

PRACTICAL GUIDE

DRONES IN HIGHWAYS & CONSTRUCTION.

What drones can do on live networks and construction sites, the rules that apply, the data you get, what it costs and how to choose a supplier.

2014	£900	0
FLYING COMMERCIALLY SINCE	DAY RATES FROM	FLIGHTS OVER LIVE TRAFFIC



01

WHAT DRONES ARE USED FOR

INSPECT

Bridges, structures, lighting, gantries, signs, barriers, culverts, roofs and telecoms masts.

SURVEY

Topographic surveys, orthomosaics, 3D models, LiDAR, stockpiles and cut and fill.

MONITOR

Construction progress, time-lapse, environmental change and earthworks over time.

CAPTURE

Project films, photography, 360° tours, inductions and stakeholder content.

02

THE RULES, IN PLAIN ENGLISH

- Commercial drone work in the UK is regulated by the Civil Aviation Authority (CAA).
- Most professional infrastructure work near people, roads and structures is flown in the CAA's **Specific category** under an **Operational Authorisation**, with pilots holding a **GVC**.
- Operators should carry suitable insurance and produce site-specific risk assessments and method statements.
- Airspace near aerodromes and other restrictions needs checking and, where required, permission before flying.
- Asset owners such as National Highways publish their own requirements for suppliers flying on their behalf.
- Good practice on highways: take off and land off the carriageway and **never fly over live traffic**.

03

COMMON MYTHS

- **"It is just photography."** Processed outputs such as orthomosaics and point clouds are engineering data.
- **"We would still need traffic management."** Usually not: flights are planned from safe positions off the road.
- **"Anyone with a drone can do it."** Live highways need authorisation, competence, insurance and site experience.



04

THE DATA YOU CAN GET

OUTPUT	WHAT IT IS	TYPICAL USE
Stills and video	High-resolution imagery, geo-tagged	Condition records, defects, comms
Orthomosaic	A single, measurable, map-accurate image of the site	Plans, progress, layout, as-built
Point cloud	Millions of measured 3D points	Design, clash checks, surfaces, volumes
Surface models	Terrain and surface models from survey data	Earthworks, drainage, cut and fill
3D model / digital twin	Textured, measurable 3D reality	Asset management, planning, engagement
Thermal imagery	Radiometric heat data	Electrical faults, moisture, heat loss
Annotated films	Edited video with structure labels	Progress reporting and stakeholders



05

WHAT IT COSTS

TIER	WHAT YOU RECEIVE	DAY RATE
Capture	Raw photos and video	from £900
Polished	Edited, client-ready media	from £1,200
Survey	Mapping and measurements	from £1,600
Data	Fully processed, CAD-ready outputs	from £1,800

