Aquaculture Stewardship Council Salmon Standard
Second Surveillance Assessment Report

Tassal Operations Pty Ltd Western Zone MF 214 Middle Harbour, MF 219 Gordon and MF 266 Franklin

Onsite Dates: 22-24 February 2016
Report release Date: May 23, 2016

ASC Audit Report - Opening

1 Title Page

1.1	Name of Certificate Holder	Tassal Operations Pty Ltd
1.2	Report Title	Surveillance Audit Report
1.3	CAB name	SCS Global Services
1.4	Name of Lead Auditor	Dr. Sabine Daume
1.5	Names and positions of report authors and reviewers	Dr. Sabine Daume David 'Dos' O'Sullivan - Technical Expert Joseph Kochanski - Social Auditor
1.6	Client's Contact person: Name and Title	Heidi Hansen - Environmental Certification and Sustainability Officer
1.7	Date	February 22-24, 2016

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3 Glossary

Terms and abbreviations that are specific to this audit report and that are not otherwise defined in the ASC glossary

ABM Area Based Management
ADAS Australian Diver Accreditation Scheme
ADD Acoustic Deterrent Device
AHD Acoustic Harassment Device
AGD Amoebic Gill Disease
AMA Area Management Agreement
AMAMG Area Management Agreement Management Group
AMBI AZTI Marine Biotic Index
APC Australian Packaging Covenant
APVMA Australian Pesticides and Veterinary Medicines Authority
ASC Aquaculture Stewardship Council
ASI Accreditation Services International
ASX Australian Stock Exchange
AWU Australian Workers' Union
AZE Allowable Zone Effect
BAP Best Aquaculture Practices
BET Bigeye Tuna
BMP Best Management Practices
BOD biochemical oxygen demand
BQI Benthic Quality Index
CAB Conformity Assessment Body
CoC Chain of Custody
CSIRO Commonwealth Scientific and Industrial Research Organisation
DHI DHI Water & Environment
DNA Deoxyribonucleic Acids

DO Dissolved Oxygen
DPIPWE Department of Primary Industry, Parks, Water and Environment
EIS Environmental Impact Statement
EMP Environmental Management Plan
EPA Environmental Protection Authority
EPO Eastern Pacific Ocean
EUL Estimated Unexplained Loss
FCR Feed Conversion Ratio
FFDRo Fish Oil Forage Fish Dependency Ratio
FFDRm Fishmeal Forage Fish Dependency Ratio
FFEMP Fish Farm Environmental Management Plan
FFL Fish Farm License
FHMP Fish Health Management Plan
FIP Fisheries Improvement Project
FM Fish meal
FO Fish oil
FRDC Fisheries Research & Development Corporation
GHG Green House Gas
GMO Genetically Modified Organism
GO Gordon Farm
GWP Global Warming Potential
Ha Hectares
HAC Huon Aquaculture Group
HO Head Office
HoS Head of Sustainability and Fish Health
IALA International Association of Marine Aids to Navigation and Lighthouse Authorities
IFFO RS The International Fishmeal and Fish Oil Organisation - Responsible Supply
IFS Inland Fisheries Service
IMAS Institute of Marine & Antarctic Studies, University of Tasmania
ISEAL International Social and Environmental Accreditation and Labelling Alliance
ISO International Organization for Standardization
ITI Infaunal Trophic Index
IUCN International Union for Conservation of Nature
IUU Illegal, Unregulated, and Unreported
JSA Job Safety Analysis
LGA Life Cycle Analysis/Assessment
LPG Liquid Petroleum Gas
MAS Marine Aeromonad Disease of Salmonids
MDS multidimensional scaling
MF Marine Farm
MFB Marine Farming Branch
MFDP Marine Farm Development Plan
MH Macquarie Harbour
MHAMA Macquarie Harbour Area Management Agreement
MiH Middle Harbour Farm
MOP Marine Operations
MSC Marine Stewardship Council
MSDS Material Safety Data Sheet
MT Metric Tonne
NC Nonconformity

OH&S Occupational Health and Safety
OIE World Organization for Animal Health
OTC Oxytetracycline
PAL Petuna Aquaculture Ltd
PPE Personal Protective Equipment
PSM Pacific Seafood Management
QA Quality Assurance
RCD Residue Current Device
ROV Remotely Operated Vehicle
RTRS Roundtable for Responsible Soy
SAD Salmon Aquaculture Dialogue
SAI Social Accountability International
SARDI South Australian Research and Development Institute
SCAT Southern Coastcare Association of Tasmania
SMFH Senior Manager Fish Health
SOP Standard Operating Procedure
SPP Special Plumbing Permit
SRAC Sustainability Report Advisory Committee
SROI Social Return on Investment
TAB Tasmanian Aquabirnavirus
TARFISH Tasmanian Association for Recreational Fishing
TasSR Tasmanian Salmonid Rickettsiosis
TCT Tasmanian Conservation Trust
TFDA Tasmania Fisheries Development Authority
TIMS Tassal's Integrated Management System
Tpa tonnes per annum
TRCI Tasmanian River Condition Index
TSGA Tasmanian Salmonid Growers Association
TSHSP Tasmanian Salmonid Health Surveillance Program
TSIC Tasmanian Seafood Industry Council
TWG Technical Working Group
TWWHA Tasmanian Wildlife World Heritage Area
USA United States of America
WCC West Coast Council
WDP Waste Disposal Plan
WHS Workplace Health and Safety
WHO World Health Organization
WIP Wildlife Interaction Plan
WPA Workplace Partnerships Agreement
WWF World Wildlife Fund For Nature

4 Summary

A concise summary of the report and findings. The summary shall be written to be readable to the stakeholders and other interested parties.

4.1	A brief description of the scope of the audit	The scope of this surveillance audit against the ASC Salmon Standard v1.0 includes the following sites from Tassal's Western Zone cluster: MF 214 Middle Harbour, MF 219 Gordon, and MF 266 Franklin.
4.2	A brief description of the applicant's operations	Tassal Group Ltd, founded in 1986, is an ASX 300 public company listed on the Australian Securities Exchange. Tassal is the largest salmon aquaculture company in Australia, employing over 1,200 people. A vertically integrated company, Tassal operates two salmon hatcheries, four processing facilities, two retail outlets and marine farms in four zones throughout the state. Tassal is producing salmon predominately for the Australian market, and has a retail presence in over 3,357 outlets around Australia. Tassal farms Atlantic salmon (*Salmo salar*) in open net cage farming systems that are polar circles with 120 m circumference, and maximum stocking densities of 15 kg/m³.
4.3	A summary of the major findings	No major non-conformities were raised during this audit.
4.4	The Audit determination	The audit team recommends continued certification.

5 CAB Contact Information

5.1	CAB Name	SCS Global Services

5.2	CAB Mailing Address	99 Drummond Street Carlton, VIC, 3053 Australia
5.3	Email Address	jkochanski@scsglobalservices.com
5.4	Other Contact Information	

6 Background on the Applicant

6.1	Information on the Public Disclosure Form (Form 3) except 1.2-1.3 All information updated as necessary to reflect the audit as conducted.	N/A - Surveillance Audit
6.2	A description of the operation being evaluated	Tassal operates 3 farming leases/ grow out sites in Macquarie Harbour in Western Tasmania. The company's head office is located in Hobart, Tasmania.
6.3	Other certifications held by the applicant	The Macquarie Harbour sites have the following certifications: AS 4801, OHS AS 18001:2007. At the related processing facilities, Tassal also has other certifications such as ISO 9001:2008, HACCP, Halal and Kosher.
6.4	Estimated annual production volumes of the unit of certification	Commercially sensitive information submitted to ASC separately.

7 Scope

7.1	The Standard(s) against which the audit was conducted.	ASC Salmon Standard v1.0 ASC Salmon Audit Manual v1.0
7.2	The species produced at the applicant farm	Atlantic Salmon (*Salmo salar*)
7.3	A description of the scope of the audit including a description of whether the unit of certification covers all production or harvest areas (i.e. ponds) managed by the operation or located at the included sites, or whether only a sub-set of these are included in the unit of certification. If only a sub-set of production or harvest areas are included in the unit of certification these shall be clearly named.	The scope of this audit includes the 3 Tassal Salmon farms in Macquarie Harbour, Tasmania. These 3 farms represent one cluster of farms for the purpose of ASC auditing. During this audit, the Franklin farming lease (originally an independent certificate) was combined with the original Macquarie Harbour certificate (Middle Harbour and Gordon leases).
7.4	The names and addresses of any storage, processing, or distribution sites included in the operation (including subcontracted operations) that will potentially be handling certified products, up until the point where product enters further chain of custody.	None exist.
7.5	Description of the receiving water body(ies).	Macquarie Harbour

8 Audit Plan

8.1	The names of the auditors and the dates when each of the following were undertaken or completed: conducting the audit, writing of the report, reviewing the report, and taking the certification decision.	Dr. Sabine Daume - Lead Auditor David O'Sullivan - Technical Expert Joseph Kochanski - Social Auditor Audit completed on February 22-14, 2016 Report writing: February 22 - March 21 Report Review: March 21 - March 25 Certification Decision: May 16, 2016
8.2	Previous Audits (if applicable):	May 11-15, 2015
8.3	Summary of previous ASC certification audit(s) and conclusion(s), with recommendations or conditions.	Continued certification recommended for Middle Harbour and Gordon farm leases. Initial certification recommended for Franklin farm lease. Minor NCs were issued at the Franklin Farm audit, but no conditions for certification were required.
8.4	Audit plan as implemented including:	
8.5	Desk reviews and other activities undertaken before or after any site visits.	Reviewed previous audit reports prior to the audit.
8.6	Site visits with date(s) and location(s).	Macquarie Harbour - February 23-24 Head Office (Hobart) - February 25

8.7 Names and affiliations of individuals consulted or otherwise involved in the audit including: representatives of the client, employees, contractors, stakeholders and any observers that participated in the audit.

David Kiemele - Head of Farming
Heidi Hansen - Environmental Certification and Sustainability Officer
Fiona Ewing - Community Engagement Officer
Craig Selkirk - Senior Manager - Freshwater
Matt Barrenger - Senior Manager - Environment
Ian Miles - Head of Safety
Angela Quinn - HR Manager
Christine Huynh - Senior Manager - Fish Health (Veterinarian/BVSc)
Tim Stephens - Fish Performance Manager - Operations (MH)
Chris Gatwardd - Fish Performance Manager - Technical (MH)
Steve Thompson - Compliance Coordinator (MH)
QA Representative/Supplier Verification
Dive Team Leader 1
Feeder 1
Feeder 2
Feeder 3
Harvest Vessel Skipper
Harvest Vessel Engineer
Net Cleaner/Operator
Environmental Assistant
Graeme Gardner, Indigenous Community Leader (ALCT)
Clyde Mansell, Indigenous Community Leader (ALCT)

8.8 Stakeholder submissions, including written or other documented information and CAB written responses to each submission.

Name of stakeholder (if permission given to make name public)	Relevance to be contacted	Date of contact	CAB responded Yes/No	Brief summary of points Raised	Use of comment by CAB	Response sent to stakeholder
Graeme Gardner, Aboriginal Land Council of Tasmania (ALCT)	Indigenous Community Leader in Tasmania	2/22/2016	Yes	The auditor met with Graeme and Clyde of the ALCT to discuss the Tassal's engagement with the indigenous community of Tasmania. Both gentlemen indicated that Tassal had been in communication with them at various points in time and both parties (Tassal and the ALCT) felt good about the relationship. Various collaboration efforts are planned for 2016.	The interview was used to confirm Tassal's engagement and consulation with the local communities in which they operate.	Yes, via in-person meeting
Clyde Mansell, Aboriginal Land Council of Tasmania (ALCT)	Indigenous Community Leader in Tasmania	2/22/2016	Yes			

Nonconformity Report Form

Definitions:

Minor Non-conformity: Any non-conformity in which the client does not comply with the standard and those non-conformities do not jeopardize the integrity of the certified product. This includes: *1.) Where failure to comply with a requirement which is not likely to result in the breakdown of a system to meet an ASC requirement; 2.) Where the failure is a single observed lapse or isolated incident; 3.) Where there is no systemic failure to conform to ASC requirements; 4.) Where the impacts are limited in their temporal and spatial scale; 5.) Where there is minimal risk of the shipment of a product that does not conform to ASC requirements; 6.) Where the failure does not meet the definition of a Major Non-conformity; 7.) Where the failure will not produce a non-conforming product.*

Major Non-conformity: Any non-conformity that has one or more of the following: *1.) The absence or total breakdown of a system that is likely to result in a failure to achieve the objective of the relevant ASC Criteria or another applicable certification requirement; 2.) Would result in the probable shipment of product that does not conform to ASC requirements; 3.) Is likely to result in a failure of the system or materially reduce the ability of the client to assure the integrity of the certified product; 4.) Is shown to continue over a long period of time; 5.) Is repeated; 6.) Is systematic or is the result of the absence or a total breakdown of a system; 7.) Affects a wide area and/or causes significant damage; 8.) Is not corrected or adequately responded to by the client once identified; 9.) Where two (2) or more minor non-conformities may together meet any of the above criteria.*

NOTE: Open Non-conformities from the 2015 surveillance audit reports for Macquarie Harbour (Middle Harbour + Gordon) were combined with the NCs identified at the 2015 Franklin Farm site. The 2 existing ASC Salmon certificates held by Tassal will be combined into one cluster certificate pending the completion of this audit.

NON-CONFORMITIES FROM THE PREVIOUS SURVEILLANCE AUDIT (2015)

	Text to be provided by:			
NCF 2015 - 1	CAB	NC Reference	2015 MH NCR1	
	CAB	NC Detected by	David O'Sullivan (DOS)	
	CAB	Date Detected	5/11/2015	
	CAB	Audit Reference	MF 266	
	CAB	Status of NC	*Open*	
	CAB		*Closed*	Closed
	CAB	Grade of NC	*Critical*	
	CAB		*Major*	
	CAB		*Minor*	Minor
	CAB		*Observation*	& Recommendation
	CAB	Deadline for closing the nonconformity		12 months
	CAB	Requirement Reference	*Source Document*	ASC Salmon Standard V1.0 June 2012
	CAB		*Clause Number*	2.1.2b
	CAB		*Text of Requirement*	Indicator: Faunal index score indicating good [4] to high ecological quality in sediment outside the AZE, following the sampling methodology outlined in Appendix I-1 Requirement: AZTI Marine Biotic Index (AMBI [5]) b. Inform the CAB whether the farm chose option #1, #2, #3, or #4 to demonstrate compliance with the requirement
	CAB	Description of the nonconformity.		Significant visual impact was observed at and near to 35m compliance sites, so MF 266 was not compliant with environmental standards as defined in the Licence conditions, Schedule 3.
	CAB	Statement of evidence detected		Refer above
	Client	Statement of any errors of fact in the nonconformity (include the name of the author and date submitted)		None provided
	CAB	Response (include the name of the author and date submitted)		Not required
	Client	Statement of the root cause of the nonconformity (include the name of the author and date submitted)		* Organic drift from cages on new lease too close to lease edge * New site so sediments have not fully adjusted to the organic loadings from the farming operation
	CAB	Response (include the name of the author and date submitted)		DOS 26022016 RCA accepted
	Client	Statement of the corrective actions proposed and taken (include the name of the author and date submitted)		• Removed cages from four pen bay positions (Positions 1, 2, 43 and 44) • Commitment to four monthly regulation surveys
	CAB	Evaluation by CAB (include the name of the author and date submitted)		DOS 26022016 CA accepted

	Client	Statement of the preventive actions proposed and taken (include the name of the author and date submitted)	• Site (MF219) offered up for TRF and FRDC projects for the next 3-4 years • Depositional outputs to be produced for next planned stocking to assess where organics hotspots may be • Continual DO monitoring onsite with new monitoring equipment (am and pm) • Further ADCP data to be collected at the site to monitor hydrodynamics throughout the water column • Full review of feed management and equipment to be undertaken • Development of new position Fish performance Manager - Technical to manage feed and environmental conditions and influences
	CAB	Evaluation by CAB (include the name of the author and date submitted)	DOS 26022016 PA accepted
	CAB	Date on which the nonconformity was closed.	2/26/2016

NCF 2015 - 2	CAB	NC Reference	2015 MH NCR2
	CAB	NC Detected by	David O'Sullivan (DOS)

EVALUATION RESULTS ASC SALMON v1.0

PRINCIPLE 1: COMPLY WITH ALL APPLICABLE NATIONAL LAWS AND LOCAL REGULATIONS

Criterion 1.1 Compliance with all applicable local and national legal requirements and regulations

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence
1.1.1	**Indicator:** Presence of documents demonstrating compliance with local and national regulations and requirements on land and water use **Requirement:** Yes **Applicability:** All	a. Maintain digital or hard copies of applicable land and water use laws.	A. Review compliance with applicable land and water use laws.	a. The Tasmanian Salmon Industry – Statutory Compliance List details over 80 Commonwealth Legislation, Tasmanian Legislation and Other Guidelines – policies, codes of practice, strategies, and management plans. Tassal Group Ltd is an ASX 300 publically listed company on the Australian Securities Exchange. As part of the Corporate Governance they must comply with a number of Business & Operating licenses (as detailed in Land and Water use laws) to operate the 3 farms. Regional legislative requirements are also contained in these documents for which hard copies and electronic copies are on site: - Macquarie Harbour Area Management Agreement (AMA) and associated schedules - Marine Farm Development Plans (MFDP) - Macquarie Harbour Environmental Impact Statement and Appendices. Note: the MFB hold it in their right to inspect anything they wish on Tassal's farms pertaining to environmental regulations they set in the MFDP including directions on sampling programs. The Regional Manager (RM) is responsible for maintaining lease boundaries & plan area controls. The three MH licenses MF214, MF 219 & MF 266 include: - 30-year Marine Farming Leases (including lease boundaries and lighting requirements), expires 14/01/13 to 31/1/43 and lease boundaries/corners set since 14/01/13; - Annual Marine Farming Licence for each lease with DPIPWE for Atlantic salmon culture from 1/12/15 to 30/11/16; - Freshwater Operations Permits (Fish Farm Licences) are with Inland Fisheries, 10 year licences, held at HO. Land Operations: - Net Paddock lease (correspondence from Parks & Wildlife 29/11/12 and 1/07/14 to put new lease in place – ongoing, Tassal plan to remove all items from this site by the end of the year) - Forestry Lease (Mort Tip) Forestry Tasmania #16516 for fish waste disposal, variation signed 14/01/16 for 6 months (the new Fish Byproducts Plant at Triabunna provides another option) - On-going Residential Property Rental Agreements at 11 Harvey Street lease from 28/11/11, 4 Harvey Street lease from 28/03/11, plus 2 others. - the Shared Aquaculture Hub has been occupied since early 2015 by both Tassal and HAC as part of the TSGA initiative. There are still emergency tie-up points for vessels at Esplanade Base. Details on the four licenced hatcheries are provided in Section 8 (a 5th is being commissioned now and will be producing by mid-year. Marine operations: All of the 17 vessels are in current MAST Certificate of Operation which expires 13/08/18. Four vessels inspected during the audit were in current survey (AMSA, 5-year period): - Ricochet II – general purpose boat, expires 28/10/19 - Rampage – diver boat, expires 10/04/19 - Dynamic V – MIC (Marine Cleaner & Inspector), expires 10/11/18 - Mareeba – general purpose/feed transport expires 3/11/18. The records for Tassal I – harvest vessel are held on the vessel (not checked). - The MAST Mooring Register lists six for MH 01/07/14 – 30/06/15. As per legislation on the Ricochet II an induction was undertaken for all of the audit team using the Vessel Induction Record (TRN-112 Issue 4). MAST Vessel Equipment List which includes flares (x5 current), fire equipment (x2 current test with fire bucket), bilge pump (operating), anchors & towing equi spare batteries (x2), EPIRB, GPS, VHF radio (working) and navigation lights (working). Activities viewed/inspected: Operations viewed or facilities inspected included feeding (Feed barges GMT and Hamersley), diving (mort recovery), new Mortality Extraction System (reduces need for divers), new cleaner in Dynamic V with larger Bighead MIC2 spinning disc cleaning head, pen towing by Mareeba, new 32 panels in n bird/seal netting on all pens, multi-purpose vessel Ricochet II, wharf operations, feed and chemical storages in Shed & outside Workshop, bulk fuel storage (diesel & ULP), firefighting tanks and infrastructure, feed bag movements with forklifts (to Mareeba), new Baader 4 channel fish stunner/bleeder s diving for mortality recovery and dive logs, dive equipment service spreadsheet with links to test certificates, training matrix & records, and WHS/diver meetings. b. Refer to 1.1.1a above. c. The legal compliance is discussed in Tassal Sustainability Report 2014 Corporate Government & Ethics (p11) and Environmental Compliance is specifically covered on pages 41-43. Annual Compliance Survey results for leases MF 214, 219 & 266 (discussed in Principle 2) are sent to MFB of DPIPWE for assessment. The MFB reserve the right to inspect anything they wish on Tassal farms pertaining to environmental regulations they set in the MFDP including directing them to do sam There is a high level of collaboration between the 3 salmon companies for harbor-wide plans as all are members of the (Tasmanian Salmonid Growers Association (TSGA): - MH Area Management Agreement V1 Dec'12 18p to promote and implement measures for the sustainable development of Atlantic salmon and Ocean trout aquaculture in the area defined. - Schedule 1 MH Fish Health Management Plan (V1.0 Dec'12 FHMP, 35p) prepared jointly by three Veterinarians on behalf of Tassal, PA & HAC, includes notifiable diseases. - Schedule 3 MH Area Management Agreement (V1.0 Dec '12, 37p) EMP for joint sustainable management. - Schedule 2 MH Health Certificate Templates (V1.0 Dec'12, 6p). - Schedule 4 MH Data collection (V1.0 Dec'12, 5p) FFEMP and FHMP covered above in 1.4; current data on FishTalk. MH AMA Working group minutes for 22/5/13 and 19/9/13 include discussions and agreements on water quality monitoring as well as fish health and other AMA group initiatives, including R&D. d. Permits and maps showing that the farm does not conflict with national preservation areas were observed. MF Development Plan Oct 2005 (34p) includes updated map with all leases for all companies (approved 28/05/12).
		b. Maintain original (or legalised copies of) lease agreements, land titles, or concession permit on file as applicable.	B. Confirm client holds original (or legalised copies of) lease agreements or land titles.	
		c. Keep records of inspections for compliance with national and local laws and regulations (if such inspections are legally required in the country of operation).	C. Review inspection records for compliance with national and local laws and regulations (as applicable).	
			D. Verify facility does not conflict with national preservation areas and has required operational permits if sited in such an area (see 2.4.2).	
1.1.2	**Indicator:** Presence of documents demonstrating compliance with all tax laws **Requirement:** Yes **Applicability:** All	a. Maintain records of tax payments to appropriate authorities (e.g. land use tax, water use tax, revenue tax). Note that CABs will not disclose confidential tax information unless client is required to or chooses to make it public.	A. Verify client has records of tax payments to appropriate authorities. Do not disclose client tax information which is confidential. An independently audited company annual report may be used to confirm tax status.	a. Annual taxation payments are detailed in the Annual Reports, for example FY13/14 & FY14/15 on p5 of 2015 Annual Report (82p).. Tassal engages accounting firm KPMG as their registered tax agent. b. Tassal uses the ATO Legal Database website for Australian Taxation Legislation for the jurisdiction in which Tassal operates (http://law.ato.gov.au/atolaw/Browse.htm?Node=0&ImA=CollapseAll). Deloitte's declaration signo c. Federal gov't registrations include: - Tassal Group Ltd - ACN 106 067 270, ABN 15 106 067 270 - Tassal Operations Pty Ltd - ACN 106 324 127, ABN 38 106 324 127 Tasmanian Gov't Marine Farm permits and licenses detailed above in 1.1.1.
		b. Maintain copies of tax laws for jurisdiction(s) where company operates.	B. Confirm client has a basic knowledge of tax requirements for farm.	
		c. Register with national or local authorities as an "aquaculture activity".	C. Verify client is registered with local or national authorities.	
1.1.3	**Indicator:** Presence of documents demonstrating compliance with all relevant national and local labor laws and regulations **Requirement:** Yes **Applicability:** All	a. Maintain copies of national labor codes and laws applicable to farm (scope is restricted to the farm sites within the unit certification.)	A. Confirm client has specified documentation.	a. Tassal has been annually named a Tasmanian Employer of Choice since 2012. Sustainability Report 2014 "Tassal – a great place to work" (p44-46) reports on workforce profile, employment conditions and Learning & Develc Document "Conditions of Employment Policy (IMS-P1047 Issue 3, 8/1/13, 1p)" includes General principles, conditions of employment, related policies & agreements. Letter of Offer (draft 28/4/11 template, 6p) lists legal & award conditions. The National Employment Standards Entitlements (NES 2010, 2p) lists 10 entitlements for Fair Work (download 18/9/12); this document is given at induction and on display boards. The Legislation Register lists a wide range of acts, regulations & legislation including Australian Fair Work Act 2009, Criminal Code Act 1995, Tasmanian Anti-Discrimination Act 1998, Tasmanian Workers Rehabilitation & Comp Discrimination Act 1992, Racial Discrimination Act 1975 and Environment and Pollution Control Act 1994. Visit www.tassal.com.au/governance-policies/ for further information about Tassal's Corporate Governance and Code of Conduct. b. Inspections of the farm are not undertaken by Federal or State Government agencies unless there has been a reportable incident, or worker complaint. The Australian Workers Union doesn't conduct scheduled inspections of the work site. The union seeks permission from Tassal before they come on site. Tassal has never refused entry. There have been several visits to MH wit Agreement.
		b. Keep records of farm inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation).	B. Review inspection records for compliance with national labor laws and codes (as applicable).	
		a. Obtain permits for water quality impacts where applicable.	A. Verify that client obtains permits as applicable.	a. At sea: - Marine Farming Licences (refer to 1.1.1a) detail the monitoring/sampling sites, parameters, methods, equipment, and broad scale monitoring as per the Macquarie Harbour Area Management Agreement (AMA) and associate - As part of the MF planning process Tassal farms are strategically placed in areas suitable for farming operations well away from areas officially designated as protected areas (such areas are prohibited for commercial and rec
		b. Compile list of and comply with all discharge laws or regulations.	B. Review evidence of compliance with discharge laws or regulations.	

