

COASTAL TRAWLER FISHERIES HOKI OPERATIONAL PROCEDURES 2023-24

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PART 1: INTRODUCTION

The purpose of this document is to provide information to companies (vessel skippers, crew and operators, quota owners and Licensed Fish Receivers) involved in the West Coast and Cook Strait coastal trawler hoki fisheries.

Both fisheries are very important with significant tonnages of hoki caught by the coastal fleet on a seasonal basis. Managing these environmental risks is important for the sustainability of the fishery. This document has been prepared by Seafood New Zealand - Deepwater Council (DWC), on behalf of quota owners, to outline requirements to manage the risks when fishing for hoki in these areas.

Fur seal and seabird risk

The coastal hoki fishery attracts New Zealand fur seals and to a lesser extent seabirds, which feed around the vessels. Fur seals are known to migrate long distances to reach plentiful food sources from such fisheries. These provide ample opportunities to access food by scavenging fish from the net and codend.

The Cook Strait hoki fishery attracts New Zealand fur seals that feed around the vessels, as a result, the fishery has the highest estimated number of fur seal captures of any New Zealand fishery. The West Coast fishery also interacts with fur seals, but to a lesser extent, but has more seabird interactions due to more seabirds in the area and the potential for more offal discharge (e.g., ling).



Figure 1: Hoki vessels at Picton Wharf (JC Photo, 2018)

Bulk fishery

The coastal hoki fishery is a bulk (high volume) fishery with vessels usually targeting dense fish marks and taking large catches in a short tow time.

This requires excellent seamanship, fishing skills and practices to ensure careful management of catch size and subsequent catch handling, given the known safe working limits for vessel and crew in sometimes difficult conditions.

Fishing operations and tow times through the fish mark must be carefully managed to ensure you do not catch beyond the capability of the gear and vessel.

Catch monitoring systems

Your ability to judge the density of the mark on the sounder and the amount of time you will tow through the mark to ensure the required catch volume is dependent on two important factors:

- The experience level of the skipper and his knowledge of the fishery and area
- The catch monitoring equipment used on the fishing gear to improve the level of information available to the skipper throughout the tow (e.g., net headline monitor and codend catch sensors). It is also important to have an echo sounder capable of good mark recognition and description.

DWC recommends the use of catch control and monitoring systems in all hoki fisheries to reduce the potential issues with using a window (see below). This also improves fish quality, reduces the potential for gear damage and loss, minimises the need of transhipments of excess fish, reduces tow times and therefore improves fishing and energy efficiencies, as well as reduces the safety risks associated with catch volumes that may exceed the capabilities of the gear or vessel. Nearly all coastal vessels and all deepwater vessels now have headline monitors and catch sensors.

Windows

Windows are used in the fishery as a vessel and gear safety measure. If the skipper misjudges the density of the fish mark or the time the trawl is in the mark, the window mitigates the significant risk to the vessel, gear, and crew.

However, windows are **not** to be used as a way of allowing for poor fishing practice, judgement, and seamanship. They are merely insurance against mishaps or events where catches cannot be controlled despite best efforts.

Any fish seen lost must always be reported in the vessel's Electronic Reporting System (ERS) under code 'A' (accidental loss). You must read and understand the reporting regulations.

A window is considered a recognised safety measure in some bulk fisheries, but it is not to be used as a volume control measure. "Stitched" windows are considered illegal and are not recommended.

Fisheries New Zealand approval to transfer fish

On occasion, a vessel may bring aboard hoki volumes exceeding its fish hold capacity. To tranship excess fish to another vessel, each vessel requires a transhipment permit from Fisheries New Zealand (Approval to Tranship Fish under Section 110 of Fisheries Act 1996 - see Appendix 2).

Operators intending to fish the Cook Strait fishery must receive a permit before the commencement of the season. This permit must list each registered vessel that may receive or tranship fish. Applications can be emailed to Fisheries New Zealand Deepwater Team: deepwater.team@mpi.govt.nz

Once the vessel has a transhipment permit, no prior notification is needed to tranship fish.

