Briefing

Trade and resilience: when it makes sense to onshore circular industries

February 2026

Introduction

Trade policy has risen up the political agenda because of geopolitical tensions. Post-Brexit, it has become a major issue for the UK, as it now needs to sign trade deals with individual countries. This is used as a marker of how successful it has been at delivering a positive future for the country in a post-Brexit world. Counting the number of trade deals agreed has become a metric to judge success.[1]

Trade policy concerning industrial raw materials, especially those critical to clean energy, is increasingly in the spotlight. According to the OECD, export restrictions on critical raw materials increased over fivefold from 2009 to 2023, and the International Energy Agency suggests that more than half of such minerals are now under some form of export control.[2,3]

In the past year, tariffs introduced by President Trump have shaken up global trade policy again, as the US seeks to protect its industries from international competition, with a particular focus on China.[4] In some ways, this was a continuation of President Biden's rationale, who introduced the Inflation Reduction Act (IRA) to incentivise domestic activity in clean energy industries.[5]

The situation is changing swiftly, though, and the move towards tariff-based trade policy from the US has prompted retaliation from some countries, and a drive to protect their own industries.

For example, the EU has sought to support domestic industries, including through the European Critical Raw Materials Act, which included stockpiling requirements.[6] A leaked draft of its Industrial Accelerator Act, expected this month (February 2026), suggests it will seek to introduce 'Made in Europe' criteria for public procurement with the explicit logic that global partners are "accelerating their industrial strategies and weaponizing their industrial successes".[7]

Since the start of 2026, there has been increasing concern that the world's 'rules based order' – for trade and wider security – is collapsing. Increasing uncertainty over President Trump's aggressive and expansionist foreign policy is reshaping the global order, following the attack on Venezuela and his repeatedly stated desire to "own" Greenland and dominate the Western hemisphere.

In this context, and as what the Canadian Prime Minister Mark Carney has called a 'middle power', the UK must be strategic about striking a balance between supporting domestic industries and international trade.[8]

The UK's Trade Strategy, published in June 2025, sets out the government's ambition to continue to trade globally in an increasingly protectionist world. It focused particularly on sectors like services and advanced manufacturing, while also committing to support domestic industries through its Industrial Strategy and countering threats from protectionism elsewhere.[9]

A recent example of the trade-offs presented by this approach is the government's decision to take temporary control of British Steel in Scunthorpe to prevent its Chinese owners Jingye Group closing it down, largely for national security reasons and to protect jobs.[10]

How does the circular economy relate to trade?

The circular economy is a good example of where this conversation plays out. This is an economy where products and materials are kept in use at their highest value for as long as possible. It means products are used for longer, repaired when they break, reused and, eventually, recycled at the end of their life. There are many reasons to embrace this model, including its economic benefits and reduced environmental impacts.[11] For example, it has the potential to increase economic resilience, retaining materials and products within the UK for reuse, rather than relying on imported raw materials. The government has recognised this and is due to publish a Circular Economy Growth Plan early in 2026.

A more circular economy can lead to economic growth, as fewer newly extracted resources are required to produce the same level of output. Global models of its economic impact suggest there is potential to drive three per cent GDP growth by 2050.[12]

At the national level, additional economic benefits come from onshoring circular activities to the UK, eg recycling, repair, reuse or remanufacturing of products that would previously have been exported as waste. For example, recent modelling of the UK electronics, construction, textiles and packaging

sectors suggests net one per cent GDP growth is possible from matching what European comparators are already doing.[13]

However, analysis in this area often conflates two issues: a trade strategy and a circular economy strategy and, without a considered approach, it is possible that circularity could be used to greenwash protectionist policies. The UK could go completely circular without onshoring anything and continuing with existing or similar trade patterns, by importing recycled or reused products instead. Or it could attempt to onshore as much as possible.

In the middle ground, the UK could also aim to 'near shore' some activities to allies like the EU, working together strategically to achieve economies of scale and harmonise approaches. This should form part of the picture as, while it might work for large countries or regions like the US and the EU, it would be almost impossible for the UK to onshore most or all production. So, the question is, for which processes, in which sectors, should the UK do this, and for which parts of the supply chain?