1.1.4	**Indicator:** Presence of documents demonstrating compliance with regulations and permits concerning water quality impacts **Requirement:** Yes **Applicability:** All	c. Maintain records of monitoring and compliance with discharge laws and regulations as required.	C. Verify that records show compliance with discharge laws and regulations.	- Annual Compliance survey requirements, reports and correspondence viewed (See Principle 2) Land operations summarised in 1.1.1, covered by Trade Waste Agreements, no direct effluent or wastes go into the environment. Extensive baseline surveys and environmental impact assessments are carried out before a farming license and the appropriate approval is handed down from the Tasmanian government. Schedule 3v & 3b - schedule for annua BEMP, ROV surveys. - Annual monitoring (in house, and external using DHI) compliance surveys sent to MFB (DPIPWE) for assessment– these include sediments, carbon, N2, phosphates and nitrogenous wastes with trigger levels. - DPIPWE lease compliance sign-off letters to report that video footage & associate monitoring reports reviewed in Principle 2 b. Refer above under 1.1.4 a. c. Refer above under 1.1.4 a.

PRINCIPLE 2: CONSERVE NATURAL HABITAT, LOCAL BIODIVERSITY AND ECOSYSTEM FUNCTION

Criterion 2.1 Benthic biodiversity and benthic effects [1]

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	
Footnote	[1] Closed production systems that can demonstrate that they collect and responsibly dispose of > 75% of solid nutrients from the production system are exempt from standards under Criterion 2.1. See Appendix VI for requirements on transparency for 2.1.1, 2.1.2 and 2.1.3.			

Instruction to Clients and CABs on Criterion 2.1 - Modification of the Benthic Sampling Methodology

For farms located in a jurisdiction where specific benthic sampling locations are required under law, clients may request to modify the benthic sampling methodology prescribed in Appendix I-1 to allow for sampling at different locations and/or changes in the total number of samples. Where modifications are sought, farms shall provide a full justification to the CAB for review. Requests for modification shall be supported by mapping taken from inside and outside of a defined AZE.

CABs shall evaluate client requests to modify benthic methodology based on whether there is a risk that such changes would jeopardize the intent and rigor of the ASC Salmon Standard. If the CAB determines that proposed modifications are low risk, the CAB shall ensure that details of the modified benthic sampling methodology are fully described and justified in the audit report.

		Note: Under Indicator 2.1.1, farms can choose to measure redox potential (Option #1) or sulphide concentration (Option #2). Farms do not have to demonstrate that they meet both threshold values.		
2.1.1	**Indicator:** Redox potential or [2] sulphide levels in sediment outside of the Allowable Zone of Effect (AZE) [3], following the sampling methodology outlined in Appendix I-1 **Requirement:** Redox potential > 0 millivolts (mV) or Sulphide ≤ 1,500 microMoles / l **Applicability:** All farms except as noted in [1]	a. Prepare a map of the farm showing boundary of AZE (30 m) and GPS locations of all sediment collections stations. If the farm uses a site-specific AZE, provide justification [3] to the CAB.	A. Review map to verify appropriate siting of sampling stations (Appendix I-1) and evidence (if applicable) to justify use of a site specific AZE.	The ASC approved variance is still in place.
		b. If benthos throughout the full AZE is hard bottom, provide evidence to the CAB and request an exemption from 2.1.1c-f, 2.1.2 and 2.1.3.	B. Review evidence of benthic type and confirm whether to proceed to 2.1.1c.	
		c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.	C. Record which option the client chose.	
		d. Collect sediment samples in accordance with the methodology in Appendix I-1 (i.e. at the time of peak cage biomass and at all required stations).	D. Review documentary evidence (notes, GPS coordinates) showing sampling time, stations, and frequency. Cross-check against farm maps and harvest records.	
		e. For option #1, measure and record redox potential (mV) in sediment samples using an appropriate, nationally or internationally recognized testing method.	E. Review results to verify that redox potential of sediments complies with the requirement at each sampling station outside the AZE. Confirm that the testing method used by the farm is appropriate.	
		f. For option #2, measure and record sulphide concentration (uM) using an appropriate, nationally or internationally recognized testing method.	F. Review results to verify that sulphide concentration in sediments complies with the Standard at each sampling station outside the AZE. Confirm that the testing method used by the farm is appropriate.	
		g. Submit test results to ASC as per Appendix VI at least once for each production cycle. If site has hard bottom and cannot complete tests, report this to ASC.	G. Confirm that client has submitted test results to ASC (Appendix VI).	
Footnote	[2] Farm sites can choose whether to use redox or sulphide. Farms do not have to demonstrate that they meet both.			
Footnote	[3] Allowable Zone of Effect (AZE) is defined under this standard as 30 meters. For farm sites where a site-specific AZE has been defined using a robust and credible modeling system such as the SEPA AUTODEPOMOD and verified through monitoring, the site-specific AZE shall be used.			

2.1.2	**Indicator:** Faunal index score indicating good [4] to high ecological quality in sediment outside the AZE, following the sampling methodology outlined in Appendix I-1 **Requirement:** AZTI Marine Biotic Index (AMBI [5]) score ≤ 3.3, or Shannon-Wiener Index score > 3, or Benthic Quality Index (BQI) score ≥ 15, or Infaunal Trophic Index (ITI) score ≥ 25 **Applicability:** All farms except as noted in [1]	Notes: - Under Indicator 2.1.2, farms can choose one of four measurements to show compliance with the faunal index Requirement: AMBI (Option #1); Shannon-Wiener Index (Option #2); BQI (Option #3); or ITI (Option #4). Farms do not have to demonstrate that they meet all four threshold values. - If a farm is exempt due to hard bottom benthos (see 2.1.1b), then 2.1.2 does not apply and this shall be noted in the audit report.		
		a. Prepare a map showing the AZE (30 m or site specific) and sediment collections stations (see 2.1.1).	A. Review map to verify appropriate siting of sampling stations (see 2.1.1).	The ASC approved variance is still in place.
		b. Inform the CAB whether the farm chose option #1, #2, #3, or #4 to demonstrate compliance with the requirement.	B. Record which option the client chose for scoring faunal index.	
		c. Collect sediment samples in accordance with Appendix I-1 (see 2.1.1).	C. Confirm sample collection followed Appendix I-1 (see 2.1.1).	
		d. For option #1, measure, calculate and record AZTI Marine Biotic Index [5] score of sediment samples using the required method.	D. Review results (as applicable) to verify that AMBI score of sediments is ≤ 3.3 at each sampling station outside the AZE.	
		e. For option #2, measure, calculate and record Shannon-Wiener Index score of sediment samples using the required method.	E. Review results (as applicable) to verify that Shannon Wiener score of sediments is > 3 at each sampling station outside the AZE.	
		f. For option #3, measure, calculate and record Benthic Quality Index (BQI) score of sediment samples using the required method.	F. Review results (as applicable) to verify that BQI score of sediments is ≥ 15 at each sampling station outside the AZE.	
		g. For option #4, measure, calculate and record Infaunal Trophic Index (ITI) score of sediment samples using the required method.	G. Review results (as applicable) to verify that ITI score of sediments is ≥ 25 at each sampling station outside the AZE.	
		h. Retain documentary evidence to show how scores were obtained. If samples were analyzed and index calculated by an independent laboratory, obtain copies of results.	H. Confirm that an approved method was used or that a qualified independent laboratory performed the sampling and calculation of faunal index.	
		i. Submit faunal index scores to ASC (Appendix VI) at least once for each production cycle.	I. Confirm that client submitted faunal index scores to ASC (Appendix VI).	
Footnote	[4] "Good" Ecological Quality Classification: The level of diversity and abundance of invertebrate taxa is slightly outside the range associated with the type-specific conditions. Most of the sensitive taxa of the type-specific communities are present.			
Footnote	[5] http://www.azti.es/en/ambi-azti-marine-biotic-index.html.			

	Indicator: Number of macrofaunal taxa in the sediment within the	a. Document appropriate sediment sample collection as for 2.1.1a and 2.1.1c, or exemption as per 2.1.1b.	A. Confirm appropriate sediment sample collection as for 2.1.1a and 2.1.1c or exemption as per 2.1.1b.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. For sediment samples taken within the AZE, determine abundance and taxonomic composition of macrofauna using an appropriate testing method.	B. Confirm that an appropriate method was used or that a suitably qualified independent laboratory performed the analysis.	

2.1.3	AZE, following the sampling methodology outlined in Appendix I-1 **Requirement:** ≥ 2 highly abundant [6] taxa that are notpollution indicator species **Applicability:** All farms except as noted in [1]	c. Identify all highly abundant taxa [6] and specify which ones (if any) are pollution indicator species.	C. Confirm that all samples from within the AZE have ≥ 2 highly abundant [6] taxa (exclusive of pollution indicator species).	
		d. Retain documentary evidence to show how taxa were identified and how counts were obtained. If samples were analyzed by an independent lab, obtain copies of results.	D. Confirm that a suitable method was used or that a suitability qualified independent laboratory performed the scoring of faunal index.	
		e. Submit counts of macrofaunal taxa to ASC (Appendix VI) at least once for each production cycle.	E. Confirm that client has submitted scores to ASC (Appendix VI).	
Footnote	[6] Highly abundant: Greater than 100 organisms per square meter (or equally high to reference site(s) if natural abundance is lower than this level).			
2.1.4	**Indicator:** Definition of a site-specific AZE based on a robust and credible [7] modeling system **Requirement:** Yes, within three years of the publication [8] of the SAD standard (i.e. full compliance by June 13, 2015) **Applicability:** All farms except as noted in [1]	Note: Farms may define a site-specific AZE at any time before this date as long as they demonstrate full compliance by June 13, 2015.		
		a. Undertake an analysis to determine the site-specific AZE and depositional pattern before 3 years have passed since publication of the Standard on June 13, 2012.	A. Review documentation to confirm that the farm has undertaken an analysis before the required date.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records to show how the analysis (in 2.1.4a) is robust and credible based on modeling using a multi-parameter approach [7].	B. Confirm that the farm used a robust and credible modeling system to define the site- specific AZE.	
		c. Maintain records to show that modeling results for the site-specific AZE have been verified with > 6 months of monitoring data.	C. Confirm that farms have validated the general applicability of the site-specific AZE using monitoring data (i.e. 'ground truthing').	
Footnote	[7] Robust and credible: The SEPA AUTODEPOMOD modeling system is considered to be an example of a credible and robust system. The model must include a multi-parameter approach. Monitoring must be used to ground-truth the AZE proposed through the model.			
Footnote	[8] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.			

Criterion 2.2 Water quality in and near the site of operation [12]

		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[12] See Appendix VI for transparency requirements for 2.2.1, 2.2.2, 2.2.3 and 2.2.5.			
2.2.1	**Indicator**: Weekly average percent saturation [13] of dissolved oxygen (DO) [14] on farm, calculated following methodology in Appendix I-4 **Requirement:** ≥ 70% [15] **Applicability:** All farms except as noted in [15]	**Instruction to Clients for Indicator 2.2.1 - Monitoring Average Weekly Percent Saturation of Dissolved Oxygen** Appendix I-4 presents the required methodology that farms must follow for sampling the average weekly percent saturation of dissolved oxygen (DO). Key points of the method are as follows: - measurements may be taken with a handheld oxygen meter or equivalent chemical method; - equipment is calibrated according to manufacturer's recommendations; - measurements are taken at least twice daily: once in the morning (6 -9 am) and once in the afternoon (3-6 pm) as appropriate for the location and season; - salinity and temperature must also be measured when DO is sampled; - sampling should be done at 5 meters depth in water conditions that would be experienced by fish (e.g. at the downstream edge of a net pen array): - each week, all DO measurements are used in the calculation of a weekly average percent saturation. If monitoring deviates from prescribed sampling methodology, the farm shall provide the auditor with a written justification (e.g. when samples are missed due to bad weather). In limited and well-justified situations, farms may request that the CAB approve reduction of DO monitoring frequency to one sample per day. Exception [see footnote 15] If a farm does not meet the minimum 70 percent weekly average saturation requirement, the farm must demonstrate the consistency of percent saturation with a reference site. The reference site shall be at least 500 meters from the edge of the net pen array, in a location that is understood to follow similar patterns in upwelling to the farm site and is nc communities. For any such exceptions, the auditor shall fully document in the audit report how the farm has demonstrated consistency with the reference site. Note 1: *Percent saturation* is the amount of oxygen dissolved in the water sample compared to the maximum amount that could be present at the same temperature and salinity.		
		a. Monitor and record on-farm percent saturation of DO at a minimum of twice daily using a calibrated oxygen meter or equivalent method. For first audits, farm records must cover ≥ 6 months.	A. Do not schedule audit until client provides a minimum of 6 months of DO data.	a. DO, salinity and temperature continue to be measured twice daily at approximately 7 am and 1-3 pm are taken at 1, 5 and 10 m depth. A calibrated OxyProbe meter is used at each feeding barge across the 3 leases This dat Parameters tables and figures. Tassal reports to ASC on DO measurements taken at 5 m depth following the methodology outlined in Appendix 1 of the ASC salmon standard. b. N/A c. Weekly average percent saturation is now calculated - the spreadsheet Weekly average % saturation DO at 5m with Saturation 5.0 Avg [%] calculated for each period since 17/05/15 (raw data is held in the spreadsheet). The Weekly averages have dropped below 70% at 266 since 3/01/16, 219 since 10/01/16 & 214 since 17/01/16. d. For the Table Head Reference Site (MF 214 and MF 219) the DO has also been below 70% (pink) from 17/01/16 to 14/02/16 and at the Franklin Reference Site (MF 266) from 17/01/15 to 14/02/16. This indicates that the lo The FPM-T commented that higher DO are expected at the 214 lease due to its proximity to the mouth with increased water flow, while 266 is furthest away and it is near mouth of the Gordon and so it can be adversely affect reduced significantly due to the low DO levels, options on split timing have also been discussed to reduce stocking densities. The weekly average for 21/02/16 have shown dramatic improvements across all three leases due to 214 from 47.9 to over 70%, 219 increase from 43.1% to 63% and 266 increase from 33.8% to 58%. These improvements are expected to continue over the next few weeks with a return to good growing conditions during Autu Corrective Action: Weekly averages will be extracted from FishTalk at the end of each week for farm sites and the reference sites. If percent saturation of DO is < 70%, on farm results will be compared to results from a reference site. New Email alert which is auto-generated from daily data-dump from FishTalk – spilt for 214/219 and 266. New Zero Harm program. Preventive Action: Ongoing responsibility of new Environmental Assistant (since Nov15), this is now a full time position. Now in use DashBoard reference for broad scale and near field camera, for water quality and fallowing (benthic) regimes. MH Environmental Group email info line run by SM-E. Status of Nonconformance: DO tracking across the farms and comparisons to the controls is now conducted routinely. Summary: Minor NC is closed. e. DO monitoring and calibration of probes was witnessed onsite for the full assessment audit on the 13th May, 2015. f. Results were submitted to the ASC.
		b. Provide a written justification for any missed samples or deviations in sampling time.	B. Review records for completeness and conformity with methodology in Appendix 1-4.	
		c. Calculate weekly average percent saturation based on data.	C. Review calculation and confirm all weekly averages ≥ 70%.	
		d. If any weekly average DO values are < 70%, or approaching that level, monitor and record DO at a reference site and compare to on-farm levels (see Instructions).	D. As needed, review DO data from reference site and document in the audit report (see instruction).	
		e. Arrange for auditor to witness DO monitoring and calibration while on site.	E. Witness DO monitoring and verify calibration while on site. On-site values should fall within range of farm data for DO. If an out of range measurement is observed, raise a nonconformity.	
		f. Submit results from monitoring of average weekly DO as per Appendix VI to ASC at least once per year.	F. Confirm that client has submitted DO results to ASC (Appendix VI).	
Footnote	[13] Percent saturation: Percent saturation is the amount of oxygen dissolved in the water sample compared to the maximum amount that could be present at the same temperature and salinity.			
Footnote	[14] Averaged weekly from two daily measurements (proposed at 6 am and 3 pm).			
Footnote	[15] An exception to this standard shall be made for farms that can demonstrate consistency with a reference site in the same water body.			
2.2.2	**Indicator**: Maximum percentage of weekly samples from 2.2.1 that fall under 2 mg/liter DO **Requirement:** 5% **Applicability:** All	a. Calculate the percentage of on-farm samples taken for 2.2.1a that fall under 2 mg/l DO.	A. Review the farm's calculation and confirm that ≤ 5% of weekly samples fall under 2 mg/l DO.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Submit results from 2.2.2a as per Appendix VI to ASC at least once per year.	B. Confirm that client has submitted results to ASC (Appendix VI).	
2.2.3	**Indicator**: For jurisdictions that have national or regional coastal water quality targets [16], demonstration through third-party analysis that the farm is in an area recently [17] classified as having	a. Inform the CAB whether relevant targets and classification systems are applicable in the jurisdiction. If applicable, proceed to "2.2.3.b". If not applicable, take action as required under 2.2.4	A. Record whether indicator is applicable.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Compile a summary of relevant national or regional water quality targets and classifications, identifying the third-party responsible for the analysis and classification.	B. Confirm that there has been a recent third-party analysis (within two years prior to the audit) to classify areas according to national or regional water quality targets.	

	"good" or "very good" water quality [18] **Requirement:** Yes [19] **Applicability:** All farms except as noted in [19]	c. Identify the most recent classification of water quality for the area in which the farm operates.	C. Confirm that the analysis and classification shows the farm is located in an area where the water quality complies with the requirement.	
Footnote	[16] Related to nutrients (e.g., N, P, chlorophyll A).			
Footnote	[17] Within the two years prior to the audit.			
Footnote	[18] Classifications of "good" and "very good" are used in the EU Water Framework Directive. Equivalent classification from other water quality monitoring systems in other jurisdictions are acceptable.			
Footnote	[19] Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients as well as > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt from standards 2.2.3 and 2.2.4.			
2.2.4	**Indicator**: For jurisdictions without national or regional coastal water quality targets, evidence of weekly monitoring of nitrogen and phosphorous [20] levels on farm and at a reference site, following methodology in Appendix I-5 **Requirement:** Yes **Applicability:** All farms except as noted in [19]	a. Develop, implement, and document a weekly monitoring plan for N, NH4, NO3, total P, and ortho-P in compliance with Appendix I-5, testing a minimum of once weekly in both locations. For first audits, farm records must cover ≥ 6 months.	A. Review the farm's monitoring plan and verify that the farm has collected monitoring data for N and P following the methodology in Appendix I-5.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Calibrate all equipment according to the manufacturer's recommendations.	B. Verify that client calibrates equipment as needed.	
		c. Submit data on N and P to ASC as per Appendix VI at least once per year.	C. Confirm that client has submitted N and P data to ASC (Appendix VI).	
Footnote	[20] Farms shall monitor total N, NH4, NO3, total P and Ortho-P in the water column. Results shall be submitted to the ASC database. Methods such as a Hach kit are acceptable.			
2.2.5		**Instruction to Clients for Indicator 2.2.5 - Calculating Biochemical Oxygen Demand** Biochemical Oxygen Demand (BOD) can be calculated based on cumulative inputs of N and C to the environment over the course of the production cycle. BOD = ((total N in feed – total N in fish)*4.57) + ((total C in feed – total C in fish)*2.67). • A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, "fish" refers to harvested fish. In this case, farm must submit breakdown of N & C captured/filtered/absorbed to ASC along with method used to estimate nutrient reduction. • Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the oxygen demand of feed. In: Proceedings of the World Aquaculture Society Meeting; Sept 25-29, 2009; VeraCruz, Mexico. And: Global Aquaculture Performance Index BOD calculation methodology available at http://web.uvic.ca/~gapi/explore-gapi/bod.html Note 1: Calculation requires a full production cycle of data and is required beginning with the production cycle first undergoing certification. If it is the first audit for the farm, the client is required to demonstrate to the CAB that data is being collected and an understanding of the calculations. Note 2: Farms may seek an exemption to Indicator 2.2.5 if: the farm collects BOD samples at least once every two weeks, samples are independently analyzed by an accredited laboratory, and the farm can show that BOD monitoring results do not deviate significantly from calculated annual BOD load.		
	Indicator: Demonstration of calculation of biochemical oxygen demand (BOD [21]) of the farm on a production cycle basis **Requirement:** Yes **Applicability:** All	a. Collect data throughout the course of the production cycle and calculate BOD according to formula in the instruction box.	A. Review calculation, cross-check data used with feed and harvest records.	Annually, SkA provide a feed declaration detailing the % total nitrogen and total carbon in feeds supplied so that Tassal can complete the BOD calculations. Compliance documents provided with the 9/02/16 SkA declaration in - Appendix 1 - ASC Feed nitrogen, carbon & phosphorous declaration (DH 31.18.03 v1) - Appendix 2 - MH 13YC C&N declaration (DH 31.18.10 v2) spreadsheet b. Data was submitted to ASC.
		b. Submit calculated BOD as per Appendix VI to ASC for each production cycle.	B. Confirm that client has submitted calculated BOD a to ASC (Appendix VI).	
Footnote	[21] BOD calculated as: ((total N in feed – total N in fish)*4.57) + ((total C in feed – total C in fish)*2.67). A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, "fish" refers to harvested fish. Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the Aquaculture Performance Index BOD calculation methodology available at http://web.uvic.ca/~gapi/explore-gapi/bod.html.			

Criterion 2.3 Nutrient release from production

		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
		Note: The methodology given in Appendix I-2 is used to determine the fines (dust and small fragments) in finished product of fish feed which has a diameter of 3 mm or more.		
2.3.1	**Indicator:** Percentage of fines [22] in the feed at point of entry to the farm [23] (calculated following methodology in Appendix I- 2) **Requirement:** < 1% by weight of the feed **Applicability:** All farms except as noted in [23]	a. Determine and document a schedule and location for quarterly testing of feed. If testing prior to delivery to farm site, document rationale behind not testing on site.	A. Review timing and location of testing. If testing off-site, verify rationale and ensure consistent with [23].	a. As per Appendix 3 - ASC Feed dust-chips declaration (DH 31.18.04 v1) the physical specifications of the SkA products regarding dust/chips are controlled as part of their quality control systems. The Skretting specification for (DH 31.18.10 v2) for MH region 13YC declares that feeds leaving the factory meet this specification. A new Task Breakdown MO-374 Quarterly Calculation of Percentage Fines in Feed (Issue 1) has been developed and is in use. This includes using a sieve by hand for the quarterly feed samples from each barge with different m 5mm or less, or 2. 2.36mm when the particle diameter is more than 5mm. Status of Recommendation: A procedure is in place to routinely record the fines and corrective actions have been made to improve the feeding systems. Summary: Recommendation is closed. b. Sieving is by hand. c. The FPM-T at all the farms/zones have been sent Outlook reminders from 6/01/16 for 3-monthly for feed fines testing for each feed barge and link to folder to file the results on Tassal G-drive. The MH FPM-T commented that this has been a useful change with some actions already undertaken to improve feeding practices and better feed performance. Samples are taken at critical points – doser, selector, pipe and s feed from the manufacturers has improved, changes include delivery in bulk bags, improved formulation & manufacturing, single use bulk (1,000kg) bags now have a single lifting point use. For the three barges samples were s respectively for 9mm feeds. Corrective actions include one for October 2015 which found two spinners causing >1% breakage – both were changed as a result. All of the spinners across all of Tassal's leases are Scheduled to change all spinners across the c
		b. If using a sieving machine, calibrate equipment according to manufacturer's recommendations.	B. Verify that client has appropriate testing technology on site and that, if applicable, it is calibrated as required.	
		c. Conduct test according to detailed methodology in Appendix I-2 and record results for the pooled sample for each quarter. For first audits, farms must have test results from the last 3 months.	C. Review testing results and confirm that the pooled sample for each quarter has a percent fines of <1%.	
Footnote	[22] Fines: Dust and fragments in the feed. Particles that separate from feed with a diameter of 5 mm or less when sieved through a 1 mm sieve, or particles that separate from feed with a diameter greater than 5 mm when sieved through a 2.36 mm sieve. To be measured at farm gate (e.g., from feed bags after they are delivered to farm).			
Footnote	[23] To be measured every quarter or every three months. Samples that are measured shall be chosen randomly. Feed may be sampled immediately prior to delivery to farm for sites with no feed storage where it is not possible to sample on farm. Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients and > 50% of dissolved nutrients (through biofiltration, sett			

Criterion 2.4 Interaction with critical or sensitive habitats and species

		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
		Note: If a farm has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may use such documents as evidence to demonstrate compliance with Indicator 2.4.1 as long as all components in Appendix I-3 are explicitly covered.		
		a. Perform (or contract to have performed) a documented assessment of the farm's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3.	A. Review the assessment to confirm that it complies with all components outlined in Appendix I-3.	a. All of the 2014 and 2015 audits reviewed the Environmental Impact Statement (EIS) and Appendices to accompany the Draft Amendment No. 1 to the Macquarie Harbour Marine Farming Development Plan, October 2005. T b. The EIS for Macquarie Harbour was submitted as part of the farm expansion process (including MF 214, 219 & 266). The farm expansion was approved by the Minister for Primary Industry and Water under the conditions to triggers. Page 462 of the EIS has Table 7.1 'Summary of potential effects and their management'; which includes: • on the basis of the current data available results of the Final Model Scenario indicate there will be no adverse water quality related impact on aquatic organisms in both the Tasmanian Wilderness World Heritage area and the • it is expected that the implementation of the mitigation measures will minimise the likelihood of unacceptable impacts occurring to the harbour from the fish farm organics and nutrients Annual Compliance Survey Report February 2015 included video surveys which show the presence of numerous opportunistic polychaetes on the sediment surface outside lease areas and extending into the TW WHA. Thus MF
		b. If the assessment (2.4.1a) identifies potential impact(s) of the farm on biodiversity or nearby critical, sensitive or protected habitats or species, prepare plan to address those potential impacts.	B. Verify the farm has a plan to address all potential impacts identified in the assessment.	