Transhipment details must be entered in the Catch Landing Return (CLR) form. The vessel that caught and transhipped the fish should report the amount under destination code "T" (that amount does not go on the subsequent Monthly Harvest Return) and the vessel that received the fish should report it under code "L" as normal.

PART 2: OPERATIONAL PROCEDURES

Hoki Management Areas (HMAs)

HMAs are areas where there are high abundances of juvenile hoki (<55 cm in total length). DWC quota owners have agreed to manage and monitor effort within HMAs to protect juvenile hoki.

All operators and vessels are required to monitor catches of hoki across the entire HOK 1 QMA (not just within the HMAs) and, as a matter of principle, all vessels must move from any area where catches of juvenile hoki (<55 cm) comprise 20% or more of the hoki catch by number.

Trawlers >28 m LOA are not permitted to target hoki inside any of the HMAs. The Cook Strait HMA is the only HMA within the coastal hoki fishery area (Figure 2). There are other HMAs for the deepwater hoki fishery, as specified in the Deepwater Trawl Hoki Operational Procedures.



Figure 2: Cook Strait HMA

Cook Strait Cable Protection Zone

The Cook Strait Cable Protection Zone (CPZ) protects vital submarine electrical and telecommunication cable links between the North and South Islands (see Appendix 1 for map).

There are severe restrictions on activities that can be carried out within the CPZ under the Submarine Cables and Pipeline Protections Act 1996. To deter illegal activity there are severe penalties in the form of fines and forfeiture of vessels for violations of the Act. All fishing vessels fishing in the Cook Strait hoki fishery should have the CPZ coordinates on the fishing plotter and allow a buffer zone to keep clear of this area when fishing or anchoring.

Transpower operates sea and air patrols within the CPZ. Ben Hubbard, marine patrol manager (phone 0210 269 2841), coastal patrol vessel MV *Seapatroller* (phone 027 444 2288).

New Zealand fur seal capture and mitigation (Cook Strait)

The Cook Strait hoki fishery has the highest estimated number of fur seal captures of any New Zealand fishery. Marine mammal mitigation is difficult, particularly in a small fishing area like Cook Strait, with few options to move far, and with (at times) large numbers of fur seals in attendance!

Average captures per season for Cook Strait hoki season in recent years

50 to 80 New Zealand fur seal captures reported to Fisheries New Zealand by vessels

Around 10% to 20% of tows are observed by Fisheries New Zealand each hoki season.

Capture reports should be made via the MPI Non-Fish Protected Species part of the daily ERS report. If a trigger point is reached, the DWC Environmental Liaison Officer should also be notified (see Part 4: Reporting – When Captures Occur).

Marine mammal mitigation procedures

Do not discharge fish waste when hauling or shooting the trawl and avoid discharging offal or fish waste when towing. Always remove fish stickers from the net before shooting.

When fishing operations, weather and navigation allow, turn your vessel when hauling to close trawl mouth across stern ramp quarters. This can close off some meshes to reduce risk of birds diving into the trawl mouth and tangling in meshes.

Minimise the time that gear is on or near the surface (shoot and haul the trawl as quickly as practicable) and avoid mending the trawl with gear in the water unless the head and ground rope are on deck.

Net-binding of midwater trawls is an option if significant captures are observed when shooting. Animals (Seals and Birds) returned dead 'washed-out' *(an indication the animal has been in trawl for a long time)* will often be found in the codends or fish-pound. Net-binding will choke the mid-water trawl mouth closed and reduce access into the trawl meshes when shooting. Net binding instructions are in Appendix 7.

• Net binding consists of tying short lengths of rope at intervals down the length of the trawl's large meshes. Held with slipknots, these pull apart when the force of the doors spread the net during shooting

Seabird capture mitigation

The coastal hoki fishery is of relatively low risk to seabirds. This is because the catch is landed whole, little processing of bycatch occurs, and seabird numbers are lower in winter.

