ASI PERFORMANCE STANDARD V3.1 | MATERIAL STEWARDSHIP

ALUMINIUM FOIL RECYCLING STRATEGY

Practical Manual for Pre-Consumer and Post-Consumer Material

GLS Aluminium Industries Private Limited

Document No.: GLS/ASI/MAN/4.4/01

Revision: 01 - 5% Recycling KPI Update

Effective Date: 18 September 2026

Process Owner: Head - EHS / Sustainability

CONTROLLED MASTER / PUBLIC DISCLOSURE VERSION

Document Control

Control	Approved information
Title	Aluminium Foil Recycling Strategy - Pre-Consumer and Post-Consumer
Organisation	GLS Aluminium Industries Private Limited
Document number	GLS/ASI/MAN/4.4/01
Revision / status	Rev. 01 / 5% recycling KPI update
Effective date	7 September 2026
Process owner	Head - EHS / Sustainability
Formal review	At least once every five years; next review no later than 17 September 2031
Interim review	Annually for progress; additionally after material business change or evidence of a control gap
Retention	Minimum seven years, or longer where legal/contractual requirements apply

Approval

Stage	Role	Signature	Date
Prepared by	Head - EHS / Sustainability	Ankit Mor	07 September 2026
Reviewed by	Head - Production / Quality	Kamal B	07 September 2026
Approved by	Business / Plant Head	Rajesh Singh	07 September 2026

CONTROL NOTE The latest approved version shall be available internally and publicly disclosed. Printed copies are uncontrolled unless specifically stamped and issued.

Revision History

Rev.	Date	Change	Approved by
00	07 Sep 2026	Initial issue	Business / Plant Head
01	7 Sep 2026	Added minimum 5% verified post-consumer foil recycling KPI from FY2030-31 onward; added KPI calculation and public-progress reporting field.	Business / Plant Head

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> **PRACTICAL INTENT** This manual establishes achievable controls for a foil conversion business. It does not assume that GLS operates a remelting furnace or a municipal collection system; recycling is implemented through prevention, segregation, customer engagement and authorised recycling partners.

1. Purpose and Commitment

This manual establishes the GLS strategy for preventing aluminium scrap, collecting and recycling all practicably recoverable aluminium, and supporting improved recovery of foil products after use. It provides the operational controls, responsibilities, timelines, targets and records needed to demonstrate implementation.

GLS commits to:

1. minimise aluminium process scrap at source and target 100% of generated aluminium process scrap for collection, reuse and/or recycling;
2. segregate aluminium by alloy, product type and contamination class wherever technically and economically feasible;
3. use only approved and legally authorised recyclers, aggregators and transporters;
4. engage customers and relevant collection/recycling systems to improve knowledge, measurement and recovery of aluminium foil after use;
5. avoid unsupported recycled-content or recycling claims; and
6. publish the latest approved recycling strategy and report progress annually.

ASI ALIGNMENT The manual supports ASI Performance Standard V3.1 Criteria 4.3 and 4.4. The central controls are scrap minimisation, 100% collection/recycling intent, grade separation, time-bound end-of-life action, five-year review, public disclosure and engagement with recycling systems.

2. Scope and Operating Boundary

The strategy applies to GLS-controlled foil manufacturing and associated storage, handling, sale and waste-dispatch activities. It covers aluminium foil and foil-related scrap generated during cold rolling, annealing, separation, slitting, inspection, rewinding and packing, together with customer returns and end-of-life foil streams connected to GLS products.

