



WILDLIFE INTERACTIONS

- Like any farming operations Huon works hard to keep both our fish and the local wildlife safe. We believe the solution to this is good barrier technology and our industry-leading Fortress Pens and nets aim to protect seals and birds by restricting access to the pens above and below the water line.
- Huon has a dedicated Wildlife team who actively work to minimise animal interactions on our farms. This team spend a lot of time checking equipment and pens making sure everything is maintained to a high standard plus the Control Room can access pen and barge camera footage to monitor pen integrity above and below waterline.
- We report all wildlife and predator interactions to relevant authorities and release monthly updates via our [Sustainability Dashboard](#)
- Seals are one of the ocean's natural inhabitants and we have a responsibility to minimise any impact we have on them. The best way to protect them and keep them safe is by preventing them from entering our pens in the first place. Seals are very intelligent and naturally curious. Before the Fortress Pens were implemented, the seals could see the fish through the net so it was commonplace for seals to climb up the above-water pen wall to gain entry. They were also known to ram the nets in an attempt to create a hole to swim through.
- Huon ceased relocating seals in August 2016, more than a year before the State Government banned the practice in September 2017. We also work closely with the RSPCA in relation to protecting the welfare of both the stock and native wildlife, resulting in Huon ceasing to use Beanbags and Scare Caps) in 2018 – the only deterrent used by Huon is crackers.
- Seals (all species) eat between 4-8% of their total body weight each day, usually fish and cephalopods (octopus and squid), but will also take seabirds. The median weight of male seals occupying Tasmanian waters is 290 kilos with females recording 85 kilos. In terms of daily food intake, this equals (on average) around 17 kilos eaten by every male seal and 5 kilos per every female. (Reference <https://dpiwwe.tas.gov.au/wildlife-management/fauna-of-tasmania/mammals/seals/about-seals>)

SEALS

Thirty-five species of seals inhabit the world's oceans, two of which breed in Tasmanian waters—the Australian fur seal and Long-nosed fur seal. Other seals that may occasionally be seen in Tasmania's waters include the Southern elephant seal, Leopard seal, Sub-Antarctic fur seal and 'true' seals. Commercial harvesting of seals was commonplace in Tasmania from 1798-1830's which pushed some species to the brink of extinction. Banning of this practice has allowed the seal population to naturally increase.

Seals are a natural marine predator, and as we share our waterways with them we are mindful of their safety as well as the safety of our fish and staff. Our patented Fortress Pens (Huon has so far invested around \$100M) aim to prevent seals from entering our pens to eat or attack the salmon, which means that less chance of them becoming trapped. The nets are made from Dyneema, the same material used in bullet-proof vests, and are the strongest developed and used in fish farming worldwide. The pen design hinders



easy access by seals to the walkways, reducing the likelihood of aggressive seals interacting with employees.

One of the key features of the Fortress Pens is a patented, wide-style stanchion with flexible seal fence posts in an angled socket to allow an outer predator net to be set around the inner net while keeping a two metre and seven metre separation between the nets. This outer predator net is connected directly to the sinker tube to reduce rigging and keep it tensioned at all times and in all weather; unfortunately, no arrangement is perfect, and often simple issues like chaffing from vessels pulling alongside nets can cause holes.

The State Government's [Seal Management Framework](#) outlines the approved measures to manage seal interactions and sets out standards for wildlife exclusion from fish pens. This framework was a collaboration between the Tasmanian Government and industry.

The Framework outlines the approved seal deterrents: 1) Crackers - explosive charges that are thrown into the water to detonate under the surface; 2) Beanbags - lead-filled projectiles, capable of being fired from a choke-less 12-gauge shot gun; and 3) Seal Scare Caps - blunt pre-stressed darts fired from a DPIPWE-approved firearm, which detonate on impact with the target.

Huon last used Scare Caps and Beanbags in August 2018. Our use of crackers has increased as a result of our expansion into off-shore waters in Storm Bay; additional fish in the water equals more seals. If bait fish (mackerel) schools increase, as they often do in Storm Bay and the Channel, increasing incidents of opportunistic seals attempting to breach pen perimeters occur. The crackers used by Huon are made of cardboard, so there is no plastic debris entering the water (unlike fireworks – *Sparks fly over fireworks litter*; Mercury 18 January 2022).

Very occasionally, seals are sedated to enable removal from the pen or net in accordance with protocols outlined in the Seal Management Framework. This is a last resort practice (inherent risk for both staff and seal) and the practice is only used after multiple attempts to remove the seal from within the pen or net. Staff undertaking sedations require a DPIPWE issued permit for sedation (which includes training) and Huon's sedation team always includes a veterinary delegate. These seals can only be released within the same marine lease. In 2018 and 2019, two seals were sedated each year, in 2020 just one seal was sedated while in 2021, a total of four seals were sedated to enable removal from a pen.