All coastal vessels are <28 m LOA, which unlike vessels >28 m are not required by law to carry and use seabird scaring devices. However, DWC and hoki quota owners require that all hoki vessels <28 m LOA have Protected Species Risk Management Plans (PSRMP) on board.

The PSRMP is a one-page document outlining information on:

- The vessel, including a photo
- Vessel-specific seabird risks
- Vessel's offal control system
- Vessel's seabird mitigation devices, including a photo of the actual warp mitigation on board.

PSRMPs are now onboard all the fresh fish hoki fleet of <28 m vessels. These plans are a much simpler version of the deepwater trawlers' VMPs, but retain the three basic management procedures of offal control, warp mitigation, and risk awareness, reduction & reporting, as follows:

1. Offal control

No continuous discharge of fish waste while towing, hold for the tow or batch at intervals.

2. Warp mitigation

If you discharge fish waste into the path of the warp and birds are present in the 'warp danger zone', deploy a warp mitigation device. Vessels must have one of the recommended warp mitigation devices and/or a tori line (see Appendix 6 - Warp Mitigation Design Guide) and deploy them when required.

3. Risk awareness, reduction & reporting

Follow your vessel's PSRMP and deploy seabird mitigation to reduce capture risk. In the event of multiple captures know the DWC Trigger Points, report to the DWC Environmental Liaison Officer (same day) and complete the required Fisheries New Zealand reports (see Part 4: Reporting – When Captures Occur).

PART 3: ANIMAL HANDLING/RELEASE AND CREW SAFETY

The following outlines what to do if a marine mammal or seabird capture occurs.

Animal welfare

- All practical care should be taken to release animals alive while maintaining the safety of the crew.
- Handle all captures with care to minimise harm to the animal and to increase their survivability.
- Deliberately harassing or harming the captured animal is an offence.
- Taking any part and keeping it or cutting or mutilating the body of a protected species is an offence.

The above applies to ALL protected species.

Health and safety when handling animals (dead or alive)

Crew and vessel safety are paramount. Animals can be dangerous, particularly when stressed and carry infectious diseases that can infect humans. Handling marine mammals should always be kept to a minimum and only occur when needed.

When attending to animals landed on deck the following steps should be followed to ensure crew safety:

- Whenever handling animals, wear waterproof gloves and waterproof protective clothing (refer to examples shown below).
- Where possible, avoid direct contact with blood, urine, faeces, and other body fluids. It is also important to avoid the animal's mouth as this is a major source of disease. Take special care when marking a dead animal.
- If bitten or grazed by an animal, wash and disinfect the wound immediately, apply betadine/antiseptic ointment and cover the wound. This minimises the risk of painful infections caused by bacteria carried by some animals.
- After handling any animal, wash your hands and forearms with antibacterial soap and hose down your protective clothing.

Marking and returning marine mammals

Any dead marine mammal returned to the sea must be marked with twine. The purpose of this is to avoid the same animal being counted twice should the body be caught again. (This can and does happen especially on other fishing grounds but is much less likely in Cook Strait).

When marking a dead fur seal ensure either a cable tie or twine is fixed firmly behind the lower or upper jaw canine teeth before returning to the sea.



Figure 3: Marking dead fur seal jaw with either twine or cable tie

PART 4: REPORTING - WHEN CAPTURES OCCUR

DWC trigger points and vessel action

Trigger points are the DWC real-time reporting capture event threshold system. Once a trigger is reached, the situation is monitored closely by DWC, the vessel manager and the

captain. When appropriate, the crew should take additional steps to mitigate the risk of further captures by actively reassessing measures and taking additional steps as required.

