

Air Safety Information Leaflet

Drone activities in the vicinity of Railway infrastructure



About Infrabel

Infrabel builds, owns, maintains and upgrades the Belgian Railway infrastructure and network. In support of these tasks Infrabel operates its own Drone Competence Center in order to develop, test and deploy different use cases for drones to improve the management of the Belgian Railway infrastructure.

Purpose

The purpose of this ASIL is to provide safety guidelines related to the risks of drone operations of external parties that are not carried out on behalf of Infrabel. Infrabel wishes to create a safe environment in which drone operations can be carried out without causing hindrance or safety risks to the infrastructure, train traffic, its own staff or third parties. Infrabel wishes to provide guidelines to external drone operators for the safety of train traffic and for the safety of drone operations near or on the railway domain.

Guidelines for flying drones in vicinity of railway infrastructure

Hazards involved

Flying your drone in vicinity of/or above the railway's infrastructure domain involves various important hazards.

- Within a distance of 5 meters from the railway outer track the train wake turbulence can imbalance the drone and/or its pilot.
- Flying above the catenaries (between 3000 V and 25000 V) can cause electromagnetic perturbation to the drones radio transmissions and electronic systems.
- A frontal train collision with a rolling train at 160 km/h can incapacitate the train conductor.

All of these hazards can cause accidents and incidents which aside severe human and material damage will also cause disruptions of the train traffic causing economic damage in terms of punctuality.

Any crash occurring on the railway infrastructure (catenary or trackside systems) will need immediate reporting to Infrabel's Traffic Control centre.

Infrabel has elaborated guidelines and recommendations for drone flights in the vicinity of railway infrastructure both in Open and Specific Category, respectively for both external and internal drone operators.

Those guidelines can be found at www.infrabel.be/nl/drones or www.infrabel.be/fr/drones

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For all questions related to drone missions or drone operators wishing to fly near or above the railway domain, please contact Infrabel's Drone Competence Center (drones@infrabel.be)