In other parts of Australia, seal culls are undertaken to protect native fish stocks. [Devastated fishers 'tearing their hair out' over Coorong seals as cull calls go national - ABC News](#)

BIRDS

Salmon farms are an attractive place for sea and coastal birds to perch and source food—both the fish and the fish-feed. The birds commonly found at our farms include cormorants (black-faced, great and pied), seagulls (Pacific, silver and kelp), eagles (mostly sea but occasionally wedge-tailed), and the occasional penguin, petrel and short-tailed shearwater.

It should be noted that short-tailed shearwaters are migratory birds that spend the winter months at sea in the northern Pacific, notably off the coasts of Japan, Siberia and Alaska. They return to Australia to breed over the warmer months at colonies like those on Bruny Island. Some Tasmanian colonies (and those on nearby islands) are believed to consist of over 16 million adults. Like with other migratory species, it is not unusual to not see this bird throughout the cooler months.

Preventing birds from becoming entangled or drowning inside our pens is a high priority for Huon. In fact, preventing bird interactions was a driver in the development of our Fortress Pens. Designed in-house by Huon staff, the pens have customised nets and barriers developed to avoid bird entry and entanglement. The Fortress Pen net design includes higher, tauter nets, differing mesh sizes and net weights (depending on where the net is located on the pen), and diamond shaped net holes to increase stress capability. All these features are designed to prevent net holes and bird entries/entanglements while staying well above the water to ensure birds cannot access the water through the nets.



By denying birds the opportunity to perch and access to both fish and feed, they are discouraged from viewing our pens as a place to rest and as a source of food. Additionally, limiting bird interactions at our Fortress Pens has further safeguarded the health and wellbeing of our fish, ensuring they don't get stressed, or worse, killed.

In the unlikely event a bird enters a Fortress Pen, we have installed custom-designed escape hatches to ensure birds are not trapped. The innovative escape hatches feature a perching bar to attract birds and a one-way bird-sized hatch that guarantees a bird cannot re-enter once it has gone through the gridded hatch.

WHALES

In over 35 years of operating, there has not been a negative interaction with whales and Huon's marine operations. Whales occasionally approach our leases, especially in Storm Bay, which is why Huon has a *Migratory Whale Interaction Management Plan* for this farm site. This document details guidelines around vessel use when whales are in the area, avoidance strategies to reduce the potential for entanglement as well as setting out a clear process for reporting sightings. In addition to this plan, each Huon vessel has a designated person on the lookout for wildlife, including whales. In the event that a whale is spotted in the area, the skipper will then undertake measures in line with government guidelines including cutting the engines and not approaching the animal.

In the event of a whale stranding, such as the October 2020 mass stranding in Macquarie Harbour, Huon employees may be called upon to offer assistance. Whales beach themselves so prolifically in Tasmania that our state has a higher level of training and specialised equipment available for response.

In 2021, record numbers of baleen whales (humpback and southern right) were seen in Tasmanian waters, including in the River Derwent. According to DPIPWE, whale "numbers have been increasing at about 10 per cent a year, and data suggests we're pretty close to pre-whaling population numbers now" (*Cloe Cummings tasweekend 23-24 October 2021*)

OTHER WILDLIFE ACTIVITIES

- Huon staff participate in the annual Gull Count, undertaken by Birdlife Tasmania which brings together like-minded bird enthusiasts and industries to monitor the populations and habitat of Tasmania's three gull species, Silver Gull, Pacific Gull and Kelp Gull.
- Huon's wellboat, the Ronja Storm has a de-waterer facility on board which ensures any wild bait fish are returned to sea and not captured during bathing or harvest operations.
- Since 2014, we have recorded sightings of the *Brachionichthys hirsutus* (**Spotted Handfish**) around multiple leases (in the SE) nearly every year. All our sightings, which occur during our routine environmental checks, are handed over to researchers and the EPA. At the best of times, Handfish are very cryptic, and difficult to find – we have been told that without the sightings from fish-farming we would still think their range was restricted to the lower River Derwent estuary areas.

Our Hideaway Bay lease has been farmed for three decades yet the Spotted Handfish has been sighted multiple times, same with our Flathead lease in the Huon River. These regular observations show the Spotted Handfish can co-exist with established fish farms. In addition, the baseline survey undertaken for our Yellow Bluff lease (early 2019) detected presence of vertical structures that Handfish attach eggs. The [Conservation of Handfish - Annual Report 2019](#) confirms 13 known extant populations several of which are near or around finfish farms.

