Department of Conservation
Te Papa Atawhai

Application Form 8d
Commercial Operations involving Marine Mammals
Filming only

The Department recommends that you contact the Department of Conservation permissions office listed below to discuss the application prior to completing the application forms. Please provide all information requested in as much detail as possible. The Department will advise you if further information is required before this application can be processed by the Department.

This form is only to be used when the activity you wish to do:

- involves only filming of marine mammals; and
- has the potential to disturb, harass or harm any marine mammal; or
- would contravene any regulation in Part 3 of the Marine Mammals Protection Regulations 1992.

Please complete this application form, attach **Form 8** and any other applicable forms and information and send to permissions@doc.govt.nz.

The Department will process the application and issue a permit if it is satisfied that the application meets all the requirements for granting a permit under the Marine Mammals Protection Regulations 1992 and/or the Marine Mammals Protection Act 1978.

Note: If you intend to film marine mammals as part of a commercial operation for viewing marine mammals (for which you already have a permit) you do not need to apply for a filming permit in addition.

Note: if you intend to take paying passengers with you whilst filming marine mammals you must also complete the applicable forms below:

- If your application also involves marine mammal viewing which is vessel-based please also fill in Form 8a.
- If your application also involves marine mammal viewing which is land-based please also fill in Form 8b.
- If your application also involves marine mammal viewing which is aircraft-based please also fill in Form 8c.
- If your application also involves swimming with marine mammals please also fill in Form 8e.

A. Applicant name (as per Form 8)

BBC Natural History and Factual Productions Limited

B. Proposed Filming Operation (please read Appendix 1)

Please tick the relevant boxes to help determine how the application will be assessed:

✓	Vessel to approach closer than 50 metres to a whale
✓	Person in the water to approach closer than 100 metres to a whale
☐	Vessel or person to approach closer than 200 metres to any female baleen or sperm whale that is accompanied by a calf or calves
✓	Person in the water with juvenile dolphins
☐	Approach (on foot, in the water, or in a vessel) closer than 20 metres to seals or sea lions on shore
☐	Use an aircraft at an altitude below 150 metres (500 feet) above sea level, unless taking off or landing
☐	Use an aircraft closer than 150 metres (500 feet) to a marine mammal horizontally from a point directly above a marine mammal
✓	Use a drone or RPA* to film marine mammals
✓	Charter a vessel or aircraft, and/or hire a skipper or pilot to take the film crew to view or come into contact with any marine mammal.

*Note: RPA means a Remotely Piloted Aircraft as defined under Civil Aviation legislation.

Purpose, outputs and benefits of the proposed filming

Please note the purpose of the filming activity (advertisement, movie, documentary etc), and describe in detail the proposed filming activity.

We aim to feature New Zealand false killer whales and oceanic bottlenose dolphins in the upcoming BBC landmark wildlife series *Mammals (working title)*. The episode that will showcase false killer whales and oceanic bottlenose dolphins will tell the story of how mammals adapted to survive in water. In order to have transitioned from a life on land to a life in the sea, mammals had to evolve to be able to communicate with each other in a new medium and find and capture prey underwater. Key characteristics that helped mammals overcome these challenges are intelligence and the ability to work together in a team. The false killer whales and oceanic bottlenose dolphins of New Zealand form an interspecies relationship, the first of its kind to ever be documented, and provide a unique opportunity to showcase these vital mammalian traits. Unlike other false killer whales and bottlenose dolphins, the whales and dolphins of New Zealand are always found together, forming massive pods that can be comprised by up to 600 bottlenose dolphins and 150 false killer whales. These animals socialise and play together, forming long-lasting relationships with specific individuals, strengthening their bonds by touching each other with their fins and bodies. They will even babysit calves and juveniles of the