Which circular activities should the UK onshore?

The answer to this question will have an impact not just on the UK economy, but also on the countries it trades with, as well as global environmental impacts from material extraction and the processing and production of goods.[14]

We have drafted criteria the UK could use to answer the question. The aim is to build on criteria the government has already used to select priority 'frontier industries' with a specific eye on identifying where circularity makes the most sense.[15]

The criteria could be used to assess activities like battery or plastics recycling, clothing resale or electronics manufacturing, along a spectrum from 'definitely onshore' to 'better to trade internationally'.

In conjunction with relevant government policy, these criteria could be useful for businesses and investors to assess the investment potential of circular activities in the UK.

We have tested them in interviews with a select group of experts from business, government and civil society (see acknowledgements on page eight).

The criteria seek to optimise three outcomes:

- **Economic impact in the UK**, including GDP, jobs, productivity, resilience, economic security, strategic autonomy and potential export opportunities.
- **Environmental impact globally**, including lower raw material extraction, greenhouse gas emissions, pollution, land use and biodiversity loss.
- **Social impact**, particularly on developing countries where extraction of raw materials for, and the manufacture of, many of the short lived products imported to the UK currently occurs. Also, the impact on the price of products in the UK market in a cost of living crisis.

As discussed, there are many economic, environmental and social reasons to move to a circular economy.[16] Our criteria do not cover those reasons. They are specifically designed to analyse only the trade-offs of onshoring circular activities, compared to policy efforts that support them happening overseas.

No single answer applies at a sector or even a supply chain level; there will be differences across materials and products, and between reuse, remanufacturing, recycling and other circular activities.

The criteria are intended to apply to specific parts of a supply chain, eg remanufacturing laptops or recycling electric vehicle (EV) batteries.

Additional circular activities that could be considered include the services and intellectual property (IP) that enable circularity, such as circular design IP or logistics systems for the collection and distribution of items for resale.

Criteria: when does it make sense to onshore?

Our proposed assessment criteria are listed in the following table.

To assess whether a particular activity, such as remanufacturing laptops or recycling cotton textiles, should be onshored, it should be checked against each of the criteria and a judgement formed. No single criteria alone should inform the judgement.

Decision making criteria

	When onshoring makes sense	When onshoring doesn't make sense or mitigation is required
Competitive advantage and infrastructure	The UK has existing competitive advantage, including infrastructure, or there is potential for the UK to create it.	The UK lacks relevant infrastructure, and others have strong competitive advantage.
Skills	The UK has existing or readily transferable skills.	The UK has little or no existing or readily transferable skills. A skills programme would be necessary.
Research and IP	The UK has research expertise and intellectual property in technologies or processes needed.	The UK has little or no research expertise.
Domestic market potential	The UK has a significant domestic market for this recycled or reused material, component or product.	The UK has little or no market or prospect of developing one.
Job creation and quality	There is potential for new UK jobs, particularly in areas suffering high unemployment, or onshoring would displace harmful, exploitative or low value work overseas, particularly in material extraction and manufacturing.	Onshoring would significantly harm livelihoods in countries economically reliant on responsible production and trade with the UK, including potentially harming their ability to fund their own green transition. Or circular activities would displace domestic industries and lead to net job losses in the UK.
Geopolitical risks	Geopolitical risks in the supply chain will be reduced by onshoring.	Important geopolitical relationships are strengthened by trade.

National security	Production within the UK is key to national security.	Production within the UK could harm national security.
Supply chain resilience	Activity in the UK would support supply chain integration, ie midstream processing.	It would create an effective domestic monopoly replacing multiple reliable suppliers, reducing supply chain resilience.
Insight into product design and evolution	There is access to information on the design of components or products, including future innovation, enabling planning for disassembly, repair or recycling.	There is limited insight into design of components or products, making it challenging to disassemble, repair or recycle. Mitigation could include requirements for design information to be published for products sold in the UK.
Environmental standards and commitments in multilateral and domestic policy	The UK has better environmental standards than elsewhere, or activities would fall within the jurisdiction of stronger environmental controls.	Environmental standards or policies are worse in the UK than other countries.
Environmental impacts globally	It reduces emissions (including from transport), pollution and nature loss globally.	It would harm biodiversity or cause pollution, compared to production elsewhere.
Global circularity	This activity is currently not done elsewhere or is not widespread. Doing it in the UK would expand the global circular economy and keep products in use at highest value for longer.	This activity already happens elsewhere, to a high standard that keeps products in use at their highest value for as long as possible. Onshoring to the UK would decrease circularity globally by making operations less viable at scale overall.
Export potential	There is significant UK export potential, ie intellectual property or consultancy.	It would actively harm UK export potential.

