UKOPA
United Kingdom Onshore Pipeline Operators' Association

UKOPA/GPG/039 – Good Practice Guide on UK Drone Use and Legislation

Simon Joyce – SGN & FARWG Chair

Jonathan Chandler - 360 Above

360 ABOVE
CREATIVE SOLUTIONS

Webinar

o **All previous webinars can be found in the members centre.**

o **For this session, please**

    o Ensure your microphone is muted & your webcam is off.

    o Use the chat facility to raise any questions during the session … this will also allow us to get back to you with a response if we don't have time to answer your question during the session.

    o Take part on the polls as they appear.

UKOPA Overview

- UKOPA is an industry group comprised of UK onshore pipeline operators
- UKOPA exists to provide the recognised and authoritative view of UK pipeline operators on strategic issues relating to safety management, operations and integrity management of hydrocarbon pipelines. It seeks to effectively influence the development and implementation of pipeline related legislation and standards for the mutual benefit of all stakeholders
- Produces Good Practice Guides and Technical Bulletins and carries out research to support the industry
- New Corrosion Prevention Working Group has recently been formed.

UKOPA Organisation

Webinar Content

o Session in two parts

   o First Part

      o Why the GPG was written.

      o Operators perspective.

      o Use of drones.

      o Things to consider.

   o Second Part

      o What we are used to seeing.

      o Example of drones.

      o Possible use cases

Overview of the Document

- UKOPA/GPG/039 was a cross working group collaboration between the FARWG, EPWG, and PIWG.
  - Bringing in expertise across UKOPA.

- The GPG is for operators to understand the current legislation regarding the use of remotely operated aerial vehicles or drones.

- The document also addresses categories of drone for inspections, help for operators to chose the appropriate supplier, and checklist for guidance.

- Each operator will use drones in different ways. The GPG provides guidance for this but doesn't stipulate what scenario to use drones. It is down to your own organisations to review their use and necessity.

Poll

Pipeline Operator Perspective

- ## Why use drones?
    - Drones can fly into locations that are difficult to reach or to gain access without huge expenditure for operators.
    - Drones can cover areas of pipeline very quickly.
    - Information is recorded and easily stored.

- ## What do pipeline operators need to be aware of?
    - Type of drone used.
    - Survey planning.
    - Contractor credentials.
    - Governance.
    - Routes of survey including location.
    - Operational procedures.
    - Emergency procedures.

Operator Checklist

APPENDIX 1 OPERATOR CHECKLIST

SITE NAME		Job Number	
Contact Name/ No.		Office Address	
Email Address			
Job Location(s)		Type of Work Required	
Vehicle Access	Y/N	Task Date (Flexible?)	

ITEM	ACTION	FINDING
INSURANCE	Operators Insurance meets EC785/2004	
AIRSPACE	Within controlled aerodrome boundaries?	
TERRESTRIAL PROXIMITIES	Near public land/footpaths or built up areas etc.	
AIR PROXIMITIES	Other Aircraft (Aerodromes, Model Flying Sites, Heli Pads etc.)	
NOTAMs	Active Notice To Airmen (NOTAM)?	
HAZARDS	Live firing, high intensity radio transmissions, gas venting etc.	
RESTRICTIONS	Nuclear power stations, prisons, CNI's, MOD etc.	
SENSITIVITIES	Recreational areas, local by laws	
OBSTRUCTIONS	Wires, buildings, masts, other	
PEOPLE	Local habitation/ industrial areas, site personnel?	
PERMISSION	Local Authority, landowner	
LIVESTOCK	Local farms/nature reserve restrictions	
ACCESS	Right of way, gates, footpaths, bridleways	
PLANNING DOCUMENTATION	Planning documents received from operator including emergency scenarios	
RISK ASSESSMENTS	Risk assessments received from operator	