opposite species, with young false killer whales seen in close contact with adult bottlenose dolphins and vice versa. Their unique relationship gives them the opportunity to hunt together, working alongside each other to herd schools of fish into tight balls and picking off their prey one by one. However, the false killer whales and oceanic bottlenose dolphins differ in the way they consume their prey, not all cetacean societies are the same. While each bottlenose dolphin catches fish just for themselves, the false killer whales will share their food with other members of the pod. While one false killer whale holds the catch in its mouth, others will bite off pieces of the fish. In false killer whale society, no member of the pod goes hungry. Utilising a large liveaboard vessel as our base of operation, and working from this and one or two other smaller vessels we aim to film the social and hunting behaviour of New Zealand false killer whales and oceanic bottlenose dolphins. Using the most advanced underwater cameras, topside cameras and drones in the world we plan to capture these behaviours in great detail both underwater and above the surface. Underwater footage will be obtained using divers and pole-cams, while footage above the surface will be shot with a drone and/or a topside camera used from the deck of one of the vessels. The footage we capture will feature in the biggest mammal related series ever made. Consisting of six 1-hour episodes *Mammals (working title)* will be broadcast on BBC1 in the UK and worldwide via the BBC's affiliated partners in 2024. Our primary goal for this series is to share with millions of people the story of mammals, educating them about the amazing lives these animals lead and the struggles they face every day. Over 25% of all mammals are currently threatened with extinction. Educating audiences about animal species and the challenges they encounter has been shown to have a positive effect for conservation. With an expected audience reach of over 100 million people we aim to share the story of New Zealand false killer whales and oceanic bottlenose dolphins with the world. We also plan to share our footage with the researchers we are working with on this project. For this shoot we are collaborating with researcher Jochen Zaeschmar and University of Auckland researcher Rochelle Constantine. The work of Jochen and Rochelle has led to the discovery of the unique relationship between these false killer whales and oceanic bottlenose dolphins and forms the basis of our current understanding of the biology and population dynamics of these species in New Zealand. However, the majority of data that Jochen and Rochelle have collected has been through visual surveys from boats and observations of behaviour and interactions made at the ocean's surface. The underwater interactions between false killer whales and oceanic bottlenose dolphins has not yet been well documented scientifically. Therefore, the footage we capture with our highly advanced camera technology has the potential to reveal behaviours that are difficult to observe or quantify using traditional scientific equipment and methods. Through our collaboration with Jochen and Rochelle we hope to increase the scientific understanding and conservation of these little known New Zealand cetaceans. Additionally, as our series will showcase the behaviour of a variety of mammal species, we may attempt to film other marine mammal species that we opportunistically encounter.

Proposed term

When do you wish to begin and finish all filming?

February 1st, 2022 – April 30th, 2022

Location information

Base of operation:

We will be based on a liveaboard vessel for the duration of the shoot. The exact location of where we board the liveaboard vessel will be determined closer to the beginning of the shoot and be subject to environmental conditions and suspected location of the whales and dolphins at the time. Likely areas of boarding the liveaboard vessel are Auckland or Marsden Bay near Whangarei.

Proposed area or areas of operation:

From the coast to around 25nm offshore extending from Cape Brett in the north to the Alderman Islands in the south and all areas in-between.

Specific locations where contact with marine mammals is proposed:

Specific locations where we will encounter marine mammals are difficult to define as the false killer whales and oceanic bottlenose dolphins we aim to film are constantly on the move, sometimes travelling up 200 kms in a day. The animals' preferred locations also depends on long term weather patterns such as El Niño/La Niña events and has potential to change slightly from year to year. Based on research conducted by Jochen Zaeschmar and the experiences of past film shoots, potential areas we may encounter false killer whales and oceanic bottlenose dolphins from February to April comprise the areas noted above. Within this large area Jochen's research has revealed several hotspots that the whale's and dolphins frequent: the Hen and Chicken Islands, the Mokohinau Islands and around Great Barrier Island. However, as the whales and dolphins rarely spend too long in any one area, our permit will need to cover the entire area where they may be encountered during February to April.

Note: please provide a map showing proposed filming areas and specific locations

Species

Marine mammals you propose to encounter and film:

✓ all species of whales

✓ all species of dolphins (excluding coastal bottlenose dolphins)

☐ all species of seals

Please specify the species you intend to target at each location

We intend to target false killer whales (*Pseudorca crassidens*) and oceanic bottlenose dolphins (*Tursiops truncatus*) in the above stated locations. We may also incidentally target pilot whales (*Globicephala melas* or *Globicephala macrorhynchus*) and other marine mammal species such as orca (*Orcinus orca*) as these cetaceans are sometimes found associated with false killer whales and oceanic bottlenose dolphins in New Zealand. While our goal for this project is to film false killer whales and oceanic bottlenose dolphins, this footage is for a series that will feature a variety of mammals from around the world. As such, if we encounter other marine mammal species exhibiting amazing or interesting behaviour in the above stated locations we may film this opportunistically. We will never target or film coastal bottlenose dolphins.

Filming details

Please provide the following additional information where applicable. Please be thorough and include relevant information for each species of marine mammal. In particular, describe how you intend to mitigate any potential adverse effects on marine mammals.

Please list all species separately

When do you propose to undertake filming at each location?
(please be a specific as possible, including dates and times during the day)

1st February 2022 – 30th April 2022. We plan to film every day during our shoot, from sunrise to sunset each day if weather permits.

Maximum number of filming days at each location:

60 days

Duration of each daily trip:

12 hours. We will be based on a liveaboard vessel and will film from this vessel and/or smaller accompanying vessel(s) for around 12 hours each day (i.e. sunrise to sunset).

Maximum cumulative time with marine mammals during a day:

12 hours: This time period is the ideal amount of time we hope to follow and observe marine mammals during the day (i.e. from sunrise to sunset). However during this period, only a small proportion of time would be spent in close proximity to the marine mammals. For example, false killer whales and oceanic bottlenose dolphins may spend many hours each day behaving in ways that are unconducive to filming, such as when the whales and dolphins are in travel mode. During these times we would move away from the whales and dolphins, following them from a distance and observing for any indication of the target behaviours we hope to film. The behaviours we want to film are very specific and infrequent, so we plan to only approach the whales and dolphins in close proximity when these behaviours occur. This means that each encounter/daily close-proximity time will never come remotely close to 12 hours. The crew will continuously monitor the whales and dolphins for any sign of disturbance during all filming activities employing appropriate mitigation strategies to reduce disturbance to marine mammals as outlined below.