2.4.1	**Indicator**: Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains at a minimum the components outlined in Appendix I-3 **Requirement:** Yes **Applicability:** All	c. Keep records to show how the farm implements plan(s) from 2.4.1b to minimize potential impacts to critical or sensitive habitats and species.	C. Verify that the farm implements the plan(s).	Annual Compliance Survey Report February 2015 included video surveys which show the presence of numerous opportunistic polychaetes on the sediment surface outside lease areas and extending into the TW WHA. Thus MF conditions, Schedule 3. This triggered a detailed assessment of benthic fauna by IMAS, which is currently in progress to better understand the ecology of these polychaetes. Research was also conducted on the Maugean Skate c. The tables following Page 462 of the Addendum to the Environmental Impact Statement (EIS) provides a summary of the potential impacts and what plans are in place to minimize these impacts. Lower DO levels were listed as a potential threat but it was predicted that this impact would be predominately confined to the marine farming zone. However, ongoing water quality monitoring as per Schedule 3 BEMP (Broad has shown a decrease in mid to bottom water dissolved oxygen levels, averaged across compliance monitoring sites from 2011 to 2014, to very low levels in winter 2014, but subsequently increasing to approximately 2011 con A Macquarie Harbour Dissolved Oxygen Working group was established in 2014 to verify the scope of DO reductions and to determine attribution, and to work cooperatively in the study of DO issues; a detailed assessment has As no bottom water DO concentration targets have been set either by ASC or the Tasmanian Government, no compliance conditions have been breached. The effects of low DO on benthic ecology of MH, including TWWHA, a This led to the recommendation that the results of the IMAS studies should be examined to provide a better understanding of the relationship between marine farming and low DO in Macquarie Harbour As per the recommendations from the 2015 audits, the results of the IMAS studies have been examined to provide a better understanding of the relationship between marine farming and low DO in Macquarie Harbour on the the report from FRDC Project No 2013/008 which has been published as Bell et al (2016). Summary provided by Tassal – "Skate tracked to only habitat shallow water sites, we have filmed these at the shallow end of our Middle Harbour (MF 214) lease in around 18m of water which is around the maximum depth th MFB. We have not had any interactions with the skate apart from this. The study also showed that the skate was found to prey on crustaceans and other small invertebrates around the shallow sections of the Harbour. The DO fluctuations found in the bottom layers of the Harbour system have been found to occur in the three deep basins that occupy the central part of the Harbour. These are deep, dark and cold waters creating a density gra system. Benthic ecology within the Harbour is not largely diverse and is thought to have evolved in relation to the fluctuating available oxygen found at the water/surface interface. The introduced and heavily colonizing Fan Worm Sab
				A recent draft report (Ross et al, 2016, Project No 2014/038) has been sent out for initial comment. It reports that Dorvilleid Polychaetes have been found to be two different species and indicate different responses to sedime assess ecosystem interactions and help with the understanding of what indicator species are useful within different systems around the state." An associated document titled "Supplementary information – individual movements" contains presence absence plots and a description of their movement for 59 tagged 59 Maugean skate, 29 Atlantic Salmon & 30 Rainbow Tı animals appear to have died prematurely and the data utilised to come to this conclusion. For skate this includes utilisation of depth and activity data, whereas for the salmon and trout, for which only presence absence data w displayed unusual behaviour following tagging the first two weeks of data were excluded from BBMM. Status of Recommendation/Observation: The results IMAS and other studies have been considered and management changes made as appropriate, research continues in FRDC and TRF projects. Summary: Recommendation/Observation is closed
2.4.2		**Instruction to Clients for Indicator 2.4.2 - Exceptions to Requirements that Farms are not sited within Protected Areas or HCVAs** The following exceptions shall be made for Indicator 2.4.2: Exception #1: For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management). Exception #2: For HCVAs if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA. Exception #3: For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designati area has been protected. **Definitions** Protected area: "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." High Conservation Value Areas (HCVA): Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure		
	Indicator: Allowance for the farm to be sited in a protected area [24] or High Conservation Value Areas [25] (HCVAs) **Requirement:** None [26] **Applicability:** All farms except as noted in [26]	a. Provide a map showing the location of the farm relative to nearby protected areas or High Conservation Value Areas (HCVAs) as defined above (see also 1.1.1a).	A. Review map and cross-check against independent information sources (e.g. 1.1.1d) to determine if the farm is sited in a protected area or HCVA.	a. EIS Addendum for Macquarie Harbour contains map on page 68 showing the Tasmanian Wilderness World Heritage Area (TWWHA) and South West Conservation Area. MF 266 is less than 1 km from the TWWHA at its closest point, the other two leases (MF 214 & 219) are several kilometres away.
		b. If the farm is not sited in a protected area or High Conservation Value Area as defined above, prepare a declaration attesting to this fact. In this case, the requirements of 2.4.2c- d do not apply.	B. Obtain a copy of the farm's declaration stating that the farm is not sited in a protected area or HCVA (as applicable).	b. Tassal provided a declaration dated 11 December 2013 before the 2014 and 2015 onsite visits.
		c. If the farm is sited in a protected area or HCVA, review the scope of applicability of Indicator 2.4.2 (see Instructions above) to determine if your farm is allowed an exception to the requirements. If yes, inform the CAB which exception (#1, #2, or #3) is allowed and provide supporting evidence.	C. Review the applicability of the exception requested by the farm together with the supporting evidence to determine if the farm is eligible. If yes, Indicator 2.4.2 is not applicable.	c. N/A d. N/A
		d. If the farm is sited in a protected area or HCVA and the exceptions provided for Indicator 2.4.2 do not apply, then the farm does not comply with the requirement and is ineligible for ASC certification.	D. Review evidence to determine whether the farm is allowed to be sited in a protected area or HCVA and hence eligible for ASC certification.	
Footnote	[24] Protected area: "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." Source: Dudley, N. (Editor) (2008), Guidelines for Applying Protected Area Management Categories, Gland, Switzerland: IUCN. x + 86pp.			
Footnote	[25] High Conservation Value Areas (HCVA): Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure that these high conservation valu			
Footnote	[26] The following exceptions shall be made for Standard 2.4.2: • For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management). • For HCVAs if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA. • For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof wo			
Criterion 2.5 Interaction with wildlife, including predators [27]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[27] See Appendix VI for transparency requirements for 2.5.2, 2.5.5 and 2.5.6.			

2.5.1	**Indicator**: Number of days in the production cycle when acoustic deterrent devices (ADDs) or acoustic harassment devices (AHDs) were used **Requirement:** 0, within three years of the date of publication [28] of the SAD standard (i.e. full compliance by June 13, 2015) **Applicability:** All	a. Prepare a written statement affirming that the farm's management is committed to eliminate all usage of acoustic deterrent devices (ADDs) or acoustic harassment devices (AHDs) by June 13, 2015.	A. Confirm that farm management has prepared a written statement of commitment.	a. Received written statement from Tassal (signed by Head of Sustainability, early 2014) affirming that the farm's management is not using any acoustic deterrent devices (ADD) or acoustic harassment devices (AHDs) and that b. N/A c. Confirmed that operation uses no AAD at all.
		b. Compile documentary evidence to show that no ADDs or AHDs were used by the farm after June 13, 2015 (applicable only after the specified date).	B. Review documentary evidence (e.g. predator management policies, records of predator incidents) and cross-check against interviews with farm staff and local community members (applicable only after the date specified in 2.5.1a).	
		-	C. During the on-site audit, inspect the farm to confirm that no ADDs or AHDs are present at the facilities (applicable only after June 13, 2015).	
Footnote	[28] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.			
2.5.2	**Indicator**: Prior to the achievement of 2.5.1, if ADDs or AHDs are used, maximum percentage of days [29] in the production cycle that the devices are operational **Requirement:** ≤ 40% **Applicability:** All, until June 13, 2015	**Instruction to Clients for Indicator 2.5.2 - Percentage of Days that ADDs or AHDs were used** Farms must calculate the percentage of days in the production cycle that ADDs or AHDs were operated using data from the most recent complete production cycle. For first audits, farms may be exempted from compliance with Indicator 2.5.2 for the most recent complete production cycle if the farm can satisfactorily demonstrate to the auditor that: - the client understands how to accurately calculate percentage of days the devices were operational; - the client maintains all information needed to accurately calculate the percentage of operational days based on > 6 months of data for the current production cycle; and - the client can show how plans for the current production cycle will ensure that the farm will meet requirements at harvest (i.e. devices in operation <40% of days). Indicator 2.5.2 is applicable until June 13, 2015, after which the use of ADDs and AHDs is not allowed under the standard.		
		a. Maintain a log for the use of any ADDs or AHDs on farm that includes recording the number of days (24-hour cycles) during which the devices were used.	A. Review log and cross-check with records of predator incidents.	a. N/A - No acoustic deterrent devices used b. N/A c. Confirmed that operation uses no AAD at all. d. N/A
		b. Calculate the percentage of days in the production cycle that the devices were operational in the most recent complete production cycle.	B. Verify calculations and cross-check against records for the duration of the production cycle.	
		-	C. Confirm devices were operational ≤ 40% of the days of the production cycle.	
		d. Submit data on number of days that ADDs/AHDs were used to the ASC as per Appendix VI. Data must be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	D. Confirm that client has submitted data on ADDs/AHDs to ASC (Appendix VI).	
Footnote	[29] Day: 24-hour cycle.			
2.5.3	**Indicator**: Number of mortalities [30] of endangered or red- listed [31] marine mammals or birds on the farm **Requirement:** 0 (zero) **Applicability:** All	a. Prepare a list of all predator control devices and their locations.	A. Review list.	a. The main predator exclusion devices are the net pens themselves – there has been an improvement since 2015 with new 32 panel nets being used. These have more weights (150kg) which are individually strung to allow the closely managed with fewer slack nets allowing predator interaction with the fish. In addition, there are now strengthened bird netting and tie ropes which are strong enough to hold the weight of a seal. Birds are also excluded from the pens. The Senior Wildlife Manager inspects these nets regularly to ensu Further exclusion devices are documented in the annual Sustainability Reports, for example p33-34 of 2015 report includes Kikko Nets, trails on K-Grid Nets, Seal proof bird nets, Seal jump fences & Internal rigging audits. Tassal has mapped the predator control devices and their locations on the three feeding barges operating in Macquarie Harbour. The new Mortality Extraction System soon to be on each pen will mean this being addressed, fa that identification of the cause factors can be more easily determined. The Training Matrix provides records on the licences (firearms x6) plus DPIPWE annual renewals of permits for predator scaring devices Bean Bag, Scare Cap & Crackers (5 each) and Trapping (10). b. As part of their daily records, the feeders and divers record any interactions, entanglements or deaths of wildlife. This information is transferred monthly into the spreadsheet Macquarie Harbour Wildlife Tracker which recc calculates Two year running totals for each lease (x3) and for the Zone for: - Birds - Alive and released - Birds - Accidental Death - Seal mortality – Accidental - Seal mortality - Humane destruction The results show that the predator exclusion equipment is working effectively: - Two year running total accident bird mortality = 2 (both were the common Silver Gulls (May15 & Oct15) - Two year running total marine mammal mortality = 0 (no Accidental and no Humane destruction) - Two year running total Birds - Alive and released = 1 for 214, 28 for 219 and 37 for 266 = total of 63. These figures show good improvements over the data presented in the 2015 Sustainability Report for birds: - FY2012 (3 months) 2 accidental, 48 released - FY2013 (12 months) 1 accidental, 268 released - FY2014 (12 months) 5 accidental, 80 released The report confirms none for MH in FY2014. c. Reviewed records of mortalities on feed barges as well as in the annual Sustainability Reports; for 2015. d. Tassal provided link to the species profile and threats database at the Australian Government Website– http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl In 2015 it was recommended keep a separate updated list as farm record - now on the intranet is the spreadsheet IUCN Redlist - Critically Endangered & Endangered lists all of the species likely to be found in Australia (land, fr Skate. Status of Recommendation/Observation: text. Summary: Recommendation/Observation is closed. e. Results from (b) to (e) were compared and cross checked for Feb2014 to 2016YTD and this confirmed that there were no mortalities of endangered or red-listed marine mammal or bird species on the farm.
		b. Maintain a record of all predator incidents.	B. Review farm records of predator incidents and cross-check against relevant records (e.g. escapes).	
		c. Maintain a record of all mortalities of marine mammals and birds on the farm identifying the species, date, and apparent cause of death.	C. Review records for completeness. Cross-check mortality records against interviews with farm staff and community representatives.	
		d. Maintain an up-to-date list of endangered or red-listed marine mammals and birds in the area (see 2.4.1)	D. Review list for consistency with 2.4.1	
		e. Compare results from (a) through (d) above to confirm that there were no mortalities of endangered or red-listed marine mammals or birds on farm.	E. Compare results from (a) through (d) above to confirm that there were no mortalities of endangered or red-listed marine mammals or birds on farm.	
Footnote	[30] Mortalities: Includes animals intentionally killed through lethal action as well as accidental deaths through entanglement or other means.			
Footnote	[31] Species listed as endangered or critically endangered by the IUCN or on a national endangered species list.			
2.5.4	**Indicator**: Evidence that the following steps were taken prior to lethal action [32] against a predator: 1. All other avenues were pursued prior to using lethal action 2. Approval was given from a senior manager above the farm manager 3. Explicit permission was granted to take lethal action against the specific animal from the relevant regulatory authority **Requirement:** Yes [33] **Applicability:** All except cases where human safety is endangered as noted in [33]	a. Provide a list of all lethal actions that the farm took against predators during the previous 12-month period. Note: "lethal action" is an action taken to deliberately kill an animal, including marine mammals and birds.	A. Review list of lethal actions taken by the farm and cross-check against 2.5.3b.	a. There is a Wildlife Interaction Plan in place (WIP). The annual Tassal Sustainability Reports, for example p33-34 2015 report, provide summary data of all wildlife interactions including birds, seals, whales & sharks. No lethal actions were taken against predators during the previous 12 months. b. As per the WIP, passive avoidance measures are practiced with the recourse to lethal control only under permit from the Tasmanian government. The MH farms have not experienced a situation requiring lethal control nor h c. During onsite audit it was confirmed with staff that no lethal control has been necessary at the 3 MH sites.
		b. For each lethal action identified in 2.5.4a, keep record of the following: 1) a rationale showing how the farm pursued all other reasonable avenues prior to using lethal action; 2) approval from a senior manager above the farm manager of the lethal action; 3) where applicable, explicit permission was granted by the relevant regulatory authority to take lethal action against the animal.	B. Review documentation to confirm that the farm shows evidence of compliance with requirements in steps 1-3.	
		c. Provide documentary evidence that steps 1-3 above (in 2.5.4b) were taken prior to killing the animal. If human safety was endangered and urgent action necessary, provide documentary evidence as outlined in [33].	C. Review documentary evidence to verify actions, permissions, and approvals were taken prior to taking lethal action. If client requests exemption due to human safety, review evidence to verify [33].	

Footnote	[32] Lethal action: Action taken to deliberately kill an animal, including marine mammals and birds.			
Footnote	[33] Exception to these conditions may be made for a rare situation where human safety is endangered. Should this be required, post-incident approval from a senior manager should be made and relevant authorities must be informed.			
Instruction to Clients and CABs on Indicators 2.5.5, 2.5.6, and 2.5.7 - Clarification about the ASC Definition of "Lethal Incident" The ASC Salsmon Standard has defined "Lethal incident" to include all lethal actions as well as entanglements or other accidental mortalities of non-salmonids [footnote 35]. For the purpose of assisting farms and auditors with understanding how to evaluate compliance with Indicators 2.5.5, 2.5.6, and 2.5.7, ASC has clarified this definition further: Total number of lethal Incidents = sum of all non-salmonid deaths arising from all lethal actions taken by the farm during a given time period There should be a 1:1 relationship between the number of animal deaths and the number of lethal incidents reported by the farm. For example, if a farm has taken one (1) lethal action in past last two years and that single lethal action resulted in killing three (3) birds, it is considered three (3) lethal incidents within a two year period. The term "non-salmonid" was intended to cover any predatory animals which are likely to try to feed upon farmed salmon. In practice these animals will usually be seals or birds.				
2.5.5	**Indicator**: Evidence that information about any lethal incidents [35] on the farm has been made easily publicly available [34] **Requirement:** Yes **Applicability:** All	a. For all lethal actions (see 2.5.4), keep records showing that the farm made the information available within 30 days of occurrence.	A. Check farm records for publicizing lethal actions against the actions listed in 2.5.4a to confirm that the farm made information available within 30 days.	a. Current legislation requires the Wildlife Branch (DPIPWE) to be notified. Information is reported in Sustainability Report annually and on the Tassal website, under ASC Dashboard, Wildlife Interactions, which is updated mon b. The information about lethal incidents are reported in Sustainability Report annually and on the Tassal website, under ASC Dashboard, Wildlife Interactions. Data on lethal incidents on the website and in the annual Sustaina
		b. Ensure that information about all lethal actions listed in 2.5.5a are made easily publicly available (e.g. on a website).	B. Verify that required information is easily publicly available.	
Footnote	[34] Posting results on a public website is an example of "easily publicly available." Shall be made available within 30 days of the incident and see Appendix VI for transparency requirements.			
2.5.6	**Indicator**: Maximum number of lethal incidents [35] on the farm over the prior two years **Requirement:** < 9 lethal incidents [36], with no more than two of the incidents being marine mammals **Applicability:** All	a. Maintain log of lethal incidents (see 2.5.4a) for a minimum of two years. For first audit, > 6 months of data are required.	A. Review log.	As part of their daily records, the feeders and divers record any interactions, entanglements or deaths of wildlife. This information is transferred monthly into the spreadsheet Macquarie Harbour Wildlife Tracker records mon Two year running totals for each lease (x3) and for the Zone for: - Birds - Alive and released - Birds - Accidental Death - Seal mortality – Accidental - Seal mortality - Humane destruction The results show that the predator exclusion equipment is working effectively: - Two year running total accident bird mortality = 2 - Two year running total marine mammal mortality = 0 (no Accidental and no Humane destruction) - Two year running total Birds - Alive and released = 1 for 214, 28 for 219 and 37 for 266. Records confirm that over the past two years there has only been two seabird mortalities, and no marine mammal mortalities. This is an improvement over the records published for the 2012, 1=2103 & 2014FY. b. Refer above 2.5.3 c. Data was submitted to the ASC.
		b. Calculate the total number of lethal incidents and the number of incidents involving marine mammals during the previous two year period.	B. Verify that over the previous two years there were < 9 lethal incidents in total and that ≤ 2 of those incidents were marine mammal deaths.	
		c. Send ASC the farm's data for all lethal incidents [35] of any species other than the salmon being farmed (e.g. lethal incidents involving predators such as birds or marine mammals). Data must be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	C. Confirm that data on all lethal incidents has been submitted to ASC (Appendix VI).	
Footnote	[35] Lethal incident: Includes all lethal actions as well as entanglements or other accidental mortalities of non-salmonids.			
Footnote	[36] Standard 2.5.6 applicable to incidents related to non-endangered and non-red-listed species. This standard complements, and does not contradict, 2.5.3.			
2.5.7	**Indicator**: In the event of a lethal incident, evidence that an assessment of the risk of lethal incident(s) has been undertaken and demonstration of concrete steps taken by the farm to reduce the risk of future incidences **Requirement:** Yes **Applicability:** All	a. Keep records showing that the farm undertakes an assessment of risk following each lethal incident and how those risk assessments are used to identify concrete steps the farm takes to reduce the risk of future incidents.	A. Review farm records to confirm that all the farm performs an appropriate risk assessment following all lethal incidents (see list 2.5.4a).	a. In 2014 Tassal provided a 3-year strategy to decrease lethal incidents on Tassal's salmon farms. The Wildlife Interaction Plan (WIP) has been updated accordingly. Date in the annual Tassal Sustainability Reports (e.g. p33-34 in 2015 report) provide summary data. There have been good improvements in the lowering of se b. The annual Tassal Sustainability Reports describe the improvements undertaken to reduce the risk of future lethal incidents.
		b. Provide documentary evidence that the farm implements those steps identified in 2.5.7a to reduce the risk of future lethal incidents.	B. Verify that the farm implements steps to reduce risk of lethal incidents.	

PRINCIPLE 3: PROTECT THE HEALTH AND GENETIC INTEGRITY OF WILD POPULATIONS

Criterion 3.1 Introduced or amplified parasites and pathogens [38,39]

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	
Footnote	[38] Farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the standards under Criterion 3.1.			
Footnote	[39] See Appendix VI for transparency requirements for 3.1.1, 3.1.3, 3.1.4, 3.1.6 and 3.1.7.			
Instruction to Clients and CABs on Exemptions to Criterion 3.1 According to footnote [38], farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the requirements under Criterion 3.1. More specifically, farms are only eligible for exemption from Criterion 3.1 if it can be shown that either of the following holds: 1) the farm does not release any water to the natural environment; or 2) any effluent released by the farm to the natural environment has been effectively treated to kill pathogens (e.g. UV and/or chemical treatment of water with testing demonstrating efficacy). Auditors shall fully document the rationale for any such exemptions in the audit report.				
3.1.1	**Indicator**: Participation in an Area-Based Management (ABM) scheme for managing disease and resistance to treatments that includes coordination of stocking, fallowing, therapeutic treatments and information-sharing. Detailed requirements are in Appendix II-1. **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [38]	a. Keep record of farm's participation in an ABM scheme.	A. Review records of farm participation in ABM scheme. Contact other ABM participants as necessary to confirm the accuracy of client records.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Submit to the CAB a description of how the ABM (3.1.1a) coordinates management of disease and resistance to treatments, including: - coordination of stocking; - fallowing; - therapeutic treatments; and - information sharing.	B. Review description of ABM to verify that the management activities address each of the four element from Indicator 3.1.1.	
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate the ABM's compliance with all requirements in Appendix II-1, including definition of area, minimum % participation in the scheme, components, and coordination requirements.	C. Evaluate documents to confirm the ABM complies with Appendix II-1.	
		d. Submit dates of fallowing period(s) as per Appendix VI to ASC at least once per year.	D. Confirm that client has submitted dates of fallowing periods to ASC (Appendix VI).	
3.1.2	**Indicator**: A demonstrated commitment [40] to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks	Note: Indicator 3.1.2 requires that farms demonstrate a commitment to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks. If the farm does not receive any requests to collaborate on such research projects, the farm may demonstrate compliance by showing evidence of commitment through other pr		
		a. Retain records to show how the farm and/or its operating company has communicated with external groups (NGOs, academics, governments) to agree on and collaborate towards areas of research to measure impacts on wild stocks, including records of requests for research support and collaboration and responses to those requests.	A. Review evidence that the farm and/or its operating company has communicated with external groups to agree on areas of research about possible impacts on wild stocks and is tracking and responding to research requests.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Provide non-financial support to research activities in 3.1.2a by either: - providing researchers with access to farm-level data; - granting researchers direct access to farm sites; or - facilitating research activities in some equivalent way.	B. Review how the farm and/or its operating company has provided non-financial support for research activities.	

	Requirement: Yes **Applicability:** All except farms that release no water as noted in [38]	c. When the farm and/or its operating company denies a request to collaborate on a research project, ensure that there is a written justification for rejecting the proposal.	C. As applicable, review the provided record of rejecting proposals to confirm that denials were justified and there is no consistent pattern to indicate that the farm and/or its operating company lacks a demonstrated commitment to collaborate on research activities.	
		d. Maintain records from research collaborations (e.g. communications with researchers) to show that the farm has supported the research activities identified in 3.1.2a.	D. Verify that the farm's communications with researchers demonstrate a commitment to collaborate on relevant areas of research.	
Footnote	[40] Commitment: At a minimum, a farm and/or its operating company must demonstrate this commitment through providing farm-level data to researchers, granting researchers access to sites, or other similar non-financial support for research activities.			
3.1.3	**Indicator**: Establishment and annual review of a maximum sea lice load for the entire ABM and for the individual farm as outlined in Appendix II-2 **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [38]	a. Keep records to show that a maximum sea lice load has been set for: - the entire ABM; and - the individual farm.	A. Review records to confirm compliance.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain evidence that the established maximum sea lice load (3.1.3a) is reviewed annually as outlined in Appendix II-2, incorporating feedback from the monitoring of wild salmon where applicable (See 3.1.6).	B. Confirm that sea lice load is reviewed annually and, if applicable, the review incorporates information from monitoring of wild salmon.	
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the ABM has set (3.1.3a) and annually reviewed (3.1.3.b) maximum sea lice load in compliance with requirements in Appendix II-2.	C. Evaluate documents to confirm the ABM complies with requirements of Appendix II-2 for establishing and reviewing maximum sea lice loads.	
		d. Submit the maximum sea lice load for the ABM to ASC as per Appendix VI at least once per year.	D. Confirm that client has submitted the ABM maximum lice load to ASC (Appendix VI).	
3.1.4	**Indicator**: Frequent [41] on-farm testing for sea lice, with test results made easily publicly available [42] within seven days of testing **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [38]	a. Prepare an annual schedule for testing sea lice that identifies timeframes of routine testing frequency (at a minimum, monthly) and for high-frequency testing (weekly) due to sensitive periods for wild salmonids (e.g. during and immediately prior to outmigration of juveniles).	A. Review sea lice testing schedule to confirm that weekly testing coincides with known sensitive periods for wild salmon (e.g. during and immediately prior to outmigration of juveniles).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records of results of on-farm testing for sea lice. If farm deviates from schedule due to weather [41] maintain documentation of event and rationale.	B. Review records to confirm that testing follows the farm's annual schedule. Review the rationale for any deviations from the schedule.	
		c. Document the methodology used for testing sea lice ('testing' includes both counting and identifying sea lice). The method must follow national or international norms, follows accepted minimum sample size, use random sampling, and record the species and life- stage of the sea lice. If farm uses a closed production system and would like to use an alternate method (i.e. video), farm shall provide the CAB with details on the method and efficacy of the method.	C. Review the farm's methodology for testing sea lice. If practicable, observe testing while on-site. If farm is a closed system using an alternate testing method, document the distinction and review evidence of efficacy of the method.	
		d. Make the testing results from 3.1.4b easily publicly available (e.g. posted to the company's website) within seven days of testing. If requested, provide stakeholders access to hardcopies of test results.	D. Test access from an offsite computer to confirm that results are easily publicly available. If applicable, confirm that the farm made hardcopies of test results easily available to stakeholders.	
		e. Keep records of when and where test results were made public.	E. Review records for the past year to confirm the farm posted test results within 7 days of each test. Cross-check against testing schedule (see 3.1.4a).	
		f. Submit test results to ASC (Appendix VI) at least once per year.	F. Confirm that client has submitted test results to ASC (Appendix VI).	
Footnote	[41] Testing must be weekly during and immediately prior to sensitive periods for wild salmonids, such as outmigration of wild juvenile salmon. Testing must be at least monthly during the rest of the year, unless water temperature is so cold that it would jeopardize farmed fish health to test for lice (below 4 degrees C). Within closed production systems, alternative methods for monitoring sea lice, such as video monitori			
Footnote	[42] Posting results on a public website is an example of “easily publicly available.”			
3.1.5		**Instruction to Clients for Indicator 3.1.5 - Evidence for Wild Salmonid Health and Migration** In writing this indicator, the SAD Steering Committee concluded that relevant data sets on wild salmonid health and migration are publicly available in the vast majority of, if not all, jurisdictions with wild salmonids. The information is likely to come from government sources or from research institutions. Therefore farms are not responsible for conducting this research themselves. Ho decisions related to minimizing potential impact on those wild stocks. This Indicator requires collection and understanding of general data for the major watersheds within approximately 50 km of the farm. A farm does not need to demonstrate that there is data for every small river or tributary or subpopulation. Information should relate to the wild fish stock level, which implies that the population is more or less isolated from other stocks of the same definition. However, it must be recognized that each jurisdiction may have slight differences in how a wild salmonid stock is defined in the region. For purposes of these standards, “areas with wild salmonids” are defined as areas within 75 kilometers of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere [43]. Potentially affected species in these areas are salmonids (i.e. including all trout species). Where a species is not natural farms and established themselves as a reproducing species in “the wild”.	
	Indicator: In areas with wild salmonids [43], evidence of data [44] and the farm’s understanding of that data, around salmonid migration routes, migration timing and stock productivity in major waterways within 50 kilometers of the farm **Requirement:** Yes **Applicability:** All farms operating in areas with wild salmonids except farms that release no water as noted in [38]	a. Identify all salmonid species that naturally occur within 75 km of the farm through literature search or by consulting with a reputable authority. If the farm is not in an area with wild salmonids, then 3.1.5b and c do not apply.	A. Review salmonid species list for accuracy and cross-check source references. Confirm whether 3.1.5 b and c are applicable.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. For species listed in 3.1.5a, compile best available information on migration routes, migration timing (range of months for juvenile outmigration and returning salmon), life history timing for coastal resident salmonids, and stock productivity over time in major waterways within 50 km of the farm.	B. Review the accuracy of the farm's information on local salmonid migratory patterns and stock productivity. Cross-check source references as necessary.	
		c. From data in 3.1.5b, identify any sensitive periods for wild salmonids (e.g. periods of outmigration of juveniles) within 50 km of the farm.	C. Confirm accuracy of farm's understanding. Cross-check against 'sensitive periods' listed in the farm's annual schedule for testing for sea lice.	
		-	D. Confirm the farm's understanding of this information through interviews.	
Footnote	[43] For purposes of these standards, “areas with wild salmonids” are defined as areas within 75 kilometers of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere.			
Footnote	[44] Farms do not need to conduct research on migration routes, timing and the health of wild stocks under this standard if general information is already available. Farms must demonstrate an understanding of this information at the general level for salmonid populations in their region, as such information is needed to make management decisions related to minimizing potential impact on those stocks.			
	Indicator: In areas of wild salmonids, monitoring of sea lice levels on wild out-migrating salmon juveniles or on coastal sea trout or	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.6 does not apply.	A. Confirm whether the farm operates in an area of wild salmonids based on results from 3.1.5a (above). If not, then Indicator 3.1.6 does not apply.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Keep records to show the farm participates in monitoring of sea lice on wild salmonids.	B. Review evidence to confirm farm's participation in monitoring.	