Trigger points

For vessels <28 m (deepwater vessels >28 m also have trigger points):

- 2 fur seals (dead or released alive) in a single trip, or 5 fur seals in a 7-day period
- 3 seabirds (dead or released alive) in a single trip, or 10 seabirds in a 7-day period

Most often a single coastal hoki trip is just one day's fishing sometimes two days of fishing.

Trigger reports

Report all DWC trigger point breaches in real time (within 24 hours) to <u>admin@deepwatergroup.org</u>. Note these emails are automatically forwarded to DWC Environmental Liaison Officer (ELO), John Cleal, and Ben Steele-Mortimer. The ELO will follow up to provide support and may seek additional information.

DWC CONTACTS (AVAILABLE 24/7)	PHONE	EMAIL
DWC (email auto-forwards to John & Ben)		admin@deepwatergroup.org
John Cleal (ELO)	021 305 825	admin@deepwatergroup.org
Ben Steele-Mortimer	027 234 3140	admin@deepwatergroup.org

Fisheries New Zealand mandatory reporting requirements

It is not illegal to accidentally capture protected species while commercially fishing **but it is illegal to fail to report the capture.**

As required under Fisheries Regulations, all protected species landed dead or alive (then returned to the sea) must be recorded via the vessel's Electronic Reporting System (ERS).

Capture Reports should be made via the Non-Fish Protected Species part of the daily ERS report, and if a trigger point is reached also to the DWC ELO (as instructed above).

Note: The ERS has fields to allow reporting of leg-band or flipper tag numbers found on a captured animal. This information is highly valued so please always record and report.

Definition of a capture

Captures = animals that have become fixed, entangled, or trapped and are prevented from moving freely or freeing themselves (i.e., interactions with fishing gear or Mitigation gear/ tori lines etc)

Deck strikes = birds that collide with the vessel superstructure or deck and are unable to leave the vessel on their own, either through death, injury, or disorientation.

Do not report any seabird if it is alive and leaves the vessel unassisted.

Note: deck strikes are not included in the Fisheries New Zealand seabird capture estimates but must be reported.

Seabird identification codes

When you *can't positively identify* the seabird species, **use the generic/unidentified codes below** (*do not use XAL to report seabirds*):

XGA - Great albatrosses (unidentified) Royal, Antipodean (Wandering) and Gibson's

XMA - Smaller albatrosses (unidentified) Mollymawks - Salvin's, White-capped, Buller's etc

XXP - Small birds, use this code for unidentified Petrels, prions, and shearwaters

Record any leg band numbers in the ERS field provided on the form.

We now require improved seabird identification of three of the most common Mollymawk species. Only when you *can positively identify* these three Mollymawk species listed below should you report the individual seabird codes for the three most common species: Buller's, Salvin's, and White Capped.

To assist with this, we have provided an improved Albatross ID Guide

XPB - Buller's albatross (light-grey head with white cap; two big bright yellow stripes on both the bottom and top of the beak; this bird is generally a bit smaller than the other two).

XSA - Salvin's albatross (head and neck grey with white cap; beak dull grey/brown with a thin yellow line at the base and a black tip at the end).

XWM - White-capped albatross (a larger Mollymawk; white head, a light grey beak with yellow tip).

Common marine mammal identification codes

FUR - Fur seal

- **CDD** Common dolphin | **DDO** Dusky Dolphin (more often found at Pegasus)
- SEA Seals and Sealions (unidentified) Only use this code if you can't identify the seal
- WHT Unidentified, whale or dolphin

Accurate reporting of all mortalities is the best approach. Having accurate information regarding captures helps better understand and manage the process which in turn helps get the most appropriate risk mitigation measures in place. See Appendix 4 for the 10 Golden Rules for Non-Fish or Protected Fish Species Catch Reporting.

Animal Welfare

Under the Marine Mammal Protection Act, it is illegal to harass, kill or deliberately catch any marine mammals. However, in commercial fisheries, any incidental capture is not illegal provided the incident is reported.

Any vessel capturing a protected species should return all animals to the sea as soon as possible (unless in the unlikely event, an MPI observer says to keep it).