Material stream	Typical GLS context	Strategy treatment
Internal process scrap	Edge trim, coil ends, setup scrap, breaks, rejects and off-spec foil generated inside GLS	ASI 4.3; reduce, segregate, recover
Pre-consumer customer scrap	Unused foil offcuts or rejects generated by a customer/converter and not recoverable in that same process	Verify origin; return or recycle through approved route
Post-consumer foil	Foil recovered after the product has served its intended use	Engage, pilot, measure and recycle where safe and feasible
Composite/contaminated stream	Printed, coated, laminated, food-soiled, pharmaceutical or otherwise contaminated foil	Separate; route only to a technically capable authorised facility

Excluded from routine take-back are hazardous, infectious, pharmaceutical-residue or unknown-contamination materials unless a documented legal, EHS and recycler-acceptance assessment confirms a safe authorised route.

3. Applicable ASI Requirements and References

Reference	Use in this manual
ASI Performance Standard V3.1	Criterion 4.3: minimise process scrap, target 100% collection/reuse/recycling and separate alloys/grades.
ASI Performance Standard V3.1	Criterion 4.4(a-c): implement a recycling strategy with timelines, activities and targets; review at least every five years; publicly disclose the latest version.
ASI Performance Standard V3.1	Criterion 4.4(d): engage with local, regional or national collection and recycling systems to improve measurement and recycling rates.
ASI Performance Standard Guidance V3.2	Practical guidance on market context, customer communication, product influence, research, collaboration, measurement and collection-system engagement.
ISO 14001 and applicable law	Waste hierarchy, operational control, approved vendors, legal compliance, records, monitoring and improvement.

4. Definitions and Classification Rules

Term	GLS working definition
Aluminium process scrap	Aluminium generated within GLS operations, including edge/end trim and discrepant product. Internal run-around material reclaimed in the same process is controlled but is not automatically reported as pre-consumer recycled content.
Pre-consumer scrap	Manufacturing material diverted from waste before consumer use that was not intentionally made, is unsuitable for intended use and cannot be reclaimed within the same process that generated it.
Post-consumer scrap	Material recovered after a product has completed its intended use by a consumer or commercial user.
Reuse	Use again without remelting, where technically and contractually acceptable.
Recycling	Processing scrap into material suitable for new production, normally through an authorised remelter/refiner.
Closed-loop arrangement	A documented route in which scrap from a defined product/customer flow is returned through a recycler into the same or a comparable aluminium product chain.
Classification rule	Where origin or prior use cannot be verified, record the stream as mixed/unknown scrap and do not claim it as post-consumer material.

5. Roles and Responsibilities

Role	Minimum responsibility
Business / Plant Head	Approve the strategy, targets, resources and public disclosure; review annual performance.
Head - EHS / Sustainability	Own the manual; maintain legal/vendor controls; coordinate data, annual review, public reporting and ASI evidence.
Production and Quality	Identify scrap sources; prevent defects; ensure segregation; analyse scrap intensity and implement corrective actions.
Stores / Scrap Yard	Provide labelled containers; weigh, store and reconcile scrap; prevent mixing, loss, contamination and unauthorised removal.
Purchase / Commercial	Approve recyclers and transporters; verify licences, capacity and downstream route; maintain contracts and certificates.
Sales / Customer Service	Engage customers; issue recycling guidance; record returns, feedback, opportunities and pilot participation.
Finance / Security	Verify sale/dispatch documentation, weighbridge records, gate passes and financial reconciliation.
All workers and contractors	Place scrap in the correct container, report mixing/loss and follow EHS controls.

6. Recycling Hierarchy and Operating Principles

7. Prevent scrap through stable rolling parameters, planned coil widths, setup control, preventive maintenance, inspection and defect elimination.
8. Reuse internally only where product quality, alloy identity, hygiene and process controls permit.
9. Keep clean aluminium separate from coated, laminated, oily, wet or contaminated material.
10. Preserve alloy and grade value; do not down-cycle clean segregated foil through unnecessary mixing.
11. Recycle off-site through approved facilities when GLS cannot reuse the material internally.
12. Measure mass flows and investigate unexplained variance.
13. Prioritise safe, lawful and verifiable recovery over unsupported claims or informal disposal.