How will you approach, film and depart from marine mammals using a vessel?
Please list all species separately

Speeds when approaching and viewing marine mammals

Vessels will approach false killer whales and oceanic bottlenose dolphins at no wake speed when within 300 meters of the animals. However, an exception to this may occur when the pod is moving at great speeds, where vessel speeds of up to 10 knots may be used to gradually catch up with the moving pod.

Behaviour of vessel and orientation of approach relative to marine mammals

Vessels will always approach whales and dolphins from the side and behind the pod moving slowly and carefully towards the desired filming position. Vessels will never be manoeuvred in a way that cuts in front of or across the path of the false killer whales and oceanic bottlenose dolphins. The vessels will be skippered by individuals who are highly experienced at piloting vessels in the presence of marine mammals, with specific experience of piloting vessels around false killer whales and oceanic bottlenose dolphins in the Hauraki Gulf for filming and research purposes. The skipper will manoeuvre the vessel in a careful manner, avoiding erratic changes in speed and direction that may cause disturbance to whales and dolphins. The skipper and crew will continuously monitor all nearby whales and dolphins for any behaviours that indicate disturbance. Should any disturbance behaviours be observed we will move away from the whales and dolphins and only approach the whales and dolphins again if normal behaviour resumes, as outlined below in the “other actions to minimise disturbance” section. We will not actively target calves and juvenile whales and dolphins, however, because of the large group size and structure it is inevitable that calves and juveniles may come near our vessel. Extra care will be taken when the vessel is in the presence of calf and juvenile whales and dolphins. Throughout the filming day we will not be required to always be within 50 meters distance to false killer whales and oceanic bottlenose dolphins. For instance, throughout the day the false killer whales and oceanic bottlenose dolphins are likely to exhibit behavioural states that are not conducive for filming purposes, such as when whales and dolphins are actively travelling. During such behavioural periods we may move away from the whales and dolphins to a distance of 300 meters away or greater so that we can track the animals without causing disturbance and maintain visual contact in order to identify when behavioural states occur that we aim to film.

Position of vessels relative to marine mammals while viewing

Vessels will be positioned to the side of, or slightly in front and to the side of the whales and dolphins. Vessels will never be positioned directly in front of the animals. The vessels will be skippered by individuals who are highly experienced at piloting vessels in the presence of marine mammals, with

specific experience of piloting vessels around false killer whales and oceanic bottlenose dolphins in the Hauraki Gulf for filming and research purposes. The skipper and crew will continuously monitor all nearby whales and dolphins for any behaviours that indicate disturbance. Should any disturbance behaviours be observed we will move away from the whales and dolphins and only approach the whales and dolphins again if normal behaviour resumes, as outlined below in the “other actions to minimise disturbance” section.

Distance from vessel to marine mammals

Within 50 meters

Distance to the water’s edge (for seals or sea lions hauled out on shore)

N/A

Behaviour around calves or pups

We will not actively target calves and juvenile whales and dolphins, however, because of the large group size and structure it is inevitable that calves and juveniles may come near our vessel or crew. Extra care will be taken when moving vessels around and filming whale and dolphin calves. Vessels will move slowly and carefully in the presence of calves. Vessels will never be positioned in a way that separates a mother and calf or blocks a calf’s path back to its mother. The vessels will be skippered by individuals who are highly experienced at piloting vessels in the presence of marine mammals, with specific experience of piloting vessels around false killer whale calves/juveniles and oceanic bottlenose dolphin calves/juveniles in the Hauraki Gulf for filming and research purposes. The skipper and crew will continuously monitor all nearby whales and dolphins for any behaviours that indicate disturbance. Should any disturbance behaviours be observed we will move away from the whales and dolphins and only approach the whales and dolphins again if normal behaviour resumes, as outlined below in the “other actions to minimise disturbance” section.

Speed of departure

No wake speed until 300 meters away from the whales and dolphins.

Behaviour of vessel and departure route relative to marine mammals

Vessels will slowly move away from the whales and dolphins at a 45 degree angle from the direction of their movement, so as to gradually move away from the animals. Vessels will never move at right angles to a travelling pod or head in the opposite direction to the movement of the pod.

What other actions you will take to minimise disturbance?

