

Mitigation Standards to Reduce the Incidental Captures of Seabirds in New Zealand Commercial Fisheries

Scampi trawl

1 Introduction

To effectively reduce the risk of seabird captures, scampi trawl vessels need to use a combination of mitigation practices that best address the risks of their individual operations. As the scampi trawl fleet is diverse with respect to vessel size, gear set-up and on-board equipment, the particulars of the mitigation practices employed may differ between vessels.

To ensure consistency in the mitigation practices employed by the scampi trawl fleet, these mitigation standards document what is expected of effective mitigation practices.

Mitigation Standards are grouped by what the mitigation practices aim to achieve (desired outcomes).

This document also details how the mitigation standards will be implemented and how adherence to the mitigation standards will be monitored and reported.

2 Scope

These mitigation standards are applicable to all trawl vessels used to target scampi, regardless of dimensions. See Appendix 1 for a characterisation of these vessels.

3 Desired outcomes

1. The discharge of fish waste¹ from the vessel is managed so as not to attract seabirds to risk areas.
2. The risk to seabirds from trawl warps is minimised.
3. Seabird attraction towards, and access to, trawl nets is minimised. If seabirds do access nets, the risk of harmful interactions is minimised.
4. The risk of deck landings or impacts against the vessel is minimised.²

¹ Fish waste is defined as all processing offal and all dead or damaged fish that are returned to the sea (or parts thereof).

² A deck landing (also known as a deck strike) is a situation when a seabird lands on a vessel and is assisted from the vessel by the crew or an observer. An impact with a vessel is a situation when a seabird collides with the superstructure of the vessel.

4 Mandatory measures

All trawl vessels 28 metres or greater in length are required to deploy one type of seabird scaring device during all tows in accordance with Seabird Scaring Devices Circular 2010.³ Vessel operators may choose to use bird bafflers, tori lines or warp deflectors. The device must meet the specifications prescribed in the Circular and must be used on both sides of the vessel (port and starboard) to minimise seabird access to both warps.

5 Mitigation standards

This section details the mitigation standards necessary to achieve each desired outcome and the equipment and/or operational practices currently needed to meet each mitigation standard.

Each mitigation standard will be updated as alternate technologies or operational practices are demonstrated to be effective in achieving the desired outcomes.

These mitigation standards do not replace or override any fisheries regulations, or legislation on workplace health and safety, maritime safety or other relevant subject.

Desired outcome 1: The discharge of fish waste from the vessel is managed so as not to attract seabirds to risk areas

Mitigation standards 1.1 and 1.2 are necessary to achieve desired outcome 1.

Mitigation standard 1.1:	Fish waste is not discharged from the vessel immediately before or during shooting or hauling. ⁴
Mitigation standard 1.2:	Fish waste discharged whilst the net is being towed must be batch discharged. ⁵

To meet mitigation standards 1.1 and 1.2, vessel operators should:

- Develop and document a fish waste management system that describes how mitigation standards 1.1 and 1.2 will be met. A copy of this document (such as a vessel management plan or comparable document) must always stay on the vessel and be accessible to, and understood by, all crew members.⁶

³ New Zealand. (2010). Fisheries (Commercial Fishing) Regulations 2001: Seabird Scaring Devices Circular 2010 (No. F517). New Zealand Gazette, No. 29. 11 March 2010. Retrieved from <https://www.mpi.govt.nz/dmsdocument/20321/loggedIn>

⁴ 'Shooting' is defined as the time between the codend leaving the deck and the time when the doors are below the surface. 'Hauling' is defined as the time between the doors reaching the surface and the codend being on deck.

⁵ Batch discharging is defined as holding all fish waste for at least 30 minutes and then discharging it in periods that last no more than five minutes each.

⁶ An example of a vessel management plan is available at the following website <https://deepwatergroup.org/wp-content/uploads/2018/12/VMP-DWG-Scampi-Trawler-V3.0-JC-Sept-18.pdf>

- Ensure their vessels have the equipment needed to implement their fish waste management system (such as batching tanks or discharge chutes). All such equipment should be well maintained with sufficient spare parts kept on board to effect regular maintenance/repairs.
- Develop and document a fish waste contingency plan that describes what actions will be taken to meet mitigation standards 1.1 and 1.2 in the event of an equipment failure. The contingency plan should ensure that any fish waste discharge from the vessel continues to achieve desired outcome 1. Sufficient, well maintained equipment must be kept on board to allow the vessel to enact the fish waste contingency plan at short notice.
- Maintain a secondary system that prevents fish waste lost to the deck or factory floor from being lost overboard. Examples of such secondary systems include equipment to minimise the volume of fish waste lost to the factory floor/deck and the use of gratings or trap systems to reduce the volume of fish waste discharged through scuppers/sump pumps (whilst still allowing the free movement and egress of water).