Points To Consider			Operational Category
	Is flight within built up area or over people?	YES	Only use A1 Open Category or Specific Category with special permissions
		NO	Use lowest possible category
	Is flight potentially close to uninvolved people?	YES	Use A1 or A2
		NO	Use lowest class possible
	Is flight on a closed site?	YES	Contact and coordinate with relevant site personnel. If briefed, any class can be used.
		NO	Conduct flights within operational guidelines with lowest class possible in line with relevant separation distances.
Operational Area	Is flight within the restricted zone of an aerodrome?	YES	Contact and coordinate with relevant aerodrome or Air Traffic Control to obtain relevant separation distances required to determine operational class.
		NO	Conduct flights within operational guidelines with lowest class possible.
	Is flight near to a restricted zone such as an MOD site?	YES	Contact and coordinate with relevant site personnel to obtain relevant separation distances required to determine operational class.
		NO	Conduct flights within operational guidelines with lowest class possible in line with relevant separation distances.
	Is drone used larger than 4kg?	YES	Only A3 or Specific Category would be allowed. Check individual operators risk assessments and documentation to determine operational abilities and separation distances of using the Specific Category.
		NO	Check operational class for separation distances.

Table 2 : Operational Category Table

Second Half

o Joff Chandler – 360 Above.

o Different scenarios.

   o What we are used to seeing.

   o Example of drones.

   o Possible use cases

What can we use drones for?

- What do we think of using a drone for?

  - Photography.

  - Videography.

- What can we use drones for?

  - Surveying.

  - 2D Mapping – Google earth overlay.

  - 3D Mapping/Photogrammetry - Measurement.

  - LiDAR.

  - Much more…

Photography

- ## Past Limitations
  - Limited most operation to large distances from uninvolved people
  - Mostly used for landscape photography due to this.

Photography

- New rules, new uses
  - Picking the correct class of drone can allow operations over uninvolved people.

Videography

- Almost all drones now film in 4K
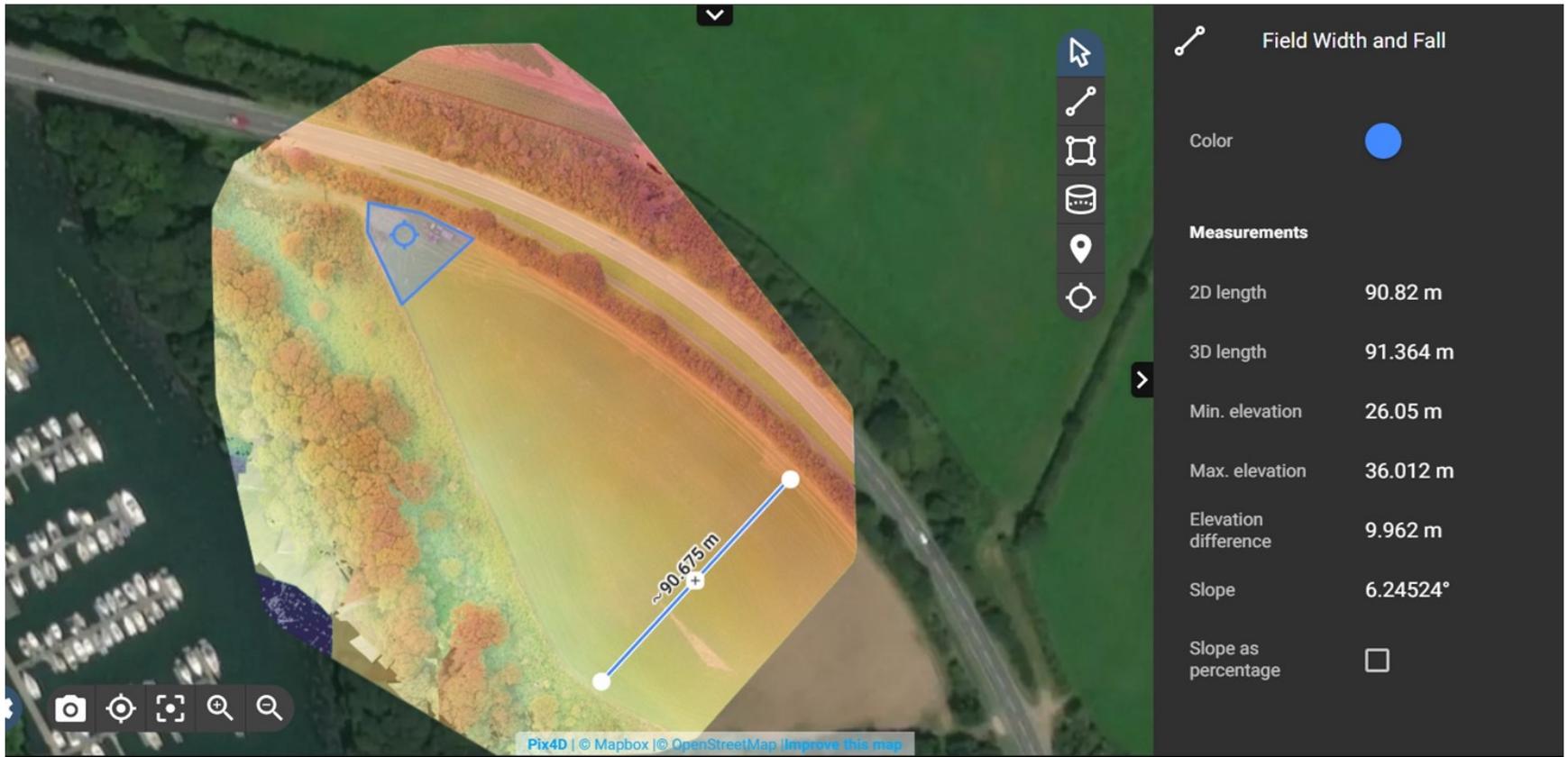 - Includes small consumer sized drones

