2FProcurement%2FContracts%2FOperationalEquipment%2FHWFRS55%20Drones%2FHeliguy&FolderCTID=0x012000BA64F229CC16D04385CC7D93074BFD08&View={9C4920E2-A498-4975-B628-1EF2EA9765B4}>

Appendix 1- Specification	 Specification.docx
Appendix 2- Invitation To Quote	 Quotation Document Drones v2.docx
Appendix 3- Evaluation Criteria	 Appendix 1 Evaluation Marking Gt
Appendix 4- Pricing Schedule	 Appendix A Drone Pricing Schedule v1.x