3.1.6	juveniles of on-coastal sea trout or Artic char, with results made publicly available. See requirements in Appendix III-1. Requirement: Yes Applicability: All farms operating in areas with wild salmonids except farms that release no water as noted in [38]	c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the methodology used for monitoring of sea lice on wild salmonids is in compliance with the requirements in Appendix III-1.	C. Evaluate documents to confirm methodology used for monitoring of sea lice on wild salmonids complies with requirements of Appendix III-1.	
		d. Make the results from 3.1.6b easily publicly available (e.g. posted to the company's website) within eight weeks of completion of monitoring.	D. Confirm that results are easily publicly available and that they were posted within the required timeframe.	
		e. Submit to ASC the results from monitoring of sea lice levels on wild salmonids as per Appendix VI.	E. Confirm that client has submitted monitoring results to ASC (Appendix VI).	
3.1.6	**Indicator**: In areas of wild salmonids, maximum on-farm lice levels during sensitive periods for wild fish [45]. See detailed requirements in Appendix II, subsection 2. **Requirement:** 0.1 mature female lice per farmed fish **Applicability:** All farms operating in areas with wild salmonids except farms that release no water as noted in [38]	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.7 does not apply.	A. Confirm whether the farm operates in an area of wild salmonids based on results from 3.1.5a (above). If not, then Indicator 3.1.7 does not apply.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Establish the sensitive periods [45] of wild salmonids in the area where the farm operates. Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.	B. Review farm's designation of sensitive periods and cross-check against datasets presented in 3.1.4 and 3.1.5.	
		c. Maintain detailed records of monitoring on-farm lice levels (see 3.1.4) during sensitive periods as per Appendix II-2.	C. Review records from the farm's sea lice monitoring program to confirm that lice levels are in compliance with the requirement based on farm-wide average lice levels per farmed fish (not values from individual net-pens).	
		d. Provide the CAB with evidence there is a 'feedback loop' between the targets for on- farm lice levels and the results of monitoring of lice levels on wild salmonids (Appendix II- 2).	D. Confirm that monitoring data for lice levels are used in a feedback loop as required by Appendix II-2.	
Footnote	[45] Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.			

Criterion 3.2 Introduction of non-native species

		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
3.2.1	**Indicator**: If a non-native species is being produced, demonstration that the species was widely commercially produced in the area by the date of publication of the SAD standard **Requirement:** Yes [47] **Applicability:** All farms except as noted in [47]	Note: For the purposes of Indicator 3.2.1, "area" is defined as a contiguous body of water with the bio-chemical and temperature profile required to support the farmed species' life and reproduction (e.g. the Northern Atlantic Coast of the U.S. and Canada). Appendix II-1A elaborates further on this definition: "The boundaries of an area should be defined, taking into account the zone function." The intent is that the area relates to the spatial extent that is likely to be put at risk from the non-native salmon. Areas will only rarely coincide with the boundaries of countries.		
		a. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.1 does not apply.	A. Confirm the farm does not produce a non-native species by comparing local species (results from 3.1.5a) to the species produced. Cross-check against record from smolt suppliers (e.g. 3.3.1b). If the farm only produces a native species, then Indicator 3.2.1 does not apply.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Provide documentary evidence that the non-native species was widely commercially produced in the area before publication of the SAD Standard (i.e. before June 13, 2012).	B. Review evidence to confirm when the non-native species was first brought into wide commercial production in the area of the farm.	
		c. If the farm cannot provide evidence for 3.2.1b, provide documentary evidence that the farm uses only 100% sterile fish that includes details on accuracy of sterility effectiveness.	C. Review evidence to confirm that the farm uses only 100% sterile fish (N.B. at the time of this writing, the SAD Steering Committee was uncertain that any existing technology could reliably deliver 100% sterile fish). Cross-check against smolt purchase records (e.g. invoices).	
		d. If the farm cannot provide evidence for 3.2.1b or 3.2.1c, provide documented evidence that the production system is closed to the natural environment and for each of the following: 1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained; 2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce [47]; and 3) barriers ensure there are no escapes of biological material [47] that might survive and subsequently reproduce (e.g. UV or other effective treatment of any effluent water exiting the system to the natural	D. Review evidence that the farm complies with each point raised in 3.2.1d and confirm by inspection during on-site audit. Cross check against related farm records for escapes (3.4.1), unexplained loss (3.4.2), and escape prevention (3.4.4).	
		-	E. Verify compliance.	
Footnote	[47] Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.			
3.2.2	**Indicator**: If a non-native species is being produced, evidence of scientific research [48] completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction and these results submitted to ASC for review [49] **Requirement:** Yes, within five years of publication of the SAD standard [50,51] **Applicability:** All	**Instruction to Clients for Indicator 3.2.2 - Exceptions to Allow Production of Non-Native Species** Farms have five years to demonstrate compliance with this standard from the time of publication of the ASC Salmon Standard (i.e. full compliance by June 13, 2017). Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the s Note: For the purposes of Indicator 3.2.2, "jurisdiction" is defined the same as "area" in 3.2.1.		
		a. Inform the ASC of the species in production (Appendix VI).	A. Confirm the farm has informed ASC which species is in production (Appendix VI).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.2 does not apply.	B. Confirm the farm does not produce a non-native species as for 3.2.1. If the farm only produces a native species, then Indicator 3.2.2 does not apply.	
		c. If yes to 3.2.2b, provide evidence of scientific research completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction. Alternatively, the farm may request an exemption to 3.2.2c (see below).	C. Confirm that the scientific research included: multi-year monitoring for non-native farmed species; used credible methodologies & analyses; and underwent peer review. If the farm requests an exemption then enter "NA" and proceed to 3.2.2d.	
		d. If applicable, submit to the CAB a request for exemption that shows how the farm meets all three conditions specified in instruction box above.	D. As applicable, review the farm's request for exemption. Verify that the evidence shows how the farm meets all three conditions specified above.	
		e. Submit evidence from 3.2.2c to ASC for review.	E. Confirm the farm submits required evidence to ASC.	
Footnote	[48] The research must at a minimum include multi-year monitoring for non-native farmed species, use credible methodologies and analysis, and undergo peer review.			
Footnote	[49] If the review demonstrates there is increased risk, the ASC will consider prohibiting the certification of farming of non-native salmon in that jurisdiction under this standard. In the event that the risk tools demonstrate "high" risks, the SAD expects that the ASC will prohibit the certification of farming of non-native salmon in that jurisdiction.			
Footnote	[50] Farms have five years to demonstrate compliance with this standard from the time of publication of the final SAD standards and accompanying auditing guidelines.			
Footnote	[51] Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining.			
	Indicator: Use of non-native species for sea lice control for on-	a. Inform the CAB if the farm uses fish (e.g. cleaner fish or wrasse) for the control of sea lice.	A. Confirm whether the farms uses fish for sea lice control. If no, auditor response to 3.2.3A-C is "not applicable" (NA).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records (e.g. invoices) to show the species name and origin of all fish used by the farm for purposes of sea lice control.	B. Review purchase records to confirm the origin and identity of all species that are used for sea lice control on farm.	

3.2.3	species for seed line control for on-farm management purposes **Requirement:** None **Applicability:** All	c. Collect documentary evidence or first hand accounts as evidence that the species used is not non-native to the region.	C. Review evidence for compliance with the requirement. Acceptable documentary evidence: peer-reviewed literature, government documentation confirming species is not non-native to the region. Acceptable first hand accounts: community testimonials and direct evidence for historical presence of the species in the water body captured with cast nets, trapping devices, or fishing.	
Criterion 3.3 Introduction of transgenic species				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
3.3.1	**Indicator**: Use of transgenic [53] salmon by the farm **Requirement:** None **Applicability:** All	a. Prepare a declaration stating that the farm does not use transgenic salmon.	A. Verify declaration of no use of transgenic salmon.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records for the origin of all cultured stocks including the supplier name, address and contact person(s) for stock purchases.	B. Review records to confirm compliance with the requirement.	
		c. Ensure purchase documents confirm that the culture stock is not transgenic.	C. If the auditor suspects that transgenic fish are being cultured, test stock identity by collecting 3 fish and sending to an ISO 17025 certified laboratory for genetic analysis.	
Footnote	[53] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring (http://www.csrees.usda.gov/nea/biotech/res/biotechnology_res_glossary.html).			
Criterion 3.4 Escapes [55]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[55] See Appendix VI for transparency requirements for 3.4.1, 3.4.2 and 3.4.3.			
3.4.1	**Indicator**: Maximum number of escapees [56] in the most recent production cycle	a. Maintain monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.	A. Review client submission for completeness and accuracy of information. Cross-check with the estimate of unexplained loss, maintenance records for small tears in net, predator attacks, etc.	3.4.1 Escape The spreadsheet Macquarie Harbour Escapes Tracker records only 8 escape events since 1/01/03, the latest was almost three years ago. Details: 25/03/2013 from seal in pen, comments - Fish were not noted as missing until h There have been no reported escapes since then; the improvements in exclusion equipment and the weighting of the nets are seen as the major factors for this.
		b. Aggregate cumulative escapes in the most recent production cycle.	B. Review the calculation and confirm compliance with the requirement.	
		c. Maintain the monitoring records described in 3.4.1a for at least 10 years beginning with the production cycle for which farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [57]).	C. Confirm that farm documents show continuous monitoring of escapes.	
	Requirement: 300 [57] **Applicability:** All farms except as noted in [57]	d. If an escape episode occurs (i.e. an incident where > 300 fish escaped), the farm may request a rare exception to the Standard [57]. Requests must provide a full account of the episode and must document how the farm could not have predicted the events that caused the escape episode.	D. Review the farm's request for a rare exception to the Standard for an escape event. Confirm no prior exceptional events were documented during the previous 10 years, or since the date of the start of the production cycle during which the farm first applied for certification. An example of an exceptional event is vandalization of the farm. Events that are not considered exceptional include failures in moorings due to bad weather, boat traffic incidents due to poor marking of the farm, human error,	
		e. Submit escape monitoring dataset to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	E. Confirm that client has submitted escape monitoring data to ASC (Appendix VI).	
Footnote	[56] Farms shall report all escapes; the total aggregate number of escapees per production cycle must be less than 300 fish. Data on date of escape episode(s), number of fish escaped and cause of escape episode shall be reported as outlined in Appendix VI.			
Footnote	[57] A rare exception to this standard may be made for an escape event that is clearly documented as being outside the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predi			
3.4.2	**Indicator**: Accuracy [58] of the counting technology or counting method used for calculating stocking and harvest numbers **Requirement:** ≥ 98% **Applicability:** All	a. Maintain records of accuracy of the counting technology used by the farm at times of stocking and harvest. Records include copies of spec sheets for counting machines and common estimates of error for hand-counts.	A. Confirm that the farm keeps records of counting accuracy for the counting technology or method used on site at stocking and harvest.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. If counting takes place off site (e.g. pre-smolt vaccination count), obtain and maintain documents from the supplier showing the accuracy of the counting method used (as above).	B. Verify the client obtains information from smolt suppliers (if applicable).	
		c. During audits, arrange for the auditor to witness calibration of counting machines (if used by the farm).	C. Verify that the farm calibrates counting equipment as recommended by the manufacturer.	
		-	D. Confirm the stated accuracy of the farm's counting technology or counting method is ≥ 98% at both stocking and harvest. Stated accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.	
		e. Submit counting technology accuracy to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	E. Confirm that client has submitted counting technology accuracy to ASC (Appendix VI).	
Footnote	[58] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.			
3.4.3	**Indicator**: Estimated unexplained loss [59] of farmed salmon is made publicly available **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 3.4.3 - Calculation of Estimated Unexplained Loss** The Estimated Unexplained Loss (EUL) of fish is calculated at the end of each production cycle as follows: EUL = (stocking count) - (harvest count) - (mortalities) - (recorded escapes). Units for input variables are number of fish (i.e. counts) per production cycle. Where possible, farms should use the pre-smolt vaccination count as the stocking count. This formula is adapted from footnote 59 of the ASC Salmon Standard.		
		a. Maintain detailed records for mortalities, stocking count, harvest count, and escapes (as per 3.4.1).	A. Review records for completeness.	The focus on escape prevention and unexplained loss is discussed in the 2015 Sustainability report (p 12, 21, 26 & 35).
		b. Calculate the estimated unexplained loss as described in the instructions (above) for the most recent full production cycle. For first audit, farm must demonstrate understanding of calculation and the requirement to disclose EUL after harvest of the current cycle.	B. Verify accuracy of farm calculations for estimated unexplained loss.	For the calendar input 12YC the ASC Dashboard of the Tassal records the EUL (Estimated Unexplained Losses) as -4.0 %. According to MH staff, most of the unexplained mortalities are thought to be due to cormorants predatic The spreadsheet Macquarie Harbour 13YC EUL records the Estimated Unexplained Losses for 13YC (completed in Aug15). Columns include Input count in period, Escape count in period, Harvest count (incl discards) in period, M confirming an improvement over the previous YC.
		c. Make the results from 3.4.3b available publicly. Keep records of when and where results were made public (e.g. date posted to a company website) for all production cycles.	C. Verify that the farm makes the information available to the public.	The FPM-T commented that the main reason for EUL was from the decomposition of morts before recovery, especially when higher water temperatures causing more mortalities and faster decomposition. The expanded use c divers.

	Applicability: All	d. Submit estimated unexplained loss to ASC as per Appendix VI for each production cycle.	D. Confirm that client has submitted estimated unexplained loss to ASC (Appendix VI).	Improved feeding practice has also helped, the feed rates are used to determine if the inventory is intact, or if there has been some loses or leakage through small holes from seals. None reported this year. The new Mortality Extraction System soon to be on each pen will mean this being addressed, farm staff are expected able to get to more pens quickly; this will also assist in 'fresher' morts so that identification of the cause fact Counting / stock-take practices have also improved, both for fish in (from hatcheries), at grade/split and at harvest; for example, there has been a software upgrade for AquaScan counter, counts checks by hand on the Baader addition, more stock has come from the Rookwood, Hatchery which usually has a higher accuracy than RF & Saltas hatcheries. Thus the EUL is expected to improve with lower figures recorded. The EUL is made available publically through the company's ASC dashboard at www.tassal.com.au.
		-	E. Compare EUL values (3.4.3a) and counting accuracy (3.4.2a) to recorded escapes to check whether farm reporting is plausible. If EUL is greater than the combined margin of error related to fish counts, investigate potential sources of error as it could indicate the farm under reported mortalities or escapes.	
Footnote	[59] Calculated at the end of the production cycle as: Unexplained loss = Stocking count – harvest count – mortalities – other known escapes. Where possible, use of the pre-smolt vaccination count as the stocking count is preferred.			
3.4.4	**Indicator**: Evidence of escape prevention planning and related employee training, including: net strength testing; appropriate net mesh size; net traceability; system robustness; predator management; record keeping and reporting of risk events (e.g., holes, infrastructure issues, handling errors, reporting and follow up of escape events); and worker training on escape prevention and counting technologies **Requirement:** Yes **Applicability:** All	a. Prepare an Escape Prevention Plan and submit it to the CAB before the first audit. This plan may be part of a more comprehensive farm planning document as long as it addresses all required elements of Indicator 3.4.4.	A. Obtain and review the farm's escape prevention plan prior to scheduling the first audit.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. If the farm operates an open (net pen) system, ensure the plan (3.4.4a) covers the following areas: - net strength testing; - appropriate net mesh size; - net traceability; - system robustness; - predator management; - record keeping; - reporting risk events (e.g. holes, infrastructure issues, handling errors); - planning of staff training to cover all of the above areas; and - planning of staff training on escape prevention and counting technologies.	B. Confirm the farm's Escape Prevention Plan contains all required elements for open (net pen) systems as applicable.	
		c. If the farm operates a closed system, ensure the plan (3.4.4a) covers the following areas: - system robustness; - predator management; - record keeping; - reporting risk events (e.g. holes, infrastructure issues, handling errors); - planning of staff training to cover all of the above areas; and - planning of staff training on escape prevention and counting technologies.	C. Confirm the farm's Escape Prevention Plan contains all required elements for closed systems as applicable.	
		d. Maintain records as specified in the plan.	D. Review documentary evidence showing implementation of the plan.	
		e. Train staff on escape prevention planning as per the farm's plan.	E. Review records (i.e. attendance records, meeting notes) to confirm that farm staff attend training on escape prevention planning.	
		-	F. Interview farm workers to confirm that the plan is implemented.	

PRINCIPLE 4: USE RESOURCES IN AN ENVIRONMENTALLY EFFICIENT AND RESPONSIBLE MANNER

Criterion 4.1 Traceability of raw materials in feed

	Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Instruction to Clients for Indicators 4.1.1 through 4.4.2 - Sourcing of Responsibly Produced Salmon Feeds Farms must show that all feeds used by the farm are produced in compliance with the requirements of Indicators 4.1.1 through 4.4.4. To do so, farms must obtain documentary evidence that the feed producers (see note 1) are audited at regular intervals by an independent auditing firm or a conformity assessment body against a recognized standard which substantially incorporate requirements for traceability. Acceptable certificatio demonstrate that fee producers have robust information systems and information handling processes to allow the feed producers to be able to bring forward accurate information about their production and supply chains. Declarations from the feed producer that are provided to the farm to demonstrate compliance with these indicators must be supported by the audits. Farms must also show that all of their feed producers are duly informed of the requirements of the ASC Salmon Standard relating to sourcing of responsibly produced salmon feed (see 4.1.1b below). In addition to the above, farms must also show that their feed suppliers comply with the more detailed requirements for traceability and ingredient sourcing that are specified under indicators 4.1.1 through 4.4.2. The ASC Salmon Standard allows farms to use one of two different methods to demonstrate compliance of feed producers: Method #1: Farms may choose to source feed from feed producers who used only those ingredients allowed under the ASC Salmon Standards during the production of a given batch of feed. For example, the farm may request its feed supplier to produce a batch of feed according to farm specifications. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements. Method #2: Farms may choose to source feed from feed producers who demonstrate compliance using a "mass-balance" method. In this method, feed producers show that the balance of all ingredients (both amount and type) used during a given feed production period meets ASC requirements. However, mixing of ingredients into the general silos and production lines is allowed during manufacturing. Audits of the feed producer w example, to integrated feed production companies that handle all steps of feed manufacturing (purchasing of raw materials, processing to finished feed, and sales) under the management of a single legal entity. Note 1: The term "feed producer" is used here to identify the organization that produces the fish feed (i.e. it is the "feed manufacturer"). In most cases, the organization supplying feed to a farm (i.e. the feed supplier) will be the same organization that produced the feed, but there may be instances where feed suppliers are not directly responsible for feed production. Regardless of whether the farm sources feeds directly from a feed compliance with requirements.			
		a. Maintain detailed records of all feed suppliers and purchases including contact information and purchase and delivery records.	A. Review feed records for completeness and confirm the number of feed suppliers to the client.	a. In past only two feed suppliers have been used - Ridley Aqua Feed & Skretting Australia (SkA). Contact details for these manufacturers/suppliers are on the Approved Supplier List and FishTalk. Since 2012 only Skretting has b have only been fed Skretting feeds. Tassal feed purchases, deliveries, transfers and usage data is entered into FishTalk – key traceability information is the delivery number (Skretting) from the invoices which relates back to batch # (hard copy only). Digital copies The Feed Team Leader documents the deliveries by De Bruyns – the driver uses site forklift and unpacks truck as per storage plan into the Warehouse/Feed Store. His Invoice is left in slot – after collection these dockets are ent Hard copies of the delivery documents are held on site for current fish class -reviewed April 15. Recent copies of Delivery Notes reviewed include (signed at site & stamped entered into FishTalk). b. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC (Aug13 to Apr15) states that SkA has been informed of the ASC requirements and that they have received a co Confirmed by Tassal through email sent on 8/01/14 (signed by Head of Sustainability) to Skretting included a copy of the Salmon Standard and the Feed Supplier Notification Letter (1p) stating the requirement 4.3.1a Tassal int type of certification scheme noted in 4.3.1a of the ASC Salmon Standard. Also as per ASC criterion 4.4.2b Tassal intends to source feed containing soya certified under the RTRS or equivalent. c. SkA notes that evidence of traceability can be assured via a third party audit of their Nutrace tracking and tracing system. As required by the ASC Salmon Standard the traceability of their feed is for all ingredients that make In the past traceability audits were undertaken by SGS annually to confirm that Skretting compliance using the 'mass balance' method (Method #2). The audit involved two randomly selected samples for traceability (the last w by annual Global GAP and ASC Principle 4 audits
		b. Inform each feed supplier in writing of ASC requirements pertaining to production of salmon feeds and send them a copy of the ASC Salmon Standard.	B. Review farm records to verify that the farm has informed all of its feed suppliers of relevant ASC requirements for feed production.	
		c. For each feed producer used by the farm, confirm that an audit of the producer was recently done by an audit firm or CAB against an ASC-acknowledged certification scheme. Obtain a copy of the most recent audit report for each feed producer.	C. Verify that the farm obtains current audit reports from all relevant feed producers, that these audits were performed by an audit firm or CAB against an ASC-acknowledged certification scheme, and that audit results demonstrate compliance with requirements.	
		d. For each feed producer, determine whether the farm will use method #1 or method #2 (see Instructions above) to show compliance of feed producers. Inform the CAB in writing.	D. Review which method the farm will use and confirm that independent audit results (4.1.1c) show compliance of feed producers.	
		e. Obtain declaration from feed supplier(s) stating that the company can assure traceability of all feed ingredients that make up more than 1% of the feed to a level of detail required by the ASC Salmon Standard [62].	E. Review declaration from each feed supplier to confirm the company assures traceability to the level of detail required by Standard.	