APPENDIX 1: COOK STRAIT CABLE PROTECTION ZONE

Figure 4: Transpower's map of Cook Strait Cable Protection Zone

APPENDIX 2: APPROVAL TO TRANSHIP FISH





APPROVAL TO TRANSHIP FISH UNDER SECTION 110 OF FISHERIES ACT 1996

1. Pursuant to section 110 of the Fisheries Act 1996 (the Act) I hereby authorise the operators of the vessels listed in Schedule 1 to tranship fish from one registered fishing vessel to another.

Term of approval

2. This approval is valid between the date of signature and 30 September 2022.

Defined area

3. This approval only applies to fishing vessels taking hoki in Cook Strait (fisheries statistical areas 16 and 17) and off the West Coast South Island (fisheries statistical areas 33, 34 and 35).

Reporting requirements

- 4. For the avoidance of doubt the requirements of the Fisheries (Reporting) Regulations 2017 still apply to any fish transhipped pursuant to this approval.
- 5. Those requirements are that the vessel that caught the transhipped fish must report that fish on a Landing Report under either landing code TL (catch balancing obligations lie with the vessel that caught the fish) or landing code TT (catch balancing obligations lie with the vessel that received the fish). In the case of the latter, the vessel that received the fish must also report it on a Landing Report and balance the catch with annual catch entitlement.

Dated this day of 2022

James Andrew Acting Manager Deepwater Fisheries

Acting under a delegation made under clause 2, Schedule 6 of the Public Service Act 2020 – with delegation for section 110 of the Fisheries Act 1996

Fisheries New Zealand Fisheries Management Charles Fergusson Building, 24-38 Bowen Street Wellington 6140, New Zealand

www.fisheries.govt.nz

APPENDIX 3: TEN COMMANDMENTS





TEN COMMANDMENTS

FOR FRESH FISH HOKI FISHERY (HOKI SEASON)

- 1. Do not target hoki in the Cook Strait Hoki Management Area. Never fish/deploy gear in the Cook Strait Submarine Cable Protection NO GO Zone.
- 2. A window is a legitimate vessel and gear safety tool, but not a best practice catch volume control tool. Stitched windows are considered illegal.
- **3.** Net monitoring systems are strongly recommended and net headline monitors and catch sensors should be deployed, giving real-time catch information.
- **4.** In the Cook Strait, hoki vessels should have an MPI transhipment permit so that transhipping can be legally undertaken. Both vessels involved need a permit and must complete the required details as per reporting rules.
- 5. Avoid shooting the gear in the midst of large numbers of fur seals. Also, the option of net-binding the midwater trawl (when shooting) if capture evidence points to fur seals or birds taken regularly when shooting.
- 6. Minimise the time that gear is on or near the surface (shoot and haul the trawl as quickly as practicable) and avoid mending the trawl with gear in the water unless the head and ground rope are on deck.
- 7. Avoid discharging offal or fish waste when towing. Always remove fish stickers from the net before shooting.
- 8. All coastal hoki vessels must have a Protected Species Risk Management Plan and deploy a seabird warp mitigation device when there is a risk of warp strikes.
- **9.** Advise DWC (same day) when fur seal captures (dead or released alive) reach Trigger Point. Email DWC Trigger Point Report to <u>admin@deepwatergroup.org</u>. Assess the event and implement further risk reduction measures. Trigger points are:
 - 2 fur seals (dead or released alive) in a single trip or 5 fur seals in a 7-day period
 - 3 seabirds (dead or released alive) in a single trip or 10 seabirds in a 7-day period
- **10.** Mark any dead fur seals with a cable tie or twine tied around the jaw before returning them to the sea. As legally required, record all protected species captures in your vessel's Electronic Reporting System.