We are working with most experienced skippers, camera operators and scientists in the world with specific expertise in working around marine mammals for filming purposes. Our camera operators are highly experienced and well versed in methods of safely filming sensitive marine mammals with underwater cameras, topside vessel-mounted cameras, pole-cameras and drones. All potential camera operators listed below have extensive experience filming marine mammals from vessels in adverse sea-state conditions. A couple of the potential camera operator’s we may use have safely filmed New Zealand false killer whales and oceanic bottlenose dolphins underwater and above water in the past. The skippers we will use have years of experience piloting vessels around marine mammals in New Zealand, with specific experience piloting vessels around false killer whales and oceanic bottlenose dolphins for filming and research purposes. We are working with Jochen Zaeschmar and Rochelle

Constantine, the foremost experts on false killer whale and oceanic bottlenose dolphin biology in New Zealand. Both Jochen and Rochelle have years of experience studying the behaviour of false killer whales and oceanic bottlenose dolphins. They are well versed in best practices for safely boating around and filming these whales and dolphins. They are skilled at identifying behaviours that indicate disturbance and we will follow their advice and guidance during all filming activities. During any vessel approach the skipper and all crew will monitor all nearby whales and dolphins for signs of disturbance. Should any signs of disturbance be observed the vessel will move away slowly until normal behaviour resumes. Once normal behaviour resumes, the vessel may approach a second time, however, if signs of disturbance are again observed the vessel will move away until normal behaviour resumes. Once normal behaviour resumes the vessel may make a 3rd approach attempt, however, if signs of disturbance are again observed the vessel will move away and search for new whales and dolphins to film. The maximum number of attempted approaches we make on any individual whale or dolphin per day will be 3, in the manner outlined above.

How will you undertake underwater filming?
Please list all species separately

Method (pole-cam, diver etc.)

Diver (SCUBA, CCR, and/or Free-diving):

Two divers (one camera operator and one safety diver) will use SCUBA, CCR, or free-diving techniques to film false killer whales and oceanic bottlenose dolphins underwater. The camera operator will use a RED video camera (or similar) in an underwater housing. GoPros or small DSLR underwater cameras may be used to capture behind-the-scenes photos and videos. The safety diver will be positioned behind the camera operator to remain out of shot, but close enough to aid the camera operator in the event of an emergency. The safety diver's main priority is to look out for the safety of the camera operator, however, the safety diver may also use a GoPro or similar camera to film behind-the-scenes footage of the camera operator if conditions allow for this to be done safely. The dive plan and role of each diver will be thoroughly discussed with the team prior to each dive.

Pole-cam:

A pole-cam mounted to the side of the vessel or handled by the camera operator on the deck of the vessel will be used to film false killer whales and oceanic bottlenose dolphins underwater. Two different pole-cams may be used for filming. The first will be a GoPro camera attached to a metal pole and handled by the camera operator on the deck of the vessel or attached to the side of the vessel. The second is a specialised, custom-built stabilised pole-cam. This system consists of a ZCam camera mounted on a stabilised gimbal inside an underwater housing. The housing is attached to an adjustable pole that is secured to the side of the vessel. Cables running through the pole from the camera housing to the deck of the vessel allow for remote operation of the camera and viewing of the footage being captured. The gimbal system inside the camera housing allows the camera to move on three axes within the housing, greatly reducing the shaky effect often associated with pole-cam footage. This new system will allow us to capture perfectly steady shots of false killer whales and oceanic bottlenose dolphins in rough choppy seas, greatly increasing our ability to document fleeting, often unseen behaviours just beneath the surface.

Approaching marine mammals (vessel and/or land)

Diver (SCUBA, CCR, and/or Free-diving):

We are working with highly skilled divers with years of experience working around and filming sensitive

marine mammals underwater. These individuals are extremely well versed in best practices for safely filming marine mammals underwater in a way that causes little to no disturbance. Divers will always deploy from a vessel during this shoot. All vessel approaches for diver-related filming will follow the same approach methods and protocols outlined above. Divers will be deployed alongside the whales and dolphins or slightly in front of and to the side of whales and dolphins. Divers will never be deployed directly in front of the whales and dolphins, so as not to cut off the path of the animals. Divers will approach the whales and dolphins underwater, swimming slowly and carefully towards the animals. Divers will move in a calm and thoughtful manner, avoiding erratic behaviour and fast movement that may cause disturbance. Divers will never position themselves in a way that blocks a whale or dolphin's path back to the surface. Special care will be taken when divers are in the presence of whale and dolphin calves and juveniles. While divers will not actively target whale and dolphin calves/juveniles, the nature of the whale/dolphin group size and structure means that whale and dolphin calves/juveniles may approach the divers. When in close proximity to whale and dolphin calves/juveniles divers will move slowly and carefully and never position themselves in a way that separates a mother and calf or blocks a calf's path back to its mother. The divers will continuously monitor all nearby whales and dolphins for signs of disturbance. Should any signs of disturbance be observed the divers will move away and only approach the same whales and dolphins again when normal behaviour resumes. The maximum number of attempted approaches that the divers will make per day on any individual dolphin or whale is 3. If signs of disturbance are observed during or after a 3rd attempted approach on a given individual, the divers will move away and seek out new whales and dolphins to film.

