



OUR FEED SYSTEMS

- Huon have long been pioneers in feeding methods and technology. We are continually learning and inventing new ways to feed our fish with a combined focus on fish performance, minimising feed wastage, keeping staff safe, and reducing our environmental footprint.
- We feed our fish to appetite which means that the fish eat to satiation. In this way, we allow the fish's natural behaviour to determine when and how much they eat. Similarly, our feed system spread feed in a way that allows all fish to feed at the same time, allowing less dominant fish equal access to feed.
- Our locally-built feed barges are at the centre of our feeding system – the barges are moored on our leases and are remotely controlled from our Hobart office. The barges contain high-tech feed systems such as cutting-edge pellet-recognition software to determine when the fish are hungry and when they are full, which means less wastage and a reduced environmental impact. Each pen includes a series of underwater cameras that delivers continuous footage back to the Control Room.
- Another component of our feeding system is the Control Room based in our Hobart office. From this room, we can remotely feed fish at any of our sites ensuring employee safety when the weather is too rough to operate from a feed barge. Investing in remote feed systems has enabled Huon to move to offshore farming without compromising employee safety.
- The final component is our feed spinners, developed in-house, which evenly distribute feed across entire pens. High-pressure water evenly spreads feed across our pens and with our spinners operating at approximately 400 revolutions per minute, we are able to ensure that each fish is given the opportunity to feed regardless of its size or dominance. (Spring 2020 – Huon is moving away from water-driven spinners to air-driven which will reduce the amount of water pipe present on each lease).
- The introduction of unmanned feed barges moored onsite and automated feeding has also reduced the number of vessel movements and time employees spend on water, particularly at high-energy sites.

FEED BARGES

Feed barges provide a safe work environment and allow experienced fish feeders to focus on feeding the fish (each barge can feed up to 12 pens simultaneously). The remotely controlled on-board systems allow our experienced feeders the ability to switch on feed to particular pens, monitor feeding using a series of underwater cameras and pellet detection software, and to switch the feed off when the fish are no longer hungry. The real-time video footage captured by the system also allows for extensive monitoring between feed times.

Huon has invested more than \$45M in our fleet of seven operational feed barges.

Huon's first feed barge, aptly named 'Huon', was launched in June 2014 and represented the first of five 320-tonne feed barges that would be integrated into Huon's operations in the coming three to four years. Huon is proud to support local businesses in the creation of new technologies and infrastructure, which is why all five 320-tonne feed barges (not to mention the two 600 tonne feed barges) were built in Tasmania by Tasmanian-



based company Crisp Bros. & Haywards at their Margate shipyard. It takes 15 companies, 187 people and 22,000 work hours to build one 320 tonne feed barge.

Huon's suite of 320 tonne feed barges (39m long/12m wide) are the Huon, Hibbs, Hope, Hippolyte and Heron.

The 600-tonne *Hogan* is the largest feed barge in the southern-hemisphere, measuring at 37 metres long and 12 metres wide. The feed barge's 600 tonne capacity allows the vessel to store two weeks' worth of fish feed, supplying 12 pens in Huon's high-energy Storm Bay sites. Designed by Huon in collaboration with AKVA and Crisp Bros. & Haywards, *Hogan* was officially launched in December 2018, costing an estimated \$10.5M. A collaboration of approximately 100 employees and contractors were involved in the project, with the barge taking approximately 82,000 hours or 30 man-years to build, with the coatings alone taking 4.25 man-years to apply. The second 600-tonne barge, *Hulk* was launched in mid-2020.

CONTROL ROOM

Our remote feed system uses a combination of industrial automation and artificial intelligence (AI) to autonomously control feed rates in offshore fish farms by identifying and tracking feed pellets in the water column using machine vision and machine learning.

This system means that at any one time, just four people are remotely feeding (from Hobart) every one of our fish regardless of location (Huon River, Storm Bay or Macquarie Harbour), which also creates a safer working environment particularly when the weather is too rough to operate from a feed barge.

Through the Control Room, the feed system remotely switches on and off feed to particular pens, and monitors feeding using a series of underwater cameras and pellet detection software that sends real-time footage and data (via the barge) back to Hobart. By carefully monitoring how much the fish are eating, we are able to prevent feed wastage and reduce our environmental impact.

By utilising remote operations Huon can also inspect nets and other infrastructure, remove mortalities, and monitor the environment remotely from our Hobart office. Feed barges also allow us to monitor wave actions and current buoys, as well as capture live video feeds of the weather conditions.