Desired outcome 2: The risk to seabirds from trawl warps is minimised

Mitigation standards 2.1 and 2.2 are necessary to achieve desired outcome 2.

Mitigation standard 2.1:	The trawl warp located closest to the side of the vessel from which fish waste is discharged is protected by a visible and physical barrier which deters birds from approaching the warp. ⁷
Mitigation standard 2.2:	The condition of the trawl warps does not increase the risk of seabirds captures.
Mitigation Standard 2.3	<p>The vessel carries a second warp mitigation device that is able to provide protection to all trawl warps used by the vessel. This device is to be deployed if:</p> <ul style="list-style-type: none"> • a seabird is captured on the trawl warp; • a seabird is observed impacting against the warp; • the fish waste-management system fails; or • there's a higher risk of seabirds getting captured, such as when feeding near a warp.

⁷ On vessels using a single warp system, mitigation standard 2.1 would apply to the centre warp. For those vessels >28 metres in overall length, both warps must be protected by a seabird scaring device in accordance with Seabird Scaring Devices Circular 2010.

To meet mitigation standards 2.1, 2.2 and 2.3, vessel operators should:

- Deploy a seabird scaring device on the appropriate warp(s). The chosen device must be well maintained and deployed in such a way that does not increase the risk to seabirds.⁸ Sufficient spares must be carried on board to effect repairs when necessary.
- Ensure the warps are not overly greased; all warp splices are 'wrapped'; any sprags are removed or 'whipped'; and warp splices are not near the water's surface.
- Ensure the vessel carries a second seabird scaring device on board. The second device should be deployed if the primary device fails or if any of the situations described in mitigation standard 2.3 occur.

Desired Outcome 3: Seabirds attraction towards, and access to, trawl nets is minimised. If seabirds do access nets, the risk of harmful interactions is minimised.

Mitigation standards 3.1, 3.2, 3.3 and 3.4 are necessary to achieve desired outcome 1.

Mitigation standard 3.1	The amount of time fishing gear remains at, or near, the surface is minimised
Mitigation standard 3.2	Using a triple-rig configuration does not increase the risk to seabirds. ⁹
Mitigation standard 3.3	All gear maintenance/repairs (planned or otherwise) are conducted in a way which minimises the risk to seabirds
Mitigation standard 3.4	Any seabirds caught in the net and released alive are handled in ways that maximise their chance of survival (whilst managing the risk to the crew)

To meet mitigation standards 3.1, 3.2, 3.3 and 3.4, vessel operators should:

- Shoot and haul the trawl net as quickly as practicable.
- Ensure the crew remove as many practicable stickers (fish caught in mesh) as possible from the net during hauling.¹⁰
- Ensure that when each codend is tipped, the remaining cod-ends remain as deep as possible.¹¹

⁸ The risk of seabirds becoming entangled in the mitigation device is increased if droppers or streamers trail excessively in the water.

⁹ When using a triple-rig, the mouth of the centre net is held partially open during hauling/tipping by the width of the trawl blocks while the other two nets are closed.

¹⁰ As the net is not brought completely on board during hauling, removing every 'sticker' would increase the time the net stayed at, or near, the water's surface, thereby increasing the risk of seabird captures.

¹¹ When using a multi-rig trawl, the codends are tipped one by one.

- Fit net restrictors¹² in the middle net of a triple-rig when there's a high risk of seabirds captures (such as when seabirds are observed feeding in or around the centre net) or when a seabird has been caught in the centre net. If seabird captures continue, the centre net should be removed until the risk reduces.
- Inspect and maintain all fishing gear and equipment (such as winches) to reduce the risk of gear or equipment failure.
- Conduct planned gear maintenance whilst the trawl net is on board. If the trawl net must be in the water during repairs, the repairs must happen when there's a low risk of seabirds getting caught (such as at night or during periods of low seabird abundance).
- Conduct all unplanned/emergency maintenance whilst the trawl net is on board. If the trawl net is required to be in the water to effect repairs, all such maintenance should be conducted with as much of the trawl net on board as possible given the circumstances (with particular consideration given to the net mouth).
- Instruct the deck crew in safe seabird-handling procedures and protocols and ensure these procedures and protocols are adhered to.

