Obstacle Management

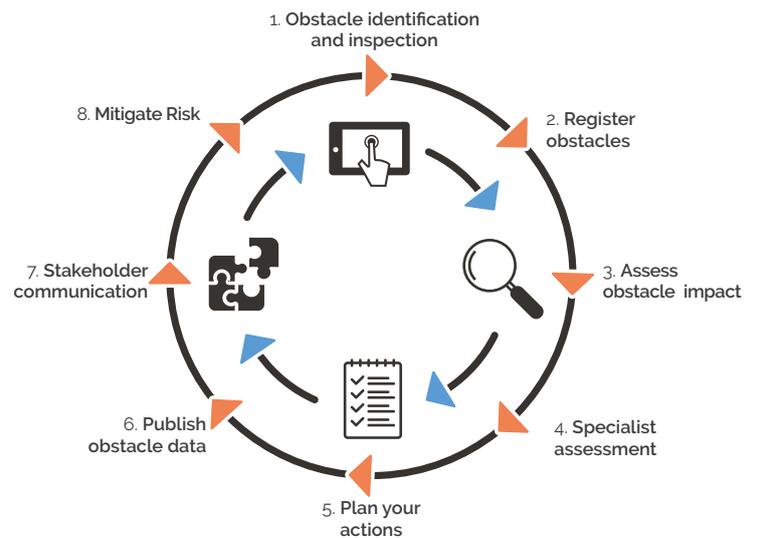## OBSTACLE MANAGEMENT AND IDENTIFICATION

Imagine being able to identify and manage all obstacles in your safeguarding zone, in one easy to use end-to-end service. The Ascend Obstacle Management solution enables you to:

- **Identify obstacles**
- **Register obstacles**
- **Assess the impact**
- **Publish obstacle data**

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PROCESS

1. **Obstacle identification and inspection:** ground, aircraft or satellites.

2. **Register obstacles:** In the Ascend web-portal.

3. **Assess obstacle impact:** Do they penetrate critical surfaces?

4. **Specialist assessment:** Should flight procedures be changed?

5. **Plan your actions:** Should obstacles be removed or approved?

6. **Publish obstacle data:** As NOTAMS, in the AIP and/or as AIXM data.

7. **Stakeholder communication:** Arrange removal with obstacle owner.

8. **Mitigate risk:** By removing obstacle or using high intensity lights, collars or etc.

1. Obstacle identification and inspection
2. Register obstacles
3. Assess obstacle impact
4. Specialist assessment
5. Plan your actions
6. Publish obstacle data
7. Stakeholder communication
8. Mitigate Risk

Detailed process description

1. Obstacle identification and inspection

Ground Identification
Create the obstacles published in your AIP in the Ascend service. Inspect the area and look for non-documented obstacles. You can assess obstacles using the Obstacle Assessment Solution and a ground-based laser measurement tool like the one shown below.

Airborne LiDAR data
Ascend can scan the area covered by your limitation surfaces identifying and classifying obstacles. This is done by comparing a surface model with the digital 3D model of your limitation surfaces. LiDAR is used to ensure the detection of all obstacles within the relevant area. LiDAR data, with a minimum 5-year life cycle, is recommended for ADQ compliance within the Annex 14 surfaces and ICAO Annex 15 area 2.

Satellite models
In areas where no public LiDAR/Elevation models are available, Ascend offers an alternative using the NextMap 5 elevation model, or WorldDEM elevation model generated from TerraSAR-X/Tandem-X data.

NextMap 5 is available in most areas within the +/-60 latitude. NextMap 5 has a vertical accuracy of 1,65m LE90 in most areas. This can vary in some areas and must be verified in these cases. WorldDEM is available worldwide, but the resolution is not as high as in Next5, and the vertical accuracy is lower.

Obstacle inspection
When obstacles are identified and registered, an inspection process should be set into place. Temporary obstacles should be inspected around expiry to make sure that they are no longer an issue. Permanent obstacles should be inspected to validate that there have been no significant changes.

