Appendix Nine – Description of Zodiac Operations

This material has primarily been written for our larger vessels, though many of the matters listed are applicable to our smaller vessels and their ancillary craft.

Zodiac 'transfers'

When a shore based activity is on offer to passengers, they are transferred from the main vessel to shore by zodiac. The number of zodiacs used to transfer passengers will vary, depending on the distance of the main vessel to the landing location and the vessel being used.

Generally, for a full vessel of 140 passengers, this would be between five and seven zodiacs. It takes time for each zodiac to be loaded, so essentially the zodiacs are operating a rotating shuttle service between the main vessel and the shore, each zodiac making several trips (i.e. the zodiacs are not travelling together at the same time). These transfers are for the express purpose of getting people from the ship to the shore location.

Zodiac 'cruising'

When a land based activity is not permitted, or the environment is best viewed from the water, then the passengers are taken on zodiac cruises. Often, zodiac cruises are offered in conjunction with another activity and therefore only a portion of the passengers are zodiac cruising at any one time. However, zodiac cruises in some locations (Snares/Tini Heke, Bounty, Antipodes Islands), are the only activity that is on offer for passengers and so there is the potential for up to 140 passengers spread through 14 zodiacs to be undertaking a zodiac cruise at the same time.

Regulations and mitigation methods

The current Marine Mammal Protection Regulations 1992 stipulate that no more than three vessels shall be within 300m of any marine mammal.

In the Subantarctic Islands use to the remote nature of the shorelines of the locations that *Heritage Adventurer* visits, in addition to the sea conditions dictate that all zodiac operations (both transfers and cruises) will mostly occur within 300m of a shoreline. The majority of the islands and locations visited as part of this application have the potential to have a sea lion hauled out at any point along the shore line, in addition to other marine mammals passing by in the water at any time. This means that there is the potential for every *Heritage Adventurer* zodiac operation to not be meeting this regulation.

The Marine Mammal Protection Regulations do not differentiate between a vessel of Heritage Adventurer's size (124 metres) and their ancillary zodiacs (5 metres) when considering them a 'vessel'. We consider that the effects of having three large ships within 300m of a marine mammal, is vastly different to having three, five metre long zodiacs with 10 passengers each (who at times are just undertaking transport of passengers from the ship to the shore).

Therefore we are proposing that the 'no more than three' regulation is not applied when considering the zodiac operations onboard *Heritage Adventurer* and an effects based assessment is applied to how operations are carried out instead. We propose the following mitigation methods for our zodiac operations to ensure minimal disturbance to marine mammals, while ensuring the continued safe and practicable use of zodiacs in our operations.

Zodiac transfers

The express purpose of these zodiac trips is for the transport of passengers, rather than marine mammal viewing. However, given the nature of the environments that these expeditions are operating in, there is always the chance that marine mammals may be encountered in the water and on the shore while the zodiacs are transiting. In these circumstances, the zodiac drivers will ensure the minimal disturbance guidelines are upheld:

- operate the vessel in a way that the normal movement or behaviour of any marine mammal is not disrupted
- no sudden or repeated changes in speed or direction (unless in an emergency)
- marine mammals are not to be separated from a group of marine mammals, or caused to scatter
- the vessel shall not cut off the path of a marine mammal or prevent a marine mammal from leaving the vicinity of the vessel
- no person shall make any loud or disturbing noises around any whale, dolphins or seals

Zodiac cruises

If a zodiac cruise involves larger numbers of zodiacs during a cruise (above eight) then the zodiacs will split into groups and undertake the cruise from different directions. This will ensure that high numbers of zodiacs are not all coalescing in one area at any one point in time.

Zodiac masters will ensure that the following Department of Conservation separation rules for interacting with marine mammals are upheld;

- maintain a minimum separation distance of 50m from whales
- gradually increase speed to outdistance dolphins and no more than 10 knots within 300 metres of a dolphin
- maintain a minimum separation distance of 20 metres from any hauled out seals/sea lions present on land

The key differences relate to the number of vessels and vessel speed within 300m of a marine mammal. We propose the following mitigation;

- maximum of three zodiacs are permitted to be within 75 metres of any marine mammal at any one time (both in the water and hauled out)
- all vessels to have a go slow/no wake speed within 75 metres of any marine mammal

In addition, Heritage Expeditions already abides by the IAATO (International Antarctic Association of Treaty Operators) Cetacean Watching Guidelines.

