



External Drone Operator Requirements

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1 Standard Reference

The applicability of standards for this document is listed in the IMS document register, QY-FT-012.

2 Scope

The scope of this document is to detail the onsite rules for the companies performing drone surveys on Arqiva sites; it covers the following areas: -

- Health and Safety
- Scope of works
- On-site behaviour
- Local site considerations
- Data control
- Emergency procedures

3 Introduction

This document details the rules for the operation of Small Unmanned Aircraft (SUA) (remotely piloted aerial device weighing more than 250grams, but no greater than 20KG), for surveys, on Arqiva sites that all company/pilot must follow. This document should also be read in conjunction with **EI-SD-002** Arqiva Site Access Standard.

4 Legal Requirements

Contractors working for Arqiva must, at all times, comply with relevant safety, health and environment legislation.

Customers or Third Parties occasionally specify different or additional health and safety rules, then those required by Arqiva. Arqiva will inform its contractors of any such requirements before a particular contract or task commences.

5 Management Systems

5.1 Management Systems

Contractors should have in place effective safety, health and environmental managements systems that are commensurate to the nature of the activities they undertake and risks involved. Elements of the management system which are applicable to the operation of SUAs must be available at a site level to all operatives.

Certain key Arqiva policies and procedures are referenced within this document. The contractor is not required to adopt them but ensure their own procedures follow the key requirements set by Arqiva

5.2 Design

Any SUA survey undertaken by the contractor shall meet all relevant Civil Aviation Authority (CAA) statutes, standards and codes of practice and shall be undertaken by competent persons. The designer shall take into account the full scope of the work, to include health safety and environmental considerations during the survey. A designer risk assessment must be in place for all elements of the work, considering the items detailed below.

Note: *Whilst every effort has been taken to detail all of the areas which need to be covered, this list is not exhaustive and there maybe site-specific variations, which should be considered prior to commencing the survey:*

- **Health and Safety onsite:**
 - Exclusion/drop zones

- **Noise levels: -**
 - Remote locations
 - Built up areas

- **Local weather conditions at time of survey:**
 - Wind speed
 - Likelihood of rain

- **Height of tower:**
 - Special exemption requirements
 - How will line of site be maintained

- **Type of tower:**
 - Does it have guy lines
 - RF transmissions

- **Proximity to members of the public:**
 - Domestic dwellings in the location, public buildings, hospitals, schools etc

- **Data protection act:**
 - Accidentally filming members of the public
 - Private properties/gardens

6 Site Access System

All contractors must be registered on Arqiva's site access system.

7 Site Setup and Management - Working methods and Behaviours

7.1 Health and Safety onsite

7.1.1 Exclusion/drop zones

When operating an SUA on an Arqiva site, care should always be taken to ensure that any staff or other contractors onsite, who are not part of the survey, are not in any danger. To this end, the company performing the survey should ensure that they set-up a physical exclusion zone, which is large enough to minimise the risk to others onsite. This should also include the posting of appropriate warning notices.

7.2 Noise Levels

7.2.1 Remote Locations

Even if the site where the survey is to be carried out is in a remote location, it would be wrong to assume that noise is not an issue. Many Arqiva locations are inhabited by protected species, which should be disturbed as little as possible. As a result of this, noise should be kept to a minimum, notwithstanding the fact that the SUA will generate a certain level of noise pollution.

7.2.2 Built up Areas:

In locations situated in built up areas, the possibility of disturbing and or upsetting, members of the public, is all the greater. If members of the survey team and their associated support staff are not located in close physical proximity to each other, then wherever possible communication should be via walkie talkie. Shouting to each other, should be discouraged and the use of expletives is strictly forbidden. Arqiva strives to maintain a harmonious relationship with all the communities around its sites and nothing should be done to jeopardise that.

7.3 Local weather conditions at the time of the survey

7.3.1 Wind speed:

SUAs are particularly susceptible to variations in wind speed, which can have a detrimental effect on their handling ability. How much tolerance the SUA has to this variation in wind speed, is largely down to the capabilities of the device itself, with larger more powerful devices being able to operate in higher wind speeds. The person(s) piloting the SUA, must make a “real-time” assessment as to the feasibility of carrying out the survey whilst onsite, based on the prevailing conditions. This assessment should also include possible impacts on SUA battery life, as a direct result of having to constantly adjust the device during the survey.

7.3.2 Likelihood of rain:

As is the case for wind, SUAs are not designed to operate in the rain. Therefore, if it is raining, or rain is imminent, then the survey should not take place. If it is due to rain at some point during the day, then every effort should be made to ensure that the survey is completed before it starts.