SEAFOOD NEW ZEALAND | DEEPWATER COUNCIL For support phone John Cleal: 021 305 825 or Ben Steele-Mortimer: 027 234 3140

APPENDIX 4: 10 GOLDEN RULES FOR NON-FISH PROTECTED SPECIES CATCH REPORTING



NON-FISH OR PROTECTED FISH SPECIES CATCH REPORT - SUMMARY INFORMATION

(from Fisheries New Zealand Electronic Catch and Position Reporting Guide August 2021)

You must complete an NFPS Catch Report if there is an interaction with the following by the vessel or gear during a trip:

- Birds;
- Marine mammals (e.g. New Zealand fur seal);
- Marine reptiles (e.g. turtles);
- Protect fish species (e.g. basking shark, great white shark, manta ray, black spotted grouper);
- Selected benthic organisms (corals, sponges, and bryozoans).

You will be prompted for more information about how the capture happened if a seabird is taken during trawling or surface or bottom longlining.

You must take care when choosing codes where there is a group option and a specific option so that you do not accidentally report an organism twice.

If there is more than one NFPS capture during an event, they will all be recorded on the same NFPS Catch Report.

The NFPS Report must be completed and provided at the same time as the Fish Catch Report if it occurs as part of a fish catch event.

If the capture happens while you were not fishing (e.g. while steaming), the NFPS Catch Report will be a standalone report, i.e. it will not be linked to a Fish Catch Report and must be completed and provided to FishServe before the end of the day on which you became aware of the capture.

Online resources to assist you with NFPS identification

- The DOC website has material on coastal and deep water seabird species. Guides include MPI reporting codes and are available in multiple languages: <u>tinyurl.com/DOCseabirdsNZ</u>
- A fuller set of invertebrate NFPS material is available at tinyurl.com/86AEBR
- A coral guide is available at tinyurl.com/DOCCoralGuide

SEAFOOD NEW ZEALAND | DEEPWATER COUNCIL For support phone John Cleal: 021 305 825 or Ben Steele-Mortimer: 027 234 3140