IAATO Cetacean Watching Guidelines



General code of conduct around marine mammals - See a Blow - *Go Slow*

- Stay with the animal up to a maximum time of thirty minutes. If signs of disturbance or change in behaviour occur at any time during the stay with the animals, retreat slowly and quietly.
- Never herd (surround), separate or scatter a group of marine mammals, particularly mothers and young. Where appropriate, stay where they can see you. Never chase animals.
- When close to marine mammals keep voices low, don't whistle or shout.
- Keep radio volume down.
- Communicate with other boats to minimise disturbance to animals.
- Avoid sudden movements that might startle the animal.
- Never attempt to touch or feed animals.
- Playback of underwater sound of any kind should not occur. If hydrophones are used from small boats to listen to the underwater sounds it is preferable to have the engines of the small boats shut down.
- Stay on the ONSHORE side of the whales when travelling close to the shore

General guidelines for viewing all marine mammals

- Marine mammals may approach vessels, and if they want to interact, it may stay with the vessel. This is when it is best for the vessel to drift passively; however, allowing a vessel to drift within acceptable distances to the animals could constitute an intentional approach.
- Do not chase or pursue animals.
- Animals may alter their behavior if they are disturbed. When in doubt, err on the side of caution, and give the animals time and space.
- Keep a watch for the following behavior, which could indicate that the animal is agitated and no longer interested in staying near the vessel. Where this behavior is noted, let the animal depart, and when safe, move away slowly:
  - Changes in travelling directions
  - Regular changes in direction or speed
  - Moving away from the area
  - Apparent general agitation
  - Hasty dives
- Breaching, tail lobbing and flipper slapping may be an indication that the whales are socializing and may not be aware of boats. Keep your distance.
- If a cetacean approaches a vessel to bow-ride, maintain a relatively constant course and speed, or reduce speed gradually. Do not enter a group of dolphins to encourage them to bow-ride.
- If a cetacean surfaces in the vicinity of your vessel, take all necessary precautions to avoid collisions, while avoiding sudden changes in speed or direction. This may include: slowing down, slowly coming to a stop, and/or steering away from the animal. Be aware of other boats and obstacles, e.g., shoreline to ensure the animal is never boxed in. Ensure that travel and exit routes for the animal are clear and that a "Tunnel" of small boats does not form.
- When watching animals in the water, it is suggested that a maximum of two ships or four small craft are watching at any one time.
- Boats watching animals together should be next to each other to ensure the animals have a large open avenue to depart through.
- Approach cetaceans from parallel to and slightly to the rear (in the 4 or 8 o'clock position), not from the front or directly behind the animal.
- Don't approach feeding baleen whales closer than 200 meters/600 feet. Attempt to stay downwind of the animal.
- If orcas (killer whales) approach kayaks and begin spy hopping behavior, ensure that safety small boats are close to the kayaks and consider transfering paddlers from kayaks to small boats.

Approaching whales in water - See a Blow - *Go Slow*

When approaching marine mammals in water (for all vessels – ships, Zodiacs, kayaks, etc.)

What to do if you sight a whale

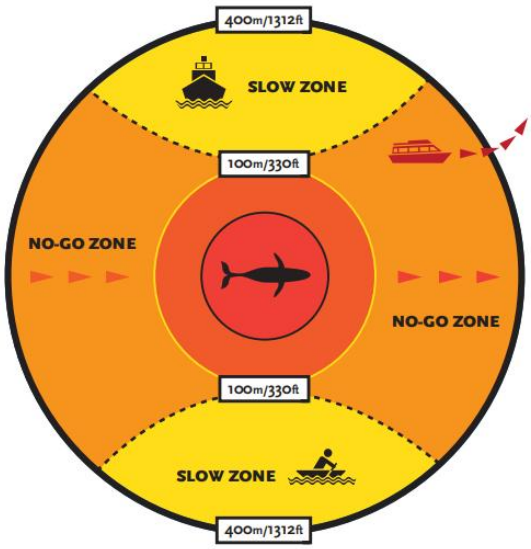
Reduce speed and post a lookout. Be prepared to slow down to 5 knots if you reach the 400 meters/1200 feet distance. By this distance engines must be in idle or turned off and allow whales to pass.

Zone 1 – 400 meters/1200 feet
- <5 knots AND go no faster than wake speed

Zone 2 – 100 meters/300 feet
- maintain this distance (studies have shown kayaks can at times be more disturbing to whales because of their stealth-like, silent approach)

  – If your vessel is not in compliance with the 100 meters/300 feet approach, place engine in neutral and allow the whale to pass.

- If you want to turn the engine off, first idle for a few minutes before turning off.
- Try avoiding abrupt changes in noise that may startle or disturb the animal, including excessive engine use, gear changes, maneuvering or backing up to the animal.
- Avoid the use of bow or stern lateral bow thrusters to maintain position as these can produce high pitched noise and intensive cavitations.



- Cetaceans are often very inquisitive and may approach close to vessels or watercraft. It is important that the cetacean is in control at all times.

Departure from whale watching in water

- Move off at a slow, no-wake speed to 100 meters/300 feet and avoid engaging propellers within the minimum approach distance.
- If possible when moving away, avoid moving in front of the animal and always move towards the rear. Do not chase or pursue departing animals.



