

Helping the UK to deal with its plastic waste

Quantafuel Sunderland Ltd is part of a plastics recycling company based in Norway.

We are hoping to invest in operations in the UK, and would like to open our first plant in Sunderland.

We are expecting to submit a planning application in Spring 2022. If approved, the plant could open during 2024.

Feedback from the community is very important to us. While we are only able to share our plans with you online at present, we welcome your questions and comments. You can email us at sunderland@quantafuel.com

As soon as we are able and Covid restrictions allow, we will be holding a drop-in event in the East End of Sunderland, where you can come along and find out more about the plans. We will provide details in due course.

**Send your questions
or comments to
[sunderland@
quantafuel.com](mailto:sunderland@quantafuel.com)**



Quantafuel's plant in Skive, Denmark

Investing in Sunderland

We are proposing to build our first UK plant on land at the eastern edge of Port of Sunderland.

It will create around 100 permanent jobs, and support around 200 jobs during construction.

There will be a range of roles available at the plant, from highly skilled chemical and mechanical engineers through to accounting, administration, security and cleaning staff.

We also expect to create apprenticeship and training opportunities.

We will ensure jobs and opportunities are available to the local community, including those living close to the port, by working with employment agencies, community groups, and local schools, colleges and universities.

**The plant will
create around 100
permanent jobs**



The proposed site at Port of Sunderland

Sunderland and the port are key to success

We have chosen a 12-acre site on the eastern edge of the port because it has been prepared for development, is in close proximity to shipping berths, and is close to the local workforce.



Artist's impression of the proposed plant

The plastics will arrive at the site in enclosed heavy goods vehicles. They will arrive during normal daytime working hours, Monday to Friday, with some activity on Saturday mornings.

Road traffic disturbance will be minimal. Around 25-28 heavy goods vehicles will enter the site each day.

Delivery vehicles will travel to and from the plant via the A19, taking the A1018 from the south, and the A183, A690 or A1231 from the north or west.

The plant will operate 24/7. We are currently planning for all materials produced to be taken by ship to customers in the petrochemical industry.

Helping to achieve Net Zero

This plant would provide the UK with a new, environmentally-friendly way to deal with the plastic waste we are currently unable to recycle, helping the UK to achieve its Net Zero target by 2040.

At present, non-recyclable plastics go to landfill or are incinerated in energy-from-waste plants, creating carbon emissions.

If approved, this plant would take low value plastic waste and recycle it to create materials that can be used again in the production of high-grade plastics.

This will help the environment and reduce CO₂ emissions, while also contributing to the circular economy in the UK.



Soft plastics like this could be recycled in the plant

Operations at the site

The plant will be capable of processing more than 110,000 tonnes of plastics a year.

It will be designed so that vehicles arriving on site can unload the plastic waste inside an enclosed hall. No plastics will be exposed outside of the building.

The plastic material will then be put through a sorting process, which will separate the recyclable plastics from those that are not suitable for this plant.

The unwanted plastics, and any other unsuitable materials that have been brought onto the site will, in most cases, be removed by the delivery vehicles. This will cut down on the number of vehicle movements around the plant.

Noise and odour from the site will be minimal and should not impact on local residents.

The suitable material will then be shredded and put into an enclosed storage bunker before being dried using heat produced by the recycling process.



An artist's impression of the plant

Using pyrolysis technology

The plastics will be recycled using a process known as pyrolysis. This is not incineration – it is recycling.



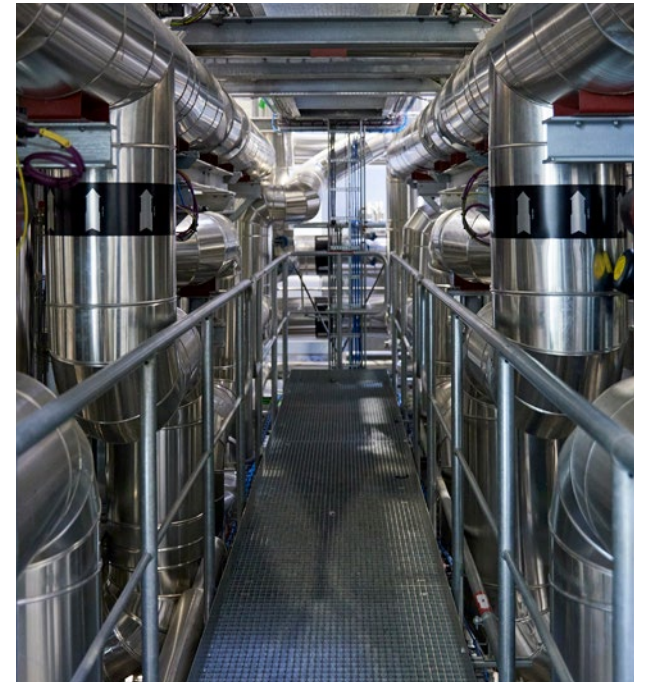
Inside Quantafuel's processing plant in Skive, Denmark

Pyrolysis involves heating the plastic in a gas-tight reactor, and in the absence of oxygen, so that it melts and becomes a gas.

The gas will then pass through a number of processes to clean and separate the different oil fractions, turning it back from a gaseous to a liquid state.

There will be two 30m-tall stacks in one location on the site, which will expel the water vapour, as well as a distillation tower that will have no exit to air and will be 21m tall. Emissions from these stacks will be from burning gas used to heat and power the plant and will be well within national limits.