Desired Outcome 4: The risk of deck landings or impacts against the vessel is minimised.

Mitigation standards 4.1, 4.2 and 4.3 are necessary to achieve desired outcome 4.

Mitigation standard 4.1	Deck lighting does not unnecessarily attract or disorientate seabirds.
Mitigation standard 4.2	Seabirds are not induced to land on the deck due to the presence of fish waste.
Mitigation standard 4.3	Any seabirds that land on deck or impact with the vessel and are released alive, are handled in ways that maximise their chance of survival (whilst managing the risk to the crew).

To meet mitigation standards 4.1, 4.2 and 4.3, vessel operators should:

- Minimise all deck lighting (including outward facing lights) that is not necessary for ship or crew safety, especially when the vessel is sheltering or anchored near seabird breeding colonies.
- Clean the deck and fish waste-handling equipment (such as fish bins) regularly, so that excess fish waste is removed.

¹² Net restrictors are individual lengths of rope which are tied to both the headline and the ground rope. They can be used to limit the vertical opening of the centre trawl. Initial research has indicated that net restrictors may reduce the risk of seabird captures, but this finding has not been empirically tested. Pierre, J. P., Cleal, J., Thompson, F. N., & Abraham, E. R. (2013). *Seabird bycatch reduction in scampi trawl fisheries*. Final Research Report for Department of Conservation project MIT2011-02. Unpublished report held by Department of Conservation, Wellington. Retrieved from <https://www.doc.govt.nz/our-work/conservation-services-programme/csp-reports/2011-12/seabird-bycatch-reduction-in-scampi-trawl-fisheries/>

- Instruct the deck crew in safe seabird-handling procedures and protocols and ensure these procedures and protocols are adhered to.

6 Implementation

The mitigation standards outlined above are implemented through Seabird Scaring Devices Circular 2010 and non-regulatory management measures (as set out in the *Scampi Fisheries Operational Procedures*).¹³ Scampi operational procedures apply to all trawl vessels used to target scampi and are agreed between scampi quota holders, vessel operators and Fisheries New Zealand. As part of the scampi operational procedures, each vessel is required to have and follow a vessel management plan (VMP). The VMP documents what actions each vessel will take to reduce the risk it poses to seabirds.

Both scampi operational procedures and VMPs are implemented and administered by the Deepwater Group Ltd, an organisation which represents the majority of deepwater quota holders. The Deepwater Group contracts an environmental liaison officer (ELO) to oversee scampi operational procedures, VMPs and associated processes. The ELO visits most vessels annually¹⁴ to train crew, and review and update VMPs. The number of vessels visited by the ELO is reported annually by Fisheries New Zealand¹⁵ and will be included in the seabird annual review report.

7 Verification

Vessel adherence to the mitigation standards is verified through Fisheries New Zealand observer coverage. After each trip, the observer completes a Vessel Management Plan Observer Review Form (Appendix 2). Fisheries New Zealand discuss the review form with the observer and then sends it to the ELO to follow up on any issues with the vessel operator. The outcome of any follow-up actions are reported to Fisheries New Zealand quarterly and will be included within the seabird annual review report.

Vessel operators also review their VMP each year by completing a vessel management plan internal audit form (Appendix 3). Once completed, this audit form is provided to the ELO for review.

During their trips, Fisheries New Zealand observers also inspect and measure each seabird scaring device. Observers record their findings on either the bird baffler, tori line or warp scarer details form (Appendices 4, 5 and 6).

The level of observer coverage on board the scampi fleet is typically between 6% and 12% of tows per year. Coverage is reported annually by Fisheries New Zealand.

¹³ Deepwater Group Ltd. *Scampi Fisheries Operational Procedures for Mitigating Risk of Seabird and Marine Mammal Captures*. Version 3.0. Retrieved from <https://deepwatergroup.org/newsresources/op-manual/>

¹⁴ The ELO prioritises visiting new vessels and those deemed 'higher risk' due to the number of reported captures or other issues.

