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N+P

A JOINT VENTURE FROM **ALFANAR** AND **N+P**

# THE WORLD'S LARGEST WASTE-TO-GREEN JET FUEL PRODUCTION FACILITY

# ABOUT THE PROJECT PARTNERS

## This new joint venture brings together Alfanar and N+P's respective expertise to create a unique end-to-end solution.

The partnership is investing in new waste treatment facilities and will source up to one million tonnes per year of non-recyclable waste from waste companies and local authorities to process at these facilities. The waste will then be converted into Sustainable Aviation Fuel (SAF) at a production facility in Teesside – known as Lighthouse Green Fuels – which will be the biggest waste-to-green jet fuel production facility in the world.

The project will create something incredibly valuable that will be essential if we are to continue flying in a net zero world - something that can't currently be made from any other process - out of things that people literally throw away.

alfanar

A global project development, manufacturing, and engineering company employing more than 20,000 people worldwide.

We specialise in developing projects as well as manufacturing electrical products and EPC solutions covering renewable power and fuels, water and infrastructure. We have developed over 1.5 GW of renewable projects globally.

WEBSITE

N+P

A Dutch-based world-leader in the production and supply of non-recyclable waste derived alternative fuels, which are used for various heavy industries.

We remove recyclable materials and then process, shred, screen, dry and then pelletise the waste, creating value of out of things that others literally throw away.

WEBSITE

# CREATE VALUE OUT OF WASTE

Several purpose-built waste treatment facilities across the UK will process the waste (including one already operating in Teesside), which will include everyday non-recyclable household and business rubbish, contaminated recycling loads and Material Recycling Facilities (MRF) residues that would otherwise have been destined for landfill, incineration, or export.

These sites will process up to one million tonnes per year of waste, which will involve removing recyclable and inert materials like metals and glass before drying and pelletising the waste.

# PRODUCING ULTRA-LOW CARBON SUSTAINABLE AVIATION FUEL

The pellets from the N+P facilities will be transported to Alfanar's Lighthouse Green Fuels SAF facility in Teesside, where they will be converted to SAF using Alfanar's unique gasification and Fischer-Tropsch technology. The facility will produce 130,000 tonnes per year of SAF, equivalent to 25,000 short-haul flights per year.

The SAF can be used as a "drop in" fuel in today's aircraft engines and refuelling infrastructure with no modifications. It delivers 80% greenhouse gas lifecycle emissions savings compared to conventional fuel. With access to carbon capture and storage technology, which the Alfanar facility requires to reach its full potential, it can deliver up to 200% savings or 750,000 tonnes per year (meaning it could deliver negative emissions).


Aviation contributes 8% of UK emissions, but it's one of the hardest sectors to decarbonise. SAF is the only viable solution for decarbonising medium and long-haul flights (over 1,500km) by 2050, which account for 75% of all global aviation emissions, so scaling up its production will be critical if we are to continue flying in a net zero world.

# WHY THE UK?

The UK is well positioned to become a global leader in SAF production. It has the third largest aviation network in the world and a third of Europe's carbon storage potential and as much as the EU27 combined.

The UK has sufficient waste feedstocks to meet well over the UK Government's 10% SAF mandate target by 2030 (i.e. 10% of all aviation fuel will need to be made from sustainable feedstocks by 2030).

Teesside specifically has a rich industrial heritage and existing skilled jobs in chemicals, fuels and waste processing, existing infrastructure like oxygen and utilities pipelines, and crucially access to permanent offshore carbon storage.

Alfanar is investing £1.5 billion in their Lighthouse Green Fuels SAF production facility which is due online in 2028. This will be the world's largest and most advanced SAF facility, with more expected to follow in the UK and beyond.

The joint venture is now seeking long-term waste contracts with waste companies and local councils to source non-recyclable waste otherwise destined for landfill, incineration or export.

To find out more **visit our project website.**