Product prices	Prices become more affordable in the UK, or there is little or no impact on them, or products and related services are more expensive but higher quality or longer lasting.	Prices rise, potentially due to higher labour and energy costs in the UK, without improving product quality.

Testing the criteria

To illustrate how these criteria could be applied and how they could influence decisions, we tested them against the example of EV battery recycling (see the annex on page ten).

Recommendations

A circular economy offers many benefits to the UK and some will come from onshoring circular industries. Strategic consideration is needed about which processes in which sectors and which parts of the supply chain should be onshored to secure them.

Through its Industrial Strategy, the government has already identified the industries and subsectors it considers have high strategic necessity, growth potential and importance for economic security, as well as those that are foundational in providing critical inputs for priority industries.

We recommend that, where industries have been prioritised in the Industrial Strategy and are prime targets to be made more circular, including clean energy, advanced manufacturing and foundational sectors, like steel and chemicals, they should be prioritised for assessment.

Development of the criteria we propose would help to make those decisions. Policy can then be more targeted and should include:

- **Links between onshoring decisions and trade policy**
  Once the UK has identified industries where it is beneficial to onshore, it should analyse the new import and export dynamics created and what the trade barriers would be. This will require regional co-operation with trade partners. Other regions of the world are already taking this approach. For example, the Association of Southeast Asian Nations (ASEAN) has a circular economy roadmap with explicit goals to harmonise standards amongst member countries and enable trade in circular products and services.[17]

- **Links between onshoring decisions and industrial strategy**
  Government policy should support activities in the domestic industries it has decided to onshore, including supporting on energy costs and market creation through public procurement or conditions on government contracts, such as contracts for difference (CfDs). It should include financing through institutions such as the National Wealth Fund and Great British Energy. The Clean Energy Industries Circular Economy Roadmap, due in 2026, will be an important moment to support greater circularity in the renewables industry.

Next steps

Our list of criteria is a first step towards the creation of a tool that policy makers and researchers could use to decide which circular activities should be prioritised for UK onshoring. To develop them further, we suggest addressing the following challenges:

- Our criteria are based on statements, not data. This could be resolved by expanding them to be more detailed, with inputs that can be quantified and scored numerically.
- Without guidance on how different criteria should be weighted against each other, there is a risk that one could be used to topple others. This could be resolved by working with experts, in industries, academia and policy, to determine appropriate weighting, using multi-factor analysis, or by converting the criteria into a decision tree.

We would welcome approaches from anyone interested in developing this work further.

For more information, contact
Libby Peake, senior fellow and head of resource policy
lpeake@green-alliance.org.uk

Acknowledgements

We would like to thank: Dr Jack Barrie, Charlotte Stamper (The Circularity Collective), Antonia Grey (British Metals Recycling Association) and our other interviewees for discussing the draft criteria with us. All views expressed in this publication are the authors' own.

Annex

Applying the criteria to EV battery recycling

This is an area of rapidly changing technology. As the UK has little control over battery design and other countries have moved quickly to secure the market, it will be challenging to onshore, but it may still be strategically important to do so. The UK does not have a strong competitive advantage in this case, and there is substantial activity elsewhere, particularly in China. Battery technology is also rapidly evolving, with much innovation happening in China, meaning the UK has limited access to information on future designs.

However, decisions may be steered by national security considerations and the policy context in the EU, where over half of the UK's exports are sent to, and which is introducing stricter rules of origin (ROO) from 2027. It is unlikely that much of the domestic UK EV production will be able to meet the ROO requirements, resulting in a ten per cent tariff being applied.