What can we use drones for?

- Surveying
  - Includes 2D and 3D modelling – Photogrammetry
  - Measurements – area/volume
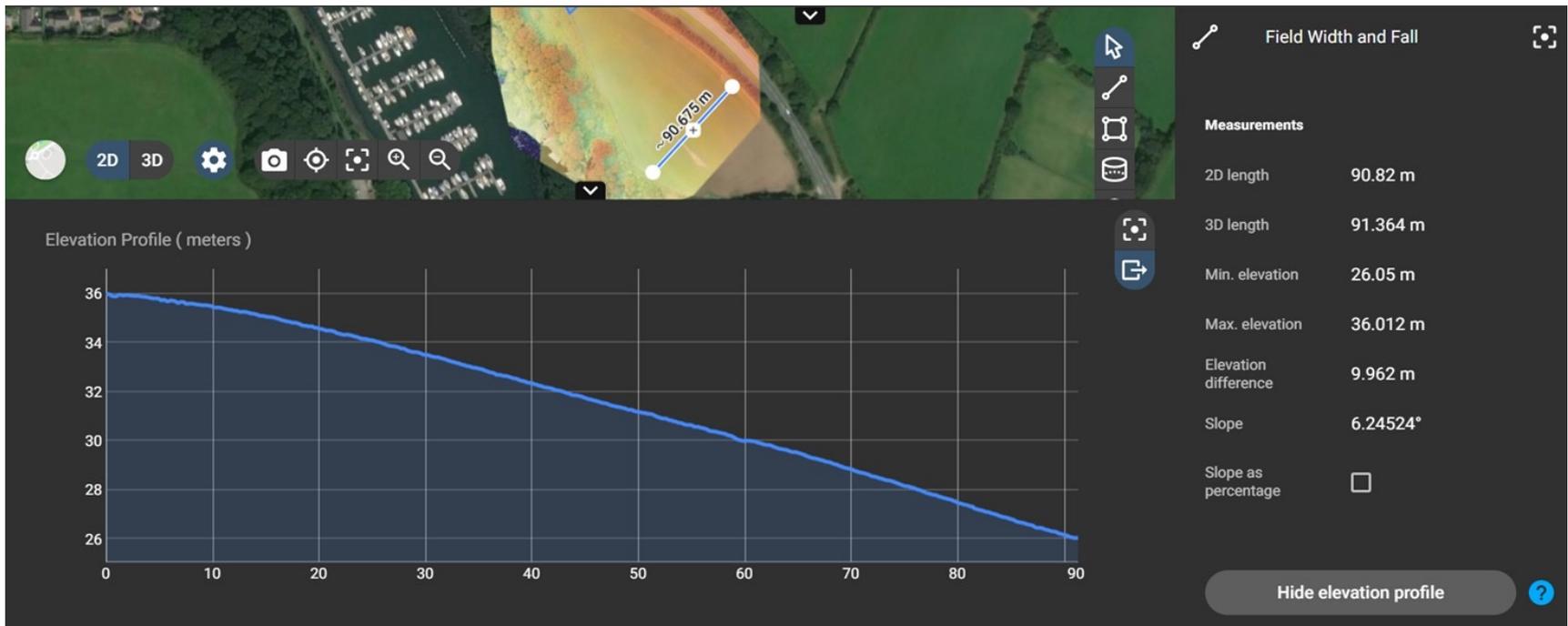 - Gradient profiles
  - LiDAR 3D models – accurate to 1cm

