

Static Cameras

What is happening?

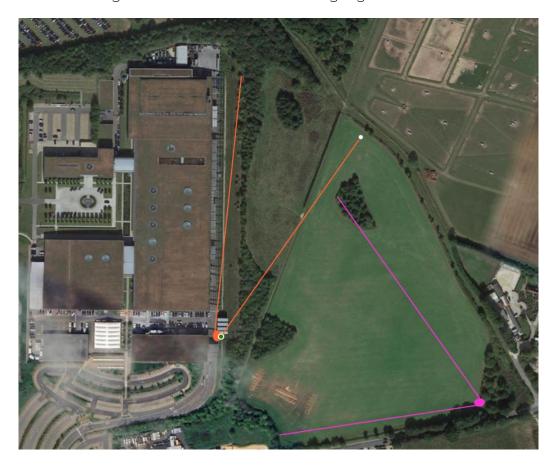
This is a five-year timelapse photography project, capturing the entire site extension build from bottom to top. The two cameras, situated on 10m-high towers at key vantage points on the new site, will provide content with significant internal and external communications value.

Why is it needed?

The images captured will enable us to track the build in its entirety, providing valuable content for internal and external communications campaigns. Doing this allows us to bring our hardworking colleagues at the Home of Rolls-Royce on the journey with us, while also giving us rich, interesting content for our external communications channels, including InfoHub articles, press releases and events.

Where will it take place?

The below image shows the locations and viewing angles of the cameras:







The following images show an example of the views from the static cameras:









When will it happen?

The cameras are operational every day from 07:00 to 19:00 and will be in place for the duration of the project, which is scheduled for completion in 2029.

What measures have been implemented to protect people's privacy and reduce the impact to the local community?

- We have selected a specialist partner organisation who use a combination of techniques – such as AI technology and block blurring – for object detection, image segmentation and anonymisation to ensure any individuals captured will be anonymised.
- The cameras are positioned in a way to ensure no images will be captured of private (residential or commercial) property. They are static, so not able to rotate or reposition from the agreed parameters.
- Images which capture people's use of the public rights of way will be automatically anonymised, in line with the information provided above.
- We have installed prominent signage to inform people that the cameras are in use in the area, their purpose, who to contact if they have any concerns and where to go to find out more information.
- There are no microphones in use on the cameras, so no audio recording will take place.





Drone / Unmanned Aerial System (UAS)

What is happening?

A UAS, with a mounted camera, will be flown periodically over the course of construction to conduct site surveys and monitor progress.

Why is it needed?

The UAS-derived data and media from these flights will support the RRMC site extension project by providing valuable information to the quantity surveyors, engineers, construction managers and other key stakeholders involved in the development.

- Quantity / Quality Surveying: The UAS will be used to capture high-resolution aerial imagery and data that can be analysed to assess the quantities of materials, resources, and infrastructure present on the site. This supports accurate quantification for procurement, logistics, and project management purposes. Additionally, the aerial data can be used to evaluate the quality and condition of existing site elements.
- Volumetric Massing: The UAS will generate 3D models of the site terrain and structures. This allows for detailed volumetric analysis to measure earthworks, stockpiles, building volumes and other spatial parameters critical for design, engineering and construction planning.
- Tolerance Checks: The aerial data collected by the UAS will be compared against design specifications and Building Information Modelling plans to verify that the site development is proceeding within acceptable tolerances. This quality assurance process helps identify any deviations that may require corrective action.
- Topographic Reports: The UAS will capture comprehensive topographic data of the site, including elevation maps, contours, and surface features. These detailed topographic reports are essential for civil engineering, drainage planning and landscape design.
- General Photos / Videos: In addition to the technical survey data, the UAS will provide general photographic and video documentation of the site conditions, progress, and activities. These visual assets can be used for internal project monitoring, external stakeholder communication and promotional purposes.





When will it happen?

Due to the construction site being located within Goodwood Aerodrome's Flight Restricted Zone, there are strict rules in place regarding UAS operations in this area. With permission from Goodwood Aerodrome, it has been agreed to operate within the following parameters:

The UAS flights are planned to be conducted on Mondays, Wednesdays, or Fridays between the dates 19/08/2024 – 31/12/2027

- There will be a maximum of 3 flights per week, although we aim to limit this to 1-2 flights per week where possible.
- The permitted flight times are as follows:
 - o Morning: 06:30-08:30
 - o Afternoon/Evening: 30 minutes after Aerodrome closes-20:30
 - Dec-Jan, 16:30-20:30
 - Feb, Mar, Nov, 17:30-20:30
 - Apr-Oct, 18:30-20:30
- The flight schedule and frequency has been designed to balance the technical requirements of the site extension project with consideration for the potential impacts on the local community. Flights will predominantly be scheduled to take place in the morning time slots, however the exact flight times will remain weather and daylight dependent.

Where will it take place?

In order to collect accurate data, the UAS needs to criss-cross the site e.g. to create accurate 3D images.

The UAS flight route has been configured to ensure it predominantly flies within the parameters of the RRMC site boundaries. This ensures the associated images captured are also contained within the site boundaries, with the exception of parts of Roman road and some open farmland, which is used for the UAS turning circle to ensure it's able to image the correct angles for accurate modelling.

The automated flight paths have been designed to maintain a minimum distance of 20 metres, but in most cases 28-30 metres away from residential and commercial buildings. In





addition, virtual geo-fences (programmed restrictions around designated physical locations) have been established around the adjacent residential and commercial properties, which operate as 'no fly zones'. This is a further measure to prevent the UAS from inadvertently flying over these areas.