Pole-cam:

We are working with highly skilled camera operators with previous experience operating pole-cams from vessels to film sensitive marine mammals. Pole-cam filming will always be conducted from a vessel. The vessel approaches for pole-cam filming will follow the same approach methods and protocols outlined above. Filming with the pole-cam will be performed while the vessel is alongside the whales and dolphins or slightly in front of and to the side of whales and dolphins, with the vessel moving in the same direction as the pod. The skipper has previous experience operating vessels around marine mammals for the purpose of pole-cam filming. Special care will be taken when conducting pole-cam filming in the presence of whale and dolphin calves and juveniles. While the crew will not actively target whale and dolphin calves/juveniles, the nature of the whale/dolphin group size and structure means that whale and dolphin calves/juveniles may approach the vessel. When in close proximity to whale and dolphin calves/juveniles the vessel will move very carefully and never be positioned in a way that separates a mother and calf or blocks a calf's path back to its mother. The skipper and crew will continuously monitor all nearby whales and dolphins for signs of disturbance during pole-cam filming. Should any signs of disturbance be observed the vessel will move away and only approach the same whales and dolphins again when normal behaviour resumes. The maximum number of attempted approaches that the vessel will make per day on any individual dolphin or whale is 3. If signs of disturbance are observed during or after a 3rd attempted approach on a given individual, the vessel will move away and seek out new whales and dolphins to film with the pole-cam.

Distances and filming position relative to each species

Within 100 meters

Our divers and skipper are all highly experienced in filming and working around sensitive marine mammals, and in particular false killer whales and oceanic bottlenose dolphins. All nearby whales and dolphins will be continuously monitored during all filming activities for any signs of disturbance. If signs of disturbance are observed the divers or vessel will move away from the animals and only approach again using the methods and protocols outlined above. Our number one priority is capturing the undisturbed

natural behaviour of false killer whales and oceanic bottlenose dolphins. As such we prefer to allow the animals to approach us. The best footage and interactions that cause the least disturbance are always achieved when the animals dictate the interaction and we will always endeavour to work with the animals in this way.

How will you approach and film marine mammals from the shore?

Approach distances for vehicles and people to seals or sea lions

N/A

Filming position relative to seals or sea lions, the shore and the sea

N/A

How film crew will be managed in the vicinity of seals or sea lions

N/A

Particular behaviour around breeding colonies and nurseries

N/A

What other actions you will take to minimise disturbance including from noise and people behaviour

N/A

How will you approach, film and depart from marine mammals using an aircraft?
Please list all species separately

Height above sea level during transit along the coast or across the sea

N/A

Height above sea level while filming marine mammals

N/A

Position and behaviour of aircraft relative to marine mammals - horizontal

N/A

Circling or other aircraft manoeuvres in the vicinity of marine mammals

N/A

What other actions you will take to minimise disturbance

N/A

How will you approach, film and depart from marine mammals using a drone?
Please list all species separately

Filming over water

We plan to film the social and hunting behaviour of false killer whales and oceanic bottlenose dolphins,

and any other opportunistically encountered marine mammals, with a drone. Only one drone will be operated at any given time. All drone filming will be done over water, with the possible exception of some scenic aerial shots, which may require flying over water and land. Our drone operator is highly experienced at piloting drones over water, with many hours spent piloting drones over water to film marine mammals. Our drone operator is well versed in the best practices for safely flying drones around sensitive marine mammals in a way that minimises disturbance to the animals. The crew will continuously monitor all nearby marine mammals for signs of disturbance. Should any signs of disturbance be observed the drone will move away and only approach the same whales and dolphins again when normal behaviour resumes. The maximum number of attempted approaches that the drone will make per day on any individual dolphin or whale is 3. If signs of disturbance are observed during or after a 3rd attempted approach on a given individual, the drone will move away and the crew will seek out new whales and dolphins to film. The drone will only be deployed over water when environmental conditions such as wind and precipitation allow for the drone to be operated safely.

Filming seals or sea lions on land

We will not be filming seals or sea lions on land with a drone.

Approach speed

All approaches will be made slowly and carefully with the drone flying at a height greater than the requested minimum height of 10 meters, but no higher than the legal maximum height of 120 meters. When the drone has reached the desired filming location the drone will slowly and carefully descend to the desired filming height, not exceeding the requested minimum height of 10 meters. The drone operator will avoid flying the drone in an erratic manner, ensuring that changes in movement speed or direction are gradual.