APPENDIX 5: OBSERVER VMP AUDIT FORM

Trip Number		Ve	Vessel Name			FMAs fished				Trip start date				Trip end date			
							1	Т	1		Т	1	1	T			
Targe	et species			Obser	ver name	_			_	Number	of t	ows					
Botton	n Trawl(s) 1	2 3		Mid wa	ater trawl												
lecord)	'es (Y), No (N	I), Unkno	wn (U) c	or Not Ap	plicable (N/A) ir	h th	e box prov	ided.	. Ma	ake detail	ed c	omme	ents on				
reas of	interest and i	f you ans	wer N or	U to any	questions, or	f fo	or items 3 c	or 4.									
em 1)	carried onb	s of the D bard and	made a	ssel Mana /ailable u	agement Plan (\ pon request?	/M	IP) and the	Irav	vi O	peration	al Pr	ocedu	nes N/	A			
em 2)	Were the se	nior crew	v familiar	with and	have access to	o tł	ne above d	ocum	nent	s?			N/	A			
em 3)	Were any s	eabird, m	arine ma	ammal or	protected shar	c 't	rigger poin	ts' ac	tiva	ted durin	g th	e trip?	N/	A			
tem 4)	Did a gear o	or equipm	ent failu	re event	occur that incre	as	ed the risk	of se	abi	rd or mar	ine r	namm	al _N	/A			
tem 5)	Were there	any resp	onse in d	rew heh	wiour fishing a		vity mitigat	tion d	levi		aru	sed					
(cill 0)	Following 't	rigger-poi	nt' even	ts or duri	ng high risk peri	od	S? (describe i	in com	ment	s any action	s take	n by cre	w)N/	A			
Seabird/	Marine Mam	mal Mitig	gation D	evices:													
tem 6)	Record what	mitigation	n devices	s were ca	rried by the ves	se	and wher	they	/ we	ere utilise	d			_			
evice		Carri	ed on b	oard	Deployed all	ov	vs	De (des	ploy	e why in co	ome mme	tows					
Bird Baffl	er																
ori line																	
LED																	
Other Describe	in comments)																
tem 7)	Were net re	strictors f	itted into	the cent	re of a triple-rig	cc	onfiguration	whe	en re	equired?	(SC	l only)	N	/A			
tem 8)	Was a Dolp	hin Dissu	asive De	evice dep	loyed on every	JN	<u>A7 tow</u> ?						N	/A			
ish Was	te Managem	ent:															
tem 9)	Was the dis	charge of	f fish wa	ste from t	the vessel mana	age	ed as per th	ne VI	MP?				N	/A			
tem 10)	The main fig	sh waste	manage	ment stra	tegy employed	du	ring this tri	p wa	s: (d	lescribe in	com	nents)					
	F/Meal	Held (for	the full t	ow)	Batch (durin	a	tow)		Min	ce	0	ther	1				
tem 11)	Was all fish	waste (in	ncludina	offal and	whole fish) held	J o	n board du	rina	sho	oting and	hau	ulina?	N	/A			
tem 12)	Was the ne	t cleared,	as prac	ticable, o	f all stickers prid	or t	o shooting	?					N	/A			
tem 13)	Was a grati	ng or trap	system	used to p	prevent fish or o	offa	al accidenta	ally lo	ost to	o the fact	ory	floor o	r .				
Seneral	deck from b	eing disc	harged o	overboard	l via scuppers c	or s	sump-pump	S (wh	iilst a	llowing the e	gress	of wate	ŋN	/A			
tem 14)	Were all pla	stics and	nettina	retained	on board?								N	/A			
tem 15)	Was shootin	ng fishing	gear ne	ar congre	egations of mari	ne	mammals	avoi	ded	?			N	/Α			
tem 16)	Was the am	ount of ti	me the r	net spent	on the surface	mi	nimised as	muc	h as	practica	ble?		N	/A			
tem 17)	Were any turns conducted during the tow with the doors fully submerged and a headline depth of less than 50 m ² (eval. coastel traviers)								N/	A							
tem 18)	Were all pro	tected sp	becies ca	aptures re	ported by the v	es	sel?						N/	A			
	Were protec	ted spec	ies that	were cau	ght alive handle	d a	and release	ed wi	ith d	ue care?			N	/A			
tem 19)					•												

APPENDIX 6: SOUTH ISLAND COASTAL TRAWL WARP MITIGATION DESIGN GUIDE

Design and Build: Guiding Principles

Larger South Island coastal trawlers increasingly operate in areas overlapping with a large number of albatross. They have high catch volumes and some on-board processing; coupled with the need to discharge fish waste more often and while trawling is taking place. The fish waste flows back into the path of the warp, increasing the risk of albatross warp captures.

FINZ and Southern Inshore support the need by this class of larger vessel to have improved fish waste management procedures and a suitable warp mitigation device, which ideally would be a 'set and forget' device that is deployed consistently while fishing.

Fish Waste Control: (No continuous discharge of fish waste when towing) Have equipment to 'hold & batch' fish waste to be discharged at intervals (deck pound, bin, chute or tank) with capacity to hold all fish waste for a minimum of 20 to 30 minutes. The discharge needs the ability to be closed off and when capacity reached, opened to allow a 'batch-discharge' during hauling and shooting. Return those fish required to be returned to the sea while still alive in a manner to reduce the risk of warp captures.

Warp Mitigation: A suitable boom/pole or structure to support hosepipe droppers to restrict seabird access into the warp-zone and a side curtain along the discharge side to restrict access to the discharge chute-point. (*If discharging regularly from both sides, you need two devices*).

These design guide examples (*or an approved type-hybrid of these*) are a starting point to construct something that works for your vessel design and your fishing operations.