¹⁵ <https://www.mpi.govt.nz/dmsdocument/33340-annual-review-report-for-deepwater-fisheries-201718>

Appendix 1: Characteristics of the scampi trawl fleet (June 2019)

On average, the scampi trawl fleet conducts between 4,500 and 5,000 tows each year. Bottom trawling for scampi is spatially concentrated in five areas:

- Bay of Plenty;
- Wairarapa and Hawkes Bay;
- Mernoo Bank¹⁶;
- Chatham Islands; and
- Auckland Islands.

The scampi target fishery is a relatively low volume fishery with an average bag size of between one and two tonnes. However, catch is characterised by relatively high proportions of non-target bycatch, much of which is comprised of fish and invertebrate species not managed under the QMS. Such species are typically discharged at sea.

As of June 2019, there are approximately eleven vessels currently active in the scampi trawl fishery, of which eight are dedicated scampi vessels. Nine of the vessels are between 20 and 28 metres long, and two are between 28 and 32 metres long. The number and type of vessels used to target scampi has remained relatively constant over time.

All vessels used to target scampi use light, low-headline gear (typically less than two metres) with a double- or triple-rig configuration. Each net has a wingspread of 25 to 30 metres. Vessels typically conduct two or three long (about seven hours) slow-speed tows per day. Using multi-rig trawls can cause parts of the net to be on, or close to the sea surface for extended periods. During hauling, the net is not brought entirely on board as each codend is individually hauled on board and tipped (emptied) before the nets are shot again. It can take up to 10 minutes to tip three codends.

Three of the vessels in the fleet have only a single warp deployed from the centreline of the vessel over the transom and tow only two nets. The remaining vessels have two warps that are deployed from blocks outside the line of the hull. Two or three nets are used depending on fishing and weather conditions.

Scampi vessels typically remain at sea for up to six weeks, with catch frozen on board. Scampi is typically retained whole (green) although some limited amount of processing may occur on scampi and key bycatch species (e.g. ling). As such, small volumes of offal are produced.

No vessels in the scampi fleet operate meal plants; all fish waste is discharged at sea. Fish waste management equipment on board the scampi fleet differs between vessels; some vessels have dedicated holding/storage tanks which can be emptied via discard chutes whilst others store fish waste in bins prior to discharge.

¹⁶ Mernoo Bank is a submarine plateau approximately 100 kilometres northeast of Banks peninsula.

Appendix 2: Vessel management plan observer review form

Deepwater Trawl VMP & MMOP – Observer Review Form				
Trip Number	Vessel Name	Observer	Trip start date	Trip end date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Target species	FMA's fished			

Record Yes (Y), No (N), Unknown (U) or Not Applicable (N/A) in the box provided. If you answer N or U to any questions, or Y for items 3, 4 or 19, then please make detailed comments on the reverse.

Item 1. Were copies of the DWG vessel specific *Vessel Management Plan (VMP)* and *Marine Mammal Operating Procedures (MMOP)* carried on board and made available upon request? ☐

Item 2. Were the senior crew familiar with and have access to the above documents? ☐

Item 3. Were any seabird, marine mammal or protected shark 'trigger-points' activated during the trip?
(if Y record details of the triggers and the action taken by the vessel) ☐

Item 4. Did a gear or equipment failure event occur that increased the risk of seabird or marine mammal captures? (if Y detail the event and the action taken by the vessel) ☐

Item 5. Were there any changes in crew behaviour, fishing activity or gear used following 'trigger point' events or during high risk periods? ☐

Seabird Mitigation Devices

Item 6. Record what mitigation devices were carried by the vessel and when they were utilised
(if a second mitigation device was deployed, detail the reason why in the comments)

	Carried on board	Deployed during all tows	Deployed during some tows	Not deployed
Bird Baffler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tori line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (describe on reverse)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Item 7. Was a second seabird mitigation device deployed when required (e.g. high risk periods) by the VMP? ☐

Fish Waste Management

Item 8. What major fish waste control systems were implemented over the course of the trip?
(indicate as many systems as appropriate)

Meal plant ☐ Mincing* ☐ Batching** ☐ Holding*** ☐ Other ☐ None ☐

Item 9. Were there any periods of continuous offal and/or fish waste discharge during the tow?
(apart from minced offal discharge) ☐