Height above sea level during transit along the coast or across the sea

Minimum height of 10 meters

Height above sea level while filming marine mammals

Minimum height of 10 meters. We understand the concerns that low-flying drones may cause behaviour changes and disturbance to marine mammals. However, past research has investigated the effects of low-flying drones on coastal cetacean species, animal groups that already experience high levels of disturbance from other additional sources. Whereas, both false killer whales and oceanic bottlenose dolphins are species which typically occur further from shore, are not subjected to the same level of disturbance as coastal species, and thus may not be as prone to disturbance from drones at low altitudes. Additionally, drone-disturbance studies conducted on cetaceans often require flying a drone at a set, unchanging distance from the subject for a long period of time in order to assess the effects that prolonged exposure to a drone has on marine mammals. However, when making natural history documentaries, we do not fly drones in this manner. While the minimum height requested is 10 meters, it is important to note that we would be spending a very minimal amount of time at this height for the duration of our filming activity. The nature of our work requires us to capture a variety of shot angles and shot sizes to create visually dynamic and interesting sequences, thus the drone does not need to remain at the requested minimum height for extended periods of time. Our primary goal is capturing the undisturbed natural behaviour of the animals we film. As such we are always assessing the behavioural responses of animals during all filming activities. If we observe signs of disturbance, the drone will always be moved away and only approach again once normal behaviour resumes, as outlined throughout this document. We will never continue filming a whale or dolphin at any height if that activity

causes continued disturbance to the animals being filmed.

Orientation of approach

The drone will approach marine mammals from behind and to the side of the whales and dolphins. The drone will approach slowly and from a height greater than the requested minimum height of 10 m and descend slowly once it has reached the desired filming location. The drone will never move in an erratic manner that might cause disturbance. The operator will pilot the drone using gradual and careful adjustments to speed and direction.

What other actions you will take to minimise disturbance

We will be working with the most experienced crew and skippers in the world. The drone operator is highly experienced at operating the proposed UAS devices over the ocean for the purposes of filming the natural history behaviour of marine mammals. The drone operator has the relevant and necessary commercial drone operator license from their home country (i.e. FAA in USA, CAA in UK, CAA in Australia, etc.). The skippers are highly experienced at safely piloting vessels around marine mammals for drone filming purposes. The crew are well versed in identifying whale and dolphin behaviours that indicate disturbance and will continuously monitor all nearby whales and dolphins for any signs of disturbance. Should any signs of disturbance be observed the drone will move away and only approach the same whales and dolphins again when normal behaviour resumes. The maximum number of attempted approaches that the drone will make per day on any individual dolphin or whale is 3. If signs of disturbance are observed during or after a 3rd attempted approach on a given individual, the drone will move away and the crew will seek out new whales and dolphins to film. The drone will only be deployed when environmental conditions allow the drone to be flown safely. The drone will be deployed with sufficient battery to allow for the planned filming and safe return of the drone to the vessel. The drone will only be deployed if whales and dolphins show no signs of disturbance from the presence of the film crew. The drone operator will avoid flying the drone in an erratic manner. During all filming activities the drone will move in a slow and thoughtful manner, avoiding erratic and sudden movements and changes in direction that could cause disturbance. The drone will never chase whales and dolphins or exceed the predetermined minimum height. A designated take-off and landing area on the vessel(s) will be marked out and remain clear from other personnel and equipment during all drone filming to ensure the safe and effective deployment and retrieval of the drone. A member of the crew will act as a dedicated drone spotter during all drone filming to ensure the drone operator is aware of the drone's position and any potential hazards that the drone may encounter. While the minimum height requested is 10 meters, it is important to note that we would be spending a very minimal amount of time at this height for the duration of our filming activity. The nature of our work requires us to capture a variety of shot angles and shot sizes to create visually dynamic and interesting sequences, thus the drone does not need to remain at the requested minimum height for extended periods of time.

Film Crew

Please fill in for every person that may come into contact with marine mammals throughout the course of the proposed filming. (Copy and paste details for additional crew)

***NOTE: We only plan on using one or two camera operators for this shoot. We are still in the process of finalising which camera operators we will be able to use. Due to COVID and a very high demand for camera operators at this time, it is difficult to secure camera operators this far in advance. Below are a list of potential camera operators we have contacted and are in discussion with regarding their involvement with this shoot.**

Full Name: Kyle Marshall Swann	Job Title: Researcher, Director
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: Kyle has assisted and directed crews on filming expeditions around the world to document the natural history behaviour of marine mammals. In the Kermadec Islands Kyle worked with camera operators to film mother humpback whales and their calves on their southerly migration. Further south in the subantarctic Auckland Islands Kyle helped the camera crew capture the breeding and social behaviour of New Zealand sea lions. More recently Kyle directed a shoot in Florida, USA to film the hunting behaviour of bottlenose dolphins.	
Relevant knowledge of the local area and sea conditions: Kyle lived in New Zealand for seven years and worked in the NZ natural history television industry for 5 years. He has extensive experience safely working from vessels and diving for filming purposes in New Zealand waters, having joined filming expeditions to the Kermadec Islands, Auckland Islands, White Island, Banks Peninsula, and Fiordland.	