The plant will be designed and operated to the highest safety and environmental standards, ensuring that it always complies with its strict permit requirements.



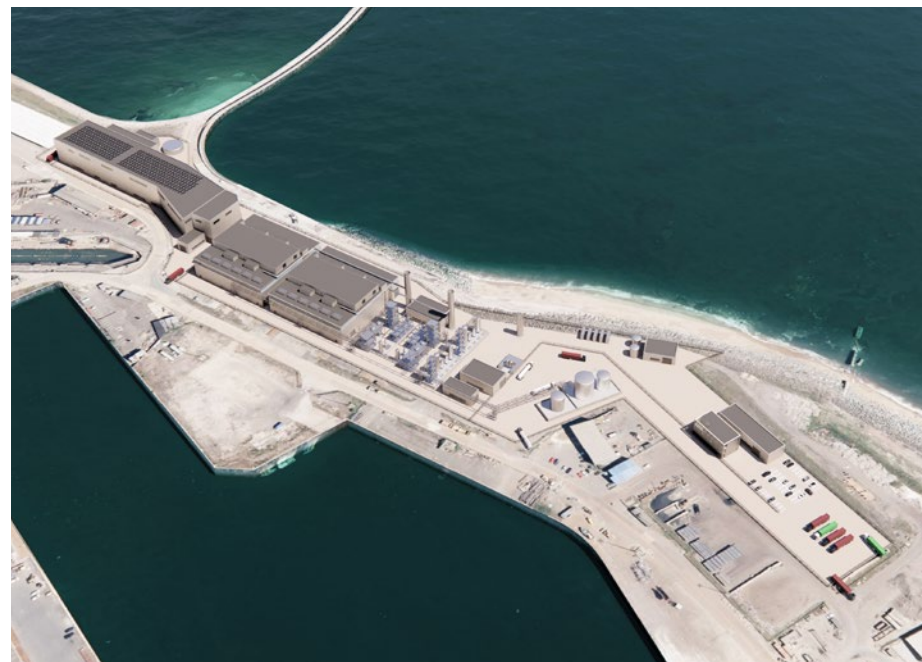
What materials will be produced?

This form of treatment melts the plastics and transforms them into an oil that can be used in the production of high-quality plastics.

A distillation tower separates the liquids produced by the process into light, medium and heavy fractions. These will be stored in tanks on site before being transported by ship to customers in the petrochemical industry. Storage conditions will be fully regulated.

Gas and ash will also be produced. The ash is known as carbon black and will be diverted into sealed containers and removed from the site for later reuse in construction applications, the manufacture of tyres, plastics, ink, coating applications and other similar uses.

Gases produced during the process will be used to heat and power the plant.



An artist's impression of the plant

Types of plastic processed

Plastic waste from across the north of England would be processed in the plant.

The plant would take in mixed consumer plastics that cannot currently be recycled in the UK, such as soft food packaging and a variety of domestic and industrial plastics.

At present, there are no environmentally-friendly ways to dispose of these plastics and they are sent to landfill or incinerated in energy-from-waste plants, or are found littering our countryside and oceans.



An example of the type of shredded mixed plastic waste that the plant would recycle



Tapping oil at the Skive plant in Denmark



An example of the products that would be produced by the plant

Meeting stringent environmental standards

The health and safety of our staff and the wider community is our priority. The plant will be designed and operated to the highest safety and environmental standards, ensuring that it always complies with its strict permit requirements.



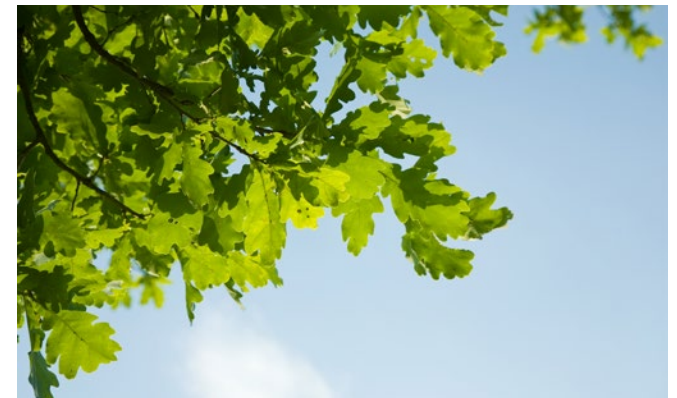
Quantafuel's Skive plant in Denmark

The plant will also be inspected regularly by qualified staff and by the Environment Agency and will be rigorously maintained to ensure it operates safely and efficiently.

Nothing hazardous will be emitted from the plant. For example, our expected nitrogen oxide emissions are expected to be less than 1% of what is permitted under the Air Quality Standard – defined as insignificant by the Environment Agency. Nitrogen oxide is generated during any high temperature combustion process, such as in car engines, household boilers or even when burning candles.



Roker Lighthouse



Nothing hazardous will be emitted

Working with the community

We at Quantafuel are excited about the possibility of opening our first UK plant in Sunderland.

We value our neighbours and want to work in partnership with the community to ensure local people can get involved and can benefit from the plant.

If we secure planning permission, we will set up a community liaison group to enable a steady flow of communication between neighbours and the Quantafuel team, enabling us to listen to feedback, provide regular updates and work towards shared goals.

If you have any queries or wish to give feedback, email us at **sunderland@quantafuel.com**

Find out more about Quantafuel at **www.quantafuel.com**

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The City of Sunderland and the port