

Drones (RPAS) in the port area – Risk analysis and detailed situation sketch

The drone operator and site concession-holder/owner (preferably the latter's Safety/Accident Prevention officer) must carry out a risk analysis together on the location, with a view to:

- Safe operation of the drone
- Formulating preventive + reactive measures in case of an incident

What we require:

1. Detailed analysis of flight area (field + air) on the basis of a site visit
2. Identification and evaluation of dangers/risks on the location
3. Mitigating measures planned to prevent/limit damage

State the type of facility on which the RPAS is to be used:

	Industrial site (Seveso high/low)
	Tank storage with dangerous goods (Liquid bulk - Seveso)
	Warehouses in which dangerous goods are stored
	Gas (power station - processing - storage)
	Container terminal
	Ro/ro terminal (vehicles)
	Dry bulk terminal (sand, gravel, ore etc.)
	Liquid bulk terminal (food)
	Breakbulk terminal
	Warehouses, logistics company
	Buildings, offices, services
	Passenger terminal
	Infrastructure (wind turbines, above-ground pipelines, etc.): SPECIFY
	Electricity (power station - processing - storage - high voltage pylons): SPECIFY
	Transport (rail, marshalling yard, etc.): SPECIFY
	Shipping
	Nature conservation area
	Other: SPECIFY

Points for attention during the site visit, to be described in the analysis:

"Obstacles" should preferably also be indicated on a map, with photograph

- What are you going to inspect?
 - o Describe the structures, with max. height
 - Obstacles in the flight area:
 - o Description of obstacles + distance and max. height
 - o Danger markings?
 - Obstacles in the vicinity of the flight area:
 - o Description of obstacles + distance from the flight area and height of obstacles
 - o Danger markings?
- Examples of obstacles: high-voltage power lines, cooling towers, wind turbines etc.*
- Are there any dangerous substances/installations present:
 - o Flammable substances?
 - Danger of fire
 - Corrosive substances
 - Dangerous for the environment
 - Explosive
 - ...
 - o Overhanging high-voltage cables?
 - o High-voltage substation?
 - o Other? Specify ...
 - Are there any activities with radiation sources? (Nuclear power station, radioactive waste processing, etc.)
 - Is the area adjacent to a Seveso site?
 - Are there above-ground pipelines in the vicinity?
 - Are there any moving obstacles on the site?
 - o Travelling gantry cranes, jib cranes, straddle carriers etc.
 - o Ships
 - Any danger of wind turbulence due to buildings and other structures?

Possible consequences/dangers + preventive measures to be taken?

- Property:
- Equipment/infrastructure:
- People:
- Causing an "explosion":
- Outage of critical processes:
- Other (specify): ...

Safety measures:

- Personnel:
 - o Will personnel be present in the flight area during the flight?
 - o Stakeholders?
 - o What safety instructions have they been given?
- Surroundings:
 - o Has a perimeter been set up on the site to mark off the flight area?
 - o Has geofencing been installed?
- RPAS

- Does the RPAS have additional sensors to avoid collisions with towers/cables or other obstacles? E.g. proximity sensors
- Tracking system (in case of loss of drone)
- Ex-proof? (ATEX-certified)
 - Parachute?
- Emergency procedure
 - Describe the emergency procedure
 - What measures are provided in case of loss of communication, battery failure, mechanical problem, crash or fly-away of the RPAS?
- Abort procedure
 - How quickly can the flight be interrupted? (E.g. in case of disaster)

Communication

- Is the RPAS visible to other companies in the vicinity, or persons on the open ground?
 - How will they be informed?

Drawn up by:

On (date):

Signature of pilot

Signature of site owner/concession-holder