

Maritime Acoustic Awareness Zone (AAZ) in the vicinity of the 'Gullet', Adeliade Island

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We recommend the following guidelines for IAATO vessels passing through an operational area from latitude 67 degrees 02 minutes South to 67 degrees 18 minutes South or what is commonly known as the 'Gullet' (Antarctic Peninsula - north Hanson Island to south Day Island. Figure 1 and 2):



Figure 1

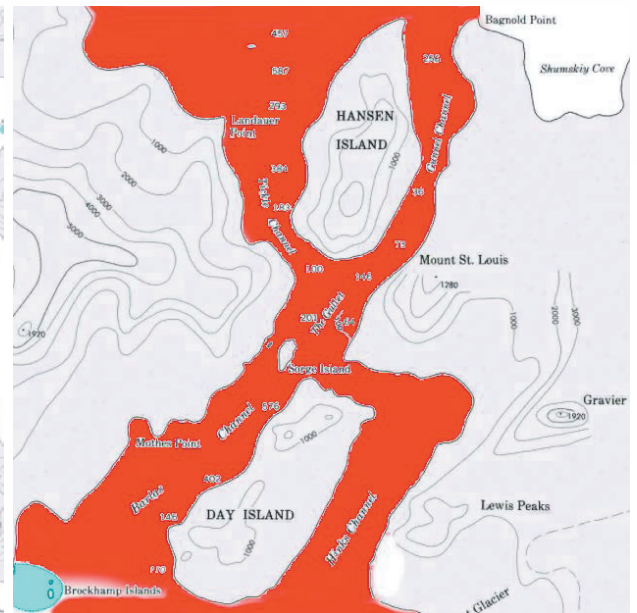


Figure 2

- Where B1 killer whales are observed, the standard IAATO approach distance to be 400 metres, however with the addition of an entire no-go zone from any angle when encountered is requested (akin to that used for southern resident killer whales in the Salish Sea, British Columbia, U.S.) See Figure 3
- Greatly consider your vessels acoustic pollution
- Only one ship at a time within the zone
- Reduce number of engines running to a minimum
- Reduce speed to maximum of 10 knots (regardless of whether designated marine mammal observers are active)
- No use of thrusters

We request these parameters be met as a first steppingstone until further information is gathered.

If practiced by the IAATO fleet, these mitigation measures would help to protect the B1 killer whale population and indicate to other global operators that IAATO is setting the gold standard, leading the field in promoting conservation led sustainable ecotourism.

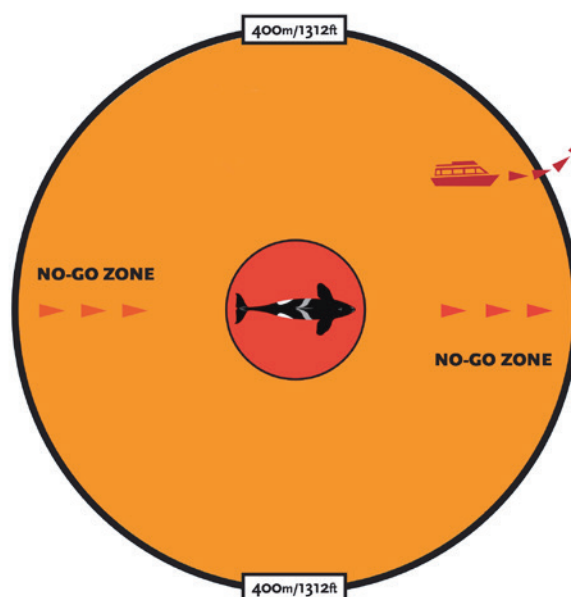


Figure 3

References

- Department of Fisheries and Oceans Canada [DFO]. 2018. Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada. Species at Risk Act Recovery Strategy Series, Fisheries & Oceans Canada, Ottawa, x + 84 pp. Agassiz, BC: Department of Fisheries and Oceans Canada.
- Fearnbach, H., Durban, J. W., Ellifrit, D. K., Paredes, A., Hickmott, L. S. and R. L. Pitman. 2021. A decade of photo-identification reveals contrasting abundance and trends of Type B killer whales in the coastal waters of the Antarctic Peninsula. *Marine Mammal Science* DOI: 10.1111/mms.12846
- Ford, J. K. 1989. Acoustic behaviour of resident killer whales (*Orcinus orca*) off Vancouver Island, British Columbia. *Can. J. Zool.* 67, 727–745. doi: 10.1139/z89-105
- Holt, M. M., Noren, D. P., Veirs, V., Emmons, C. K., and S. Veirs. 2009. Speaking up: killer whales (*Orcinus orca*) increase their call amplitude in response to vessel noise. *J. Acoust. Soc. Am.* 125, EL27–EL32. doi: 10.1121/1.3040028
- Joy, R., Tollit, D., Wood, J., MacGillivray, A., Li, Z., Trounce, K. and O. Robinson. 2019. Potential Benefits of Vessel Slowdowns on Endangered Southern Resident Killer Whales. *Front. Mar. Sci.* 6:344. doi: 10.3389/fmars.2019.00344
- Lusseau, D., Bain, D. E., Williams, R., and Smith, J. C. (2009). Vessel traffic disrupts the foraging behaviour of southern resident killer whales *Orcinus orca*. *Endanger. Species Res.* 6, 211–221. doi: 10.3354/esr006211
- Pitman, R. L. and J. W. Durban. 2012. Cooperative hunting behavior, prey selectivity and prey handling by pack ice killer whales (*Orcinus orca*), type B, in Antarctic Peninsula waters. *Marine Mammal Science* 28:16–36. DOI: 10.1111/j.1748-7692.2010.00453.x
- Sørensen, P. M., Haddock, A., Guarino, E., Jaakkola, K., McMullen, C., Jensen, F. H., Tyack, P. L. and S. L. King. 2023. Anthropogenic noise impairs cooperation in bottlenose dolphins. *Current Biology*, 33, 1–6. <https://doi.org/10.1016/j.cub.2022.12.063>