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CASE STUDY · MARLUC SYNOPSIS

Sharp Group and TeknTrash humanoid robot trial at a London recycling plant

IMPLEMENTED 2025–2026 · ENERGY AND UTILITIES · UK · BAND E · CLAIMED ONLY

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A London waste company is training a humanoid robot to sort recycling on a conveyor line. In May 2026 the robot was still in training and no results had been published.

ABOUT THIS SYNOPSIS

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The impact band, proof marker and SEAM view are MarLuc's opinion. The organisation is not a MarLuc client and has not reviewed or endorsed this synopsis. Names and trademarks belong to their owners.

NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

No measurable effect: no results reported.

AI used: Humanoid robot guided by computer vision and trained on worker motion data.

Implemented: 2025–2026. Grade: band E, No measurable effect, Claimed only.

Headline result, as reported: A humanoid sorting robot was still in training at a London plant in May 2026; no sorting results published

1 · The case

The facts, as reported by the 4 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Sharp Group and TeknTrash Robotics. Sharp Group is a family-run waste and skip company with a recycling facility in Rainham, East London. TeknTrash Robotics is a UK start-up adapting a humanoid robot for recycling. Headcount of either: Not reported; the plant uses 24 agency workers on its sorting lines, per the BBC. Canvas block: 4. Operations and process. Also 5. People and skills, 6. Data and technology.

Business challenge

The challenge. TeknTrash's release says people sort at 30 to 40 picks a minute but tire, and that contamination in single-stream recycling leaves about 25% of material unsellable. The BBC reports that work-related injury and ill health in the sector is 45% higher than in other industries, and annual staff turnover of 40%.

How it was addressed. Sharp Group and TeknTrash began testing ALPHA at Rainham. The robot is built by RealMan Robotics in China and adapted by TeknTrash. Workers wear Meta Quest 3 headsets to record movements, and the data trains the robot's models to identify and pick items by material and brand. Heavy computation runs in the cloud. [1] [2] [3] [4]

Who implemented it

TeknTrash Robotics (Equipment or robot maker): Adapts and trains the robot.
RealMan Robotics (Equipment or robot maker): Built the robot.
Google Cloud (Model or cloud provider): Cloud infrastructure for training and remote operation.
In-house (In-house): Plant owner hosting the trial.

Technology (SEAM pillar E)

SEAM types: T8 Predictive / ML models, T9 AI in physical systems. Deployment: Mixture.
Vendors and products: TeknTrash Robotics, RealMan Robotics, Google Cloud, ALPHA humanoid robot, HoloLab.

Where it was built in: The robot stands at an existing conveyor line; hyperspectral and camera data feed cloud models that identify items, and worker motion is captured by VR headsets for training.

What changed

Before: manual sorting on conveyor lines. After, by May 2026: a humanoid robot is being trained beside a human worker; it was not yet operational. Measured results: Not reported. [1] [2] [3] [4]

What it cost

Not reported

What it saved

Not reported. TeknTrash projects a 10% improvement in recovery efficiency and a possible 95% recovery rate, per its Google Cloud story. [1] [2] [3] [4]

Governance and control

Worker motion data is recorded through headsets; consent and data handling are not described. Sharp says staff will be upskilled to maintain and oversee robots. Accountable owner and safety case for operating the robot: Not reported.

S2 · Accountable owner · Not reported
Not reported.

A1 · Safe use · Not reported
Not reported.

A2 · Human in the loop · Claimed
Sharp says staff will be upskilled to maintain and oversee the robots; the robot is not yet operating on its own. [2]

A3 · Monitoring and assurance · Not reported
Not reported.

A4 · Vendor AI · Not reported
Not reported.

A5 · Agent controls · Not reported
Not applicable as described; not an agent deployment.

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Not reported

DID NOT

– Alpha was not yet up to speed and was on a training agenda when the BBC visited in May 2026.

UNPROVEN

– Sorting speed, accuracy and contamination against human workers.

– Cost per tonne, and whether robot costs beat agency labour.

– The rollout to 1,000 plants across the UK and Europe in 24 months, TeknTrash's stated aim in June 2025.

Timeline

Jun 2025 TeknTrash Robotics and Sharp Group begin real-world testing of the ALPHA humanoid robot at Rainham, East London [1]

May 2026 BBC reports the robot is still being trained; The Next Web reports training will take months [2]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: Not applicable. Grade: E, No measurable effect. Proof: Claimed only. Level of change: Not graded.

No level assessed: band E, a trial with no measured results.

Graded E, no results reported. The robot was in training when a BBC reporter visited in May 2026, and no sorting rates, accuracy or cost figures are published. This is an absence of evidence, not evidence of no effect.

The SEAM view and lessons learnt

The aim is a robot that fits existing lines by copying human movement, which could widen automation to smaller plants. At this stage the evidence is a training demonstration and projections; there is no result to attribute. A leadership team should ask what sorting rate and

1. Set a measurable pass mark before the trial starts.
2. Agree how recorded worker data is used and protected.
3. Treat vendor projections as targets until measured on your own line.

Evidence

Score 1 of 4. Self-reported: supplier statements with a client director quoted; a BBC site visit independently confirms the trial exists and is at the training stage.

Evaluation method. Self-reported company statements and a journalist's site visit; no measured results.

Sources disagree. TeknTrash's release gives the plant's throughput as 2,800 tonnes a week; the BBC and The Next Web give up to 280,000 tonnes a year. The Google Cloud story says TeknTrash boosts recovery accuracy by up to 50%, while the same page projects a 10% improvement in recovery efficiency.

Status. Ongoing: robot still in training in May 2026.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/tekntrash-sharp-group-humanoid-recycling-robot

[1] TeknTrash Robotics release, published by RoboticsTomorrow: TeknTrash Robotics and Sharp Group Launch Groundbreaking Humanoid Robot Pilot for Smarter Recycling (June 2025)
https://www.roboticstomorrow.com/story/2025/06/tekntrash-robotics-and-sharp-group-launch-groundbreaking-humanoid-robot-pilot-for-smarter-recycling/24851

[2] BBC News: Robots move in as waste firms struggle to find staff (5 May 2026)
https://www.bbc.co.uk/news/articles/cvg0w84q1wyo

[3] The Next Web: recycling humanoid robots and the waste labour crisis
https://thenextweb.com/news/recycling-humanoid-robots-waste-labour-crisis

[4] Google Cloud: TeknTrash Robotics, Turning waste into intelligence
https://cloud.google.com/customers/tekntrash

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