



Hydro Aluminium UK Ltd

Hydro Extrusions

About Hydro



40 countries

35,000 employees

Hydro is a fully integrated aluminium company with 35,000 employees in 40 countries on all continents, combining local expertise, worldwide reach and unmatched capabilities in R&D.

Headquartered in Norway, Hydro is rooted in more than a century of expertise in hydropower, development of technology and product innovation.

We are present within all market segments for aluminium, from production of the primary metal to recycling and repurposing it. Our sales and trading activities throughout the value chain serve more than 30,000 customers.

From extracting the bauxite and refining the alumina to producing primary metal and offering specialized products to a wide range of industries, our commitment remains the same: to strengthen the viability of our customers and communities through innovative and sustainable aluminium solutions.

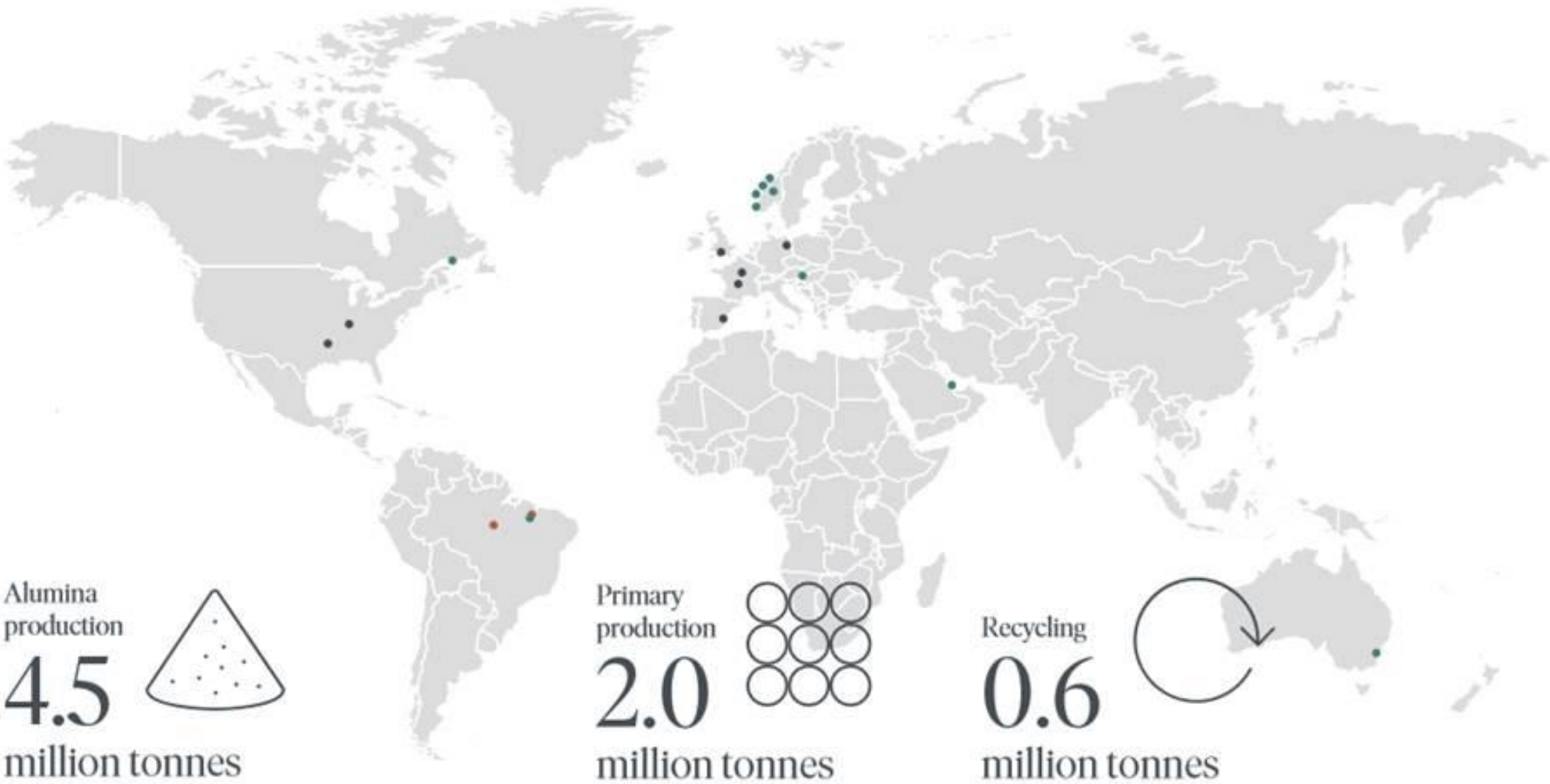
Our Capabilities

How can Hydro help you and your business



Aluminium upstream production facilities

● Bauxite and Alumina ● Remelters ● Smelters





Hydro Aluminium UK Ltd

Hydro Extrusion
Birtley
DH3 2AH

Birtley: Extrusion & Thermal Break

Hydro Extrusion
Tibshelf
DE55 5NH

Cheltenham: Extrusion & Surface Treatment

Tibshelf: Extrusion, Die Manufacturing & Recycling

Hydro Fabrication
Bedwas
CF83 8DR

Bedwas: Fabrication & Surface Treatment

Hydro Extrusion
Cheltenham
GL51 9DT



**We know where and how
aluminium can be best used**





UK Manufacturing Capabilities

- 6 presses
- Maximum length is 13,700mm
- Minimum section weight is 0.15kg/m
- Maximum section weight is 11kg/m
- Alloys are 6000 series
- The UK has a unique remelt facility with c 50,000 tonne capacity and a total cast weight of 25 tonnes



Application
Engineering



Bespoke
Extrusion



Cutting



Bending &
Forming



Anodizing



Powder
Coating



CNC
Machining



Friction
Stir Welding



Welding



Punching



Assembly



Logistics

Our Capabilities

How can Hydro help you and your business

More than just a profile...

Hydro's additional capabilities and services hold no boundaries. From performance enhancing to aesthetically pleasing procedures.

See how Hydro can enhance your design and product with additional services and fabrication.

www.hydro.com

Surface Treatment Offerings



Shot Blasting

Process can quickly remove surface defects of a profile from extrusion process & handling whilst creating a consistent surface finish aesthetically. This method can be unsuitable for some complex and thin walled profiles.



