



Case Study

Peel Tech Ltd

Peel Tech Ltd, based in Ballingry, Fife, has developed a small scale potato waste-water treatment & starch recovery process. All companies undertaking potato processing such as fish and chip shops and other fast food processors will, at the start of 2016, be required to restrict their discharges to sewer. The Peel Tech process could provide a cost effective mechanism to enable companies to meet their discharge requirements.

The Hydro Nation Award recognises businesses who have proven expertise in maximising the economic benefit of water resources in Scotland and/or internationally.

The judges recognised that this product could have wide applications and benefits for the water industry.

The VIBES site visit Judges (representatives from SEPA, Zero Waste Scotland and Scottish Government) felt that Peel Tech is an excellent example of Scottish innovation which has the potential to alleviate issues with waste water whilst enabling water savings and re-use of starch.

Highlights

- Water treatment technique to remove starch from potato processing waste.
- Developed as a result of current and imminent waste and water legislation.
- The process can capture the starch and enable this to be re-used in other applications
- Solves problem of starch blockages in sewage network – great news for the water industry.
- On site trials have shown that the cleaned discharge can be reused with a potential to save 50% of the water used in the potato peeling process.
- The process is innovative with a patent pending to be granted in November.
- The process has significant potential to become a viable business proposition because it provides a cost effective solution for the food preparation businesses, particularly for smaller businesses, that will be required to comply with the new regulations.
- Lower operational and capital cost compared to current centrifuge techniques.
- The directors are enthusiastic about the business and passionate about the product.

VIBES Award Category:



Hydronation Award

(Sponsored by Scottish Government)

Winner:

Peel Tech Ltd

Pending legislation is the driver for the development of this product - from 1 January 2016, a ban on disposing food waste, including solid waste from grease traps, to the public sewer comes into force. This provides a challenge for businesses that have previously used food waste disposal units as a convenient way of quickly removing food waste from the kitchen. The new cost effective unit will capture the food waste (potato peelings and starch) so that it can be segregated for separate collection. Additionally, there is the potential to utilise the waste starch from potato preparation activities. A patent is pending for this process and is expected to be granted shortly.

The product development is at an early stage and Peel Tech Ltd has just started a 2 year Knowledge Transfer Partnership project with Abertay University to improve the design, provide robust process performance data and develop new products.

The judges were impressed with the data which clearly demonstrates the volume of solid waste and starch diverted from the Waste Water discharge. On site trials have shown that the cleaned discharge can be reused with a potential to save 50% of the water used in the potato peeling process.

The future plans include development of the product to enable its use by Asian takeaways, that primarily use rice, to enable collection and re-use of rice starch and reduce water use.

The ethos identified by the Director at Peel Tech demonstrates that sustainability can be integrated into all stages of a business and this product will benefit the water environment and re-use of materials both locally and internationally.

Malcolm Wood, director of Peel Tech Ltd. Said: "At Peel Tech, we pride ourselves for putting sustainability at the heart of our business and it is great to have our efforts recognised by the team at the VIBES Awards this year."