What can we use drones for?
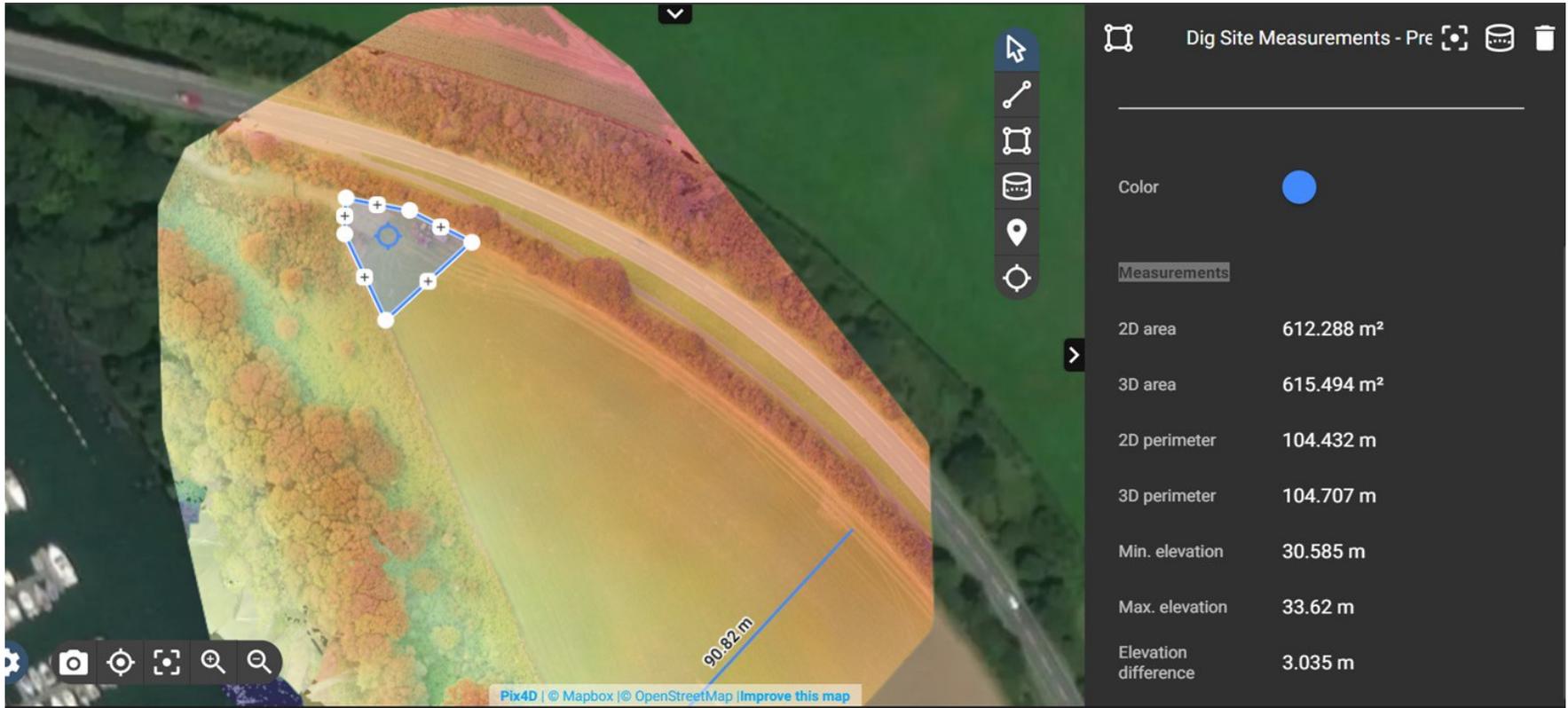
What can we use drones for?

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Keep in mind…

The drone industry is VERY quickly developing.

New capabilities coming every year including

- o LiDAR improving.
- o Gas detection cameras starting to come to market.
- o Higher resolution, more accurate photogrammetry.