Powder Coating

Similar to paint, however applied as a free flowing dry powder electrostatically to add colour or finish effects. It is then cured via heat treatment or UV lights. The benefits include more environmentally friendly & speciality finishes.



Sapa Lok

A unique service to Hydro. Whilst being able to add a range of decorative colours, the processes main objective is to lock in colour, durability & longevity. It also remains stable under high UV reducing the risk of colours fading.



Painting

The most popular surface treatment for a range of colours commonly used after anodising. Painting provides a cost effective way of adding desired colours and finishes whilst keeping the benefits associated with anodising.

Anodising Capabilities

- ⚡ Anodising is a process in which the outer surface of an aluminium product is converted into Alumina, a ceramic with unique properties.
- ⚡ The process has many stages including the aluminium profiles or product being submerged in a sulphuric acid solution with an electrical charge passing through.
- ⚡ The current releases hydrogen within the aluminium and oxygen on the surface of the to create a build up of aluminium oxide.
- ⚡ Anodising acts as a base for further surface treatments to develop onto to help create the desired finish product.



Dirt repellent & increased hygienic rating

Higher corrosion resistance

Base for decorative applications such as painting & dying

Electrically isolating along with other functional features

How Anodising can Improve Sustainability

Unlike other surface finishes, anodizing adds nothing new to the profile therefore **100% recyclable!**

Remelting aluminium scrap requires only around 5% of the energy used for primary aluminium.

With a more durable, **longer lasting product** the need to replace the product is reduced

A thin anodized layer will perform better than a much thicker layer of paint meaning **less material used**

Anodizing plants must adhere to **high environmental standards** with regards to waste and emissions.





Thermal Break



Hydro Extrusion UK consists of 4 primary sites, 3 extrusion based and 1 fabrication centre.

Our Birtley extrusion site provides the facilities and capabilities for Thermal Break application to create more sophisticated, durable and complex structures by co-joining profiles that the die design process cannot achieve alone.

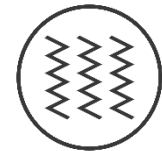
All profiles and extrusions that are subject to thermal break application undergo dimension and shear tests to ensure the product complies to customer design specifications.