7.4 Height of tower

7.4.1 Special exemption requirements:

CAA regulations state that drones should not be flown at an altitude greater than 400ft (122m) above ground level. Many of our towers are well in excess of that height and therefore special CAA exemption will be required prior to the survey taking place, providing they can be satisfied that all risks associated with flying above the maximum height limit, have been fully mitigated. A copy of that exemption should be brought to the site and checked/validated prior to the commencement of the survey.

7.4.2 How will “Line of Site” be maintained:

CAA regulations also state that “Visual Line of Site” (VLOS) should always be maintained during the flight. However, given the height of some of our towers, (VLOS), may not be feasible. Therefore, if the pilot is intending to view flight progress via a screen, utilising “Beyond Visual Line of Site” (BVLOS) or Extended Visual Line of Site (EVLOS), by use of a spotter(s), this also requires special CAA exemption. A copy of that exemption should be brought to the site and checked/validated prior to the commencement of the survey.

Note: *If special permission is required in order to complete the survey, the CAA will require an Operation Safety Case (OSC) to be completed as specified in CAP 722A, before they will grant approval.*

Details of these requirements, along with how to apply for the relevant authorisation, can be found on the CAA website.

7.5 Type of Tower

7.5.1 Tower support structure: -

Some of the towers surveyed will be free standing structures and therefore not present any additional complications to the survey. However, for those towers which utilise guy lines for support, additional care should be taken to ensure that the SUA does not collide with these lines.

7.5.2 RF Transmissions: -

Many of the Arqiva towers emit high levels of Radio Frequency (RF). These RF transmissions could adversely affect the operability of the SUA, which can result in, serious control issues or, in extreme cases, cause the aircraft to crash. To this end, the SUA pilot should be aware of the minimum safe distance under which the aircraft will safely operate and ensure that limit is not breached. The cameras fitted to modern SUAs have a great deal of flexibility with regards to the distance from which they can capture extremely detailed images. Wherever possible, this functionality should be utilised to its full extent, in order to minimise any of the risks associated with RF transmissions.

7.6 Proximity to members of the public

7.6.1 Domestic dwellings, public buildings, hospitals, schools etc:

CAA regulations state that no SUA should be flown within 50m of people and buildings, (this does not include people on site who have been made fully aware of what is going on).

Whilst this may not be an issue for many of our sites, which have 150m – 200m perimeters and are often in remote locations. It is however, something that should be considered for sites which are located in urban areas, where the “no fly zone” increases to 150m.

To this end, any survey which is carried out at a location which is situated in an urban location, should include in its method statement, how it will mitigate for any risks to the public. It may also, under certain circumstances, be necessary to seek special permission from the CAA, if the designated “no-fly” zone could be breached during the survey. (see creation of an OSC in section 5.1.4.2 above)

7.7 Data Protection Act

When conducting surveys at sites which are either, located in urban areas or where members of the public are likely to be. Care should be taken to ensure that only images directly related to the survey are captured.

If it is not possible to completely avoid capturing data related to the public, or their dwellings, then that data should be deleted as soon as possible. Under no circumstances should it ever be put on a web site or posted on social media, as this would be in breach of the Data Protection Act of 1998.

8 Active Monitoring

The contractor is responsible for ensuring there is a programme of active monitoring of the work they undertake and any areas for improvement are actioned in a timely manner. Records of monitoring should be shared with Arqiva.

Arqiva will also conduct a programme of active monitoring. Formal reports will be produced and issued to the contractor and any actions identified should be closed out in a timely manner.

9 Emergency Procedures

9.1 Fire Safety

Arqiva shall inform the contractor of any fire safety procedures on site and the arrangements for action in the event of a fire alarm.

The Contractor shall not interfere with any fire systems and shall ensure that all fire routes and fire exits are kept clear at all times. The contractor will be required to undertake a fire risk assessment for the work and ensure any requirements are made part of the emergency plan.

9.2 First Aid

Contractors must make their own arrangements for administering first aid and for the provision of equipment and facilities.

9.3 Accident, Incident and Near Miss Reporting

All accidents, incidents and near misses arising out of work undertaken by contractors on behalf of Arqiva must be reported immediately the Arqiva Accident Report Line on 01926 416 650. This is over and above any requirement to report any SUA related accidents to the CAA.

Contractors will investigate all accidents incidents and near misses as soon as is practicable and, where appropriate, in liaison with Arqiva and other contractors. A report detailing the findings of such investigations must be supplied to Arqiva within 5 working days.