2. Register obstacles

Register all your published obstacles in the Ascend web-portal, see tutorials here. To generate compliant AIXM data, obstacle meta data must be filled out. We recommend that you create the controlling obstacle for each flight procedure. This will help you in assessing future obstacles in the area – If you need guidance for this task contact Ascend support.
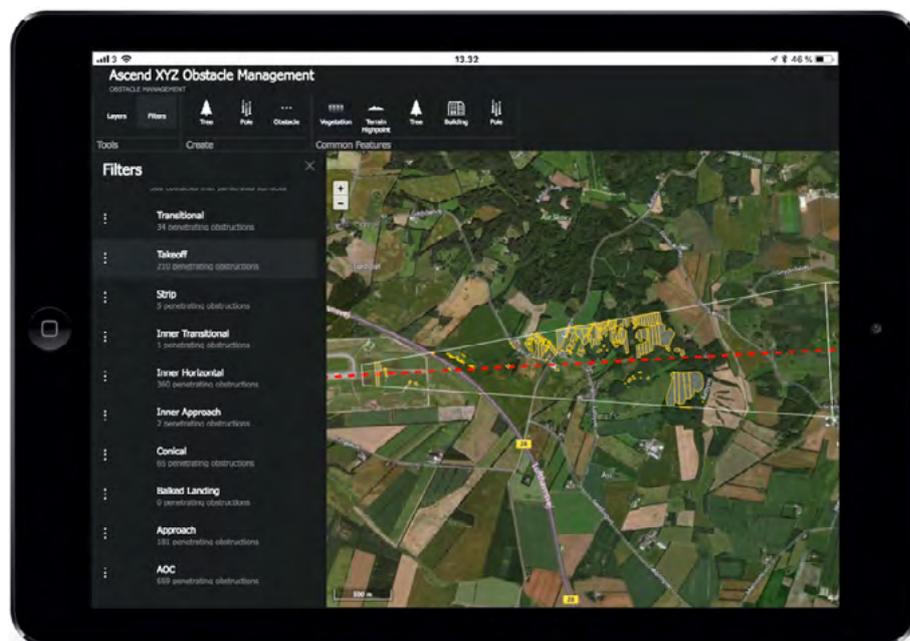
3. Assess obstacle impact

When an obstacle is registered in the service, you can easily evaluate if it penetrates any critical surfaces. An AOC surface penetration will typically have no effect on flight procedures, whereas a penetration in the approach or take-off surfaces could have an effect, and should be dealt with.

Detailed process description
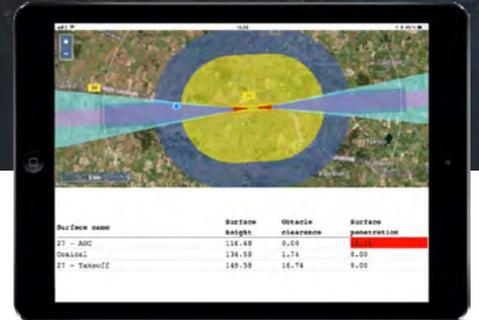
4. Specialist assessment

In some cases, the evaluation can be complex. If there is doubt about the impact an obstacle may have on flight procedures, the obstacle should be evaluated by a procedure designer or specialist. Ascend can support you in this task.

5. Plan your actions

Should the obstacles be approved? Do they have an effect on flight procedures? If so, what is the mitigation plan? If an obstacle needs to be removed, this must be planned. This is performed by airport staff, an external contractor or by the obstacle owner.

6. Publish obstacle data

If the obstacle is temporary it should be published as a NOTAM. If the obstacles are permanent they should be published via your local AIM office, typically obstacle data is exported in AIXM format. Make sure obstacles are published in all relevant charts (procedure charts, AOC etc.).

7. Stakeholder communication

Get landowner's acceptance on a removal or mitigation plan. Obstacle documentation can be created with images and data from the Ascend Obstacle Management solution. This helps the stakeholder to understand the problem and makes communication easier.

8. Mitigate risk

Mitigate the risk by removing obstacle or by equipping obstacle with ICAO standard markings or lights. Remember to update the obstacle metadata in the Obstacle Management solution.

Get access to the service now!

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Notes:

- Obstacle identification is depending on LiDAR scan availability in your area. Ferry flight to your airport will be added to the cost. Contractual binding period is 5 years when obstacle identification is included.

- Terrain model can be included in the service based on the public or satellite data. This is a one time cost.