Temperature
Control



Noise
Reduction



Vibration
Control

Infinitely Recyclable – a high recycling rate



One of the world's largest energy reserves, increasingly utilized through urban mining and recycling





Hydro's Vision



Sustainability is the biggest challenge of modern production. We need to change our economy into one that produces for a low-carbon world.

We work to create a more viable society by developing natural resources into products and solutions in innovative and efficient ways. In order for you as our customer to understand our work and performance, we report on our impact on the climate, using the UN Global Compact and the Task force on Climate-related Financial Disclosure (TCFD) Framework in Hydro's annual reports.

We also work closely with customers to develop products that save energy and reduce emissions. Examples include lighter transportation, better packaging to reduce cooling needs and aluminium facades that lead to lower operating costs and enable buildings to generate as much energy as they use during operation.

DID YOU KNOW?

About 70% of Hydro's primary aluminium production is based on renewable power



Our Sustainability Offerings



PRODUCT



Hydro RESTORE

Hydro RESTORE is aluminium made from recycled pre-consumer scrap, recycled post-consumer scrap and primary aluminium. In Hydro we recycle scrap locally so it can enter back into the production process. By collecting and recycling the scrap close to the source, our customers get the best service and sustainability offering.

Hydro RESTORE has a carbon footprint of 6.9 kilo CO₂e per kilo aluminium.



Hydro REDUXA

Hydro REDUXA is our brand of low-carbon aluminium. Using renewable energy from water (hydro power), wind and solar, we can produce cleaner aluminium, reducing the carbon footprint per kg of aluminium to 4.0 which is less than a quarter of the global average.

Hydro REDUXA 4.0 has a certified carbon footprint of 4.0 kilo CO₂e per kilo aluminium.



Hydro CIRCAL

Hydro CIRCAL is our brand of recycled aluminium made with a minimum of 75% recycled, post-consumer aluminium scrap. Using recycled aluminium, we drastically reduce energy use in the production phase whilst still offering high-quality aluminium.

Hydro CIRCAL 75R has a carbon footprint of 2.3 kilo CO₂e per kilo aluminium.



ASI Certification – Performance Standard & Chain of Custody Standard

The Aluminium Stewardship Initiative (ASI) is a voluntary, global, multi-stakeholder, non-profit standards setting and certification organization. It works toward responsible production, sourcing and stewardship of aluminium following an entire value chain approach. ASI's Standards apply throughout the supply chain, from mining through to downstream sectors that use aluminium in their products.