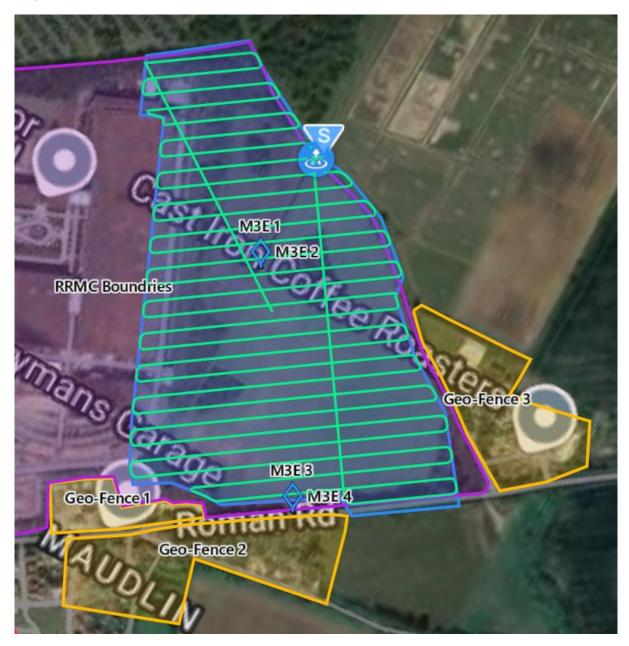
3D Mapping Flight Path: This is the flight path used for mapping of the site to create 3D models.







2D Mapping Flight Path: This is the flight path used for mapping of the site to create 2D maps.

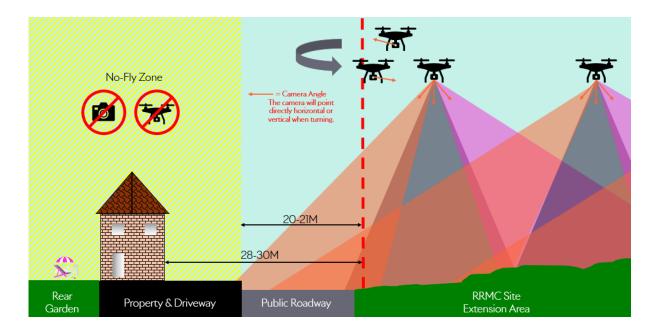






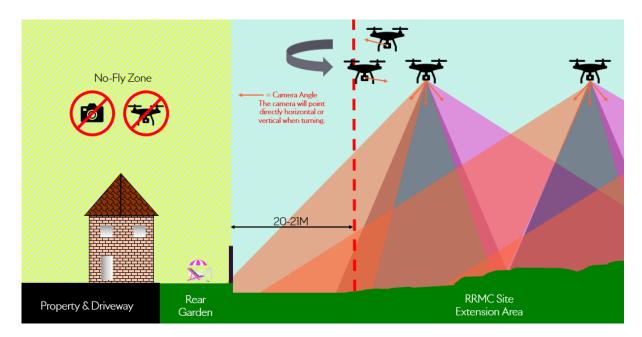
What measures have been implemented to protect people's privacy and reduce the impact to the local community?

- We have installed prominent signage to inform the community that cameras are in use in the area, for what purpose, who to contact if there are any concerns and how to find out more information.
- The camera angle on the UAS is programmed to automatically adjust during the UAS turning phase, to point either directly forward or vertically up (never down). This ensures the UAS will not inadvertently capture any images of residential or commercial property.









- For areas of public space within the defined flight path (e.g. bridleways, footpaths, roadways), any individuals inadvertently captured by the camera will be anonymised.
- The UAS is restricted to a maximum height of 40m as per the requirement of Goodwood Aerodrome.
- There are no microphones in use on the UAS, so no audio recording will take place.

Other Useful Information

Our UAS pilots are all qualified, registered operators and take their responsibility seriously to fly safely, legally and considerately, in accordance with the 'Drone Code'.

We have ensured our Public Liability Insurance covers these UAS flight operations.

Civil Aviation Authority (CAA) REGULATIONS:

Since December 2023, the CAA regulation requires UAS's to fly at a minimum distance of 50 metres (horizontally) away from uninvolved persons (a person or persons that are not involved with flight operations) and 150 meters away from any private or commercial buildings.





Before conducting UAS flights over public rights of way, a visual check is conducted by the UAS pilot to look for members of the public. If no person/s are seen, the flight is taken to the 50-metre limit. This exercise is then repeated for subsequent sections as necessary.

To fly within the 150-metre zone, a Specific Operation Authorisation (SOA) is required from the Civil Aviation Authority (CAA). RRMC holds an SOA with the CAA, which allows the organization to fly up to 10 meters away from residential buildings (excluding driveways). To ensure minimal disruption to residents, however, we will maintain the 20-30-metre distance outlined in the 'Where will it take place?' section above.

RRMC's PDRA Operational Authorisation number (for the SOA), is PDRA01-23388.

For more detailed information on the regulations, please refer to the links provided below:

- 2019 Regulation: https://regulatorylibrary.caa.co.uk/2019-947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_EU_2019_947_of_247/Content/map/00010_Commission_Implementing_Regulation_Implementing_Implementing_Regulation_Implementing_Regulation_Implementing_Regulation_Impleme
- Section (UAS.OPEN.030 (2)): https://regulatorylibrary.caa.co.uk/2019-947/Content/map/00330_UAS.OPEN.030_UAS_operations_in_subcategory_A2.htm
- Current UAS Regulation Guidance: https://register-drones.caa.co.uk/drone-code/the_drone_code.pdf

PDRA / SOA: https://www.caa.co.uk/drones/pdra01-operational-authorisations/