Item 10. Was all fish waste (including offal and whole fish) held on board during shooting and hauling? ☐

Item 11. Were all 'stickers' removed from the net prior to shooting? ☐

Item 12. Was a grating or trap system used to prevent fish or offal accidentally lost to the factory floor or deck from being discharged overboard via scuppers or sump-pumps (whilst still allowing the free movement of water) ☐

General Procedures

Item 13. Were all plastics and netting retained on board? ☐

Item 14. Was shooting fishing gear near congregations of marine mammals avoided? ☐

Item 15. Was the amount of time the net spent on the surface minimised? ☐

Item 16. Were any turns conducted with the doors fully submerged and a headline depth of less than 50 m? ☐

Item 17. Were all seabird, marine mammal or protected shark captures recorded by the vessel? ☐

Item 18. Were all seabirds, marine mammals or protected sharks released alive handled with due care? ☐

Item 19. Was a Dolphin Dissuasive Device deployed on every JMA7 night tow? (JMA7 only) ☐

Item 20. Was gear shot between 02:30 and 04:30 (NZST) when targeting JMA North of 40.30° S? (JMA7 only) ☐

Item 21. Were net restrictors fitted into the centre net of a triple-net configuration when required?
(i.e. at times of high risk or once a 'trigger point' was reached) (SCI only) ☐

Appendix 3: Vessel management plan internal review form

Name of Vessel		Auditor's Name	Review Date	Conforms?
				Yes / No
Item		Location / Subject		OK
Non-Fish Protected Species Catch Return	Bridge	Completed and being furnished to MPI as required		<input type="checkbox"/>
Trigger points (report within 24hrs)	Bridge	Was a trigger point reached? If so, did the captain report this to shore management and or DWG? Did shore management contact DWG?		<input type="checkbox"/>
Bridge Log	Bridge	Is the Bridge Log being used for recording any mitigation equipment failure, multiple captures etc.?		<input type="checkbox"/>
MPI Observer Audit/Review	MPI	MPI Vessel Management Plan Review audit form(s) received from DWG & feedback given to crew.		<input type="checkbox"/>
Mitigation Methods	Procedure	Check recorded equipment matches equipment being used and on board, check all mitigation gear is being maintained to the correct specification.		<input type="checkbox"/>
	Personnel	Check contingency plans are properly recorded.		<input type="checkbox"/>
Offal Control Methods	Procedure	Check recorded equipment matches equipment being used on board, check VMP procedures are followed.		<input type="checkbox"/>
	Personnel	Check contingency plans are properly recorded.		<input type="checkbox"/>
Corrective Actions taken	Previous Review Form	Check that previous corrective actions have been carried out.		<input type="checkbox"/>
On-board Management	Bridge	Are officers and crew monitoring changing conditions and making changes to mitigation devices when risk to seabirds increases?		<input type="checkbox"/>
Training	Personnel	Check crew in key positions are well aware of the VMP and its procedures and are maintaining equipment and on board management systems to meet the VMP OP requirements.		<input type="checkbox"/>
Safety Hazard Management	Bridge	Have hazards associated with the equipment or procedures to adhere to the VMP been assessed/ identified and crew advised.		<input type="checkbox"/>
Changes advised or details of non-conformance (comments). Contact DWG for advice:				
Auditor's Signature			Date Results Advised	
Return Form to Deepwater Group Ltd:		DWG	VMP Internal Audit Form	
		Email	admin@deepwatergroup.org	
		Call	John 021 305 825 / Richard 021 457 123	

Appendix 4: Bird baffle details form

Bird Baffler Details Form

(Version 1 - Sept 2007)

1. Trip Information

Trip Number	Observer(s)
	and

2. Measurement Summary

Equipment Code	Date measured dd/mm/yy	Reason for measuring	Type of record (full or partial)
B	/ /		Full <input checked="" type="checkbox"/> Partial <input checked="" type="checkbox"/> based on B

3. Measure and record details for each of the 4 possible booms.

	Method A/C/E
Attachment Location	
Angle from Dead Astern (degrees)	E
Distance to Innermost Dropper (m)	
Distance to Outermost Dropper (m)	
Number of Droppers and Webbing Type (R, F, N)	
Maximum Dropper Spacing (m)	
Dropper line length (m)	
Dropper object length (m)	
Distance between sea surface and bottom of dropper object (m)	E
Dropper material types (list all)	
Dropper material colours (list all)	