4.1.1	**Indicator**: Evidence of traceability, demonstrated by the feed producer, of feed ingredients that make up more than 1% of the feed [62]. **Requirement:** Yes **Applicability:** All	-	F. Cross-check the declarations against results from audits of feed suppliers (4.1.1c) to verify evidence of required levels of traceability .	by annual Global GAP and ASC Principle 4 audits. SkA has Global GAP certification for Compound Manufactured Feeds of Skretting (2015 certificate #4052852637961) through annual certification since 2014 by SGS Australia – the next audit is scheduled for 16-17/05/16. Since 2015 SkA have also been audited against the ASC Salmon Standard Principle 4; the latest SGS Statement of Compliance (Certificate AU15/4663 Issue 1, expires 31/05/16); the next audit is scheduled for 13/05/16. Tassal has copies of the May15 SGS report and certificate on file. d. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC (Aug13 to Apr15) confirms the use of Method #2 Mass Balance to show compliance of feed producers. The au e. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) confirms they can demonstrate evidence of traceability in regard to all feed materials (>1% of feed) for the products fed to a com The declaration also confirms that marine ingredients & soy can be traced to country of origin (when the fish is captured or processed, or where the soya was grown). For all other raw materials SkA can also trace to country o supplier. Skretting has an electronic traceability system which is described in their internal quality SOP Nutrace tracking and tracing: Purpose and responsibility including support (DMS-00028 R1 3/03/15). Skretting's traceability system Nutrace check list for Skretting (DMS-00241 R1 3/03/15).The Global GAP Compound Manufactured Feed (CFM) Standard (v2.1) Chapter 13 has detailed provisions regarding traceability. Compliance documents provided with the 9/02/16 SkA declaration include Appendix 4 - MH 13YC FFDR declaration (DH 31.18.10 v2) spreadsheet for FFDRm and FFDRo over the culture period Aug13 to Apr15. f. Cross check confirms results.
Footnote	[62] Traceability shall be at a level of detail that permits the feed producer to demonstrate compliance with the standards in this document (i.e., marine raw ingredients must be traced back to the fishery, soy to the region grown, etc.). Feed manufacturers will need to supply the farm with third-party documentation of the ingredients covered under this standard.			
Criterion 4.2 Use of wild fish for feed [63]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[63] See Appendix VI for transparency requirements for 4.2.1 and 4.2.2.			
4.2.1	**Indicator**: Fishmeal Forage Fish Dependency Ratio (FFDRm) for grow-out (calculated using formulas in Appendix IV- 1) **Requirement:** < 1.35 **Applicability:** All	**Instruction to Clients for Indicator 4.2.1 - Calculation of FFDRm** Farms must calculate the Fishmeal Forage Fish Dependency Ration (FFDRm) according to formula presented in Appendix IV-1 using data from the most recent complete production cycle. Farms must also show that they have maintained sufficient information in order to make an accurate calculation of FFDRm as outlined below. For first audits, farms may be exempted from compliance satisfactorily demonstrate to the auditor that: - the client understands how to accurately calculate FFDRm; - the client maintains all information needed to accurately calculate FFDRm (i.e. all feed specs for > 6 months) for the current production cycle; and - the client can show how feed used for the current production cycle will ensure that the farm will meet requirements at harvest (i.e. FFDRm < 1.35).		
		a. Maintain a detailed inventory of the feed used including: - Quantities used of each formulation (kg); - Percentage of fishmeal in each formulation used; - Source (fishery) of fishmeal in each formulation used; - Percentage of fishmeal in each formulation derived from trimmings; and - Supporting documentation and signed declaration from feed supplier.	A. Verify completeness of records and that values are stated in a declaration from the feed manufacturer.	a. The Tassal database FishTalk allows a detailed inventory of the feed purchased in each FY or completed YC, including quantities of the various formulations based on information supplied by SkA. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC (over the culture period Aug13 to Apr15) states that they can declare the % inclusion and quantity of all fishmea site for a complete production cycle. This data can be used to calculate the FFDRm. SkA can also declare the fishery origin of all fishmeal (reduction and trimmings sources) based on purchases made in the previous year. The volume of feed sold per month to the farming site for the assessment production cycle is provided to SkA by Tassal with their eFCR to complete the FFDRm calculation. Supporting SkA compliance documentation and signed declaration (9/02/16) on file include: - Appendix 4 - MH 13YC FFDR declaration (DH 31.18.10 v2) spreadsheet confirms that both meet ASC requirements for MH 13YC - FFDRm is 0.42 (complaint to the ASC requirement of <1.35) and the FFDRo is 1.95 (complaint t - Appendix 5 - 2015 Origin of Source Fishery for FM and FO (DH 31.18.07 v3) records the source fisheries for 100% of both the fish meal and the fish oil during the purchasing period Jan15-Dec15 including Peruvian/Chilean red (Chile Anchovy & Indian Sardine). Individual raw materials can be traced and source fishery identified for each specific feed using the manufacturing order and Skretting's internal Tracking and Tracing system. For the Purchasing period: Jan 2015-Dec 2015, the - Reduction Fishmeal from Peru (Anchovy, 30% of 2015 Raw material purchases), Chile (Anchovy, 22%); - Trimmings Fishmeal from Thailand (Skipjack tuna, 10%, Yellowfin tuna, 2%), Samoa (Skipjack tuna, 5%, Yellowfin tuna, 1%, Albacore (2%), Ecuador (Skipjack tuna, 20%, Yellowfin tuna, 7%, Bigeye tuna, 0.1%); and -Reduction Fish Oil from Chile (Anchovy, 57%) and India (Sardine , 44%). These values are based on purchased raw materials that are available in SkA's internal system, i.e. feeds made at the beginning or end of purchasing year may not include species in this list due to lead times of purchased marir All of the fish species are listed in Appendix 6 - 2015 Independent Marine Assessment Report (14/01/15, 89p) called the Irvine (2015), also refer 4.3.2a. The latest report 2016 Independent Marine Assessment Report (15/01/1 In an email (2/03/16) regarding the Oil Sardine (India FAO 51) contributing 44% of the total reduction fish oil, the Commercial Manager at SkA replied that their Origin of Source Fishery is the entire raw material use at Skrettin compliant fish oil (and fish meal) to be able to issue sufficient ASC feed certificates for Tassal's production. In general, if 50% of their fish oil (and fish meal) purchases are ASC compliant in any one year they consider they are w b. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC includes the compliance document Appendix 4 - MH 13YC FFDR declaration (DH 31.18.10 v2) states that fishm c. The most recently completed production cycle at MH was 13YC undertaken from Aug13-Apr15. The 13YC average eFCR is 1.39. d. For MH 13YC the FFDRm is 0.42 (complaint to the ASC requirement of <1.35). e. The client has submitted data/information to ASC.
		b. For FFDRm calculation, exclude fishmeal derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery.	B. Verify that the client excludes from the FFDRm calculation any fishmeal rendered from seafood by-products.	
		c. Calculate eFCR using formula in Appendix IV-1 (use this calculation also in 4.2.2 option #1).	C. Verify that eFCR calculation was done correctly.	
		d. Calculate FFDRm using formulas in Appendix IV-1.	D. Verify that FFDRm calculations were done correctly and confirm the value complies with the requirement.	
		e. Submit FFDRm to ASC as per Appendix VI for each production cycle.	E. Confirm that client has submitted FFDRm to ASC (Appendix VI).	
		Note: Under Indicator 4.2.2, farms can choose to calculate FFDRo (Option #1) or EPA & DHA (Option #2). Farms do not have to demonstrate that they meet both threshold values. Client shall inform the CAB which option they will use.		
		a. Maintain a detailed inventory of the feed used as specified in 4.2.1a.	A. Verify completeness of feed records as in 4.2.1A.	a. A detailed inventory of the feed used is maintained as specified in 4.2.1a. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC contains the % inclusion quantity & for a complete production cycle. This data can be used to calculate the FFDRo. Compliance documents include:

4.2.2	**Indicator**: Fish Oil Forage Fish Dependency Ratio (FFDRo) for grow-out (calculated using formulas in Appendix IV- 1), OR Maximum amount of EPA and DHA from direct marine sources [64] (calculated according to Appendix IV-2) **Requirement:** FFDRo < 2.95 or (EPA + DHA) < 30 g/kg feed **Applicability:** All	b. For FFDRo and EPA+DHA calculations (either option #1 or option #2), exclude fish oil derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery.	B. Verify client excludes fish oil rendered from byproducts from the FFDRo or (EPA + DHA) calculation.	- Appendix 4 - MH 13YC FFDR declaration (DH 31.18.10 v2) spreadsheet - Appendix 5 - 2015 Origin of Source Fishery for FM and FO (DH 31.18.07 v3). Individual raw materials can be traced and source fishery identified for each specific feed using the manufacturing order and Skretting's internal Tracking and Tracing system. For the Purchasing period: Jan 2015-Dec 2015, the - Reduction Fishmeal from Peru (Anchovy, 30% of 2015 Raw material purchases), Chile (Anchovy, 22%); - Trimmings Fishmeal from Thailand (Skipjack tuna, 10%, Yellowfin tuna, 2%), Samoa (Skipjack tuna, 5%, Yellowfin tuna, 1%, Albacore (2%), Ecuador (Skipjack tuna, 20%, Yellowfin tuna, 7%, Bigeye tuna, 0.1%); and -Reduction Fish Oil from Chile (Anchovy, 57%) and India (Sardine , 44%). These values are based on purchased raw materials that are available in SkA's internal system, i.e. feeds made at the beginning or end of purchasing year may not include species in this list due to lead times of purchased marir All of the fish species are listed in Appendix 6 - 2015 Independent Marine Assessment Report (14/01/15, 89p) called the Irvine (2015), also refer 4.3.2a. The report includes assessments on both Trimming (x20) and Reduction (fishmeal and fish oil, and whether they meet the requirements of the ASC Salmon Standard. b. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC includes the compliance document Appendix 4 - MH 13YC FFDR declaration (DH 31.18.10 v2) states that fish c. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC states that SkA calculates values according to option #1. d. For MH 13YC the FFDRo is 1.95 (complaint to the ASC requirement of <2.95) e. N/A f. The client has submitted data/information to ASC.
		c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.	C. Record which option the client chose.	
		d. For option #1, calculate FFDRo using formulas in Appendix IV-1 and using the eFCR calculated under 4.2.1c.	D. Verify that FFDRo calculations were done correctly and confirm the value complies with the standard.	
		e. For option #2, calculate amount of EPA + DHA using formulas in Appendix IV-2.	E. Verify that (EPA+DHA) calculations were done correctly and confirm the value complies with the standard.	
		f. Submit FFDRo or EPA & DHA to ASC as per Appendix VI for each production cycle.	F. Confirm that client has submitted FFDRo or EPA & DHA to ASC (Appendix VI)	
Footnote	[64] Calculation excludes DHA and EPA derived from fisheries by-products and trimmings. Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption. Fishmeal and fish oil that are produced from trimmings can be excluded from the calculation as long as the origin of the trimmings is not any species that are classified as critically endangered, endangered or vulnerable in the IUCN Red List of Threatened Species (http://www.iucnredlist.org).			
Criterion 4.3 Source of marine raw materials				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
		Note: Indicator 4.3.1 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.		
4.3.1	**Indicator**: Timeframe for all fishmeal and fish oil used in feed to come from fisheries [65] certified under a scheme that is an ISEAL member [66] and has guidelines that specifically promote responsible environmental management of small pelagic fisheries **Requirement:** < 5 years after the date of publication [67] of the SAD standards (i.e. full compliance by June 13, 2017) **Applicability:** All	a. Prepare a policy stating the company's support of efforts to shift feed manufacturers purchases of fishmeal and fish oil to fisheries certified under a scheme that is an ISEAL member and has guidelines that specifically promote responsible environmental management of small pelagic fisheries.	A. Verify that the client's policy supports responsible feed sourcing (e.g. programs at http://www.isealalliance.org/portrait/full%20member).	a. Tassal's IMS-P1084 Responsible Sourcing Policy (8/01/14, Issue #1) includes the sourcing of feed made from byproduct sources or fisheries with responsible environmental management. b. Tassal email sent on 8/01/14 (signed by Head of Sustainability) to Skretting included a copy of the Salmon Standard and the Feed Supplier Notification Letter (1p) stating the requirement 4.3.1a Tassal intends to source feeds scheme noted in 4.3.1a of the ASC Salmon Standard. c. Tassal have noted that starting on or before June 13, 2017, they need to use feed inventory and feed supplier declarations in 4.2.1a to develop a list of the origin of all fish products used as feed ingredients., and also to reta indicate 4.3.1. d. Tassal are working with Skretting to be ready by deadline of June 13, 2017, to provide evidence that fishmeal and fish oil used in feed come from fisheries [65] certified under a scheme that is an ISEAL member [66] and has fisheries. The Nutreco Sustainable Procurement Policy for Marine Products Version 2010 (4p) states that Skretting will continue to work globally to obtain sufficient sources, including by-products & trimmings from suitability managed f There continues to be good evidence that Skretting is being proactive in working towards fulfilling all the ASC requirements; for example, in the SkA correspondence with ASC ("ASC detailed questions 11-7-13_ASC Response" 3 they can expect IFFO RS to be the only realistic alternative for certified marine raw materials for quite some time. IFFO RS does not assess fisheries (as does MSC), but rather certifies that fishmeal and fish oil come from fisheri the goal is to become compliant in the future.) With the likely completion of the Feed Standard Dialogues, it is expected that this requirement will be modified. Skretting have assured Tassal they will comply with the criteria accordingly within the allowable timeframe.
		b. Prepare a letter stating the farm's intent to source feed containing fishmeal and fish oil originating from fisheries certified under the type of certification scheme noted in 4.3.1a	B. Obtain a copy of the client's letter of intent.	
		c. Starting on or before June 13, 2017, use feed inventory and feed supplier declarations in 4.2.1a to develop a list of the origin of all fish products used as feed ingredients.	C. As of June 13, 2017, confirm that the farm has sufficient evidence for the origin of all fish products in feed to demonstrate compliance with indicator 4.3.1. Prior to June 13, 2017, 4.3.1c does not apply.	
		d. Starting on or before June 13, 2017, provide evidence that fishmeal and fish oil used in feed come from fisheries [65] certified under a scheme that is an ISEAL member [66] and has guidelines that specifically promote responsible environmental management of small pelagic fisheries.	D. As of June 13, 2017, review evidence and confirm compliance. Prior to June 13, 2017, 4.3.1d does not apply.	
Footnote	[65] This standard and standard 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.			
Footnote	[66] Meets ISEAL guidelines as demonstrated through full membership in the ISEAL Alliance, or equivalent as determined by the Technical Advisory Group of the ASC.			
Footnote	[67] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.			
		Instruction to Clients for Indicator 4.3.2 - FishSource Score of Fish Used in Feed To determine FishSource scores of the fish species used as feed ingredients, do the following: -go to http://www.fishsource.org/ -select "Species" drop down tab to the left and select the relevant species -confirm that the search identifies the correct species, then select the top tab that reads "Scores" For first audits, farms must have scoring records that cover all feeds purchased during the previous 6-month period. Note: Indicator 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.		
		a. Record FishSource score for each species from which fishmeal or fish oil was derived and used as a feed ingredient (all species listed in 4.2.1a).	A. Cross-check against 4.2.1a to confirm that client recorded a score for each species used in feed.	a. As SkA chose to use the mass balance approach, they use the FishSource score for each species from which fishmeal or fish oil was derived and used as a feed ingredient. The SkA (9/02/16) ASC Salmon Standard Compliance up until June 2017, they have committed at each annual review to declare the FishSource & Biomass (#4) scores of species in the fish meal and fish oil (reduction fishery sources only) used in feeds. SkA's annual independent assessment report of marine ingredients is by Dr. Sarah Irvine (Marine Fisheries Scientist & Consultant). The Declaration Appendix 6 - 2015 Independent Marine Assessment Report called the Irvine (2 for Skretting Australia" (14/01/15, 89p). As in previous editions, the report discloses the FishSource scores for the marine species used in feeds fed over the past 12 months at MH (i.e. for 13YC). This report is augmented by the Appendix 7 - Mass Balance - Skretting's approach (DH 31.18.24 v0) and ASC Feed Certificates (SkA now issue ASC feed certificates for the entire Tassal operation; four certificates for the entire 2
		b. Confirm that each individual score ≥ 6 and the biomass score is ≥ 8.	B. Cross-check a sample of the farm's scores against the FishSource website to verify that no individual score is < 6 and no biomass score is < 8.	

4.3.2	**Indicator**: Prior to achieving 4.3.1, the FishSource score [68] for the fishery(ies) from which all marine raw material in feed is derived **Requirement:** All individual scores ≥ 6, and biomass score ≥ 8 **Applicability:** All, until June 13, 2017	c. If the species is not on the website it means that a FishSource assessment is not available. Client can then take one or both of the following actions: 1. Contact FishSource via Sustainable Fisheries Partnerships to identify the species as a priority for assessment. 2. Contract a qualified independent third party to conduct the assessment using the FishSource methodology and provide the assessment and details on the third party qualifications to the CAB for -	C. If the client provides an independent assessment, review the assessment and the qualifications of the independent third party to verify that the assessment was done with the FishSource methodology. D. If the species does not have a FishSource score then the fish feed does not comply with the requirement.	b. SkA's Compliance documents include: - Irvine (2015) Independent raw material assessment report - Appendix 7 - Mass Balance - Skretting's approach (DH 31.18.24 v0) describes using the mass balance system to demonstrate compliance to origin of marine ingredients (Method #2). - Appendix 5 - 2015 Origin of Source Fishery for FM and FO (DH 31.18.07 v3). Individual raw materials can be traced and source fishery identified for each specific feed using the manufacturing order and Skretting's internal Tracking and Tracing system. For the Purchasing period: Jan 2015-Dec 2015, the - Reduction Fishmeal from Peru (Anchovy, 30% of 2015 Raw material purchases), Chile (Anchovy, 22%); - Trimmings Fishmeal from Thailand (Skipjack tuna, 10%, Yellowfin tuna, 2%), Samoa (Skipjack tuna, 5%, Yellowfin tuna, 1%, Albacore (2%), Ecuador (Skipjack tuna, 20%, Yellowfin tuna, 7%, Bigeye tuna, 0.1%); and -Reduction Fish Oil from Chile (Anchovy, 57%) and India (Sardine , 44%). These values are based on purchased raw materials that are available in SkA's internal system, i.e. feeds made at the beginning or end of purchasing year may not include species in this list due to lead times of purchased marir All of the fish species are listed in Appendix 6 - 2015 Independent Marine Assessment Report (14/01/15, 89p) called the Irvine (2015), also refer 4.3.2a. The report includes assessments on both Trimming (x20) and Reduction (fishmeal and fish oil, and whether they meet the requirements of the ASC Salmon Standard. Reviewed Tassal's ASC Feed Certificates (with lot number and kg) for Q2-Q4 2014 (13/01/16) and Q1, Q2 & Q3 2015 (31/12/15) – some state "ASC Feed Certificates represent the amount of feed that has been requested by yo Standard using principle 2 (mass balance). This invoice can be used in addition to the general information provided by Skretting to demonstrate this amount of feed is in compliance with the feed related criteria of the ASC Stan SkA provide ASC Feed Certificates represent the amount of feed that has been used by a company to be in compliance with criteria 4.3.2 (source of marine raw materials) of the ASC Standard using principle 2 (mass balance). T demonstrate this amount of feed is in compliance with the feed related criteria of the ASC Standard. c. Tassal continues to work with Skretting for full compliance with the feeds it uses. The Irvine (2015) Independent raw material assessment report commissioned annual by SkA includes the FishSource & Biomass (#4) scores f
Footnote	[68] Or equivalent score using the same methodology. See Appendix IV-3 for explanation of FishSource scoring.			
4.3.3		**Instruction to Clients for Indicator 4.3.3 - Third-Party Verification of Traceability** Indicator 4.3.3 requires that farms show that their feed producers can demonstrate chain of custody and traceability as verified through third-party audits. Farms may submit reports from audits of feed producers (see 4.1.1c) as evidence that traceability systems are in compliance. Alternatively, farms may show that their feed producers comply with traceability requirements of Indica Organization's Global Standard for Responsible Supply or to the Marine Stewardship Council Chain of Custody Standard. For the first audit, a minimum of 6 months of data on feed is required and evidence shall relate to species used in said dataset.		
	Indicator: Prior to achieving 4.3.1, demonstration of third-party verified chain of custody and traceability for the batches of fishmeal and fish oil which are in compliance with 4.3.2. **Requirement:** Yes **Applicability:** All, until June 13, 2017	a. Obtain from the feed supplier documentary evidence that the origin of all fishmeal and fish oil used in the feed is traceable via a third-party verified chain of custody or traceability program.	A. Review evidence and confirm that a third party verified chain of custody or traceability program was used for the fishmeal and fish oil.	a. SkA has maintained annual Global GAP certification for Compound Manufactured Feeds (certification #4052852637961) since 2014 from SGS Australia; the next audit is scheduled for May16. The Global GAP CMF Standard, control point 15.3 states: "Is the origin of species of wild captured fish used to produce fishmeal and fish oil traceable with regards to: - Species of origin - Country of origin Is the producer able to demonstrate that the list of species used for the production of fishmeal and fish oil does not contain species classified as critically endangered or endangered in the IUCN Red List at the time of purchase? This has been recorded complaint for the past two certifications. b. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) for MH region 13YC notes the evidence is assessed during the annual Global GAP certification for Compound Manufactured Feeds and 4.2.2a.
		b. Ensure evidence covers all the species used (as consistent with 4.3.2a, 4.2.1a, and 4.2.2a).	B. Verify that demonstration of third-party verified chain-of-custody is in place for all species used.	
4.3.4	**Indicator**: Feed containing fishmeal and/or fish oil originating from by-products [69] or trimmings from IUU [70] catch or from fish species that are categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [71] Requirement: None [72] Applicability: All except as noted in [72]	a. Compile and maintain, consistent with 4.2.1a and 4.2.2a, a list of the fishery of origin for all fishmeal and fish oil originating from by-products and trimmings.	A. Review list and confirm consistent with 4.2.1a, 4.2.2a, 4.3.3b.	a. A list of the fishery of origin for all fishmeal and fish oil originating from by-products and trimmings has been provided for Tassal in the 2015 independent report by Irvine (refer 4.3.2a) which summarises these FM & FO sou These values are based on purchased raw materials that are available in SkA's internal system, i.e. feeds made at the beginning or end of purchasing year may not include species in this list due to lead times of purchased marir None of these noncompliant fisheries have been sourced by SkA in the Jan-Dec15 purchasing period except for Ecuador Bigeye tuna; refer 4.2.1a above for discussions on this and why they remain complaint in 2015. b. Both the 09.050.1 Nutreco Sustainable Procurement Policy for Marine Products Version 2010 (9/11/12) and the 09.05.03 Sustainability Criteria soy products (9/11/12) have been replaced by the SOP Nutreco Supplier Code (version June 2014). As per the Skretting SOP Nutreco Supplier Code of Conduct (MDMS-00039 R1 10/02/15) each supplier of marine raw materials purchased by Skretting must sign the Skretting Marine Vendor Policy which has the statement "Th regulations of the country of production or regional laws related to fisheries. The catch processed must not originate from any fisheries that are Illegal, unregulated or unreported (IUU)." c. Skretting's marine vendor policy states that the fishmeal and fish oil must not originate from species classified as endangered or critically endangered. Therefore, any new marine ingredients purchased now requires the sup originate from any species classified as vulnerable according to the IUCN red Lists. The exception is for fisheries from a discrete sub-population assessed to be responsibility managed. These declarations were sighted during th Reviewed declarations from the three largest suppliers for Skretting feeds used in MH. d. The annual Independent raw material assessments are highlighting changes in the fishery status. For example, the Irvine 2014 report noted the only species used by SkA that was listed globally by IUCN as "vulnerable" was requirements. However, the 2015 re-assessment reclassified bigeye tuna from EPO as vulnerable. Therefore, this trimmings fishmeal from this were not be sourced in 2015.
		b. Obtain a declaration from the feed supplier stating that no fishmeal or fish oil originating from IUU catch was used to produce the feed.	B. Verify that the farm obtains declarations from feed suppliers.	
		c. Obtain from the feed supplier declaration that the meal or oil did not originate from a species categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [71] and explaining how they are able to demonstrate this (i.e. through other certification scheme or through their independent audit).	C. Review declaration to confirm compliance. The International Fishmeal and Fish Oil Organization's Global Standard for Responsible Supply and the Marine Stewardship Council standards are two options for demonstrating compliance with Indicator 4.3.4c	
		d. If meal or oil originated from a species listed as "vulnerable" by IUCN, obtain documentary evidence to support the exception as outlined in [72].	D. Review evidence to support exception (if applicable).	
Footnote	[69] Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption.			
Footnote	[70] IUU: Illegal, Unregulated and Unreported.			
Footnote	[71] The International Union for the Conservation of Nature reference can be found at http://www.iucnredlist.org/static/introduction.			
Footnote	[72] For species listed as "vulnerable" by IUCN, an exception is made if a regional population of the species has been assessed to be not vulnerable in a National Red List process that is managed explicitly in the same science-based way as IUCN. In cases where a National Red List doesn't exist or isn't managed in accordance with IUCN guidelines, an exception is allowed when an assessment is conducted using IUCN's metho			

