LIFE GRAPhiREC

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NEWSLETTER

LIFE GRAPHIREC



Introducing GRAPhiREC: giving graphite a second life

Welcome to the September issue of the GRAPhiREC Newsletter!

Welcome to the September 2025 GRAPhiREC newsletter. Our headline this month is an invitation to join us in Rimini on 4 November for our first public outreach workshop at Ecomondo (4–7 November, Rimini Expo Centre), a chance to see our two pilot routes (Li-ion and alkaline), hear the latest on EU files shaping graphite circularity, and connect with policymakers, industry and NGOs in one place.

Inside you'll also find a save-the-date for Antimony Day during Raw Materials Week in Brussels, plus concise briefs on the Commission's battery-recycling methods, the WEEE evaluation, DIWASS digital waste shipments, the Circular Economy Act consultation and the CRMA resilience agenda.

EMPOWERING EUROPE'S BATTERY RECYCLING INDUSTRY

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Join us in Rimini: GRAPhiREC outreach workshop at ECOMONDO

4 November 2025 | Rimini | ECOMONDO

We're hosting our first public GRAPhiREC outreach workshop at ECOMONDO, Rimini Expo Centre on Tuesday, 4 November 2025, 10:00–13:00, Sala Orchidea. Join industry, research partners and policymakers for a focused session on recovered graphite for batteries: project objectives, the two pilot routes (Li-ion and alkaline), policy context (Batteries Regulation, CRMA), and discussion on replication and industrial uptake. If you're already planning to attend Ecomondo (4–7 November, Rimini), this workshop is the ideal add-on to your visit.

Why come:

- See two pilot routes (ORIM & SIMA) and the qualification pathway for recycled graphite.
- Exchange with institutional speakers on permitting, shipments and market acceptance.
- Build links with LIFE projects and potential users of secondary graphite.

Plan your trip: Ecomondo's visitor info and programme are live; flights and logistics are well covered on the official site. https://www.ecomondo.com/en





Save the date: Critical Raw Materials Event – Antimony Day 2025

17 November 2025 | Brussels | Raw Materials Week

During Raw Materials Week (17 – 21 November, Brussels), Antimony Day will convene policymakers, researchers and industry to discuss strategic materials, including graphite, for Europe's green, digital and defence transitions. Registration for Antimony Day is open; the Commission page confirms the Raw Materials Week's dates and core programme. If you work on graphite issues, battery recycling or supply-chain resilience, pencil this in.

Combine Antimony Day (17 Nov) with the Raw Materials Week's core programme (18–20 Nov) to maximise meetings and policy touchpoints.

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Project update
Alkaline route redesigned for battery-grade graphite

Over recent months the project has concentrated on the alkaline-battery route led by SIMA. Industry-standard recycling processes can contaminate the graphite, making it unsuitable for battery re-use. To address this, GRAPhiREC partners have redesigned the process so the graphite stream is preserved and purified to battery-grade expectations (impurity control, morphology/surface state, electrochemical performance). Because this represents a material improvement in scope, a grant agreement amendment has been submitted to the European Commission and is currently under assessment, in line with LIFE programme procedures.

While the review is ongoing, work continues on material characterisation process definition and communication so that, once approved, the pilot can move rapidly into validation and re-qualification against the EU's harmonised methods for recycling outcomes. The goal is clear: enable recycled graphite from alkaline streams to re-enter European battery manufacturing as a traceable, specification-ready material.

UNIVAQ at GRICU 2025 (poster)
Pre-amendment lab work

Our partner UNIVAQ presented the poster 'Graphite recovery from spent alkaline batteries' at GRICU 2025 – Challenging Chemical Engineering in Ischia (14–17 September 2025). The contribution summarised earlier laboratory investigations on alkaline-route purification and characterisation within GRAPhiREC's work plan.
Following the Steering Committee decision and the grant agreement amendment submitted to CINEA, the consortium has redesigned the alkaline process, moving from sulphuric acid conditions to a hydrochloric acid route to better preserve graphite quality for anode re-use. The amendment is currently under assessment under standard LIFE procedures.

While the amendment is being assessed, partners continue with material characterisation and process definition. The goal is clear: enable recycled graphite from alkaline streams to re-enter European battery manufacturing as a traceable, specification-ready material.

What's new in EU battery rules

On 4 July 2025, the European Commission adopted harmonised methods for calculating and verifying recycling efficiency and material recovery under the Batteries Regulation. Standard methods and reporting make outcomes comparable across Member States and strengthen the audit trail for secondary inputs. For graphite, this tightens the linkage between pre-treatment/refining data and downstream anode re-qualification. Harmonised EU methods lift comparability and auditability of recovery data, key to qualifying recycled graphite into new cells.

These methods sit alongside phased targets: efficiency requirements apply to lithium-based batteries by 31 December 2025, while material-recovery thresholds (e.g. cobalt, nickel, copper, lithium) increase in 2027 and again by 2031. The timeline creates a structured offtake pull for quality-assured secondary materials and rewards robust Quality Assurance / Quality Control and mass-balance documentation.



WEEE evaluation and embedded batteries

On 2 July 2025, the Commission published its evaluation of the WEEE Directive, finding it broadly effective but highlighting collection gaps, uneven Extended Producer Responsibility (EPR) delivery, and treatment disparities that limit recovery of critical raw materials, especially where embedded batteries are concerned. Follow-up work aims to tighten minimum treatment outcomes, improve tracking, and raise CRM capture across Member States. For recycled graphite, better-routed and cleaner input streams reduce transition-metal contamination and variability, improving yields and shortening re-qualification cycles after purification and thermal steps.

For practitioners, the study package (final report, SWD, executive summary) sets the evidence base and timelines to watch as interfaces between collection, dismantling and treatment are clarified.

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Easier, traceable cross-border movements (DIWASS)

From 21 May 2026, all intra-EU waste shipments will run on DIWASS, the Digital Waste Shipment System. Notified shipments move to a fully digital consent workflow; green-listed flows gain stronger monitoring and visibility. For graphite pilots, that means faster, more predictable movements of black mass, intermediates or purified graphite between pre-treatment, refining and testing and stronger chain-of-custody evidence for buyers and auditors.

DIWASS is implemented under the new Waste Shipments Regulation. Implementing Regulation (EU) 2025/1290 (adopted 2 July 2025) sets the interoperability requirements operators will need for IT integration.

Circular Economy Act consultation

On 1 August 2025, the Commission opened a public consultation and Call for Evidence for the forthcoming Circular Economy Act (feedback until 6 November 2025). The initiative targets stronger performance and traceability for secondary raw materials and better-functioning markets. For graphite recycling, this is the venue to anchor recognised quality metrics (purity bands, morphology descriptors, electrochemical KPIs) and data models that interface cleanly with digital product passports and with Batteries/WSR requirements, so pilot-generated evidence can translate directly into market acceptance.

Strategic projects and resilience

Under the Critical Raw Materials framework, the Commission adopted the first lists of Strategic Projects to expand EU capacity in extraction, processing and recycling (EU list 24 – 25 March 2025; extra-EU list 3 – 4 June 2025). This sits alongside the EU Stockpiling Strategy (adopted 9 July 2025), which introduces coordinated preparedness, including for critical raw materials, and works towards an EU CRM Centre from 2026. Together, these moves create a policy environment that values traceable, specification-ready secondary materials; for GRAPhiREC, pilot outputs pairing documented purity and performance with robust traceability dossiers can slot into investor/offtake dialogues aligned with CRMA and resilience objectives.

Stay connected!

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