The UK Space Agency’s Active Debris Removal Mission

By Jodie Howlett
Space Systems Engineer
Office of the Chief Engineer (OCE), UK Space Agency

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ESA Clean Space Industry Days, ESTEC
Deliver capabilities to track objects in orbit and reduce or remove debris, and lead global regulation and best practice to make space activities more sustainable.
Overview of UK ADR

• Removal of two defunct UK-licensed satellites from LEO
• Targets must be unprepared for capture
• 2026 launch
• Compliant with IADC guidelines
• Servicer to be refurbishable to enable follow-on mission(s)
Phase 0/A Timeline

KO: Kick-Off
MCW: Mission Concepts Workshop
MDR: Mission Definition Review
MTR: Mid-Term Review
FA: Final Assessment
COSMIC
Cleaning Outer Space Mission through Innovative Capture

• Based on an adapted ELSA-M platform
• Utilises a robotic capture system
• ELSA-M leverages flight heritage from ELSA-d

In-Orbit Servicing Control Centre (IOSCC) developed by Astroscale (prime) and embedded in the Satellite Applications Catapult
CLEAR
Clearing the LEO Environment with Active Removal

Capture mechanisms:
- 4 robotic tentacles
- Robotic arm

In-orbit services to shape the future of sustainable space operations

The CLEAR servicer spacecraft
LEOPARD
Low Earth Orbit Pursuit for Active Removal of Debris

Capture Mechanism:
- Robotic arm
- Passive net with sail

Refurbishment:
- Refuelling
Phase B

£4M awarded to Astroscale and ClearSpace to perform Phase B

ClearSpace
Alden Legal, AstroAgency, Critical Software, Deimos, MDA, Orbit Fab, Satellite Applications Catapult, University of Surrey

Astroscale
MDA UK, Thales Alenia Space UK, Nammo, GMV-NSL, NORSS, Goonhilly, Satellite Applications Catapult, Willis Towers Watson, and other advisory and industrial partners

Press release
UK builds leadership in space debris removal and in-orbit manufacturing with national mission and funding boost
Thank you

Jodie Howlett
Jodie.Howlett@ukspaceagency.gov.uk

Office of the Chief Engineer
OCE@ukspaceagency.gov.uk

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