Criterion 4.4 Source of non-marine raw materials in feed				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
4.4.1	**Indicator**: Presence and evidence of a responsible sourcing policy for the feed manufacturer for feed ingredients that comply with recognized crop moratoriums [75] and local laws [76] **Requirement:** Yes **Applicability:** All	a. Compile and maintain a list of all feed suppliers with contact information. (See also 4.1.1a)	A. Review feed supplier list and cross-check against feed purchases. (See also 4.1.1a)	a. Tassal Responsible Sourcing Policy (IMS-P1084 issue 1, 8/01/14, 1p) states "Tassal supports efforts to shift feed manufacturer's purchases of fishmeal and fish oil to fisheries certified under a scheme that is an ISEAL membe environmental management of small pelagic fisheries. Tassal supports efforts to shift feed manufacturers' purchases of soya to soya certified under the Roundtable for Responsible Soy (RTRS) or equivalent". Although another feed manufacturer was used several years ago, since 2012 Skretting Australia (SkA) have been the only feed supplier to Tassal and they are in the Tassal Approved Supplier System. Contact details and other i Sources of SkA raw materials include: 1. Rendered land-animal proteins and oils All of SkA rendered raw materials (i.e. poultry meal, feather meal, blood meal, meat meal, poultry oil) are only sourced from Australian suppliers accredited with the Australian Renderers Association. Their documentation curr The ASC response to a 2014 query on this information was that given all sources were from Australia, there was no need to provide information on different regions/states they are from. 2. Vegetable proteins and oils SkA grains and legumes (i.e. wheat, faba bean, lupine, and canola oil) are sourced from Australian suppliers. Similar to their rendered ingredients, their documentation traces back to their suppliers. Again the ASC response was that given all sources from Australia, there was no need to provide information on different regions/states they are from. 3. Wheat gluten meal SkA purchase their wheat gluten meal from China. Similar to above, their supplier sources the raw materials from various suppliers. The ASC response was that country of origin was acceptable. 4. Soy protein concentrate SkA know the country of origin of their SPC is Brazil, but they currently do not request information from their supplier on what region the soya was grown. The ASC response was the country of origin b. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) states that Skretting has a responsible sourcing policy that applies to non-marine feed ingredients. For their suppliers of plant raw outlines that the vendor must abide by the laws and regulations of the country or region that governs their business activities. For soy refer 4.4.2 below. Both the 09.050.1 Nutreco Sustainable Procurement Policy for Marine Products Version 2010 (9/11/12) and the 09.05.03 Sustainability Criteria soy products (9/11/12) have been replaced by the SOP Nutreco Supplier Code of (version June 2014). The Policy has a section that is signed by the vendor to state they will abide by the laws and regulations of the country or region that governs their business activities. Criteria covered in GLOBAL GAP 15.1 - GlobalGAP certificate (DH18.07.01 v0) for Compound Feed Manufacturing, (2015 certificate #4052852637961) from SGS Australia, expires 30/06/16.
		b. Obtain from each feed manufacturer a copy of the manufacturer's responsible sourcing policy for feed ingredients showing how the company complies with recognized crop moratoriums and local laws.	B. Review policies from each feed supplier to confirm required sourcing policy is in place.	
		c. Confirm that third party audits of feed suppliers (4.1.1c) show evidence that supplier's responsible sourcing policies are implemented.	C. Verify that the scope of third-party audits of feed suppliers includes review of policies and evidence of implementation.	
				c. These vendor policies signed by the suppliers were sighted during the last SGS ASC/Global GAP audits (18-19/05/15) – refer 4.1.1c. These signed policies will be reexamined at the next SGS audit scheduled for 13/05/16.
Footnote	[75] Moratorium: A period of time in which there is a suspension of a specific activity until future events warrant a removal of the suspension or issues regarding the activity have been resolved. In this context, moratoriums may refer to suspension of the growth of defined agricultural crops in defined geographical regions.			
Footnote	[76] Specifically, the policy shall include that vegetable ingredients, or products derived from vegetable ingredients, must not come from areas of the Amazon Biome that were deforested after July 24, 2006, as geographically defined by the Brazilian Soy Moratorium. Should the Brazilian Soy Moratorium be lifted, this specific requirement shall be reconsidered.			
4.4.2	**Indicator**: Percentage of soya or soya-derived ingredients in the feed that are certified by the Roundtable for Responsible Soy (RTRS) or equivalent [77] **Requirement:** 100%, within five years of the publication [78] of the SAD standards **Applicability:** All, after June 13, 2017	a. Prepare a policy stating the company's support of efforts to shift feed manufacturers' purchases of soya to soya certified under the Roundtable for Responsible Soy (RTRS) or equivalent.	A. Verify that the client's policy supports responsible sourcing of soya or soya-derived feed ingredients.	a. ASC have previously confirmed (SCS Macquarie Harbour audit report V1.0 Aug12) that only the country of origin is required from soy suppliers not the specific growing region grown. Tassal's Responsible Sourcing Policy (IMS-P1084 issue 1, 8/01/14 1p) states "Tassal supports efforts to shift feed manufacturers purchases of fishmeal and fish oil to fisheries certified under a scheme that is an ISEAL member o environmental management of small pelagic fisheries. Tassal supports efforts to shift feed manufacturers' purchases of soya to soya certified under the Roundtable for Responsible Soy (RTRS) or equivalent". Skretting also have a specific responsible sourcing vendor policy for the purchase of soya. Soy protein concentrate from Brazil is the only soy raw material purchased by SkA, and the supplier has signed their specific soy vendor Code of Conduct (MDMS-00039 R1 10/02/15). b. Confirmed by Tassal through email sent on 8/01/14 (signed by Head of Sustainability) to Skretting included a copy of the Salmon Standard and the Feed Supplier Notification Letter (1p) stating as per the ASC criterion 4.4.2b c. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) states that SkA has been notified. d. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) states that SkA only used soy concentrate originating from Brazil. Vendor Policies are being reviewed and updated. e. Tassal and SkA have both noted that starting on or before June 13, 2017, they requirement to provide evidence that soya used in feed is certified by the Roundtable for Responsible Soy (RTRS) or equivalent. In the interim Skretting has a specific soya vendor policy that recognises the RTRS certification and Is encouraging soy producers to start the process of RTRS or an equivalent accreditation. Both the 09.050.1 Nutreco Sustainable Procurement Policy for Marine Products Version 2010 (9/11/12) and the 09.05.03 Sustainability Criteria soy products (9/11/12) have been replaced by the SOP Nutreco Supplier Code of (version June 2014).
		b. Prepare a letter stating the farm's intent to source feed containing soya certified under the RTRS (or equivalent)	B. Obtain a copy of the client's letter of intent.	
		c. Notify feed suppliers of the farm's intent (4.4.2b).	C. Verify that farm notifies feed suppliers.	
		d. Obtain and maintain declaration from feed supplier(s) detailing the origin of soya in the feed.	D. Confirm that the farm has sufficient and supportive evidence for the origin of soya products in feed to demonstrate compliance with indicator 4.4.2	
		e. Starting on or before June 13, 2017, provide evidence that soya used in feed is certified by the Roundtable for Responsible Soy (RTRS) or equivalent [77]	E. As of June 13, 2017,. review evidence and confirm compliance. Prior to June 13, 2017, 4.4.2e does not apply.	
Footnote	[77] Any alternate certification scheme would have to be approved as equivalent by the Technical Advisory Group of the ASC.			
Footnote	[78] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.			
	Indicator: Evidence of disclosure to the buyer [79] of the salmon of inclusion of transgenic [80] plant	a. Obtain from feed supplier(s) a declaration detailing the content of soya and other plant raw materials in feed and whether it is transgenic.	A. Review feed supplier declaration and ensure declarations from all suppliers are present (see also 4.4.1A).	a. The SkA (9/02/16) ASC Salmon Standard Compliance Declaration MH 2016 (DH 31.18.10 v2) states that SkA has a non-GMO Policy which is documented on page 3 of the updated Quality Assurance Declaration (DH 31.12.01 Australia New Zealand Code) SkA has maintained a 'GMO DNA free' status for their aquaculture feeds. Our vegetable raw materials are purchased as non-GMO and supplier certifications are documented." Except for soy and wheat gluten, all vegetable raw materials were purchased Australian sources. The Brazilian soy supplier/manufacturer declaration includes a Non-GMO certificate (SGS DO Brasil Ltda Certificate #14092503E The Quality Assurance Declaration (DH 31.12.01 v4) includes information on Certifications for Quality & Food Safety, Composition of Aquaculture Feeds, GM Status of Aquaculture Feeds and Antibiotics & Hormones in Aquacul
		b. Disclose to the buyer(s) a list of any transgenic plant raw material in the feed and maintain documentary evidence of this disclosure. For first audits, farm records of disclosures must cover > 6 months.	B. Verify evidence of disclosure to all buyers, cross-checking with plant material list (4.4.3a) to see that all transgenic plant ingredients were disclosed	

4.4.3	raw material, or raw materials derived from transgenic plants, in the feed **Requirement:** Yes, for each individual raw material containing > 1% transgenic content [81] **Applicability:** All	c. Inform ASC whether feed contains transgenic ingredients (yes or no) as per Appendix VI for each production cycle.	C. Confirm that the farm has informed ASC whether feeds containing transgenic ingredients are used on farm (Appendix VI).	b. Tassal has acknowledged its responsibility to disclose to the buyer(s) a list of any transgenic plant raw material in the feed and maintain documentary evidence of this disclosure for > 6 months. They have noted the info fro The 2013 Sustainability Report (p32) documented the Tasmanian moratorium on commercial GMOs. The 2015 Sustainability Report (p11, 22 &36) notes the use of non-GMO processes. c. Tassal makes annual submissions to ASC for each region as part of their Transparency of Farm Level Performance reporting, this includes the use or non-use of transgenic feed ingredients.
Footnote	[79] The company or entity to which the farm or the producing company is directly selling its product. This standard requires disclosure by the feed company to the farm and by the farm to the buyer of their salmon.			
Footnote	[80] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring.			
Footnote	[81] See Appendix VI for transparency requirement for 4.4.3.			
Criterion 4.5 Non-biological waste from production				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
4.5.1	**Indicator**: Presence and evidence of a functioning policy for proper and responsible [83] treatment of non-biological waste from production (e.g., disposal and recycling) **Requirement:** Yes **Applicability:** All	a. Prepare a policy stating the farm's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the farm's policy is consistent with best practice in the area of operation.	A. Review policy to verify the farm's commitment to proper and responsible treatment of non-biological waste from production in a manner consistent with best practice in the area.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Prepare a declaration that the farm does not dump non-biological waste into the ocean.	B. Verify the client makes a declaration.	
		c. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of.	C. During the on-site inspection look for evidence of proper waste disposal.	
		d. Provide a description of the types of waste materials that are recycled by the farm.	D. During the on-site inspection look for evidence of recycling of waste materials as described by client.	
Footnote	[83] Proper and responsible disposal will vary based on facilities available in the region and remoteness of farm sites. Disposal of non-biological waste shall be done in a manner consistent with best practice in the area. Dumping of non-biological waste into the ocean does not represent “proper and responsible” disposal.			
4.5.2	**Indicator**: Evidence that non-biological waste (including net pens) from grow-out site is either disposed of properly or recycled **Requirement:** Yes **Applicability:** All	a. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of. (see also 4.5.1c)	A. During the on-site inspection look for evidence of proper waste disposal. (See also 4.5.1C)	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Provide a description of the types of waste materials that are recycled by the farm. (See also 4.5.1d)	B. During the on-site inspection look for evidence of recycling of waste materials as described by client. (See also 4.5.1D)	
		c. Inform the CAB of any infractions or fines for improper waste disposal received during the previous 12 months and corrective actions taken..	C. Review infractions and corrective actions.	
		d. Maintain records of disposal of waste materials including old nets and cage equipment.	D. Review records to verify waste disposal and/or recycling is consistent with client description and policy.	
Criterion 4.6 Energy consumption and greenhouse gas emissions on farms [84]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[84] See Appendix VI for transparency requirements for 4.6.1, 4.6.2 and 4.6.3.			
4.6.1		**Instruction to Clients for Indicator 4.6.1 - Energy Use Assessment** Indicator 4.6.1 requires that farms must have an assessment to verify energy consumption. The scope of this requirement is restricted to operational energy use for the farm site(s) that is applying for certification. Boundaries for operational energy use should correspond to the sources of Scope 1 and Scope 2 emissions (see Appendix V-1). Energy use corresponding to Scope 3 emissic companies to integrate energy use assessments across the board in the company. For the purposes of calculating energy consumption, the duration of the production cycle is the entire life cycle "at sea" - it does not include freshwater smolt production stages. Farms that have integrated smolt rearing should break out the grow-out stage portion of energy consumption if possible. Quantities of energy (fuel and electricity) are converted to kilojoules. Verification is d		
	Indicator: Presence of an energy use assessment verifying the energy consumption on the farm and representing the whole life cycle at sea, as outlined in Appendix V- 1 **Requirement:** Yes, measured in kilojoule/mt fish/production cycle **Applicability:** All	a. Maintain records for energy consumption by source (fuel, electricity) on the farm throughout each production cycle.	A. Verify that the farm maintains records for energy consumption.	Assumptions for clauses 4.6.1, 4.6.2, 8.9 and 8.10: 1. Production cycle data requested for much of ASC clauses refers to the most recently completed year class – for this report data from 13YC is used (the production cycle for a YC can range from 15-22 months, assume average 2. Tassal energy and GHG calculations for their reporting (e.g. Annual Sustainability report, etc.) is for financial year – for this report data is from FY14 which covers much of the 13YC production cycle. 3. Sometimes individual farm data for energy & GHG is not able to be determined, however the MH data is more relevant as it includes the three farms, all the vessels and the land base operations and facilities. 4. Trends in the indices reported (kilojoule/mt fish/production cycle) can be compared between audit reports from year to year.
		b. Calculate the farm's total energy consumption in kilojoules (kj) during the last production cycle.	B. Review the farm's calculations for completeness and accuracy.	
		c. Calculate the total weight of fish in metric tons (mt) produced during the last production cycle.	C. Confirm that the farm accurately reports total weight of fish harvested per production cycle. Cross-check against other farm datasets (e.g. harvest counts, escapes, and mortalities).	a. Records of energy consumption are collected and published annually for all of the Tassal business units (Admin, hatcheries, farms, processing, vessels, transport), including each farming zone, for example the Macquarie Harl Harbour (MH) Farming Zone FY14 by Dr. Amy White (Feb16). This report includes the Appendix 1: Life Cycle Inventory. For the remainder of this audit report, this report will be referred to as the White (2015) MH FY14 Energy
		d. Using results from 4.6.1b and 4.6.1c, calculate energy consumption on the farm as required, reported as kilojoule/mt fish/production cycle.	D. Review the farm's calculations for completeness and accuracy.	The results for 2013/14 were used for the Sustainability Report 2015 (p42) for the entire Tassal Group with the following improvements: - It is based on the principles outlined in the Greenhouse Gas Protocol Corporate Standard (WRI and WBCSD, 2004). - Clearer for goals and breakdown on scopes boundaries operational & organisation (includes part owned SALTAS hatchery). - Equity share or control approach discussed - It concluded that based on the organisational structure of Tassal there is no difference between taking an equity share or control approach to consolidating GHG emissions. If required, the raw data can be traced back to individuals leases or sites (data from invoices).
		e. Submit results of energy use calculations (4.6.1d) to ASC as per Appendix VI for each production cycle.	E. Confirm that client has submitted energy use calculations to ASC (Appendix VI).	
		f. Ensure that the farm has undergone an energy use assessment that was done in compliance with requirements of Appendix V-1.	F. Confirm that the farm has undergone an energy use assessment verifying the farm's energy consumption.	The emissions factors and energy content used to calculate the direct GHG emissions from on-site fuel use were taken from the default values provided by the Australian Department of the Environment (2014). Minor changes b. To extract from the White (2015) MH FY14 Energy & GHG report. c. The most recently completed full production cycle at MH was 13YC undertaken from Jul13-Apr15 - stocked 31/7/13 to 10/10/13 and harvest finished in April 15. Production summary for 13YC records provided. The White (: d. Individual lease data is not available, data is for all of MH (including depots and other on land infrastructure), thus: Energy Use 13YC for MH farms is 2,072,012 kJ/tonne of biomass – figures for the two hatcheries supplying s Unlike the assessment made in 2013 which only accounted for the impacts associated with the direct use of these fuels using the NGERs methodology, this assessment is more comprehensive as it includes the inputs required u e. The client has submitted data/information to ASC. f. Confirmed through the White (2015) MH FY14 Energy & GHG report.
		Instruction to Clients for Indicator 4.6.2 - Annual GHG Assessment Indicator 4.6.2 requires that farms must have an annual Greenhouse Gas (GHG) assessment. Detailed instructions are presented in Appendix V-1 and references therein. The scope of this requirement is restricted to operational boundaries for the farm site(s) that is applying for certification. However the SAD Steering Committee encourages companies to integrate GHG accounting pra Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details). Note: For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).		

4.6.2	**Indicator**: Records of greenhouse gas (GHG [85]) emissions [86] on farm and evidence of an annual GHG assessment, as outlined in Appendix V-1 Requirement: Yes Applicability: All	a. Maintain records of greenhouse gas emissions on the farm.	A. Verify that the farm maintains records of GHG emissions.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. At least annually, calculate all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.	B. Confirm that calculations are done annually and in compliance with Appendix V-1.	
		c. For GHG calculations, select the emission factors which are best suited to the farm's operation. Document the source of those emissions factors.	C. Verify that the farm records all emissions factors used and their sources.	
		d. For GHG calculations involving conversion of non-CO_2 gases to CO_2 equivalents, specify the Global Warming Potential (GWP) used and its source.	D. Verify that the farm records all GWPs used and their sources.	
		e. Submit results of GHG calculations (4.6.2d) to ASC as per Appendix VI at least once per year.	E. Confirm that the farm has submitted GHG calculations to ASC (Appendix VI).	
		f. Ensure that the farm undergoes a GHG assessment as outlined in Appendix V-1 at least annually.	F. Confirm that the farm undergoes a GHG assessments annually and that the methods used comply with requirements of Appendix V-1.	
Footnote	[85] For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).			
Footnote	[86] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.			
		Instruction to Clients for Indicator 4.6.3 - GHG Emissions of Feed Indicator 4.6.3 requires that farms document the greenhouse gas emissions (GHG) associated with any feeds used during salmon production. Farms will need to obtain this information from their feed supplier(s) and thereafter maintain a continuous record of Feed GHG emissions throughout all production cycles. This requirement takes effect on June 13, 2015 and it will apply acros requirement long before the effective date. Specifically, the SC recommends that... - the farm provides its feed suppliers with detailed information about the requirements including a copy of the methodology outlined in Appendix V, subsection 2; - the farm explain what analyses must be done by feed suppliers; and - the farm explains to feed suppliers what documentary evidence will be required by the farm to demonstrate compliance. Note1: Farms may calculate GHG emissions of feed using the average raw material composition used to produce the salmon (by weight) rather than using feed composition on a lot-by- lot basis. Note2: Feed supplier's calculations must include Scope 1, Scope 2, and Scope 3 GHG emissions as specified in Appendix V, subsection 2.		
4.6.3	**Indicator**: Documentation of GHG emissions of the feed [87] used during the previous production cycle, as outlined in Appendix V, subsection 2 **Requirement:** Yes, within three years of the publication [88] of the SAD standards (i.e. by June 13, 2015) **Applicability:** All, after June 13, 2015	a. Obtain from feed supplier(s) a declaration detailing the GHG emissions of the feed (per kg feed).	A. Verify declaration from feed supplier(s) and confirm client has declarations from all feed suppliers.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Multiply the GHG emissions per unit feed by the total amount of feed from each supplier used in the most recent completed production cycle.	B. Verify calculations cross-checking with feed purchase and use records.	
		c. If client has more than one feed supplier, calculate the total sum of emissions from feed by summing the GHG emissions of feed from each supplier.	C. Verify calculations.	
		d. Submit GHG emissions of feed to ASC as per Appendix VI for each production cycle.	D. Confirm that the farm has submitted GHG calculations for feed to ASC (Appendix VI).	
Footnote	[87] GHG emissions from feed can be given based on the average raw material composition used to produce the salmon (by weight) and not as documentation linked to each single product used during the production cycle. Feed manufacturer is responsible for calculating GHG emissions per unit feed. Farm site then shall use that information to calculate GHG emissions for the volume of feed they used in the prior produ			
Footnote	[88] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.			
Criterion 4.7 Non-therapeutic chemical inputs [89,90]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[89] Closed production systems that do not use nets and do not use antifoulants shall be considered exempt from standards under Criterion 4.7.			
Footnote	[90] See Appendix VI for transparency requirements for 4.7.1, 4.7.3 and 4.7.4.			
4.7.1	**Indicator**: For farms that use copper-treated nets [91], evidence that nets are not cleaned [92] or treated in situ in the marine environment **Requirement:** Yes **Applicability:** All farms except as noted in [89]	a. Prepare a farm procedure for net cleaning and treatment that describes techniques, technologies, use of off-site facilities, and record keeping.	A. Review procedure for completeness.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records of antifoulants and other chemical treatments used on nets.	B. Review documentary evidence and records for completeness, including traceability records of the nets where available.	
		c. Declare to the CAB whether copper-based treatments are used on nets.	C. Verify whether copper-based treatments are used. If no, Indicator 4.7.1d does not apply to the client. If yes, proceed to 4.7.1D.	
		d. If copper-based treatments are used, maintain documentary evidence (see 4.7.1b) that farm policy and practice does not allow for heavy cleaning of copper-treated nets in situ.	D. Review evidence and interview farm manager to confirm that farm does not do any heavy cleaning of copper-treated nets in situ.	
		e. Inform ASC whether copper antifoulants are used on farm (yes or no) as per Appendix VI for each production cycle.	E. Confirm that the farm has informed ASC whether copper antifoulants are used on farm (Appendix VI).	
Footnote	[91] Under the SAD, “copper-treated net” is defined as a net that has been treated with any copper-containing substance (such as a copper-based antifoulant) during the previous 18 months, or has not undergone thorough cleaning at a land-based facility since the last treatment. Farms that use nets that have, at some point prior in their lifespan, been treated with copper may still consider nets as untreated so long as su purchase all new nets.			
Footnote	[92] Light cleaning of nets is allowed. Intent of the standard is that, for example, the high-pressure underwater washers could not be used on copper treated nets under this standard because of the risk of copper flaking off during this type of heavy or more thorough cleaning.			
4.7.2	**Indicator**: For any farm that cleans nets at on-land sites, evidence that net-cleaning sites have effluent treatment [93] **Requirement:** Yes **Applicability:** All farms except as noted in [89]	a. Declare to the CAB whether nets are cleaned on-land.	A. Review declaration and cross-check with records from 4.7.1b. If nets are not cleaned on land, Indicator 4.7.2 does not apply. If nets are cleaned on land, proceed to 4.7.2B.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. If nets are cleaned on-land, obtain documentary evidence from each net-cleaning facility that effluent treatment is in place.	B. Review documentary evidence to confirm that each net-cleaning facility has effluent treatment in place.	
		c. If yes to 4.7.2b, obtain evidence that effluent treatment used at the cleaning site is an appropriate technology to capture of copper in effluents.	C. If applicable, review documentary evidence to confirm that land-based cleaning sites have appropriate technologies in place to capture copper in effluents and that they function as intended.	
Footnote	[93] Treatment must have appropriate technologies in place to capture copper if the farm uses copper-treated nets.			
		Note: If the benthos throughout and immediately outside the full AZE is hard bottom, provide evidence to the CAB and request an exemption from Indicator 4.7.3 (see 2.1.1c).		

4.7.3	**Indicator**: For farms that use copper nets or copper-treated nets, evidence of testing for copper level in the sediment outside of the AZE, following methodology in Appendix I-1 **Requirement:** Yes **Applicability:** All farms except as noted in [89]	a. Declare to the CAB whether the farm uses copper nets or copper-treated nets. (See also 4.7.1c). If "no", Indicator 4.7.3 does not apply.	A. Review declaration and cross-check against declaration from 4.7.1c. Record whether Indicator 4.7.3 is applicable to the client.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. If "yes" in 4.7.3a, measure and record copper in sediment samples from the reference stations specified in 2.1.1d and 2.1.2c which lie outside the AZE.	B. As applicable, verify the farm tested sediment samples for copper from the reference stations specified in 2.1.1d and 2.1.2c which lie outside the AZE.	
		c. If "yes" in 4.7.3a, maintain records of testing methods, equipment, and laboratories used to test copper level in sediments from 4.7.3b.	C. Verify the measurements were taken using appropriate equipment and testing methods.	
4.7.4	**Indicator**: Evidence that copper levels [94] are < 34 mg Cu/kg dry sediment weight OR in instances where the Cu in the sediment exceeds 34 mg Cu/kg dry sediment weight, demonstration that the Cu concentration falls within the range of background concentrations as measured at three reference sites in the water body **Requirement:** Yes **Applicability:** All farms except as noted in [89] and excluding those farms shown to be exempt from Indicator 4.7.3	a. Inform the CAB whether: 1) farm is exempt from Indicator 4.7.4 (as per 4.7.3a), or 2) Farm has conducted testing of copper levels in sediment.	A. Document and verify applicability of 4.7.4 to client (see also 4.7.3A)	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Provide evidence from measurements taken in 4.7.3b that copper levels are < 34 mg Cu/kg dry sediment weight.	B. Verify that copper levels are < 34 mg Cu/kg sediment. If no, proceed to 4.7.4C.	
		c. If copper levels in 4.7.4b are ≥ 34 mg Cu/kg dry sediment weight, provide evidence the farm tested copper levels in sediments from reference sites as described in Appendix I-1 (also see Indicators 2.1.1 and 2.1.2).	C. If applicable, review evidence to confirm that farm followed Appendix I-1 for testing copper levels at reference sites.	
		d. Analyze results from 4.7.4c to show the background copper concentrations as measured at three reference sites in the water body.	D. As applicable, review data to confirm that copper levels fall within the range of background concentrations as measured at reference sites.	
		e. Submit data on copper levels in sediments to ASC as per Appendix VI for each production cycle.	E. Confirm that farm has submitted to ASC data on copper levels in sediment (Appendix VI).	
Footnote	[94] According to testing required under 4.7.3. The standards related to testing of copper are only applicable to farms that use copper-based nets or copper-treated nets.			
4.7.5	**Indicator**: Evidence that the type of biocides used in net antifouling are approved according to legislation in the European Union, or the United States, or Australia **Requirement:** Yes **Applicability:** All farms except as noted in [89]	a. Identify all biocides used by the farm in net antifouling.	A. Review list of biocides and cross-check against treatment records (see 4.7.2b) and purchase records.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Compile documentary evidence to show that each chemical used in 4.7.5a is approved according to legislation in one or more of the following jurisdictions: the European Union, the United States, or Australia.	B. Review documentary evidence to confirm compliance.	

