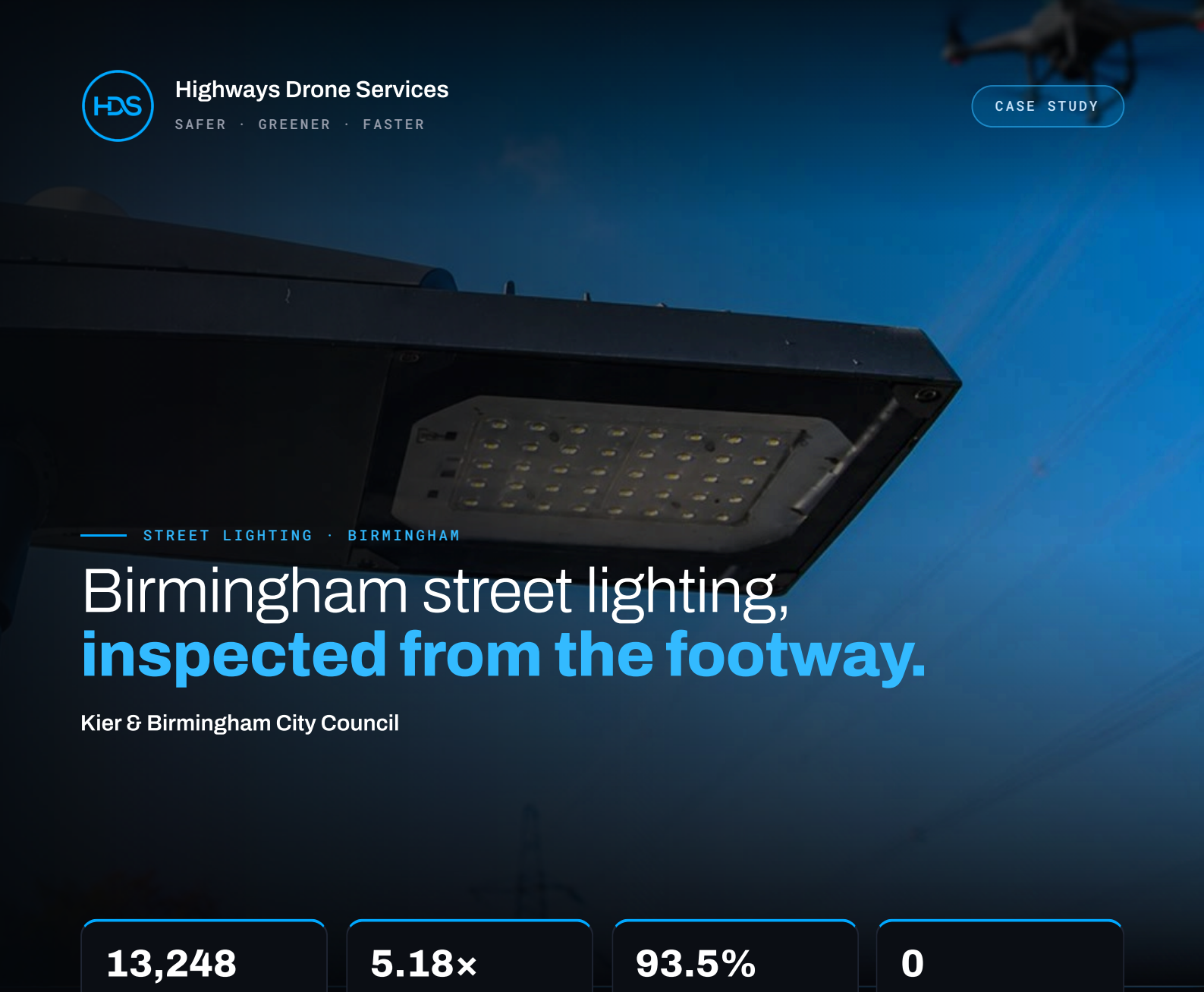
Highways Drone Services

SAFER · GREENER · FASTER

CASE STUDY



STREET LIGHTING · BIRMINGHAM

Birmingham street lighting, **inspected from the footway.**

Kier & Birmingham City Council

13,248	**5.18×**	**93.5%**	**0**
lighting columns surveyed	productivity: 75.1 columns a shift vs 14.5	less survey-phase CO_2	accidents, injuries or near misses

THE PROJECT

Birmingham's network runs to around 94,000 lighting columns. Inspecting them meant MEWPs, impact protection vehicles and lane closures, 15 to 30 columns a shift, and paper checklists too subjective for long-term planning. HDS, working with Kier on the Birmingham Highways Maintenance Contract, replaced that with a drone-led workflow flown from footways and verges.

THE CHALLENGE

- Operatives working at height from MEWPs and IPVs beside moving traffic
- Lane closures, signals and footway blockages adding to urban congestion
- Diesel plant idling through 15 to 30 column shifts
- Subjective paper records that could not support predictive maintenance

KIER & BIRMINGHAM CITY COUNCIL · 13,248 STREET LIGHTING COLUMNS SURVEYED BY DRONE FOR BIRMINGHAM

OUR APPROACH

01 Off-carriageway operations: pilots work from footways and verges, with no lane closures and no IPV

02 Repeatable urban flight routines for tight, high-traffic streets

03 High-detail payloads capturing brackets, luminaires and column condition

04 Automated processing into a structured, searchable record, ingested into the client's GIS

05 A Chapter 8 compliant mobile base with on-board kit and Starlink connectivity



Lantern and bracket captured from the footway



Column-top detail without a MEWP

OUTCOMES

Zero harm

No accidents, injuries or near misses across the 10-day trial and rollout. All at-height activity and 100% of live-lane exposure removed.

Carbon slashed

93.5% less CO_2 during survey operations and around 234 tonnes avoided across the full rollout, with three heavy vehicles replaced by one light van and a drone.

Productivity multiplied

75.1 columns a shift against a 14.5 baseline: 5.18 times the output, an 81% shorter programme and 738 fewer days occupying the public network.

A living asset record

Every column captured as a geo-tagged, condition-scored record: 3,574 OSID nodes, 900 telecell timers, 424 photocells, 520 missing or damaged stickers and 232 heritage lanterns logged.

THE RESULT

What began as a controlled 10-day trial is now business as usual on the Birmingham maintenance contract, and the same workflow is extending to bridges, high-mast signage, drainage and retaining walls.

> *"Using HDS allowed us to remove traffic management and road closures from many inspections, reducing disruption, noise and impact on local communities."*
>
> **Ian Davies** General Manager, Kier Infrastructure

Start a project

Tell us about your asset. A desktop review, airspace check and fixed cost, agreed before we mobilise.

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