10 List of Related Documents

Document No:	Document Title:
EI-SD-002	Arqiva Site Access Standard
SHE-FT-011	Site Access Accreditation - One Off Permit Request - Form
SHE-FT-012	Site Access Company Accreditation - Form

Appendix A Method Statement Checklist

A Method Statement must identify and explain the method by which each task will be undertaken and any safety precautions that must be implemented. It needs to clearly demonstrate that consideration has been given to each element of the overall job. It must be specific to the site and work being undertaken. This check sheet should be used to ensure that method statements meet minimum Arqiva standards.

Requirement	Satisfactory		
	Yes	No	N/A
Scope of Work			
Method statement, detailing full approach to how the survey will be carried out			
Operating Safety Case (OSC), including; Operations Manual, UAS Systems & Safety Risk Assessment. Required by CAA if seeking special permission.			
Start and completion date			
Location where the work is to be undertaken			
Special CAA Permissions (where appropriate; see OSC)			
Operations above 400ft (122M)			
Utilise BVLOS/ELOS (Beyond Visual Line of Site/Extended Line of Site)			
Operations in a built-up area			
Personnel Involved			
Details of site supervisor and their contact details			
Details of individuals involved in the work			
Arqiva contacts			
Order of Work			
Step by step description of how the work will be undertaken (See OSC)			
Method of starting work, who will be notified			
Details of the SUA pilots and their training			
Site Requirements			
Site access arrangements			
Details of temporary structures that will be erected e.g., barriers and signs			
How the work area will be controlled to stop unauthorised access			
Details of site security arrangements			
Personal protective equipment requirements			
Emergency planning			
Details of first aider and nearest hospital			
Environment			
Managements of nuisance such as noise			

Appendix B Site Setup Requirements

Requirement		Size of Project – CDM Non Notifiable (Hour = total hours worked by all personnel on site)			CDM Notifiable Projects
		5 working days or less on site	Between 6 working days and 10 days on site	Over 10 working days on site	
Site Access accreditation	Company, subcontractors and individuals must be on the site access system if work is on Arqiva site	All individuals working on the project must be accredited in the site access system and site access permits must be raised for all work			
Site signage	To detail contractors and for specific hazards eg men working at height. Alternative site entrance, parking areas and traffic routes must all be suitably signed				
Pre start meetings	Pre start meeting must be held with all parties involved in the work.	By telephone	By telephone / on site	On site meeting	On site meeting
Site management					
Supervision	Supervision will be dependent on the duration, size, site supervisor and complexity of the work and if there are multiple contractors on site.	Single contractor – team leader Multiple contractors – site supervisor	Single contractor – team leader Multiple contractors – site supervisor	On site supervisor required	On site supervisor required
Documentation <ul style="list-style-type: none"> Method statement Risk assessments Construction phase health and safety plan Waste management plan Lifting plans 	A site specific method statement and risk assessment is required for all work. If a project on any one site is worth over £300k then a site waste management plan is required. Lifting plans are required for all work involving cranes, rigging and heavy lifting.	Method statement and risk assessment	Method statement and risk assessment	Method statement and risk assessment	Method statement and risk assessment Construction Phase Health and Safety Plan
Permits	Contractors can use and issue their own permits to work. If undertaking RF planned work the Arqiva RFSSOW form must be used.				
Active monitoring - Site inspections	The contractor should detail how monitoring of site activities will be undertaken.	Monitoring by on site personnel	Monitoring by on site personnel	Site inspection programme required	Site inspection programme required
Traffic management	If any off the work activities will affect traffic routes or parking areas then a traffic management plan should be prepared, this can be a site drawing detailing new routes ort parking areas, signage should also be provided.				
Emergency arrangements – mast rescue, first aid, fire etc	Emergency arrangements should be determined by the activities being undertaken and the risks	First aider, nearest hospital and fire	First aider, nearest hospital and fire	First aider, nearest hospital and fire	First aider, nearest hospital and fire

Requirement		Size of Project – CDM Non Notifiable (Hour = total hours worked by all personnel on site)			CDM Notifiable Projects
		5 working days or less on site	Between 6 working days and 10 days on site	Over 10 working days on site	
	identified. Any work at height must have a rescue plan.	arrangements must be detailed.	arrangements must be detailed.	arrangements must be detailed.	arrangements must be detailed.
Communications	Communications include site notice boards, method statement briefings, site induction and tool box talks	Method statement briefing and site induction can be combined. Tool box talks only when required.	Method statement briefing and site induction can be combined. Tool box talks only when required.	Separate induction required.	Separate induction required.
Environmental monitoring <ul style="list-style-type: none"> • Ground water • Noise 	Environmental monitoring only required where a specific risk has been identified				