

I have visited Disaster Bay for over 40 years staying at our Wonboyn family house. Disaster Bay is widely regarded as the most pristine marine environment in the region and abuts the Nadgee Nature Reserve, the only coastal wilderness in NSW. It is the wrong location for a large commercial enterprise. If it goes ahead it will irrevocably change the nature of a unique environment. **My deep concerns include: inadequate Indigenous consultation; animal and bird entanglement; undersea noise; changes to the benthic environment; micro-plastics; visual and noise disruption; effects on wilderness areas; negative impacts on eco-tourism.**

**1. Inadequate Indigenous consultation:** Ongoing consultation with Traditional Owners is claimed throughout the EIS. In A5 ASCHA final it's stated that 19 RAP groups were invited to an on-site meeting to discuss the cultural significance of the area and proposed works. However, none of the RAP groups were able to attend. In late 2023 RAP groups were provided with information packs and given 28 days to respond. Feedback was received from only one person, a Wendy Morgan of Guntawang Aboriginal Resources, a woman's group based in Sydney. This does not constitute a valid Aboriginal consultation. The next step to formal contact is relationship building and face to face contact, as recommended in guides for working with Indigenous Australians. Some Indigenous people may regard formal approaches with suspicion due to the history of the stolen generation. Some may lack confidence in reading and writing. Aboriginal people are very busy with matters of their own communities. Approaching organisations personally, if there's no or little response from formal approaches, is recommended practice. This step was missing. As well, the relevant Elders for the Greenglades site were not contacted. Their names do not appear on the list of Aboriginal people in the report. The views and insights of Traditional Owners should have been included in the EIS. **The Independent Planning Commission should review the consultation. What is reported is not a valid process.**

**2. Animal entanglement:** During the whale migration season I have watched whales in Disaster Bay from the hill behind Wonboyn village. AusKelp's template for risk assessment states that the location must avoid known whale migration routes (Table 5; Eden1 Ann. Rep. FY24). Whales are common in the bay. The EIS admits it may be part of a whale resting place, p 211. The NPWS website informs that whales can be observed in the bay during the migration season from the Disaster Bay lookout. Scientific studies find that whales are known to play with kelp as a social activity and use it as a skin balm. Killer whales, Humpbacks and Southern Right whales are among the species observed doing this, and the latter two are common in the area. Cases of whale entanglement in kelp have been recorded by NOAA in the USA. Its report states the mariculture of seaweeds is on the rise which could put whales in increased proximity to infrastructure. The kelp farm could potentially attract whales and put them at risk. Whale watching, a growing industry in Eden should not be risked. The EIS states there's been no known cases of whale entanglement within a kelp farm. But lack of evidence of whale entanglement does not equate to the absence of risk. Whale expert Dr Michael Moore of the WHOI research org. says 'Whenever there's a rope in the water column, there's an entanglement risk.'

Dolphins, seals and other marine animals, including vulnerable and endangered animals and birds frequent the bay. Fairy Penguins are seen. The EIS says dolphins are irregular visitors, yet dolphins frequently ride the surf at Greenglades. AusKelp admits that seabirds are potentially vulnerable to accidental collision with longline infrastructure when diving for schooling fish and may ingest marine debris. There's no evidence AusKelp's mitigation measures will prevent entanglements. The size of the proposal, at 200 ha, is unprecedented in Australia and apart from China, in the rest of the world, eg a 40 ha limit in Maine, a 10 ha

limit in Norway in clean waters. AusKelp's longlines and infrastructure are untested (the small test site does not equate to infrastructure of this scale) yet the proposed site is within an environmentally sensitive area.

**3. Undersea noise:** Baleen whale communication can cross hundreds of km. UniMelb research found that human made noise is affecting whale behaviour and migration, reducing whales' ability to hear acoustic communication, generating an avoidance response and lowering the detection of environmental cues that some whales use to inform navigation. Noise pollution increases whales' stress levels, which has been linked to strandings. Given the close proximity of the whale migration route, there is a significant risk that noise pollution during AusKelp's activities, via motors and tools, will affect whale behaviours.

**4. Changes to the undersea environment:** Aus Kelp's community consultation in Wonboyn described the ocean floor of the farm site as 'ocean desert,' as though it's a denuded, lifeless area. I believe the term was misleading to the audience. Also, on p22 of the EIS, the site is described as unvegetated sandy substrate with no biological assemblages. AusKelp's benthic snapshot, a single survey during winter, revealed communities of organisms (74 fauna and two algae) inhabiting the unpolluted waters and sea floor of the site. These communities included fish, sharks, rays, squid, shellfish, crustaceans, algae, seastars and worms. A Big Bellied seahorse (protected species) was present. AusKelp's Benthic assessment admits that a valid assessment of infauna composition would be based on multiple replica samples collected from various sites over summer as well as winter seasons to capture natural variation. 'Benthic infauna communities can be extremely variable over different sites and during different seasons' p 44.