Full Name: Alex Vail	Job Title: Camera Operator
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: Alex Vail is a BAFTA award winning natural history camera operator, specialising in capturing the undisturbed behaviour of animals. He has extensive experience using underwater cameras, pole-cameras, vessel-mounted cameras and drones to film marine mammals, from southern right whales in the Auckland Islands to blue whales in Antarctica.	
Relevant knowledge of the local area and sea conditions: Alex Vail has filmed false killer whales and oceanic bottlenose dolphins in New Zealand on a previous BBC film shoot. Alex joined other crew members and lived on a vessel for several weeks while searching for and filming false killer whales and oceanic bottlenose dolphins in the same area we plan to film.	

Full Name: Tom Fitz	Job Title: Camera Operator
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: Tom Fitz is an Emmy and BAFTA award winning natural history camera operator who has worked on a multitude of landmark wildlife series such as Blue Planet II, Planet Earth II, and Blue Planet. He has extensive experience filming marine mammals underwater and above the surface. He has joined filming expeditions all over the world from the poles to the tropics, documenting the undisturbed behaviour of a multitude of animals, including whales, dolphins, and manatees.	
Relevant knowledge of the local area and sea conditions: Tom Fitz has previously filmed false killer whales and oceanic bottlenose dolphins for the series Blue Planet II. Tom spent two weeks working from a vessel in the outer Hauraki Gulf (same area where we plan to film) to film the whales and dolphins with underwater cameras while using SCUBA equipment.	

Full Name: Jeandre Gerding	Job Title: Camera Operator
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: Jeandre Gerding is a natural history camera operator with over 10 years of experience. He has ventured to 6 continents filming a variety of animals using underwater cameras, drones, topside cameras and specialised motion control camera systems. His	

experience filming marine mammals includes filming cape fur seals and a variety of whale and dolphin species both underwater using SCUBA/free diving techniques and above water with a drone.
Relevant knowledge of the local area and sea conditions: Jeandre Gerding is a local to South Africa. He has extensive knowledge working on the sea for filming purposes in rough conditions along the South African coast.

Full Name: David Reichert	Job Title: Camera Operator
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: David Reichert is a highly experienced camera operator who specialises in capturing the natural history behaviour of wild animals. He has worked on a number of landmark wildlife series produced for the BBC, Netflix and National Geographic including Blue Planet II, The Hunt, Our Planet and Hostile Planet. He has filmed a variety of marine mammals from the poles to the tropics, including seals in the Antarctic and blue whales off California.	
Relevant knowledge of the local area and sea conditions: David Reichert is extremely experienced in working at sea and filming from boats in adverse, rough sea conditions. He has been on many vessel-based filming expeditions in areas of extremely rough seas around the Arctic and Antarctic.	

Full Name: Andre Rerekura	Job Title: Camera Operator
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: Andre Rerekura is an Australia based natural history camera operator. He has experience filming sensitive marine mammals underwater and with a drone including dugongs, humpback whales and orca. He recently worked on the BBC's landmark wildlife series 'Seven Worlds, One Planet'.	
Relevant knowledge of the local area and sea conditions: Andre Rerekura has extensive experience working at sea from vessels in rough conditions. This includes experience filming from vessels to capture the undisturbed behaviour of fast moving cetaceans such as orca, similar to the species and scenarios we will experience in New Zealand.	

Full Name: Dan Beecham	Job Title: Camera Operator
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No
If yes please provide details:	
Relevant experience with marine mammals: Dan Beecham is a highly experienced underwater camera and drone operator specialising in documenting the natural behaviour of animals. Dan has extensive experience filming sensitive marine mammals underwater and with a drone, from orca and humpback whales hunting herring in Norway to sea lion hunting behaviour in the Galapagos. Dan's work has featured in world renowned documentary series including 'Blue Planet II', 'Seven Worlds, One Planet', and 'Hostile Planet'.	
Relevant knowledge of the local area and sea conditions: Dan Beecham has extensive experience working on film shoots in remote locations and harsh conditions. This includes living on and working from vessels to film marine mammals in temperate and sub-tropical environments with sea conditions similar to those expected in our filming locations.	

Full Name: Jochen Zaeschmar	Job Title: Researcher, Skipper
Has this person had any convictions or prosecutions for offences against the Act or any other Act involving the mistreatment of animals?	☐ Yes ✓ No

If yes please provide details:

Relevant experience with marine mammals: Jochen Zaeschmar has nearly 20 year's experience interacting with and studying marine mammals, including a multitude of encounters with false killer whales and oceanic bottlenose dolphins for research and filming purposes. Jochen is the author of the first scientific publication on false killer whales in New Zealand waters, and one of the foremost experts on false killer whales and oceanic bottlenose dolphins in New Zealand.

Relevant knowledge of the local area and sea conditions: Jochen Zaeschmar is a local charter boat operator and commercial skipper with thousands of hours spent operating vessels in the area since 2000. Additionally, Jochen has safely skippered vessels for the purpose of filming false killer whales and oceanic bottlenose dolphins in the past, and has acted as an advisor to film crews, helping identify and interpret behaviours and ensuring that the filming activity does not cause disturbance to the animals.