DECISION PRIORITY Prevent > reuse > closed-loop or high-value recycling > other authorised recycling > authorised disposal as last resort. No aluminium scrap shall be sent to landfill when a safe, lawful and technically feasible recycling route is available.

7. Pre-Consumer and Internal Process Scrap Strategy

7.1 Source prevention

14. Prepare a scrap source map for each relevant production stage and identify the principal defect or trim mechanism.
15. Review scrap intensity monthly by product, machine and reason code; prioritise the largest repeat losses.
16. Optimise incoming coil width, rolling schedule, slitting pattern and order sequencing where commercially feasible.
17. Use first-off approval, process parameter limits, roll/knife condition checks and preventive maintenance to avoid repeated rejection.
18. Record corrective action for abnormal scrap, recurring defects or a significant increase against the approved baseline.

7.2 Collection and segregation

19. Provide colour-coded or clearly labelled bins at the point of generation.
20. Identify alloy/grade or alloy family, material condition and source department on each container or batch tag.
21. Keep clean foil separate from oily, coated, printed, laminated, wet or foreign-material-contaminated scrap.
22. Weigh scrap at transfer to the scrap store and again at dispatch where feasible; retain weighment evidence.
23. Route clean recoverable material to approved reuse, return-to-supplier, closed-loop or authorised remelting channels.

7.3 Customer-generated pre-consumer scrap

GLS may support return or closed-loop recycling of clean unused customer conversion scrap where commercial volumes, alloy identity, cleanliness, transport and recycler acceptance make the arrangement practical. The customer shall declare the source, previous processing, contamination status and weight. Returns shall be accepted only against an approved specification and agreed logistics route.

8. Post-Consumer Foil Strategy

Post-consumer foil is often thin, dispersed and combined with inks, coatings, paper, plastic, adhesives or product residue. GLS will therefore use a staged, partnership-based strategy rather than make an unrealistic universal take-back commitment. From FY2030-31 onward, GLS targets a minimum 5% verified post-consumer foil recycling rate, calculated as verified post-consumer foil accepted/recycled by approved recyclers divided by relevant foil sales mass within the defined reporting boundary, multiplied by 100.

Stage	Practical action
Map	Identify the main foil product families, customer sectors, markets, likely end-of-life route and recovery barriers.
Engage	Discuss collection practices with priority customers, converters, brand owners, waste aggregators, producer organisations, industry associations and authorised recyclers.
Guide	Provide simple instructions: keep recoverable foil empty, dry, segregated and free from avoidable contamination; follow local collection acceptance rules.
Pilot	Start with a controlled B2B stream where source, composition, cleanliness, quantity and route can be verified.
Verify	Confirm the collection weight, recycler receipt, treatment route, recovery outcome and any residue/disposal.
Scale	Expand only after the pilot demonstrates safe handling, legal compliance, reasonable cost and a genuine recycling outlet.

8.1 Preferred pilot streams

24. clean, source-segregated commercial foil after use;
25. controlled end-of-life foil from a customer with predictable composition and volume;
26. used foil suitable for densification/baling and accepted by a verified recycler; and
27. sector or association programs that already have a measured collection route.

8.2 Restricted streams

Food-soiled, biomedical, pharmaceutical-residue, hazardous or unknown-contamination foil shall not enter routine GLS premises or be mixed with clean scrap. Such material may be included in engagement or data studies, but physical collection must use a specialised authorised service and documented acceptance criteria.

> **NO OVERCLAIMING** A product being technically recyclable does not prove that it was collected or recycled. GLS shall disclose actual measured pilot results separately from estimated market potential.