• Aft baffler/pole: extending far enough back (est. 3m to 5m+ astern, this is vessel-dependent) to provide coverage over most of the area where the warp meets the water surface (3 different versions/examples of this shown over page):

o Option 1: Single side aft baffler with side curtain - baffler with hosepipe droppers over warp area and separate side curtain providing coverage over fish waste flow down the hull to the discharge chutepoint.

o Option 2: Single side aft pole with full curtain - angled back over warp area and outboard with full large single curtain from the end of the pole providing coverage over fish waste flow down the hull to the discharge chute-point.

o Option 3: Two aft boom bafflers and aft curtain - extended over/outside each warp with hosepipe droppers on each pole and aft curtain between poles with streamers to provide aerial coverage across both warp danger zones.

The aft boom device(s) is expected to be very effective but requires more complex design and engineering requirements (this design may only suit some of the largest vessels).

• Option 4: Single side baffler/pole with side curtain - extended at least 2.0m - 2.5m outboard of trawl block.

o Positioned close to (or over) the trawl block with hosepipe droppers that hang down and trail back into warp zone. A side curtain with streamers extends from the pole running forward alongside the vessel to provide coverage over discharge point.

• Option 5: Single side pole with tori line and side curtain - extended at least 1.5m - 2.0m outboard of the trawl block.

o Support the attachment for a tori line which should be a minimum of twice length of the warp behind the vessel. A side curtain with streamers extends from the pole running forward alongside the vessel to provide coverage over discharge point.

Droppers and/or streamers should be spaced at intervals approx. 70cm apart

Fish waste discharge management is the key. The less often you discharge, and the less you discharge into path of the warp, the less likely you are to have birds around the warp danger zone!

The better baffler device you build, the greater protection you will have over the warp danger areas, and the less likely you will be to have to deal with warp strikes.

Contact John Cleal for further information Ph. 021 305 825

Design Guide for Large Coastal Trawlers: Warp Mitigation Options



APPENDIX 7: NET BINDING MIDWATER TRAWL

Net binding holds the meshes in a tight bundle during shooting and helps prevent seals and birds from becoming entangled or entering the open meshes of the trawl.

Net binding should be used in conjunction with other well-known risk mitigation procedures; shooting the trawl gear quickly/efficiently, cleaning the net properly, and not discharging offal and fish waste combined reduce protected species interactions.

Net binding consists of tying the mesh into a tight bundle at set intervals down the length of the trawl. These binds slip/pull apart when the trawl doors spread the trawl open. Net binding reduces the volume of netting 'lofting' and/or opening near the surface, so seals have less time to enter the trawl and birds are less likely to become entangled in the mesh.

A net bind is a short length of rope (most often 7 mm mussel lashing 600-1000 mm long) tied off with one end knotted in the middle of a mesh or selvedge on one side (so you don't lose the binds) then 'looped' around the meshes several times and 'tied-off' with simple twists/hitches of the rope '*slip-hitch*' tied with three to six twists depending how much grip you wish to apply.

The number of times you loop around the meshes and the number of twists or hitches you apply varies depending on the size of the vessel and therefore the size of the midwater trawl being used. Two or sometimes three or more binds are applied down the length of the trawl.



Figure 5: binds loop around the trawl meshes, then a few slip hitches applied

Fixing all the net binds in the best positions for the first time takes around five minutes. You may have to change the number of twists you apply to the binds or change rope material depending on how much grip you require to stop any binds from 'falling out' before the net has submerged. After this, it takes only one minute for the crew to check and re-tie each tow. Be mindful that if you 'overdo it' binds will fail to 'slip open' and the trawl will not open.

Net binding will not hold the bigger/heavier rope meshes further up the trawl closer to the head of the net. The rope binds need to be tied carefully. They must 'slip' out so the hitches must not be overlapped, or they could 'knot-up'. The rope must be in good condition and checked by the crew every haul and reset. Any rope found frayed or knotted should be replaced as it will eventually not slip or untie and will cause the trawl not to open. Whip or splice the ends of the binds to stop the rope from fraying.