Poll

Conclusions

- The GPG is available on the UKOPA website under published documents.

- Share it amongst your companies.

- We hope its useful to the members.

- Any areas of work that you would like to see UKOPA developing then please let Nikki Barker know, or speak to your representative in UKOPA, or join a working group!

Any Questions?
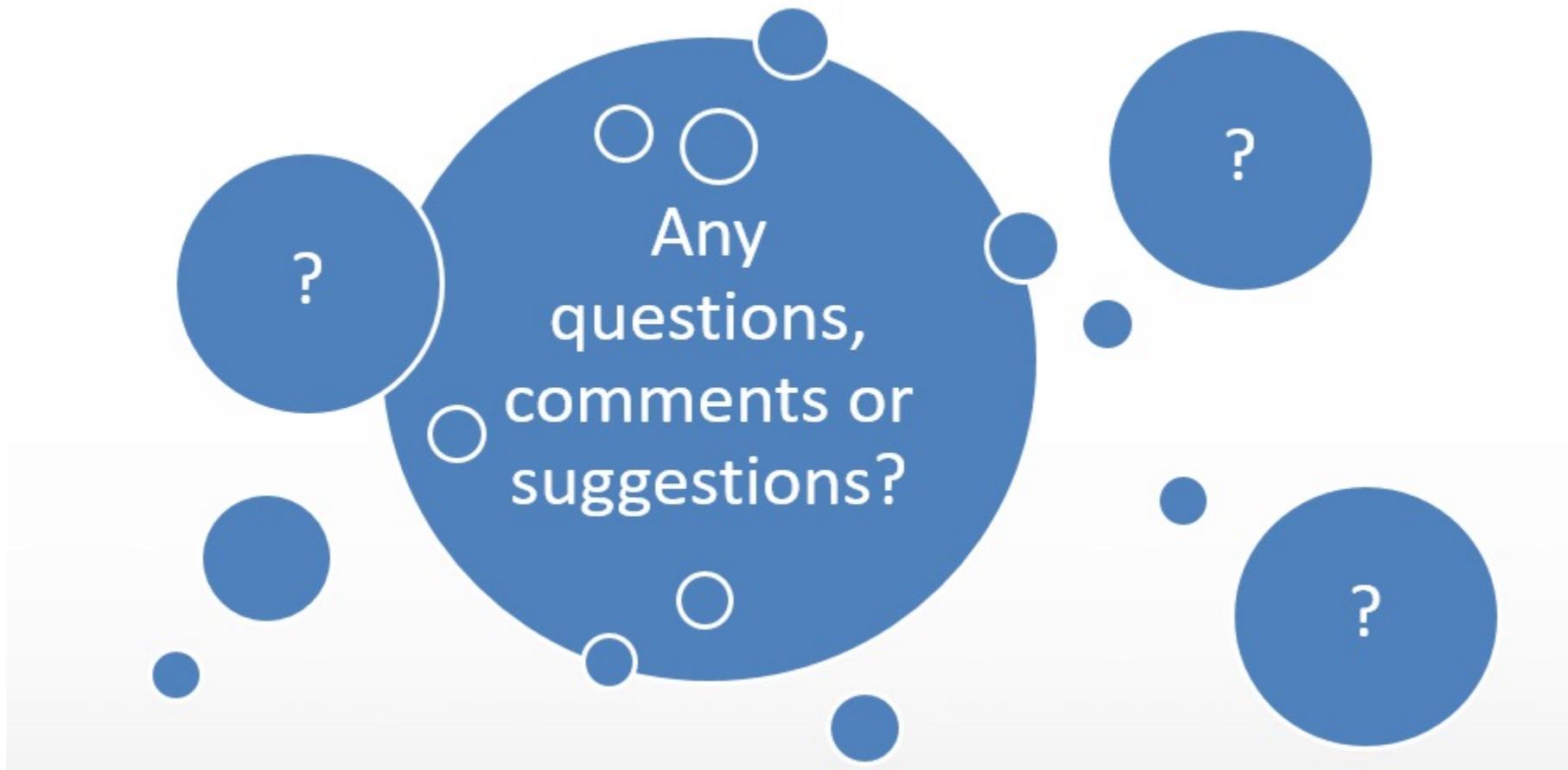
Thank you

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