9. Collection, Segregation, Storage and Dispatch Controls

Control point	Minimum practice
Identification	Batch tag shows source, material class, alloy/grade where known, condition, date and approximate/actual weight.
Segregation	Dedicated marked areas prevent mixing of clean, coated/laminated, oily and contaminated streams.
Storage	Covered, stable and access-controlled; no contact with soil, drains, water, incompatible waste or ignition sources.
Inspection	Stores/EHS checks labelling, contamination, housekeeping, fire access and stock condition at least monthly.
Weighment	Use calibrated equipment or retain third-party weighbridge slips; reconcile inward/transfer/dispatch quantity.
Vendor control	Verify legal authorisation, technical capability, downstream route, EHS performance and documentation before use and annually.
Dispatch	Use approved transporter, gate pass, invoice/manifest as applicable, weighment record and recycler acknowledgement/certificate.
Nonconformity	Quarantine mixed or suspicious material; investigate unauthorised disposal, unexplained loss, wrong classification or missing evidence.

10. Targets and Implementation Plan

Targets are forward-looking commitments. Baseline values shall be established from controlled records; no achievement is claimed by issuing this manual.

No.	Activity	Target / KPI	Timeline	Owner
1	Complete scrap source map and FY2026-27 baseline	All relevant processes and streams mapped; baseline approved	31 Mar 2027	Production / EHS
2	Collect, reuse and/or recycle aluminium process scrap	Target 100% of generated process scrap; measure monthly	From issue; ongoing	Production / Stores
3	Implement source labels and feasible grade/condition segregation	100% designated scrap locations labelled and controlled	31 Dec 2026	Stores / Quality
4	Reduce process scrap intensity	At least 3% below FY2026-27 baseline by FY2028-29 and 5% by FY2030-31	31 Mar 2029 / 2031	Production / Quality
5	Control recycling partners	100% approved before use and rechecked annually	Before dispatch; annual	Purchase / EHS
6	Engage priority customers on end-of-life recycling	Coverage of customers representing >=60% of sales mass by Mar 2028 and >=80% by Mar 2030	31 Mar 2028 / 2030	Sales / EHS
7	Run a verified post-consumer foil pilot	At least one customer/collector/recycler pilot completed and measured	31 Mar 2028	Sales / EHS
8	Set a quantified post-consumer recovery target	Interim quantified recovery target approved using pilot and market data; supports progression to minimum 5% verified post-consumer recycling from FY2030-31	Within 90 days of pilot; no later than 30 Jun 2028	Management
9	Achieve verified post-consumer foil recycling	Minimum 5% verified post-consumer foil recycling rate from FY2030-31 onward	From FY2030-31; annual	Sales / EHS / Sustainability
10	Publicly disclose strategy and progress	Current strategy published; annual progress summary issued	Within 30 days of approval; annually	EHS / Management

TARGET REVIEW Management may strengthen targets after reliable baseline or pilot data becomes available. A target may be revised only through documented review, with the reason, evidence and approval retained; it shall not be weakened merely to report conformance.

11. Measurement, Reconciliation and Reporting

Indicator	Calculation / rule	Frequency
Process scrap intensity (%)	Process scrap generated / aluminium input x 100	Monthly
Material yield (%)	Good foil output / aluminium input x 100	Monthly
Scrap collection/recycling rate (%)	Process scrap reused or sent for recycling / process scrap generated x 100	Monthly / annual
Segregation compliance (%)	Conforming scrap locations inspected / total locations inspected x 100	Monthly

Indicator	Calculation / rule	Frequency
Verified post-consumer recovery (t)	Actual weight acknowledged by approved recycler for completed pilots	Per pilot / annual
Customer engagement coverage (%)	Foil sales mass to engaged customers / total relevant foil sales mass x 100	Annual
Approved recycler coverage (%)	Approved recycling vendors used / total recycling vendors used x 100	Annual
Verified post-consumer recycling rate (%)	Verified post-consumer foil accepted/recycled by approved recycler / relevant foil sales mass within defined reporting boundary x 100. KPI: minimum 5% from FY2030-31 onward.	Annual

11.1 Scrap mass balance

For each reporting period, GLS shall reconcile: opening scrap stock + scrap generated/received - internal reuse - dispatch to recycler - closing scrap stock = variance. Material variance outside the internally approved tolerance shall be investigated and corrected.