From 2031, vehicles placed on the EU market must also contain a certain proportion of recycled cobalt, lead, lithium and nickel.[18] If the UK wants to continue to export vehicles to the EU, it will need battery manufacturing, remanufacturing or recycling facilities within the UK to meet requirements.[19]

See the criteria applied to this industry on page ten.

	When onshoring makes sense	When onshoring doesn't make sense or mitigation is required
Competitive advantage and infrastructure	The UK has EV manufacturing sites in Sunderland (Nissan) and Ellesmere Port (Vauxhall). The Sunderland site includes battery production.[20] A new battery production facility has recently been approved in the West Midlands.[21] Agratas, a subsidiary of Tata, who also own Jaguar Land Rover, are building a new gigafactory in Somerset with production set to begin in 2027.[22] There are no large scale battery recycling facilities in the UK, although there are plans.[23]	There is ample infrastructure globally, including in the EU, but China is dominant with over 70 per cent of EV production, and costs 30 per cent lower than in Europe.[24] Battery recycling is also dominated by China with 78 per cent of pre-treatment processing capacity and 89 per cent of black mass refining (where metals like cobalt, nickel and lithium are recovered from shredded end of life batteries).[25]
Skills	Battery manufacturing skills exist at Nissan's Sunderland facility. These are likely to be transferable to battery recycling. One of the core elements of UK Research and Innovation's (UKRI's) Faraday Challenge is the UK Battery Industrialisation Centre (UKBIC), aiming to scale-up manufacturing and skills development.[26] Higher education is a key UK strength and the next wave of EV innovation, including battery recycling, will require workers with an understanding of software, electronics, chemistry and engineering.	Most battery production, processing and recycling happens outside the UK. A skills programme is needed to address gaps.

Research and IP	The UK has research expertise in battery recycling, including through the Faraday Institution, Advanced Propulsion Centre and universities, including: Birmingham, Imperial College London, Oxford, Warwick and others.	
Domestic market	The UK has a domestic market for EV batteries, given the mandate requiring UK car manufacturers to increase zero emission vehicle sales, and the need for energy storage. EU rules of origin mean UK EVs sold to the EU will need batteries sourced primarily from the UK or the EU to avoid tariffs and they will also need to meet the EU's recycled content requirements.	There are no demand drivers for secondary EV battery materials sold in the UK, such as those which exist at the EU level through recycled content requirements.[27]
Job creation and quality	There is potential for new UK jobs in battery recycling, particularly in areas suffering high unemployment, such as the Midlands. Due to high demand, this would not displace jobs in new mining for necessary materials in regions like Cornwall. Where battery recycling occurs, it could reduce pressure on more difficult to access raw material reserves and exploitative working conditions used in the supply chain. For example, EV supply chains have been linked to forced labour of Uyghurs in China.[28]	

Geopolitical risks	EV batteries contain critical raw materials. Many of the supply chains suffer from serious geopolitical risks, including increasing competition for resources and overreliance on countries, such as China, for some materials.	
National security	There are no additional security risks beyond the geopolitical risks outlined above.	
Supply chain resilience	Existing UK battery production facilities, such as in Sunderland, could co-locate with recycling facilities.	The battery supply chain in the UK is limited and increasing reliance on limited domestic facilities could reduce access to well established international networks.
Insight into product design		Battery production, and therefore design, is currently dominated by China. The UK has limited control over design of components or products, making it challenging to disassemble, repair or recycle in the absence of policy that would require information to be published, such as battery passports, or an active push to develop and disperse an alternative designs, such as sodium-ion batteries.[29] This is particularly acute as battery technology continues to evolve rapidly, in design and chemical composition.
Environmental standards and commitments in multilateral and domestic policy	Onshoring battery processing from China would improve environmental standards of the industry's operations and bring activities within the jurisdiction of stronger	

	environmental policies, eg the Climate Change Act, recycling regulations and stronger environmental controls.	
Environmental impacts globally	Onshoring has the potential to reduce emissions, pollution and nature loss globally, as UK industrial activity is more tightly environmentally regulated than China, which dominates the processing and recycling of EV batteries.	
Global circularity		Circular activity already happens in other countries, particularly China, and is emerging in the EU and US. (Onshoring to the UK is unlikely to shrink the global circular economy, though, as economies of scale have already been reached in other countries.)
Export potential	If the UK continues to export EVs to the EU, it will need to ensure 65 per cent of battery cells are sourced and processed within the UK or the EU by 1 January 2027.[30] Domestic battery recycling could help meet that target and enable continued exports. From 2031, there will also be explicit recycled content requirements for cobalt, lithium, nickel and lead in batteries destined for the EU market.[31]	
Product prices		Onshoring battery recycling to the UK is likely to increase the price of materials due to higher labour and energy costs in the UK compared with competitors like China.

