

COMPLETE RECYCLING SYSTEMS



Delivering superior waste management equipment

Issue February 2026

INSIDE Q&A: Expert Plant Builder Tips

Designing the Right Recycling Plant

Insights from an Experienced Plant Builder

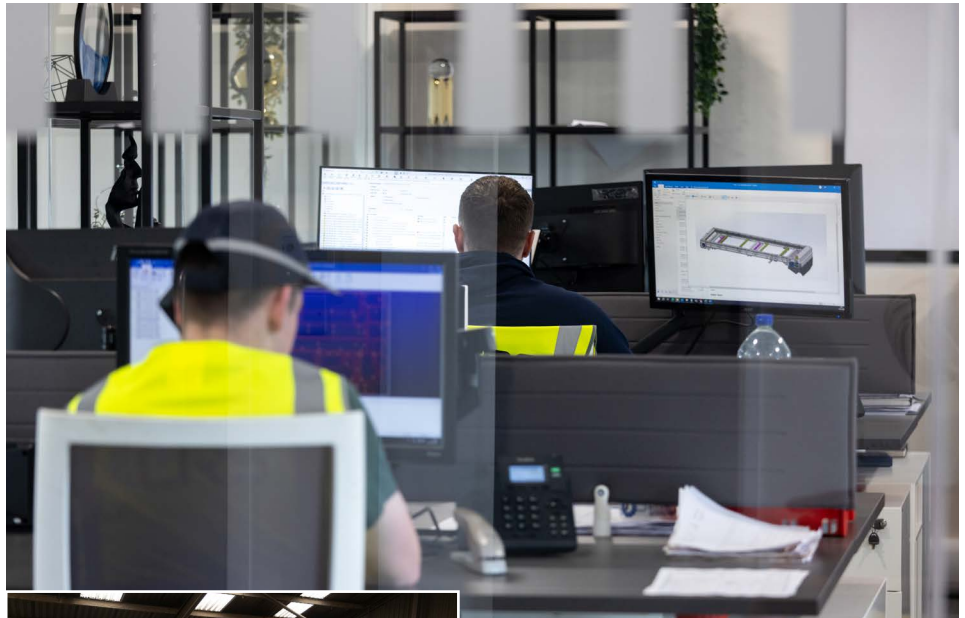
The most successful recycling operations are built around the materials they process and the collection systems in place – not just the equipment they use. CRS NI, a trusted waste recycling plant manufacturer and plant builder, specialises in designing both mobile and static waste systems, including mobile picking stations, trommel screens, recycling conveyors and full waste recycling systems tailored to C&D, C&I, gypsum, ASR, WEE or MDR.

A well-designed plant considers:

Material type and composition:

Different waste streams require different separation methods – for example, C&D material needs heavy-duty screens and oversize picking lines, while MDR (mixed dry recyclables) may need optical sorting or flip-flow screens.

Material flow: Smooth, continuous flow from infeed to output reduces blockages, downtime and contamination. Correct belt speeds, spacing and placement of picking stations are critical.



Integration of systems: Screens, conveyors, picking stations, trommel screens, and air separators need to work in unison for maximum throughput and recovery.

At CRS NI, we combine expertise with proven technology to create plants that are efficient, adaptable and designed for maximum material recovery. Every plant layout is customised to the client's material streams, operational priorities and site requirements.

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Q&A

Expert Plant Builder Tips



Q: What's the key factor when designing a new recycling plant?

A: Understanding the type of waste, material flow, material density and end-product requirements is critical. The equipment should support the process, not dictate it.

Q: How do mobile and static systems differ in efficiency?

A: Mobile systems provide flexibility for temporary or changing sites, while static systems maximise throughput and uptime for established, high-volume operations.

Q: What's often overlooked in plant layouts?

A: Smooth material flow, proper spacing between equipment, and integration of screens. Small layout choices can significantly affect recovery rates and operational efficiency.

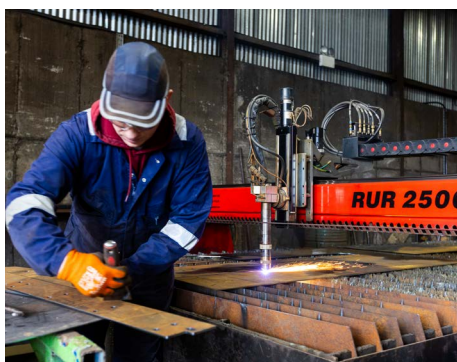
Q: How do you ensure a plant is future-proof?

A: Designing for adaptability — allowing upgrades such as AI sorting, additional screens, or conveyor extensions — ensures the plant can evolve with changing material streams and regulations.



Q: Why is upstream preparation so important?

A: Even the best sorting equipment performs poorly without correct upstream preparation. Screening, oversize removal, and feeder management are essential to maintain consistent output and minimise downtime.





Behind the Scenes: Sortera's Edmonton Recycling Plant Upgrade

A major milestone was achieved at Sortera's Edmonton site in London with the completion of their C&D plant installation. This fully operational system is designed to maximise material recovery, improve flow, and reduce waste sent to landfill, supporting Sortera's sustainability and operational goals.

Key upgrades and benefits include:

New belt feeder & infeed conveyor system: Ensures smooth, continuous material flow.
Magnet removal for ferrous materials: Protects downstream equipment and recovers valuable metal.