Where weight is estimated, the method and conversion factor shall be documented. Estimates shall not be presented as measured quantities. Post-consumer and pre-consumer data shall be reported separately whenever origin is verified.

12. Customer, Recycler and System Engagement

28. Prioritise high-volume customers and product streams where collection is practical and measurable.
29. Ask customers about use, contamination, current disposal/recycling route, annual quantity and interest in a return or collection pilot.
30. Request recyclers to confirm accepted specifications, minimum volume, treatment technology, recovery rate information and residue route.
31. Engage directly or through relevant industry associations and local/regional recycling initiatives.
32. Maintain a communication log and use feedback to update targets, product guidance and pilot design.
33. Protect commercially confidential information and avoid anti-competitive exchange of price or market-sensitive data.

13. Communication and Public Disclosure

The latest approved recycling strategy shall be publicly accessible through the GLS website or another reliable public channel. The disclosure may omit personal information, prices and commercially sensitive details but shall retain the strategy, timelines, activities and targets.

The annual progress summary shall state, at minimum:

34. reporting period and organisational boundary;
35. process scrap generated and collection/recycling performance, with calculation basis;
36. progress against each time-bound target;
37. customer/recycler engagement, post-consumer pilot status and verified post-consumer recycling rate against the 5% FY2030-31 KPI;
38. material limitations, data gaps, nonconformities and corrective actions; and
39. changes made to the strategy or next-period priorities.

> **CLAIMS CONTROL** Any claim concerning recycled content, post-consumer content, ASI material or closed-loop recycling requires documented traceability and approval under applicable sales, quality, ASI Chain of Custody and claims controls.

14. Training, Review and Continual Improvement

14.1 Training

Workers handling foil or scrap shall receive induction and refresher training on source segregation, labels, contamination, weighing, storage, incident reporting and unauthorised removal. Sales, Purchase, Stores, Quality and EHS personnel shall receive role-specific training on definitions, vendor/customer evidence, calculations and claims.

14.2 Review

40. Review progress and KPIs at least annually through the environmental/sustainability management review.
41. Formally review the complete strategy at least every five years; the next review is due no later than 17 September 2031.
42. Review earlier after a material change in product, market, law, recycling infrastructure, customer expectation or business scope.
43. Review immediately when audit findings, data variance, unauthorised disposal, vendor failure or another control gap indicates ineffectiveness.
44. Record decisions, revised targets, resources, responsibilities and public-disclosure updates.

15. Records and Audit Evidence

Evidence area	Expected objective evidence
Strategy control	Approved manual, revision history, five-year review record, annual progress review, public disclosure evidence
Source and quantity	Scrap source map, input/output data, production scrap report, weighment slips, monthly mass balance
Segregation	Location map, bin/label photographs, inspection checklist, training and awareness records
Recycling route	Vendor approvals, licences, contracts, transporter documents, gate passes, invoices, recycler receipts/certificates
Customer/end-of-life	Customer questionnaire, engagement log, pilot plan, photographs, weights, recycler confirmation and lessons learned
Improvement	Root-cause analysis, CAPA, yield/scrap trend, management review and revised targets

Records shall be retained for at least seven years or longer where required by law, customer agreement, financial control or ASI Chain of Custody requirements. Electronic records shall be access-controlled and backed up.