PRINCIPLE 5: MANAGE DISEASE AND PARASITES IN AN ENVIRONMENTALLY RESPONSIBLE MANNER

Criterion 5.1 Survival and health of farmed fish [95]

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	
Footnote	[95] See Appendix VI for transparency requirements for 5.1.4, 5.1.5 and 5.1.6.			
5.1.1	**Indicator**: Evidence of a fish health management plan for the identification and monitoring of fish diseases and parasites **Requirement:** Yes **Applicability:** All	a. Prepare a fish health management plan that incorporates components related to identification and monitoring of fish disease and parasites. This plan may be part of a more comprehensive farm planning document.	A. Obtain and review the farm's fish health management plan.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Ensure that the farm's current fish health management plan was reviewed and approved by the farm's designated veterinarian [96].	B. Verify there is evidence to show that the farm's designated veterinarian [96] reviewed and approved the current version of the plan.	
5.1.2	**Indicator**: Site visits by a designated veterinarian [96] at least four times a year, and by a fish health manager [97] at leastonce a month **Requirement:** Yes **Applicability:** All	a. Maintain records of visits by the designated veterinarian [96] and fish health managers [97]. If schedule cannot be met, a risk assessment must be provided.	A. Review documentary evidence of site visits to confirm a minimum number of visits as outlined in 5.1.2. Or review risk assessment.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain a current list of personnel who are employed as the farm's designated veterinarian(s) [96] and fish health manager(s) [97].	B. Confirm visits in 5.1.2a were performed by the farm's designated health professionals.	
		c. Maintain records of the qualifications of persons identified in 5.1.2b.	C. Review evidence for qualifications of the farm's health professionals.	
Footnote	[96] A designated veterinarian is the professional responsible for health management on the farm who has the legal authority to diagnose disease and prescribe medication. In some countries such as Norway, a fish health biologist or other professional has equivalent professional qualifications and is equivalent to a veterinarian for purposes of these standards. This definition applies to all references to a veterinarian thro			
Footnote	[97] A fish health manager is someone with professional expertise in managing fish health, who may work for a farming company or for a veterinarian, but who does not necessarily have the authority to prescribe medicine.			
		a. Maintain records of mortality removals to show that dead fish are removed regularly and disposed of in a responsible manner.	A. Review records of mortality removals to confirm completeness and accuracy. Cross- check against 5.1.4 and calculations of escapes and unexplained loss.	a. Reviewed the AQUAVET Plan's Operational Procedures Manual for Disposal (Version 2.0, 2009), which discussed responsible disposal and outlines plan for implementation. Based on these Federal Gov't recommendations, T - Fish Health Management Plan (MO-182 Issue 2, 30p); - Farm Disease Management and Biosecurity Protocol (MO-116 Issue 3 25p). - Stock, Net Inspection and Mort Retrieval (MO-200 Issue 15 2p).
		b. Collect documentation to show that disposal methods are in line with practices recommended by fish health managers and/or relevant legal authorities.	B. Review client submission. Inspect the farm's system for mortality removals and disposals during the on site audit.	For several years Mort Pits in Forestry lease (#16516) have been used for disposal, 4-year lease from 1 October 2011. This lease is being renewed for 6months (refer 1.1.1) while the procedures for the transport of mortalities

5.1.3	**Indicator**: Percentage of dead fish removed and disposed of in a responsible manner **Requirement:** 100% [98] **Applicability:** All	c. For any exceptional mortality event where dead fish were not collected for post-mortem analysis, keep a written justification.	C. Review the farm's justification for any exceptional mortality event where dead fish were not collected for post-mortem analysis (this situation should be a rare occurrence).	The current cycle is year class 2014 (14YC) is almost completed, all fish harvested in mid16. Some 15YC smolt have been stocked since late last year. Thus the most recent completed harvest is 13YC. Tassal uses "Fishtalk" to record removals based on the mortalities recorded by divers and farm staff – these are summarised in the spreadsheet Macquarie Harbour 13YC mortality classification. b. Reviewed Farm Disease Management and Biosecurity Protocol (MO-116 Issue 3 25p). Cross checked with operational procedures (see above); during the 2014 audit the mort pits site was visited and procedures were confirm c. All significant mortalities result in fish samples being taken for analysis by the Fish Health Unit. For example during the mortality event for Nov-Dec14 & Jan15 the Fish Health Team took samples from multiple pens. Submit Nov15 some newly stocked smolt were also found to be infected – refer to 5.2.9 & 7.1.1 below for the resultant Antibiotic treatments. These were within the period for them to be classified as post transfer mortalities and we For 13YC there have been no significant or exceptional mortality events. Continuing the research Project with Deakin Uni to use ATP-ase as diagnostic test (chloride cells) since 2013, comparing between hatcheries and osmoregulatory functions during smoltification, in 2015 have included Saltas for
Footnote	[98] The SAD recognizes that not all mortality events will result in dead fish present for collection and removal. However, such situations are considered the exception rather than the norm.			
5.1.4		Note: Farms are required to maintain mortality records from the current and two previous production cycles. For first audit, records for the current and prior production cycle are required. It is recommended that farms maintain a compiled set of records to demonstrate compliance with 5.1.3 - 5.1.6.		
	Indicator: Percentage of mortalities that are recorded, classified and receive a post-mortem analysis **Requirement:** 100% [99] **Applicability:** All	a. Maintain detailed records for all mortalities and post-mortem analyses including: - date of mortality and date of post-mortem analysis; - total number of mortalities and number receiving post-mortem analysis; - name of the person or lab conducting the post-mortem analyses; - qualifications of the individual (e.g. veterinarian [96], fish health manager [97]); - cause of mortality (specify disease or pathogen) where known; and - classification as 'unexplained' when cause of mortality is unknown (see 5.1.6).	A. Review records of mortalities to verify completeness and to confirm that post-mortem analyses were done by qualified individuals or labs.	a. Tassal records all mortalities of each site for each year. Tassal maintains records of all lab reports that are associated with any mortality event that list cause of the mortality event (if determined). During the 2015 audit the Fish Health Manager was able to demonstrate and access all records related to randomly chosen mortality events from laptop files. Also reviewed summary records from current and two previous pr for 13YC (completed) and 14YC in water. Monthly reports on FCR and SGR were also provided. Reviewed Final reports of examinations conducted by Animal Health Laboratory, Department of Primary Industries, Parks, Water and Environment, Tasmania on a case by case basis (records Oct13-Mar15). These reports cont - Case 15/0701 on 11/3/15 for Franklin with diagnosis of no significant abnormalities detected. - Case 15/1311 on 24/4/15 for FR with diagnosis of mild gill inflammation. b. The vet onsite visits can be linked all farm mortality events with final examinations reports see 5.1.3 c for specific examples. c. Refer 5.1.3 c d. Refer 5.1.3 c e. Database contained list of all events, at onsite visit to linked all farm mortality events with final examinations reports see 5.1.3 c for specific example. f. Data was submitted to ASC.
		b. For each mortality event, ensure that post-mortem analyses are done on a statistically relevant number of fish and keep a record of the results.	B. Review records to confirm the farm had post-mortem analysis done for each mortality event and that a statistically relevant number of fish were analyzed from each mortality event.	
		c. If on-site diagnosis is inconclusive and disease is suspected or results are inconclusive over a 1-2 week period, ensure that fish are sent to an off-site laboratory for diagnosis and keep a record of the results (5.1.4a).	C. Review records to confirm that any inconclusive on-site diagnoses were sent to an off- site laboratory for further testing.	
		d. Using results from 5.1.3a-c, classify each mortality event and keep a record of those classifications.	D. Review mortality events to confirm the farm's classification was consistent with results from post-mortem analyses. Where cause was not determined verify that classification was plausible given available info.	
		e. Provide additional evidence to show how farm records in 5.1.4a-d cover all mortalities from the current and previous two production cycles (as needed).	E. Review evidence to confirm compliance with requirements.	
		f. Submit data on numbers and causes of mortalities to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	F. Confirm that client has submitted data from post-mortem analyses and cause and number of mortalities to ASC (Appendix VI).	
Footnote	[99] If on-site diagnosis is inconclusive, this standard requires off-site laboratory diagnosis. A qualified professional must conduct all diagnosis. One hundred percent of mortality events shall receive a post-mortem analysis, not necessarily every fish. A statistically relevant number of fish from the mortality event shall be analyzed.			
5.1.5	**Indicator**: Maximum viral disease-related mortality [100] on farm during the most recent production cycle **Requirement:** ≤ 10% **Applicability:** All	a. Calculate the total number of mortalities that were diagnosed (see 5.1.4) as being related to viral disease.	A. Review and confirm the calculated number of viral disease-related mortalities.	a. N/A – There have been no reports or even suspicions of viral diseases in Macquarie Harbour, this was checked at 2015 onsite audit through interviews with company vet and other staff. b. N/A (see above) c. N/A (see above) or data was submitted to ASC.
		b. Combine the results from 5.1.5a with the total number of unspecified and unexplained mortalities from the most recent complete production cycle. Divide this by the total number of fish produced in the production cycle (x100) to calculate percent maximum viral disease-related mortality.	B. Verify that the sum of confirmed viral disease-related mortalities plus unspecified & unexplained mortalities is ≤ 10% of the total number of fish produced during the most recent production cycle.	
		c. Submit data on total mortality and viral disease-related mortality to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	C. Confirm that client has submitted data on mortality to ASC (Appendix VI).	
Footnote	[100] Viral disease-related mortality count shall include unspecified and unexplained mortality as it could be related to viral disease.			
5.1.6	**Indicator**: Maximum unexplained mortality rate from each of the previous two production cycles, for farms with total mortality > 6% **Requirement:** ≤ 40% of total mortalities **Applicability:** All farms with > 6% total mortality in the most recent complete production cycle.	a. Use records in 5.1.4a to calculate the unexplained mortality rate (%) for the most recent full production cycle. If rate was ≤ 6%, then the requirement of 5.1.6 does not apply. If total mortality rate was > 6%, proceed to 5.1.6b.	A. Review, confirm, and document whether 5.1.6 is applicable to the client. If applicable, proceed to 5.1.6B.	a. The spreadsheet Macquarie Harbour 13YC mortality classification provides data on UEM. The data shows that unexplained mortalities were greater than 6% but less than 40%. Thus the total mortality rate for 13YC is greater than the ASC requirement of 6% so b applies; likewise for 12YC (refer below). b. For MH sites the estimated unknown mortality is less than 40% for the past 5 year classes and therefore, this criteria is met.: As detailed above in 3.4.3 Estimated Unexplained Losses, the FPM-T commented that the main reason for the high EUL was from the decomposition of morts before recovery, especially when higher water temperatures causin mortalities falling under the EUL categories, as of 1/12/14, Tassal have implemented changes in procedures to determine mortalities faster, before fish decompose, (new recording sheet for mortalities MO-F230). Changes hav accurately; the new sheet has 6 categories vs 14 in the old one. New instructions have been sent to divers, health officers and regional managers. The new Mortality Extraction System soon to be on each pen will mean this being addressed, farm staff are expected able to get to more pens quickly so that morts are recovered daily rather than every 2-3 days by divers. Thi determined. Thus the estimated unknown mortality is expected to improve with significantly lower figures recorded. c. Data was submitted to ASC.
		b. Calculate the unexplained mortality rate (%) for each of the two production cycles immediately prior to the current cycle. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	B. Review and confirm that ≤ 40% of total mortalities were from unexplained causes for each of the two previous production cycles	
		c. Submit data on maximum unexplained mortality to ASC as per Appendix VI for each production cycle.	C. Confirm that client has submitted data on unexplained mortality to ASC (Appendix VI).	
		Note: Farms have the option to integrate their farm-specific mortality reduction program into the farm's fish health management plan (5.1.1).		
		a. Use records in 5.1.4a to assemble a time-series dataset on farm-specific mortalities rates and unexplained mortality rates.	A. Confirm that the farm used mortalities records to assemble a detailed dataset on mortality rates which covers the required timeframe (see 5.1.4).	a. Data on the farm-specific mortalities rates and unexplained mortality rates have been collated for the last five completed full production cycle at MH – 09YC to 13YC. Extracts from the 2015 Sustainability Report (p36): To continually improve fish welfare across all marine sites and hatcheries, since FY2014, Tassal developed and implemented a new framework to better support fish health and welfare: 'Zero Harm for Fish'. The program is based on the RSPCA UK fish welfare guidelines and sets the standard for what Tassal wishes to achieve. The Zero Harm for Fish program is based on a three-step process: 1. Internal audit on fish welfare standards
		b. Use the data in 5.1.7a and advice from the veterinarian and/or fish health manager to develop a mortalities-reduction program that defines annual targets for reductions in total mortality and unexplained mortality.	B. Review program to confirm that targets for mortality reduction are reasonable and based on historical data.	

5.1.7	**Indicator**: A farm-specific mortalities reduction program that includes defined annual targets for reductions in mortalities and reductions in unexplained mortalities **Requirement:** Yes **Applicability:** All	c. Ensure that farm management communicates with the veterinarian, fish health manager, and staff about annual targets and planned actions to meet targets.	C. Interview workers to confirm their understanding of mortalities recording, classification, and annual targets for reduction (see also 5.1.1, 5.1.3).	2. Gap analysis to determine where improvements can be made 3. Action plan to optimise fish welfare. This includes the Fish Welfare Scorecard (spread sheet with questions and weighting score) and the development of a number of procedures for High and Medium Risk Husbandry activities such environmental management, ha nutrition, disease prevention & controlling, AGD, Harvest preparation, Emergency preparedness, etc. The on farm management structure has been changed and now includes the Fish Performance Manager – Operations (FPM-O) and the Fish Performance Manager – Technical (FPM-T). b. Reviewed specific Fish Health Strategy July 2012 (power point presentation) with specific targets for reduction in mortalities as well as Fish Health Strategy Nov 2013. These are also in the Fish Welfare Scorecard. Staff interviews conducted onsite over the past three years confirms the awareness of improvement process to develop a mortalities-reduction program that defines annual targets for reductions in total mortality and unexpla c. As per 5.1.2 the spreadsheet Vet Visit Tracker records visits dates for each zone and notes. The latest for MH was on 14-15/01/16 for Fish Health Surveillance; previously there were six in 2015 - 22/05/15 with Cawthorn Vet and Fish Health Surveillance on 21-22/9/15, 25-27/11/15 & 9-10/12/15. The visits by the Cawthron Vet Dr. Colin Johnston was on the request of the DPIPWE for him to conduct a review on the environmental and fish health status of the harbour. He provided a report on the health management of required by Tassal as a result of the report. The Oct15 visit was originally a broad surveillance, however when they found Yersiniosis in the fish from 15YC SALTAS origin pens they medicated them (refer FMAs 5.2.9 & 7.1.1). There were some low DO problems in Januar the Vet; she believes the next visit will be in March. In addition, there are almost daily email and phone discussions between the Fish Health Team and the Zone Manager, FPM-O, FPM-T and other team leaders.

Criterion 5.2 Therapeutic treatments [101]

	Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[101] See Appendix VI for transparency requirements for 5.2.1, 5.2.5, 5.2.6 and 5.2.10.		

Instruction to Clients and CABs for Criterion 5.2 - Records Related to Therapeutic Treatments

Indicator 5.2.1 requires that farms maintain detailed record of all chemical and therapeutant use. Those records maintained for compliance with 5.2.1, if all consolidated into a single place, can be used to demonstrate performance against subsequent Indicators (5.2.1 through 5.2.10) under Criterion 5.2.

5.2.1	**Indicator**: On-farm documentation that includes, at a minimum, detailed information on all chemicals [102] and therapeutants used during the most recent production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing, and all disease and pathogens detected on the site **Requirement:** Yes **Applicability:** All	a. Maintain a detailed record of all chemical and therapeutant use that includes: - name of the veterinarian prescribing treatment; - product name and chemical name; - reason for use (specific disease) - date(s) of treatment; - amount (g) of product used; - dosage; - mt of fish treated; - the WHO classification of antibiotics (also see note under 5.2.8); and - the supplier of the chemical or therapeutant.	A. Review records of chemical and therapeutant use. Verify accuracy through cross-check with purchase orders and sales records, inventories, documentation from feed manufacturer for any in-feed treatment, and veterinary records.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. If not already available, assemble records of chemical and therapeutant use to address all points in 5.2.1a for the previous two production cycles. For first audits, available records must cover one full production cycle immediately prior to the current cycle.	B. Confirm that farm has detailed records for chemical and therapeutant use that covers the previous two production cycles.	
		c. Submit information on therapeutant use (data from 5.2.1a) to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	C. Confirm that client has submitted therapeutant information to ASC (Appendix VI).	
Footnote	[102] Chemicals used for the treatment of fish.			
5.2.2	**Indicator**: Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [103] in any of the primary salmon producing or importing countries [104] **Requirement:** None **Applicability:** All	a. Prepare a list of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [104].	A. Review list and supporting evidence. If ASC has agreed to maintain a list of relevant therapeutants, farm can demonstrate that they have this list.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records of voluntary and/or mandatory chemical residue testing conducted or commissioned by the farm from the prior and current production cycles.	B. Verify records.	
		-	C. Cross-check records of therapeutant use (5.2.1a) against the list of banned therapeutants to verify compliance with requirements.	
Footnote	[103] "Banned" means proactively prohibited by a government entity because of concerns around the substance. A substance banned in any of the primary salmon-producing or importing countries, as defined here, cannot be used in any salmon farm certified under the SAD, regardless of country of production or destination of the product. The SAD recommends that ASC maintain a list of a banned therapeutants.			
Footnote	[104] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.			
5.2.3	**Indicator**: Percentage of medication events that are prescribed by a veterinarian **Requirement:** 100% **Applicability:** All	a. Obtain prescription for all therapeutant use in advance of application from the farm veterinarian (or equivalent, see [96] for definition of veterinarian).	A. Review documentary evidence (on-farm records, veterinary records, and prescriptions) to confirm all therapeutants were prescribed by a qualified individual. See [96] for definition of veterinarian.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain copies of all prescriptions and records of veterinarian responsible for all medication events. Records can be kept in conjunction with those for 5.2.1 and should be kept for the current and two prior production cycles.	B. Cross-check with results from chemical residue testing provided under 5.2.2b.	
5.2.4	**Indicator**: Compliance with all withholding periods after treatments **Requirement:** Yes **Applicability:** All	a. Incorporate withholding periods into the farm's fish health management plan (see 5.1.1a).	A. Review the farm's fish health management plan to confirm inclusion of withholding periods and interview farm staff to verify implementation.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Compile and maintain documentation on legally-required withholding periods for all treatments used on-farm. Withholding period is the time interval after the withdrawal of a drug from the treatment of the salmon before the salmon can be harvested for use as food.	B. Review documentation for completeness and accuracy. Compare to records of therapeutant use (5.2.1a).	

	Applicability: All	c. Show compliance with all withholding periods by providing treatment records (see 5.2.1a) and harvest dates for the most recent production cycle.	C. Review documentary evidence and, if applicable, results from chemical residue testing (5.2.2b), to confirm legal withholding periods were met for the most recent production cycle and harvest.	
5.2.5	**Indicator**: Maximum farm level cumulative parasiticide treatment index (PTI) score as calculated according to the formula in Appendix VII **Requirement:** PTI score ≤ 13 **Applicability:** All	a. Using farm data for therapeutants usage (5..2.1a) and the formula presented in Appendix VII, calculate the cumulative parasiticide treatment index (PTI) score for the most recent production cycle. Calculation should be made and updated on an ongoing basis throughout the cycle by farm manager, fish health manager, and/or veterinarian.	A. Review the farm's calculations to verify that the PTI score was calculated correctly and that the scores are accurate. Cross-check with records of parasiticide use.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Provide the auditor with access to records showing how the farm calculated the PTI score.	B. Verify that the farm level cumulative PTI score ≤ 13.	
		c. Submit data on farm level cumulative PTI score to ASC as per Appendix VI for each production cycle.	C. Confirm that client has submitted data on cumulative PTI score to ASC (Appendix VI).	
5.2.6		Note: Indicator 5.2.6 does not take effect until June 13, 2017. Nonetheless farms should start collecting data on parasiticide load beforehand in case farms have to demonstrate compliance with Indicator 5.2.6 at some point in the future using data from the two previous production cycles.		
	Indicator: For farms with a cumulative PTI ≥ 6 in the most recent production cycle, demonstration that parasiticide load [105] is at least 15% less that of the average of the two previous production cycles **Requirement:** Yes, within five years of the publication of the SAD standard (i.e. by June 13, 2017) **Applicability:** All farms with a cumulative PTI ≥ 6 in the most recent production cycle	a. Review PTI scores from 5.2.5a to determine if cumulative PTI ≥ 6 in the most recent production cycle. If yes, proceed to 5.2.6b; if no, Indicator 5.2.6 does not apply.	A. Review farm's cumulative PTI score to determine if Indicator 5.2.6 is applicable.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Using results from 5.2.5 and the weight of fish treated (kg), calculate parasiticide load in the most recent production cycle [105].	B. Review the farm's calculation of parasiticide load to verify accuracy.	
		c. Calculate parasiticide load in the two previous production cycles as above (5.2.6b) and compute the average. Calculate the percent difference in parasiticide load between current cycle and average of two previous cycles. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	C. Review farm's calculations to verify that parasiticide load for the most recent production cycle is at least 15% less than that of the two previous cycles.	
		d. As applicable, submit data to ASC on parasiticide load for the most recent production cycle and the two previous production cycles (Appendix VI).	D. Confirm that client has submitted data on parasiticide load to ASC (Appendix VI) as applicable.	
Footnote	[105] Parasiticide load = Sum (kg of fish treated x PTI). Reduction in load required regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined parasiticide load of the consolidated sites.			
5.2.7	**Indicator**: Allowance for prophylactic use of antimicrobial treatments [106] **Requirement:** None **Applicability:** All	a. Maintain records for all purchases of antibiotics (invoices, prescriptions) for the current and prior production cycles.	A. Review purchase records and calculate total amount procured by client. Inspect storage areas to verify quantities on-site.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain a detailed log of all medication-related events (see also 5.2.1a and 5.2.3)	B. Review log of medication events to verify that the quantity of antibiotic applied by the client does not suggest prophylactic use.	
		c. Calculate the total amount (g) and treatments (#) of antibiotics used during the current and prior production cycles (see also 5.2.9).	C. Verify that the total amount of antibiotics used in the current production cycle is equal to the total amount prescribed.	
Footnote	[106] The designated veterinarian must certify that a pathogen or disease is present before prescribing medication.			
5.2.8		Note 1: Farms have the option to certify only a portion of the fish or farm site when WHO-listed [107] antibiotics have been used at the production facility (see 5.2.8d). To pursue this option, farms must request an exemption from the CAB in advance of the audit and provide sufficient records giving details on which pens were treated and traceability of those treated fish. Note 2: It is recommended that the farm veterinarian review the WHO list [see 107] in detail and be aware that the list is meant to show examples of members of each class of drugs, and is not inclusive of all drugs.		
	Indicator: Allowance for use of antibiotics listed as critically important for human medicine by the World Health Organization (WHO [107]) **Requirement:** None [108] **Applicability:** All	a. Maintain a current version of the WHO list of antimicrobials critically and highly important for human health [107].	A. Confirm that the farm has the current copy of the WHO list of antibiotics.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. If the farm has not used any antibiotics listed as critically important (5.2.8a) in the current production cycle, inform the CAB and proceed to schedule the audit.	B. During the on-site audit, verify that no antibiotics listed as "critically important" have been used on the farm through cross-check of records for 5.2.1 and 5.2.7.	
		c. If the farm has used antibiotics listed as critically important (5.2.8a) to treat any fish during the current production cycle, inform the CAB prior to scheduling audit.	C. Make note of the farm's antibiotic usage and do not schedule an on-site audit until the client provides additional information as specified in 5.2.8d.	
		d. If yes to 5.2.8c, request an exemption from the CAB to certify only a portion of the farm. Prior to the audit, provide the CAB with records sufficient to establish details of treatment, which pens were treated, and how the farm will ensure full traceability and separation of treated fish through and post- harvest.	D. Review the farm's exemption request and supporting documents to verify that the farm can satisfactorily demonstrate traceability [108] to merit an exemption.	
Footnote	[107] The third edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: http://www.who.int/foodborne_disease/resistance/CIA_3.pdf.			
Footnote	[108] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.			
5.2.9		Note: for the purposes of Indicator 5.2.9, "treatment" means a single course of medication given to address a specific disease issue and that may last a number of days and be applied in one or more pens (or cages).		
	Indicator: Number of treatments [109] of antibiotics over the most recent production cycle **Requirement:** ≤ 3 **Applicability:** All	a. Maintain records of all treatments of antibiotics (see 5.2.1a). For first audits, farm records must cover the current and immediately prior production cycles in a verifiable statement.	A. Review documents to confirm that the client maintains a record of all treatments of antibiotics. Cross-check against records of on-farm chemical & therapeutant use (5.2.1a), medication events (5.2.3a), and prescription records (5.2.3b).	a. The spreadsheet Macquarie Harbour - Antibiotic Use records only treatments for Yersiniosis since 2010. There is evidence that no medicated feeds were left over. b. The 12YC production cycle (12YC) received no antibiotic treatments.
		b. Calculate the total number of treatments of antibiotics over the most recent production cycle and supply a verifiable statement of this calculation.	B. Confirm that the client used ≤ 3 treatments of antibiotics over the most recent production cycle.	
Footnote	[109] A treatment is a single course medication given to address a specific disease issue and that may last a number of days.			
		Note: Indicator 5.2.10 requires that farms must demonstrate a reduction in load required, regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined antibiotic load of the consolidated sites. Indicator 5.2.10 does not take effect until June 13, 2017. Nonetheless farms should start collecting data on antibiotic load beforehand in case farms have to demonstrate compliance with Indicator 5.2.10 at some point in the future using data from the two previous production cycles.		
	Indicator: If more than one antibiotic treatment is used in the most recent production cycle,	a. Use results from 5.2.9b to show whether more than one antibiotic treatment was used in the most recent production cycle. If not, then the requirement of 5.2.10 does not apply. If yes, then proceed to 5.2.10b.	A. Review results to confirm whether 5.2.10 is applicable to the client. Record the results and, if applicable, proceed to 5.2.10B.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.