C. Filming from vessels

Maximum number of vessels operating at any one time:

The number of vessels operating will depend on which combination of liveaboard vessel and smaller tender vessel(s) we are able to hire for this project, which we are still in the process of finalising. The maximum number of vessels operating at one time would be 3, for instance if we use one liveaboard and two smaller tender vessels. However, the liveaboard vessel will likely always remain at a distance greater than 300 meters away from the whales and dolphins. Thus, the likely maximum number of vessels that might approach closer for filming purposes is 2 (i.e. the 2 smaller tender vessels). We will keep DOC updated when we have finalised which vessels we will be using for this project. Below are a list of potential vessels we may use, including descriptions (Vessel 4 & Vessel 5 descriptions) of the general type of vessels we are looking to hire.

Type and number of vessels (Copy and paste details for additional vessels)

Vessel 1 description:

Location(s) of filming: See Location Information in Section B above	
Vessel name: Manawanui	Make:
Model: John Pugh	Size: 22 meters
Motive power: Single 120-hp diesel engine	Construction and hull design: Steel mono-hull displacement
Planing hull: ☐	Displacement hull: ✓
Maximum speed: 8 knots	Normal cruising speed: 6 knots

Vessel 2 description:

Location(s) of filming: See Location Information in Section B above	
Vessel name: Manawanui tender vessel	Make: RIB
Model: 4.1 meter RIB	Size: 4.1 meters
Motive power: Single 30-hp Yamaha two-stroke engine	Construction and hull design: RIB
Planing hull: ✓	Displacement hull: ☐
Maximum speed: 20 knots	Normal cruising speed: 15 knots

Vessel 3 description:

Location(s) of filming: See Location Information in Section B above

Vessel name: Hawere	Make: Qualicraft
Model:	Size: 15 meters
Motive power: 2 x 420 hp engines	Construction and hull design: Timber/Composite, mono-hull
Planing hull: ☐	Displacement hull: ☐
Maximum speed: 27 knots	Normal cruising speed: 18 knots

Vessel 4 description:

Location(s) of filming: See Location Information in Section B above	
Vessel name: TBD	Make: Lazercraft, Stabicraft, or similar type of vessel
Model: TBD	Size: 6 – 9 meters
Motive power: Single or twin engines. Likely not exceeding 1 x 250 hp engine or 2 x 150 hp engines.	Construction and hull design: Aluminium or similar
Planing hull: ✓	Displacement hull: ☐
Maximum speed: 40 knots or similar	Normal cruising speed: 20 knots or similar

Vessel 5 description:

Location(s) of filming: See Location Information in Section B above	
Vessel name: TBD	Make: RIB
Model: TBD	Size: 5 – 8 meters
Motive power: Single or twin engines. Likely not exceeding 1 x 150 hp engine or 2 x 100 hp engines.	Construction and hull design: RIB, mono-hull
Planing hull: ✓	Displacement hull: ☐
Maximum speed: 30 knots or similar	Normal cruising speed: 15 knots or similar

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D. Filming from shore

Maximum number of vehicles at any one time within 50 metres of a seal or sea lion on shore:
(not including vehicles parked in an official car park, slipway or public road)

N/A

Type and number of vehicles (Copy and paste details for additional vehicles)

Vehicle 1 description:

Location(s) of filming:	
Registration:	Make:
Model:	Carrying Capacity:

Vehicle 2 description:

Location(s) of filming:	
Registration:	Make:

Model:	Carrying Capacity:

Vehicle 3 description:

Location(s) of filming:	
Registration:	Make:
Model:	Carrying Capacity:

E. Filming from aircraft

Maximum number of aircraft operating at any one time:

N/A

Type and number of aircraft (Copy and paste details for additional aircraft)

Aircraft 1 description:

Location(s) of filming:	
Registration:	Make:
Model:	Carrying Capacity:
Air service certificate number or other aviation document:	

Aircraft 2 description:

Location(s) of filming:	
Registration:	Make:
Model:	Carrying Capacity:
Air service certificate number or other aviation document:	

Aircraft 3 description:

Location(s) of filming:	
Registration:	Make:
Model:	Carrying Capacity:
Air service certificate number or other aviation document:	

Filming with a drone

Maximum number of drones operating at any one time:

Type and number of drones (Copy and paste details for additional drones)

Drone 1 description:

Location(s) of filming: See Location Information in Section B above	
Model: DJI Mavic 2 Pro	Noise level: Low levels

Drone 2 description:

Location(s) of filming: See Location Information in Section B above	
Model: DJI Inspire II	Noise level: Low levels

Drone 3 description:

Location(s) of filming: See Location Information in Section B above

Model: Up to 25 kg (A new model of one or both of the above drones may be released before the shoot. If this happens, we would like to film with these new models. They will likely have very similar weights, sizes, and noise levels to their predecessor models.)	Noise level:

F. Other

Is there any further information you wish to supply in support of your application?