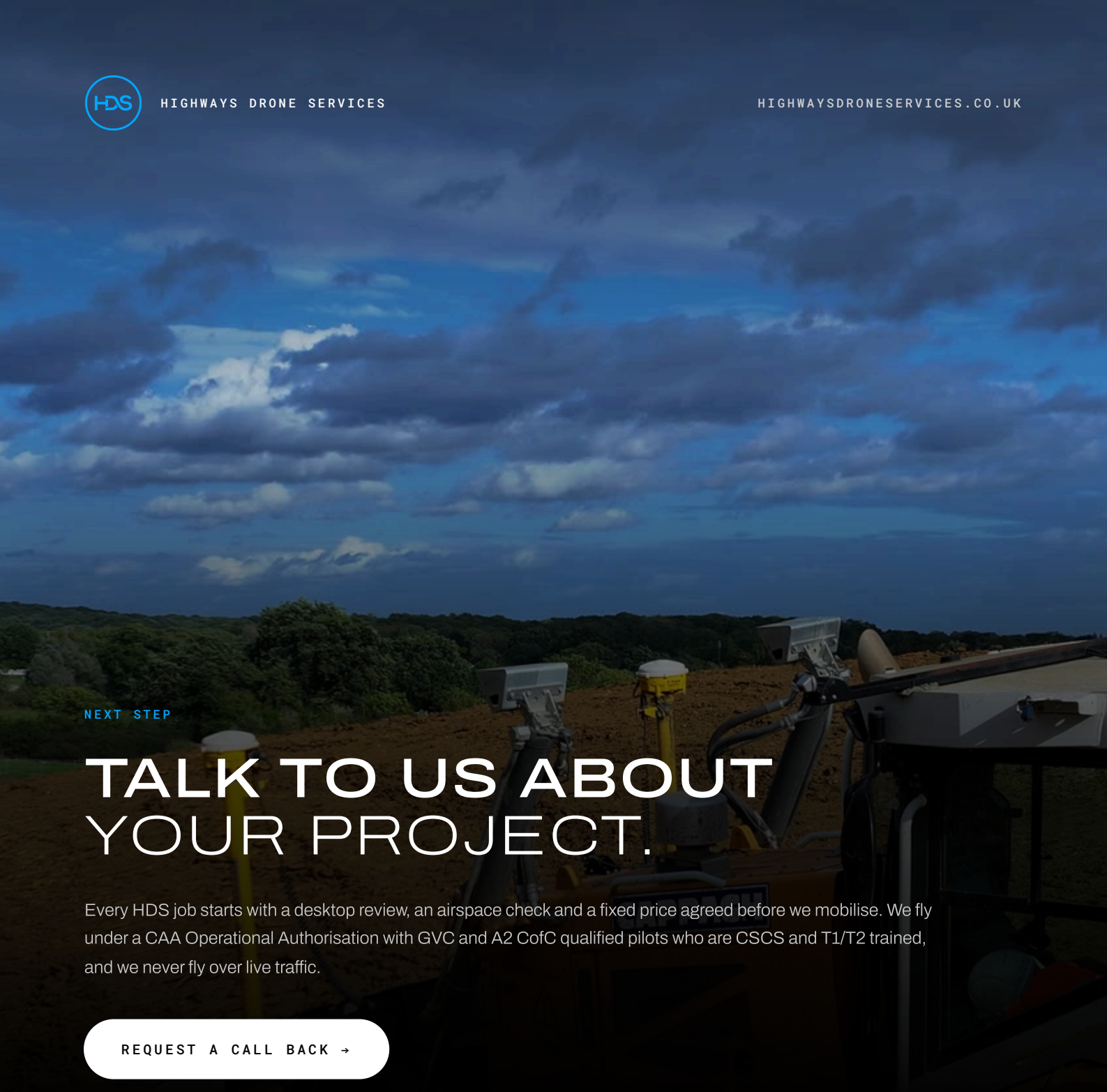
Example: bi-weekly progress monitoring of a major rail scheme, with edited annotated films and 360° capture, has run at around £5,000 a month.

06

CHOOSING A SUPPLIER

Use these questions before you appoint anyone to fly on your project.

QUESTION TO ASK A DRONE SUPPLIER	WHY IT MATTERS	✓
Do you hold a CAA Operational Authorisation for the Specific category?	Most professional infrastructure work near people and roads needs it.	☐
Are your pilots GVC and A2 CofC qualified?	Recognised UK competence for commercial flying.	☐
What public and employers liability do you carry?	Ask for certificates, not just a figure.	☐
Will you provide site-specific RAMS and an airspace assessment?	Generic paperwork is a warning sign.	☐
Do you fly over live traffic?	The answer should be no. Good operators plan positions on verges and compounds.	☐
Are your operatives CSCS and traffic management trained?	They will be on your site and on the highway edge.	☐
What exactly will we receive, and in what formats?	Raw files are not a deliverable. Agree outputs up front.	☐
Can imagery be referenced to our asset list or GIS?	Makes the data usable by your engineers.	☐
How is our data stored, shared and protected?	Public-space imagery has GDPR implications.	☐
Can you show live-network references and case studies?	Highways experience is different from property filming.	☐



NEXT STEP

TALK TO US ABOUT YOUR PROJECT.

Every HDS job starts with a desktop review, an airspace check and a fixed price agreed before we mobilise. We fly under a CAA Operational Authorisation with GVC and A2 CofC qualified pilots who are CSCS and T1/T2 trained, and we never fly over live traffic.

REQUEST A CALL BACK →

CALL BACK	highwaysdroneservices.co.uk/contact
EMAIL	hello@highwaysdroneservices.co.uk
DAY RATES	From £900 for raw capture to £1,800 for fully processed, CAD-ready data
INCLUDED	Two-person team, Chapter 8 vehicle, RAMS, flight planning and insurance
COVER	£10m public and employers liability
COMPANY	Highways Drone Services Ltd · Company number 16621433