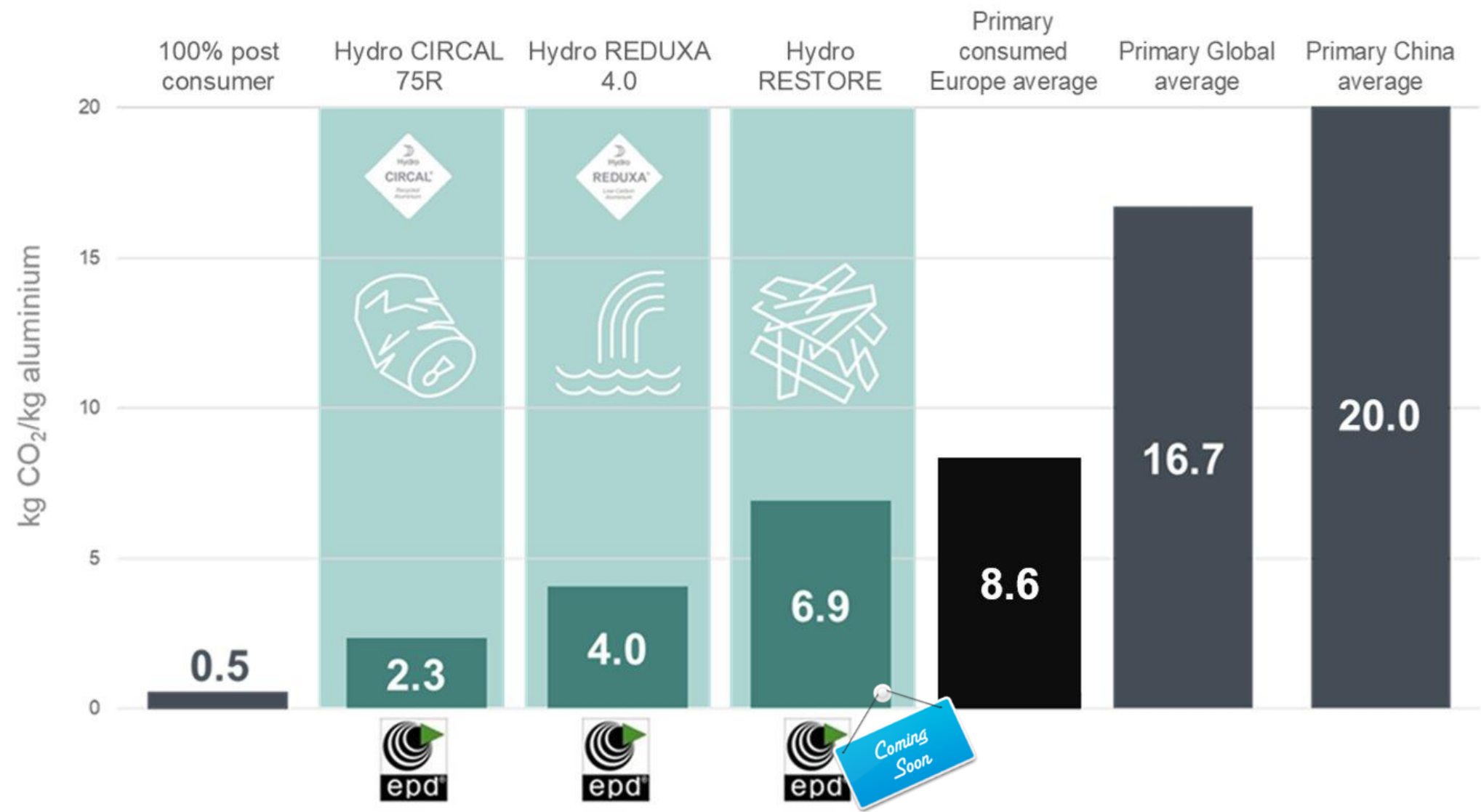
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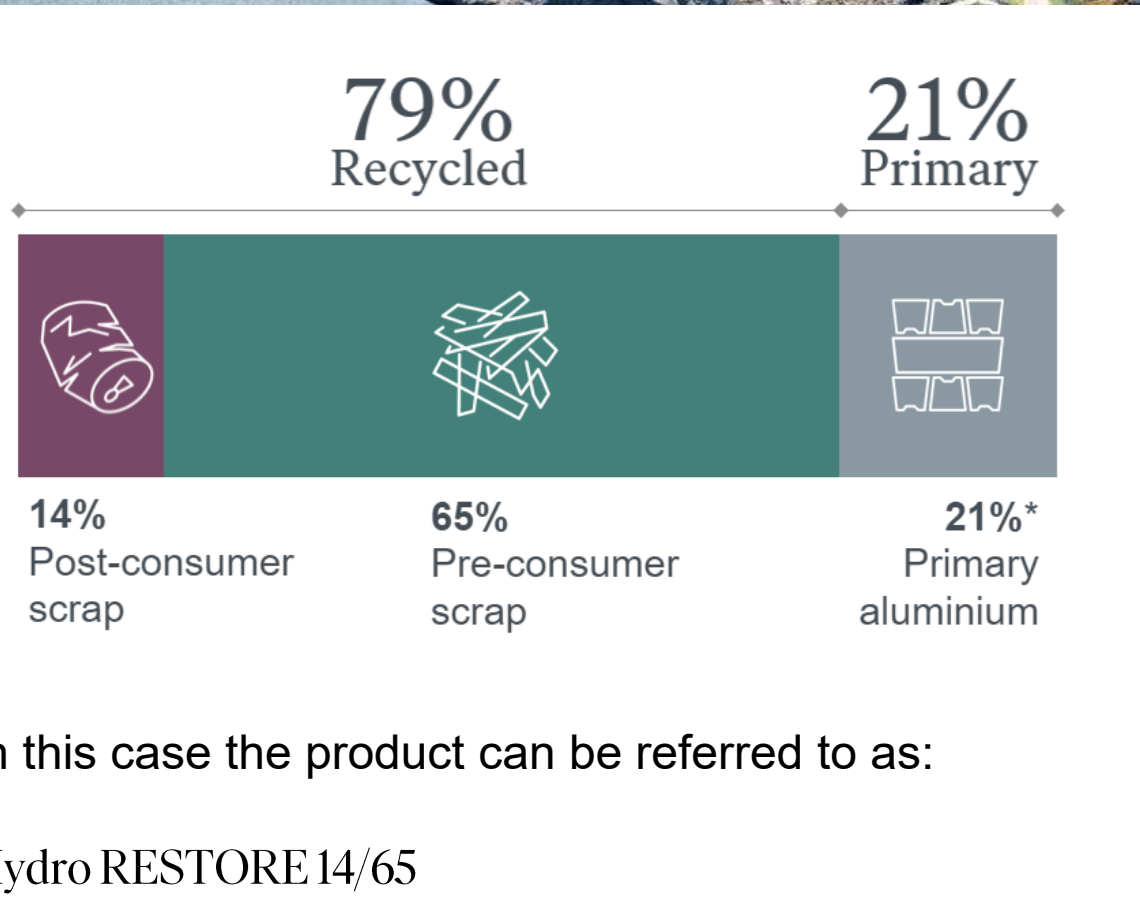
Hydro EcoDesign