Endnotes

[1] T Edington, 26 January 2024, 'Trade deals: what has the UK done since Brexit?', BBC News
[2] Organisation for Economic Co-operation and Development, 12 May 2025, 'OECD inventory of export restrictions on industrial raw materials 2025'
[3] International Energy Agency (IEA), 2025, 'Global critical minerals outlook 2025'
[4] I Jozepa and D Webb, 2025, research briefing, 'US trade tariffs', House of Commons Library
[5] O Milman, 11 August 2023, 'Green investment boom and electric car sales: six key things about Biden's climate bill', *The Guardian*
[6] European Union (EU), 2024, 'Critical Raw Materials Act'
[7] Eurometal, 26 January 2026, 'Leaked EU Industrial Accelerator Act seeks to unlock green steel demand, stalled investments'
[8] World Economic Forum, 20 January 2026, 'Davos 2026: Special address by Mark Carney, Prime Minister of Canada '
[9] UK Government, 2025, 'The UK's trade strategy'
[10] National Audit Office (NAO), 2026, 'Work in progress: investigation into government's intervention in British Steel's Scunthorpe site'
[11] Green Alliance, 2024, *Why a circular economy is good for the UK*
[12] Green Alliance, 2023, *Profit without loss: how conserving resources benefits the economy, businesses and consumers*
[13] S Oates et al, 2025, *Building a more productive and resilient UK through circularity*, PwC
[14] J Barrie and P Schröder, 2022, *The role of international trade in realizing an inclusive circular economy*, Chatham House
[15] UK Government, 2025, 'Industrial Strategy Technical Annex'. The criteria used to identify priority 'frontier industries' at the leading edge of the eight sectors that were the focus of the Industrial Strategy included: economic potential (which considered growth; strategic alignment with other government aims including regional growth, net zero and environmental sustainability, or economic security and resilience; and sector interconnectedness with other sectors prioritised in the industrial strategy); policy opportunity (including the rationale for government intervention and the availability of suitable policy levers).
[16] Green Alliance, 2025, *What the circular economy is good for*
[17] ASEAN, 2021, 'Framework for Circular Economy for the ASEAN Economic Community'
[18] EU, 12 July 2023, 'Regulation on batteries and waste batteries'
[19] Green Alliance, 2023, *Powering up the UK battery industry*
[20] AESC, 16 December 2025, press release, 'AESC launches its new battery gigafactory'
[21] H Kintuka, 16 December 2025, 'The major £2.5bn project to turn UK airport into "global hub"', *Express*
[22] R Bradley, 1 July 2025, 'Building of EV battery factory reaches 'milestone'', BBC News.
[23] N Piperidou and S Hindocha, 2023, *The 2035 UK battery recycling industry vision*, UK Research and Innovation (UKRI)
[24] T Lombardo, L Paoli, A Pales and T Gül, 5 March 2025, 'The battery industry has entered a new phase', International Energy Agency commentary

[25] *Benchmark*, 16 May 2025, 'Infographic: how much of the battery recycling industry does China control?'
[26] UKRI, 'Faraday Battery Challenge'
[27] EU, 12 July 2023, op cit
[28] Anti-Slavery International, 2023, submission to the Business, Energy and Industrial Strategy Committee's 'Call for evidence on batteries for electric vehicle manufacturing'
[29] Royal Academy of Engineering, 2024, *Critical materials: demand-side resource efficiency measures for sustainability and resilience*
[30] M Szczepanski, 2024, 'EU – UK rules of origin for electric vehicles and batteries', European Parliament
[31] EU, 12 July 2023, op cit