Annexure A - Scrap Segregation Matrix

Example source	Class	Condition	Identification	Preferred route
Rolling/slitting edge trim and coil ends	Internal process scrap	Clean / alloy known	Green / alloy-labelled	Reuse if approved; otherwise authorised remelter
Setup scrap, breaks and off-spec foil	Internal process scrap	Clean or oily	Separate clean and oily	Quality review; drain/control oil; approved recycler
Unused customer offcuts/rejects	Pre-consumer if verified	Source and alloy declared	Customer-return tag	Approved return/closed-loop/recycler route
Printed, coated or laminated unused foil	Pre-consumer if verified	Composite	Yellow / composite	Recycler with demonstrated composite capability
Used, empty and dry commercial foil	Post-consumer	Controlled pilot stream	Blue / pilot ID	Approved pilot recycler
Food-soiled, pharma, hazardous or unknown foil	Post-consumer / restricted	Contaminated	Red / quarantine	Specialised authorised route only; no routine intake

Note: The facility shall confirm its actual alloy, product and colour-coding system during baseline mapping. Existing safe colour conventions may be retained if labels are clear and consistently applied.

Minimum batch tag

Field	Entry
Batch / container ID	_____
Source department / customer	_____
Material class	_____
Alloy / grade or family	_____
Clean / oily / coated / laminated / contaminated	_____
Date	_____
Weight	_____
Checked by	_____

Annexure B - Monthly Scrap and Recycling Register

Month	Input (t)	Good output (t)	Scrap generated (t)	Reused (t)	Recycled (t)	Closing stock (t)	Variance / action

Monthly review

Review field	Entry
Process scrap intensity (%)	
Collection/recycling rate (%)	
Material yield (%)	
Top three scrap causes	
Corrective action and owner	
Approved by / date	

Annexure C - Customer and Post-Consumer Pilot Record

Pilot field	Controlled record
Customer / location / contact	
Foil product and intended use	
Estimated annual quantity	
Current end-of-life route	
Pre-consumer or post-consumer basis	
Composition / coating / laminate / residue	
Collection and storage method	
Recycler / aggregator and authorisation	
Pilot period	
Measured quantity collected	
Quantity accepted/recycled	
Residue / rejection route	
Issues, lessons and corrective action	
Decision: stop / improve / scale	
Approvals and date	
Contribution to verified post-consumer recycling rate (%)	

Annexure D - Recycler Due-Diligence Checklist

No.	Check	Result	Evidence / remarks
1	Valid legal authorisation for the waste/scrap category and site	Y / N / NA	
2	Authorised transporter and compliant transport documentation	Y / N / NA	
3	Technical capability for clean, coated, laminated or contaminated foil as applicable	Y / N / NA	
4	Documented downstream processing route and final recovery outlet	Y / N / NA	
5	Weighment, receipt and recycling/recovery certificate available	Y / N / NA	
6	EHS controls, fire safety, storage and housekeeping acceptable	Y / N / NA	
7	No evidence of unlawful dumping, child labour, forced labour or material misconduct	Y / N / NA	
8	Financial and identity verification completed; payment through approved channel	Y / N / NA	
9	Annual licence and performance review completed	Y / N / NA	
10	Approval decision and restrictions documented	Approve / Reject / Conditional	

Vendor name: _____ Site: _____

Assessed by: _____ Date: _____

Approved by: _____ Next review: _____

Annexure E - Annual Public Progress Summary

GLS Aluminium Industries Private Limited - Aluminium Foil Recycling Strategy Progress Summary

Disclosure item	GLS result / statement
Reporting period and boundary	
Aluminium input and good foil output	
Process scrap generated	
Process scrap reused/recycled	
Collection/recycling rate	
Scrap intensity and change from baseline	
Customer engagement coverage	
Post-consumer pilot quantity and outcome	
Progress against each strategy target	
Data limitations / nonconformities / CAPA	
Priorities for next year	
Approved by / date / public link	
Verified post-consumer recycling rate (%) and status against 5% FY2030-31 KPI	

DISCLOSURE STATEMENT GLS will communicate verified results transparently. Where data are unavailable, the disclosure will state the gap and improvement action rather than substitute an unsupported estimate.

Management Endorsement

Management approves this strategy and commits appropriate resources for implementation, monitoring, stakeholder engagement and continual improvement.

Business / Plant Head: _____

Signature: _____ Date: _____