The Hydro EcoDesign concept aims to reduce negative impacts of products on the environment and health of people while amplifying the positive effects on society. The concept is being developed in Extruded Solutions and will launch soon.

Aluminium CO2 Footprint by Processing Route



Hydro RESTORE



- Contains two kinds of aluminium scrap:
- Post-consumer scrap that has lived a life in a product
 - Pre-consumer scrap from Hydro's and our customers' manufacturing sites

Average recycled content in Hydro RESTORE is 79%

- 14% Post-consumer scrap
- 65% Pre-consumer scrap
- The remaining content is 21% primary aluminium

Example using average from Extrusion Europe casthouses in 2020, individual casthouse values will vary

*Includes alloying elements

Hydro REDUXA

Hydro REDUXA is our series of low carbon aluminium. Through the use of renewable energy sources, like Hydro power, we reduce the carbon footprint per kg aluminium to less than a fourth of the global average. The result is the aluminium with one of the world's lowest carbon footprints to date.

1. Maximum or below **4.0** kg CO₂e/kg Aluminium
2. **VERIFIED** by DNV GL according to ISO 14064
3. **CONFIRMED** by an Environment Product Declaration



Hydro CIRCAL

Hydro CIRCAL is a range of products made with recycled, post-consumer scrap. Through the use of recycled content, we reduce energy use drastically while still being able to offer high quality products. The percentage of scrap will change depending on specifications from the client, but we can always guarantee a CO2 footprint below 2.3 kg CO2 per 1 kg aluminium produced with Hydro CIRCAL 75R.

1. At least **75%** post-consumed recycled aluminium*
2. **VERIFIED** by DNV GL based on traceability and quality principles developed by Hydro
3. **2.3** kg CO2e/kg Aluminium
4. **CONFIRMED** by an Environment Product Declaration



Full ASI Certification



All Hydro Extrusion sites within the United Kingdom are certified according to both the ASI Performance Standard and ASI's Chain of Custody Standard. ASI's Performance Standard recognizes the responsible production, sourcing and stewardship of aluminium.

It is complemented by the Chain of Custody (CoC) standard, which sets out requirements for the creation of a chain of custody for CoC material, including ASI Aluminium, which is produced and processed through the value chain into the downstream sectors.



Hydro ASI Certifications



- In 2018, Hydro decided to Implement ASI across its full value chain.
- ASI is the only 3rd party Certification scheme covering the entire value chain of Aluminium to address sustainability challenges.





Hydro EcoDesign products
contribute actively to
environmental- and human
well-being, functionality and
circular economy by design



Innovative Design, Safe Materials, Intelligently Cycled



Expertise and Knowledge



Lead Times & Speed of response



Size, Scale and Financial Resilience



Vertically Integrated Value Chain



Drive for Sustainability



UK Manufacturing + Global support network





Hydro

We are aluminium