1. PORT, SIDE	
Present <input checked="" type="checkbox"/> Absent <input checked="" type="checkbox"/>	
Distance from stern	o . m
Number	Type

2. PORT, AFT	
Present <input checked="" type="checkbox"/> Absent <input checked="" type="checkbox"/>	
Distance from side	. m
	o
Number	Type

3. STARBOARD, SIDE	
Present <input checked="" type="checkbox"/> Absent <input checked="" type="checkbox"/>	
Distance from stern	. m
	o
Number	Type


4. STARBOARD, AFT	
Present <input checked="" type="checkbox"/> Absent <input checked="" type="checkbox"/>	
Distance from side	. m
	o
Number	Type

4. Additional Comments

This form is number

for this trip. Is this form the last page? → Yes ☒ No ☒

Appendix 5: Tori line details form

Tori line details form				 Fisheries New Zealand Tini a Tangaroa		
(v3 August 2018)				Page ___ of ___		
Trip number	Observer code	Vessel name	Date measured (dd/mm/yy)			
If multiple tori lines were used, complete a separate form for each tori line. Give each tori line a gear code starting with "T1".				Tori line gear code	Reason for measuring*	
				T		
				Type of record*		
				based on T		
Tori mainline						
Line length	Line diameter	Aerial extent	Recovery rope (Y/N)			
m	mm	m				
Attachment point** Tension release (Y/N) <input type="checkbox"/>						
Height above water	Distance (laterally) from centre of the stern	Distance from stern to attachment point	Adjustable (Y/N)			
m	m to port (P) or starboard (S)	m				
Dual attachment point (if applicable) Tension release (Y/N) <input type="checkbox"/>						
Height above water (m)	Distance (laterally) from centre of the stern					
	m to port (P) or starboard (S)					
Distance from join (if present) to		Streamers between second attachment point and join (Y/N)				
Stern	Attachment point					
m	m					
Long streamers Y/N <input type="checkbox"/> Material* <input type="checkbox"/>						
Max dist between long streamers	Paired or single	Number of long streamers/pairs	Max length	Min length	Diameter	Colour code*
m	(P/S)		m	m	mm	
Distance to first long streamer that reaches water		Long streamers cover aerial extent (Y/N)		Number of long streamers that touch water		
m						
Light streamers Y/N <input type="checkbox"/> Material* <input type="checkbox"/>						
Distance between light streamers	Paired or single	Number of light streamers/pairs	Max length	Min length	Diameter	Colour code*
m	(P/S)		m	m	mm	
Towed object (used to induce drag)						
Towed object Y/N	Towed object code*	Size of towed object*				
* Refer to instructions on reverse.						
Comments						

Appendix 6: Warp scarer details form

1. Write the trip number

2. Describe one warp scarer in each column and assign it a unique code. If a warp scarer is changed during the trip, record it in a new column.

Warp scarer equipment code		W		W		W	
Observer(s)		.	and	.	.	.	and
Date Measured (dd/mm/yy)		/	/	/	/	/	/
Reason for measuring							
Type of record (full or partial)		Full	Partial based on	Full	Partial based on	Full	Partial based on
Attachment Location (Port / Starboard/Central)							
Main line diameter (mm)			mm		mm		mm
Towed object and weight (kg)		Object	Weight	Object	Weight	Object	Weight
Type and number of connectors		Type	Number	Type	Number	Type	Number
Streamers (if present)		Number	Max Gap	Number	Max Gap	Number	Max Gap
Number of branched streamers and maximum gap (m)		Min	Max	Min	Max	Min	Max
Number of branches per streamer		Min	Max	Min	Max	Min	Max
Streamers length (m)		Min	Max	Min	Max	Min	Max
Streamers diameter (mm)		Min	Max	Min	Max	Min	Max
Extent (m) of scarer and maximum gap (mm) of main line visible material		Extent	Max Gap	Extent	Max Gap	Extent	Max Gap
Length of main line visible material (mm)		Min	Max	Min	Max	Min	Max
Colours (list all)							
Materials (list all)							
Comments:		Comments:		Comments:		Comments:	

3. This form is page number for this trip. Is this form the last page for this trip? → Yes ☐ No ☐