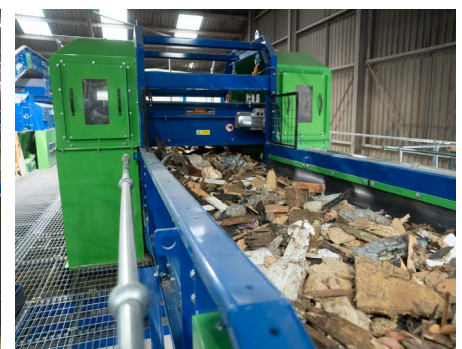
Dual-deck screen for precise separation: Separates bulky and fine fractions efficiently.

Oversize picking line: Improves manual inspection efficiency while reducing contamination.

ASU systems for light/heavy split: Optimises downstream processing and recovery.

Eddy current separator for non-ferrous recovery: Ensures high-purity fractions and reduces landfill.
NIR optical sorters for sorting hardcore and wood.

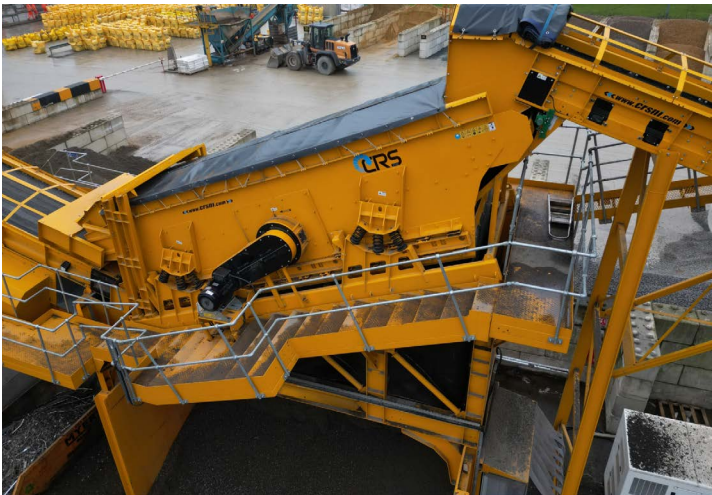
CRS NI is proud to support Sortera in the first phase of this multi-million-pound site upgrade, with more improvements to follow. This project demonstrates how customised plant design and equipment integration deliver real operational and environmental benefits.



Choosing the Right Recycling Screen

Selecting the right screening equipment is critical to throughput, separation quality, and downstream performance. CRS NI's combination, scalping, and flip-flow screens are built for C&D, C&I, and mixed dry recyclable streams, helping operators improve recovery rates while protecting downstream equipment.

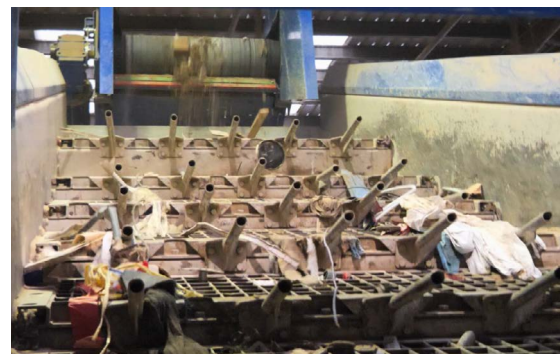
Screen Types and Applications:



Combination Screens: Flexible solution combining coarse and fine separation in one machine. Ideal for plants with variable feedstock and mixed materials.



Scalping Screens: Designed for coarse, bulky, or high-volume materials, providing reliable primary separation and protecting downstream equipment.



Flip-Flow Screens: Perfect for wet, sticky, or fine fractions where conventional screens may clog or underperform.



Matching the right screen to your material stream ensures consistent output quality, higher recovery rates, and more efficient operations.

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Product Highlight: CRS-051 Double Deck Screen

The CRS-051 Double Deck Screen combines durability and precision for efficient material sorting in demanding recycling operations. Designed for high-volume streams, it is suitable for construction and demolition (C&D) waste, commercial and industrial (C&I) waste, gypsum, wood, automotive shredder residue (ASR), municipal solid waste (MSW), and compost/organics, ensuring reliable performance, minimal downtime, and superior separation quality.



Key Features & Technical Highlights:

- Heavy-duty steel construction with 10mm side plates and 8mm stiffening plates at the deck and vibrating mechanism
- 6000mm x 1800mm (16' x 5') screening area
- Heavy-duty shaft with offset counterweights and 150mm SKF spherical roller bearings
- 18.5kW electric motor with V-belt drive and Rosta motor base tensioning unit
- Top deck options: punch plate, '3D', or tines bar setup
- Flip-flow bottom deck for easy removal and maintenance
- Wearplates on infeed and outfeed chutes, plus optional additional weights
- Full guarding with emergency stops for safe operation

Why Choose the CRS-051:

- Handles the toughest applications efficiently
- Reduces downtime with accessible flip-flow mats and user-friendly maintenance
- Integrates seamlessly with CRS NI picking stations, conveyors, and trommel screens
- Optimises recovery rates and ensures consistent, high-quality output

Built to last and engineered for performance, the CRS-051 Double Deck Screen is an ideal solution for recycling plants looking to maximise throughput and operational efficiency.

Explore our full range of Recycling Screens and discover how CRS NI can optimise your recycling plant.

[See Products →](#)



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