The natural communities of the site play a vital ecological role. Infrastructure, shading, anchors and a seaweed not normally occurring will alter the kind of nutrient cycling normally present. A novel habitat will be created, disrupting the current ecological balance. The AusKelp benthic assessment points out that an increase in prey items may occur during routine maintenance, when lines of fouling organisms such as mussel shells are cleaned. The resulting shell-fall to the sea-bed could provide 'prey items' for seastars and predators such as Port Jackson sharks p. 35 Benthic assessment. It is scientifically evidenced that kelp farms typically support habitats and distinct communities which are not equivalent to natural kelp forests. <https://doi.org/10.1007/s10811-022-02822-y>

**5. micro-plastics:** AusKelp admits its use of synthetic rope will introduce microplastics into the sea, and therefore into the food chain. This is waved away in the EIS, stating that other aquaculture industries such as oyster farms use plastics. If the kelp farm goes ahead, microplastics will be introduced into an unpolluted marine environment. The bay's strong wave action will increase rope abrasion. The current use of plastics in aquaculture is not a license for use.

**6. Visual change, noise:** Up to six daily return boat trips during the construction phase, and up to three return trips daily thereafter for inspections, harvesting and other activities, weather permitting, will occur. Few boats currently navigate the very rough bay. Drones will be used for inspections (and to check for animal entanglements) if marine conditions are too rough. However, the Nadgee is an exclusion area for drones. The NPWS website says that flying drones in parks can impact visitors and disturb native animals. Formal approval has to be applied for. Strict guidelines apply. Sea and Wedgetail eagles are a common sight at Greenglades. Raptors have been injured by drones, and white-bellied Sea

eagles are stressed by drones, and highly sensitive to disturbance during the breeding season. In a UNSW study aggressive behaviour was observed. In one instance a raptor attacked and took down a fixed-wing drone. The presence of drones, boating activities, increased human presence and the visual disruption of the seascape will alter the nature of this wilderness place, making it less desirable for visitors who wish to enjoy the peace of an untouched environment. Dark Sky places are increasingly rare around the world. Greenglades at night, with the moon-glow on waves and vast starscape, is majestic. The kelp farm with its lights and buoys will degrade the nocturnal ambiance, depriving people and children of a unique experience.

**7. Encroach on and affect wilderness areas:** The sea and coast are part of the same environment and interact. Indigenous people of the Nadgee call themselves saltwater people, as described in A5 ASCHA Final, yet the EIS discusses land and sea as separate entities. The kelp farm location is close to the Merrica river mouth in the Nadgee. The river could be affected by in-washing seaweed, erosion, and changes in wave patterns. Several creeks adjacent to the kelp farm site are frequented by wildlife and birds, including the endangered Hooded Plover. Both creeks experience intermittent interaction with tides. I have seen baby eels washed in, climbing the red rocky bed of the creek at the Greenglades cliff. On p.30 of the EIS these creeks are referred to as ephemeral and dry, apart from during heavy rainfall. Neither creek runs dry except in extreme drought. Aquatic life is plentiful at Snake creek. The long-term impacts of the farm on the shoreline, estuarine creeks and on pristine Nadgee beaches are unknown. The EIS does not provide answers. Disaster Bay and the Nadgee Nature Reserve should not be placed at dire risk.

**8. Negatively affect eco-tourism:** The EIS repetitively down-plays the area, describing it as remote and difficult to access. Greenglades beach and Disaster Bay are in fact the most accessible part of the Nadgee as attested by the NPWS website. The road to Greenglades beach is unsealed, but accessible via a normal car. Wonboyn village has a small permanent population, but this swells during holiday seasons and weekends. The local caravan park bursts at the seams. Wonboyn village is only a 28 minute drive from Eden. Disaster Bay and surrounds are enjoyed by fishermen, boaters, bushwalkers, swimmers, surfers, and those who wish to experience a wild, pristine environment untouched by industry. The construction of a large commercial kelp farm risks the area's environmental value, and could negatively affect tourism.

What are the consequence of **not** having a kelp farm in this location? A pristine, wild place will be retained. A place far more valuable to humans than we know. Such places are rare around the planet. The Nadgee and its environs afford a connection between people and wilderness. It isn't worth putting its future at risk. I am not against kelp farms in appropriate places, where they may be beneficial to a degraded environment, but I'm strongly against altering and disturbing the last coastal wilderness in NSW.