

# Counter Drone Vulnerability Assessment (CDVA) Case Study



## BACKGROUND

Cunning Running Software Ltd (CRSL) were invited by North Yorkshire Police to provide Counter Drone Vulnerability Assessments (CDVA) for the 2019 UCI Road World Cycling Championships, which took place in late September 2019.

The event consisted of 9 days of racing with over 80 countries involved, around 1400 cyclists, 7000 delegates and a global TV audience of around 300 million.

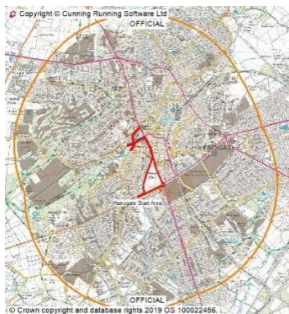
Harrogate was the focal point and the finishing destination for all the races. There were 10 start locations: Beverley, Tadcaster, Wetherby, Doncaster, Bradford, Leeds, Ripon, Northallerton, Richmond and Harrogate, spread across four police force areas: North Yorkshire, West Yorkshire, South Yorkshire and Humberside.

In previous years, drone incursions had occurred in the Tour de Yorkshire cycle race in a clear breach of drone legislation. The police needed to mitigate the risk at this event, namely from potential conflict with helicopters undertaking aerial TV coverage, the potential for alarm in densely crowded locations and any loss of credibility should the championships have to be called off over security concerns.

## THE CDVA SERVICE PROVIDED

CRSL carried out assessments using aerial imagery and other geographic data of all 10 of the start locations, using our Counter Drone Vulnerability Software (UAS-PRAS).

This identified potential drone launch sites, which are based on drone capabilities and limitations; ground topography and the local environment. At the request of North Yorkshire Police, CRSL also carried out a ground assessment of Harrogate, as this was the focal point for all races and involved visiting all the identified potential drone sites, capturing additional data and scoring each site based on specific criteria.



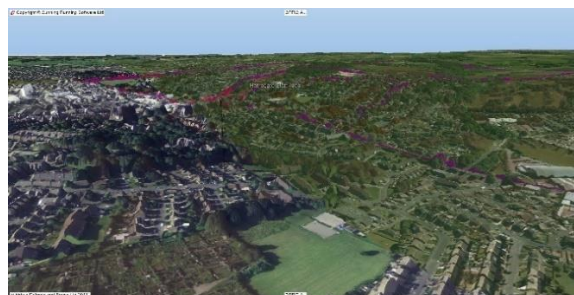
Example of a Drone Footprint

The purpose of the assessment was to identify potential drone sites in proximity to the locations, enhance the awareness of local personnel and to further encourage joint contingency planning between police forces as well as part of a multi-faceted approach to managing the Airspace.

On completion of the assessment, a detailed report was provided to each force Counter Terrorism Security Co-ordinator. This consisted of an overview of the potential drone launch sites, recommended actions, areas where community engagement could be carried out, maps of the drone footprints and a 3D aerial image showing the view from a drone

## THE OUTCOME

Our CDVA allowed the police forces to identify high priority sites, to deploy resources and develop patrol strategies to mitigate the risk of drone incursions at a prestigious sporting championship. Unlike previous events, no drone incursions occurred and neither the racing nor public safety were interrupted. A clear success! Furthermore, the assessments saved the police considerable time & manpower in comparison to using a manual process.



Example of a 3D Aerial Image

## TESTIMONIAL – North Yorkshire Police Lead Security Coordinator

From my perspective the CDVA provide a scientific basis for narrowing down prospective launch sites. For those of you who are familiar with the Mortar Base Plate Assessment process, they efficiently streamline what is a very laborious manual piece of work, if undertaken in force.

Tel: +44 (0)1794 834750 • E-mail: [sales@cunningrunning.co.uk](mailto:sales@cunningrunning.co.uk) • [www.cunningrunning.co.uk](http://www.cunningrunning.co.uk)



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