5.2.10	demonstration that the antibiotic load [110] is at least 15% less that of the average of the two previous production cycles **Requirement:** Yes [111], within five years of the publication of the SAD standard (i.e. full compliance by June 13, 2017) **Applicability:** All	b. Calculate antibiotic load (antibiotic load = the sum of the total amount of active ingredient of antibiotic used in kg) for most recent production cycle and for the two previous production cycles. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	B. Review farm's calculations for accuracy and completeness of coverage. Cross-check against treatment records (5.2.1a).	
		c. Provide the auditor with calculations showing that the antibiotic load of the most recent production cycle is at least 15% less than that of the average of the two previous production cycles.	C. Review evidence to verify that farm complies with requirement.	
		d. Submit data on antibiotic load to ASC as per Appendix VI (if applicable) for each production cycle.	D. Confirm that client has submitted data on antibiotic load to ASC (Appendix VI) as applicable.	
Footnote	[110] Antibiotic load = the sum of the total amount of active ingredient of antibiotics used (kg).			
Footnote	[111] Reduction in load required, regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined antibiotic load of the consolidated sites.			
5.2.11	**Indicator**: Presence of documents demonstrating that the farm has provided buyers [112] of its salmon a list of all therapeutants used in production **Requirement:** Yes **Applicability:** All	a. Prepare a procedure which outlines how the farm provides buyers [112] of its salmon with a list of all therapeutants used in production (see 4.4.3b).	A. Review the farm's procedure and confirm implementation based on relevant documentary evidence (e.g. sales records, invoices).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain records showing the farm has informed all buyers of its salmon about all therapeutants used in production.	B. Review sales records for completeness and cross-check against treatment records (5.2.1a) to verify that buyers were adequately informed about therapeutants used in production.	
Footnote	[112] Buyer: The company or entity to which the farm or the producing company is directly selling its product.			
Criterion 5.3 Resistance of parasites, viruses and bacteria to medicinal treatments				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
5.3.1		**Instruction to Clients for Indicator 5.3.1 - Identifying the 'Expected Effect' of Medicinal Treatment** Indicator 5.3.1 requires that farms identify treatments that have not produced the expected effect. The SAD Steering Committee recognizes that the "expected effect" will vary with health condition and type of medicinal treatment. Therefore farms and auditors will need to review the pre- and post-treatment condition of fish in order to understand and evaluate the impact of treatm Example: sea lice treatment with emamectin benzoate The SAD SC recommends that a typical baseline for effectiveness of emamectin benzoate is a minimum of 90 percent reduction in abundance of lice on the farmed fish. To determine whether treatment has produced the expected effect, farm and auditor must review pre- and post-treatment lice counts. If the calculated percent reduction in lice is < 90% then the treatment did not pr Note: If field-based bio-assays for determining resistance are ineffective or unavailable, the farm shall have samples analyzed by an independent laboratory to determine resistance formation. The auditor shall record in the audit report why field-based bio-assays were deemed ineffective and shall include results from the laboratory analyses of resistance formation.		
	Indicator: Bio-assay analysis to determine resistance when two applications of a treatment have not produced the expected effect **Requirement:** Yes **Applicability:** All	a. In addition to recording all therapeutic treatments (5.2.1a), keep a record of all cases where the farm uses two successive medicinal treatments.	A. Review farm records to confirm recording of all successive medicinal treatments.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Whenever the farm uses two successive treatments, keep records showing how the farm evaluates the observed effect of treatment against the expected effect of treatment.	B. If applicable, review how the farm evaluates the observed effect of treatment against the expected effect of treatment.	
		c. For any result of 5.3.1b that did not produce the expected effect, ensure that a bio-assay analysis of resistance is conducted.	C. Review farm records to confirm that bio-assays were done in every case where successive treatments did not produce the expected effect. Confirm that bio-assays were performed by a qualified independent laboratory.	
		d. Keep a record of all results arising from 5.3.1c.	D. Verify that farm maintains records from bio-assays (as applicable).	
5.3.2	**Indicator**: When bio-assay tests determine resistance is forming, use of an alternative, permitted treatment, or an immediate harvest of all fish on the site **Requirement:** Yes **Applicability:** All	a. Review results of bio-assay tests (5.3.1d) for evidence that resistance has formed. If yes, proceed to 5.3.2b. If no, then Indicator 5.3.2 is not applicable.	A. Review evidence from bio-assay tests to determine whether Indicator 5.3.2 is applicable.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. When bio-assay tests show evidence that resistance has formed, keep records showing that the farm took one of two actions: - used an alternative treatment (if permitted in the area of operation); or - immediately harvested all fish on site.	B. If applicable, review records to verify that the farm either used an alternative treatment that is permitted in the area of operation or else harvested all fish on site.	
Criterion 5.4 Biosecurity management [113]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
Footnote	[113] See Appendix VI for transparency requirements for 5.4.2 and 5.4.4.			
5.4.1	**Indicator**: Evidence that all salmon on the site are a single-year class [114] **Requirement:** 100% [115] **Applicability:** All farms except as noted in [115]	a. Keep records of the start and end dates of periods when the site is fully fallow after harvest.	A. Review records and verify fallow periods by cross-checking during interviews with farm staff and community representatives.	The ASC approved variance is still in place for this indicator.
		b. Provide evidence of stocking dates (purchase receipts, delivery records) to show that there were no gaps > 6 months for smolt inputs for the current production cycle.	B. Review evidence to confirm there were no gaps in smolt inputs > 6 months. Inspect pens during the on-site audit to see if fish size (which may be variable) is consistent with the production of a single-year class.	
		-	C. Verify that the available evidence shows that salmon on the site are from a single-year class.	
Footnote	[114] Gaps of up to six months between inputs of smolts derived from the same stripping are acceptable as long as there remains a period of time when the site is fully fallow after harvest.			
Footnote	[115] Exception is allowed for: 1) farm sites that have closed, contained production units where there is complete separation of water between units and no sharing of filtration systems or other systems that could spread disease, or, 2) farm sites that have ≥95% water recirculation, a pre-entry disease screening protocol, dedicated quarantine capability and biosecurity measures for waste to ensure there is no discharge of live biological material to the natural environment (e.g. UV or other effective treatment of effluent) .			
	Indicator: Evidence that if the farm suspects an unidentifiable transmissible agent, or if the farm	a. For mortality events logged in 5.1.4a, show evidence that the farm promptly evaluated each to determine whether it was a statistically significant increase over background mortality rate on a monthly basis [116]. The accepted level of significance (for example, $p < 0.05$) should be agreed between farm and CAB.	A. Review evidence to confirm that the farm evaluated mortality events for statistically significant increases relative to background mortality rates (compare to farm's time-series dataset in 5.1.7a).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. For mortality events logged in 5.1.4a, record whether the farm did or did not suspect (yes or no) an unidentified transmissible agent.	B. Determine if the farm suspected any unidentified transmissible agents associated with mortality events during the most recent production cycle. An abrupt increase in unexplained mortality should be cause for suspicion.	

5.4.2	experiences unexplained increased mortality, [116] the farm has: 1. Reported the issue to the ABM and to the appropriate regulatory authority 2. Increased monitoring and surveillance [117] on the farm and within the ABM 3. Promptly [118] made findings publicly available Requirement: Yes Applicability: All	c. Proceed to 5.4.2d if, during the most recent production cycle, either: - results from 5.4.2a showed a statistically significant increase in unexplained mortalities; or - the answer to 5.4.2b was 'yes'. Otherwise, Indicator 5.4.2 is not applicable.	C. Confirm that the farm took the correct action based on results from 5.4.2a and 5.4.2b and whether 5.4.2d is applicable to the farm.	
		d. If required, ensure that the farm takes and records the following steps: 1) Report the issue to the ABM and to the appropriate regulatory authority; 2) Increase monitoring and surveillance [117] on the farm and within the ABM; and 3) Promptly (within one month) make findings publicly available	D. If applicable, verify that the farm keeps records to show how each of the required steps was completed.	
		e. As applicable, submit data to ASC as per Appendix VI about unidentified transmissible agents or unexplained increases in mortality. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	E. Confirm that client submits data to ASC (Appendix VI) about unidentified transmissible agents or unexplained increases in mortality as applicable.	
Footnote	[116] Increased mortality: A statistically significant increase over background rate on a monthly basis.			
Footnote	[117] Primary aim of monitoring and surveillance is to investigate whether a new or adapted disease is present in the area.			
Footnote	[118] Within one month.			
5.4.3		**Instruction to Clients for Indicator 5.4.3 - Compliance with the OIE Aquatic Animal Health Code** Indicator 5.4.3 requires that farms show evidence of compliance with the OIE Aquatic Animal Health Code (see http://www.oie.int/index.php?id=171). Compliance is defined as farm practices consistent with the intentions of the Code. For purposes of the ASC Salmon Standard, this means that the farm must have written procedures stating how the farm will initiate an aggressive resp declared free of the pathogen)]. An aggressive response will involve, at a minimum, the following actions: - depopulation of the infected site; - implementation of quarantine zones (see note below)in accordance with guidelines from OIE for the specific pathogen; and - additional actions as required under Indicator 5.4.4. To demonstrate compliance with Indicator 5.4.3, clients have the to option to describe how farm practices are consistent with the intentions of the OIE Aquatic Animal Health Code by developing relevant policies and procedures and integrating them into the farm's fish health management plan. Note: The Steering Committee recognizes that establishment of quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM.		
	Indicator: Evidence of compliance [119] with the OIE Aquatic Animal Health Code [120] **Requirement:** Yes **Applicability:** All	a. Maintain a current version of the OIE Aquatic Animal Health Code on site or ensure staff have access to the most current version.	A. Verify that farm management is aware of practices described in the most current version of the code during interviews.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Develop policies and procedures as needed to ensure that farm practices remain consistent with the OIE Aquatic Animal Health Code (5.4.3a) and with actions required under indicator 5.4.4.	B. Review farm policies and procedures to verify that the farm has documented how its practices are consistent with the OIE Aquatic Animal Health Code and Indicator 5.4.4.	
		-	C. During the on-site inspection look for evidence that policies and procedures in 5.4.3a are implemented. Cross-check in interviews with staff.	
Footnote	[119] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Quaran ABM. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).			
Footnote	[120] OIE 2011. Aquatic Animal Health Code. http://www.oie.int/index.php?id=171.			
5.4.4	**Indicator**: If an OIE-notifiable disease [121] is confirmed on the farm, evidence that: 1. the farm has, at a minimum, immediately culled the pen(s) in which the disease was detected 2. the farm immediately notified the other farms in the ABM [122] 3. the farm and the ABM enhanced monitoring and conducted rigorous testing for the disease 4. the farm promptly [123] made findings publicly available **Requirement:** Yes **Applicability:** All	a. Ensure that farm policies and procedures in 5.4.3a describe the four actions required under Indicator 5.4.4 in response to an OIE-notifiable disease on the farm.	A. Review farm policies and procedures (see 5.4.3A) to verify that the farm has documented actions in response to an OIE-notifiable disease.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Inform the CAB if an OIE-notifiable disease has been confirmed on the farm during the current production cycle or the two previous production cycles. If yes, proceed to 5.4.4c. If no, then 5.4.4c an 5.4.4d do not apply.	B. Record whether there were any OIE-notifiable diseases confirmed on the farm during the current or two previous production cycles.	
		c. If an OIE-notifiable disease was confirmed on the farm (see 5.4.4b), then retain documentary evidence to show that the farm: 1) immediately culled the pen(s) in which the disease was detected; 2) immediately notified the other farms in the ABM [122] 3) enhanced monitoring and conducted rigorous testing for the disease; and 4) promptly (within one month) made findings publicly available	C. If applicable, review documentary evidence to verify the farm's response complied with the four actions required under Indicator 5.4.4.	
		d. As applicable, submit data to ASC as per Appendix VI about any OIE-notifiable disease that was confirmed on the farm. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	D. Confirm that client submits data to ASC (Appendix VI) about any OIE-notifiable disease that was confirmed on the farm (as applicable).	
		-	E. If an OIE-notifiable disease was confirmed on the farm, verify that notifications were made to regulatory bodies required under law and the OIE Aquatic Animal Health Code (122).	
Footnote	[121] At the time of publication of the final draft standards, OIE-notifiable diseases relevant to salmon aquaculture were: Epizootic haematopoietic necrosis, Infectious haematopoietic necrosis (IHN), Infectious salmon anemia (ISA), Viral hemorrhagic septicemia (VHS) and Gyrodactylosis (Gyrodactylus salaris).			
Footnote	[122] This is in addition to any notifications to regulatory bodies required under law and the OIE Aquatic Animal Health Code.			
Footnote	[123] Within one month.			

PRINCIPLE 6: DEVELOP AND OPERATE FARMS IN A SOCIALLY RESPONSIBLE MANNER

6.1 Freedom of association and collective bargaining [124]

		Compliance Criteria		
Footnote	[124] Bargain collectively: A voluntary negotiation between employers and organizations of workers in order to establish the terms and conditions of employment by means of collective (written) agreements.			
6.1.1	**Indicator:** Evidence that workers have access to trade unions (if they exist) and union representative(s) chosen by themselves without managerial interference **Requirement:** Yes **Applicability:** All	a. Workers have the freedom to join any trade union, free of any form of interference from employers or competing organizations set up or backed by the employer. Farms shall prepare documentation to demonstrate to the auditor that domestic regulation fully meets these criteria.		Staff interviews confirmed that a trade union exists and employees are free to join. Meetings between union representatives and union members regularly transpire at the workplace.
		b. Union representatives (or worker representatives) are chosen by workers without managerial interference. ILO specifically prohibits “acts which are designated to promote the establishment of worker organizations or to support worker organizations under the control or employers or employers’ organizations."		
		c. Trade union representatives (or worker representatives) have access to their members in the workplace at reasonable times on the premises.		
		d. Be advised that workers and union representatives (if they exist) will be interviewed to confirm the above.		
6.1.2	**Indicator:** Evidence that workers are free to form organizations, including unions, to advocate for	a. Employment contract explicitly states the worker's right of freedom of association.		Employees are provided with a copy of the Fair Work Act Information Sheet, which highlights the representational rights of the employee. Also, a document 'Schedule 2 - Notice of Representation Rights' has been provided to several were also members of a union.
		b. Employer communicates that workers are free to form organizations to advocate for and protect work rights (e.g. farm policies on Freedom of Association; see 6.12.1).		

6.1.2	and protect their rights **Requirement:** Yes **Applicability:** All	c. Be advised that workers will be interviewed to confirm the above.	
6.1.3	**Indicator:** Evidence that workers are free and able to bargain collectively for their rights **Requirement:** Yes **Applicability:** All	a. Local trade union, or where none exists a reputable civil-society organization, confirms no outstanding cases against the farm site management for violations of employees' freedom of association and collective bargaining rights. b. Employer has explicitly communicated a commitment to ensure the collective bargaining rights of all workers. c. There is documentary evidence that workers are free and able to bargain collectively (e.g. collective bargaining agreements, meeting minutes, or complaint resolutions).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.

Criterion 6.2 Child labor

		Compliance Criteria	
6.2.1	**Indicator:** Number of incidences of child [125] labor [126] **Requirement:** None **Applicability:** All except as noted in [125]	a. In most countries, the law states that minimum age for employment is 15 years. There are two possible exceptions: - in developing countries where the legal minimum age may be set to 14 years (see footnote 125); or - in countries where the legal minimum age is set higher than 15 years, in which case the legal minimum age of the country is followed. If the farm operates in a country where the legal minimum ages is not 15, then the employer shall maintain documentation attesting to this fact. b. Minimum age of permanent workers is 15 or older (except in countries as noted above). c. Employer maintains age records for employees that are sufficient to demonstrate compliance.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
Footnote	[125] Child: Any person under 15 years of age. A higher age would apply if the minimum age law of an area stipulates a higher age for work or mandatory schooling. Minimum age may be 14 if the country allows it under the developing country exceptions in ILO convention 138.		
Footnote	[126] Child Labor: Any work by a child younger than the age specified in the definition of a child.		
6.2.2	**Indicator:** Percentage of young workers [127] that are protected [128] **Requirement:** 100% **Applicability:** All	a. Young workers are appropriately identified in company policies & training programs, and job descriptions are available for all young workers at the site. b. All young workers (from age 15 to less than 18) are identified and their ages are confirmed with copies of IDs. c. Daily records of working hours (i.e. timesheets) are available for all young workers. d. For young workers, the combined daily transportation time and school time and work time does not exceed 10 hours. e. Young workers are not exposed to hazards [129] and do not perform hazardous work [130]. Work on floating cages in poor weather conditions shall be considered hazardous. f. Be advised that the site will be inspected and young workers will be interviewed to confirm compliance.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
Footnote	[127] Young Worker: Any worker between the age of a child, as defined above, and under the age of 18.		
Footnote	[128] Protected: Workers between 15 and 18 years of age will not be exposed to hazardous health and safety conditions; working hours shall not interfere with their education and the combined daily transportation time and school time, and work time shall not exceed 10 hours.		
Footnote	[129] Hazard: The inherent potential to cause injury or damage to a person's health (e.g., unequipped to handle heavy machinery safely, and unprotected exposure to harmful chemicals).		
Footnote	[130] Hazardous work: Work that, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of workers (e.g., heavy lifting disproportionate to a person's body size, operating heavy machinery, exposure to toxic chemicals).		

Criterion 6.3 Forced, bonded or compulsory labor

		Compliance Criteria	
6.3.1	**Indicator:** Number of incidences of forced, [131] bonded [132] or compulsory labor **Requirement:** None **Applicability:** All	a. Contracts are clearly stated and understood by employees. Contracts do not lead to workers being indebted (i.e. no 'pay to work' schemes through labor contractors or training credit programs). b. Employees are free to leave workplace and manage their own time. c. Employer does not withhold employee's original identity documents. d. Employer does not withhold any part of workers' salaries, benefits, property or documents in order to oblige them to continue working for employer. e. Employees are not to be obligated to stay in job to repay debt. f. Maintain payroll records and be advised that workers will be interviewed to confirm the above.	The auditor reviewed employment contracts and interviewed several staff, all confirming that no incidences of forced, bonded or compulsory labor is in place. Staff were familiar with and fully understood their contracts. They result in disciplinary measures. By way of interviews with the Human Resources department, the auditor confirmed that only photocopies of identification documents are retained.
Footnote	[131] Forced (Compulsory) labor: All work or service that is extracted from any person under the menace of any penalty for which a person has not offered himself/herself voluntarily or for which such work or service is demanded as a repayment of debt. "Penalty" can imply monetary sanctions, physical punishment, or the loss of rights and privileges or restriction of movement (e.g., withholding of identity documents).		
Footnote	[132] Bonded labor: When a person is forced by the employer or creditor to work to repay a financial debt to the crediting agency.		

Criterion 6.4 Discrimination [133]

		Compliance Criteria	
Footnote	[133] Discrimination: Any distinction, exclusion or preference that has the effect of nullifying or impairing equality of opportunity or treatment. Not every distinction, exclusion or preference constitutes discrimination. For instance, a merit- or performance-based pay increase or bonus is not by itself discriminatory. Positive discrimination in favor of people from certain underrepresented groups may be legal in some coun		
6.4.1	**Indicator:** Evidence of comprehensive [134] and proactive anti-discrimination policies, procedures and practices **Requirement:** Yes **Applicability:** All	a. Employer has written anti-discrimination policy in place, stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination. b. Employer has clear and transparent company procedures that outline how to raise, file, and respond to discrimination complaints. c. Employer respects the principle of equal pay for equal work and equal access to job opportunities, promotions and raises. d. All managers and supervisors receive training on diversity and non-discrimination. All personnel receive non-discrimination training. Internal or external training acceptable if proven effective.	The company has a comprehensive policy which prohibits any form of harassment, bullying and discrimination. This policy explicitly protects employees from discrimination or harassment based on: • Race, nationality, colour or ethnic origin; • Sex; • Marital status; • Sexual Preference; • Pregnancy or potential pregnancy; • Family responsibilities; • Physical or intellectual impairment; • Age; • Medical record; • HIV status; • Trade union activity or affiliation; • Irrelevant criminal record; • Physical features and • Religious or political belief or activity. The procedure related is covered through training and requires prompt action any breaches of the aforementioned policy in a confidential manner.
Footnote	[134] Employers shall have written anti-discrimination policies stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination.		

6.4.2	**Indicator:** Number of incidences of discrimination **Requirement:** None **Applicability:** All	a. Employer maintains a record of all discrimination complaints. These records do not show evidence for discrimination.	The auditor observed that no female employees worked at the farm sites in Macquarie Harbour; however, there is clearly a diverse workforce at the corporate office. Many of these staff members do work at the farm at vario applicant was hired for available positions and there was no evidence to indicate any form of discrimination was taking place. This was additionally confirmed through a review of gender equality
		b. Be advised that worker testimonies will be used to confirm that the company does not interfere with the rights of personnel to observe tenets or practices, or to meet needs related to race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation or any other condition that may give rise to discrimination.	
Criterion 6.5 Work environment health and safety			
		Compliance Criteria	
6.5.1	**Indicator:** Percentage of workers trained in health and safety practices, procedures [135] and policies on a yearly basis **Requirement:** 100% **Applicability:** All	a. Employer has documented practices, procedures (including emergency response procedures) and policies to protect employees from workplace hazards and to minimize risk of accident or injury. The information shall be available to employees.	The auditor reviewed training records and interviewed numerous staff, all of whom which were knowledgeable about identifying and reporting workplace hazards, as well as emergency response procedures.
		b. Employees know and understand emergency response procedures.	
		c. Employer conducts health and safety training for all employees on a regular basis (once a year and immediately for all new employees), including training on potential hazards and risk minimization, Occupational Safety and Health (OSH) and effective use of PPE.	
Footnote	[135] Health and safety training shall include emergency response procedures and practices.		
6.5.2	**Indicator:** Evidence that workers use Personal Protective Equipment (PPE) effectively **Requirement:** Yes **Applicability:** All	a. Employer maintains a list of all health and safety hazards (e.g. chemicals).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated in its entirety during the 2016 surveillance audit; howeve about emergency procedures.
		b. Employer provides workers with PPE that is appropriate to known health and safety hazards.	
		c. Employees receive annual training in the proper use of PPE (see 6.5.1c). For workers who participated in the initial training(s) previously an annual refreshment training may suffice, unless new PPE has been put to use.	
		d. Be advised that workers will be interviewed to confirm the above.	
6.5.3	**Indicator:** Presence of a health and safety risk assessment and evidence of preventive actions taken **Requirement:** Yes **Applicability:** All	a. Employer makes regular assessments of hazards and risks in the workplace. Risk assessments are reviewed and updated at least annually (see also 6.5.1a).	Per the farm OH&S Manager, all workplace hazards are being identified and fixed on an ongoing basis. Identified hazards are identified, fixed and recorded. All staff interviewed were aware of the need for identifying risks and maintenance crews.
		b. Employees are trained in how to identify and prevent known hazards and risks (see also 6.5.1c).	
		c. Health and safety procedures are adapted based on results from risk assessments (above) and changes are implemented to help prevent accidents.	
6.5.4	**Indicator:** Evidence that all health- and safety-related accidents and violations are recorded and corrective actions are taken when necessary **Requirement:** Yes **Applicability:** All	a. Employer records all health- and safety-related accidents.	The auditor interviewed the OH&S Manager at the farm who showed the tracking system for all OH&S incidents, which was complete. For any incidents, records are maintained and preventative actions are taken.
		b. Employer maintains complete documentation for all occupational health and safety violations and investigations.	
		c. Employer implements corrective action plans in response to any accidents that occur. Plans are documented and they include an analysis of root cause, actions to address root cause, actions to remediate, and actions to prevent future accidents of similar nature.	
		d. Employees working in departments where accidents have occurred can explain what analysis has been done and what steps were taken or improvements made.	
6.5.5	**Indicator:** Evidence of employer responsibility and/or proof of insurance (accident or injury) for 100% of worker costs in a job-related accident or injury when not covered under national law **Requirement:** Yes **Applicability:** All	a. Employer maintains documentation to confirm that all personnel are provided sufficient insurance to cover costs related to occupational accidents or injuries (if not covered under national law). Equal insurance coverage must include temporary, migrant or foreign workers. Written contract of employer responsibility to cover accident costs is acceptable evidence in place of insurance.	The company has a workers compensation policy which provides full coverage in the event of workplace injury.
6.5.6		Note: If the farm outsources its diving operations to an independent company, the farm shall ensure that auditors have access to specified information sufficient to demonstrate compliance with Indicator 6.5.6. It is the farm's responsibility to obtain copies of relevant documentation (e.g. certificates) from the dive company.	
	Indicator: Evidence that all diving operations are conducted by divers who are certified **Requirement:** Yes **Applicability:** All	a. Employer keeps records of farm diving operations and a list of all personnel involved. In case an external service provider was hired, a statement that provider conformed to all relevant criteria must be made available to the auditor by this provider.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated in its entirety during the 2016 surveillance audit; howeve about emergency procedures.
		b. Employer maintains evidence of diver certification (e.g. copies of certificates) for each person involved in diving operations. Divers shall be certified through an accredited national or international organization for diver certification.	
Criterion 6.6 Wages			
		Compliance Criteria	
6.6.1	**Indicator:** The percentage of workers whose basic wage [136] (before overtime and bonuses) is below the minimum wage [137] **Requirement:** 0 (None) **Applicability:** All	a. Employer keeps documents to show the legal minimum wage in the country of operation. If there is no legal minimum wage in the country, the employer keeps documents to show the industry-standard minimum wage.	The auditor reviewed records and contracts which indicate that the minimum wage or better is being paid to all employees. Staff interviews confirmed that the basic needs wage is also satisfied.
		b. Employer's records (e.g. payroll) confirm that worker's wages for a standard work week (≤ 48 hours) always meet or exceed the legal minimum wage. If there is no legal minimum wage, the employer's records must show how the current wage meets or exceeds industry standard. If wages are based on piece-rate or pay-per-production, the employer's records must show how workers can reasonably attain (within regular working hours) wages that meet or exceed the legal minimum wage.	
		c. Maintain documentary evidence (e.g. payroll, timesheets, punch cards, production records, and/or utility records) and be advised that workers will be interviewed to confirm the above.	
Footnote	[136] Basic wage: The wages paid for a standard working week (no more than 48 hours).		
Footnote	[137] If there is no legal minimum wage in a country, basic wages must meet the industry-standard minimum wage.		
6.6.2	**Indicator:** Evidence that the employer is working toward the payment of basic needs wage [138] **Requirement:** Yes **Applicability:** All	a. Proof of employer engagement with workers and their representative organizations, and the use of cost of living assessments from credible sources to assess basic needs wages. Includes review of any national basic needs wage recommendations from credible sources such as national universities or government.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Employer has calculated the basic needs wage for farm workers and has compared it to the basic (i.e. current) wage for their farm workers.	
		c. Employer demonstrates how they have taken steps toward paying a basic needs wage to their workers.	
Footnote	[138] Basic needs wage: A wage that covers the basic needs of an individual or family, including housing, food and transport. This concept differs from a minimum wage, which is set by law and may or may not cover the basic needs of workers.		
6.6.3	**Indicator:** Evidence of transparency in wage-setting and rendering [139] **Requirement:** Yes **Applicability:** All	a. Wages and benefits are clearly articulated to workers and documented in contracts.	Wages have been clearly communicated to staff via employment contracts and pay schedules. Staff interviewed confirmed that payments were made in a convenient fashion and that they understood their wages and benefits.
		b. The method for setting wages is clearly stated and understood by workers.	
		c. Employer renders wages and benefits in a way that is convenient for the worker (e.g. cash, check, or electronic payment methods). Workers do not have to travel to collect benefits nor do they receive promissory notes, coupons or merchandise in lieu of payment.	
		d. Be advised that workers will be interviewed to confirm the above.	
Footnote	[139] Payments shall be rendered to workers in a convenient manner.		
Criterion 6.7 Contracts (labor) including subcontracting			

		Compliance Criteria	
6.7.1	**Indicator:** Percentage of workers who have contracts [141]Requirement: 100% Applicability: All	a. Employer maintains a record of all employment contracts.	By way of human resources and staff interviews, the auditor confirmed that all employees have contracts with the company.
		b. There is no evidence for labor-only contracting relationships or false apprenticeship schemes.	
		c. Be advised that workers will be interviewed to confirm the above.	
Footnote	[141] Labor-only contracting relationships or false apprenticeship schemes are not acceptable. This includes revolving/consecutive labor contracts to deny benefit accrual or equitable remuneration. False Apprenticeship Scheme: The practice of hiring workers under apprenticeship terms without stipulating terms of the apprenticeship or wages under contract. It is a "false" apprenticeship if its purpose is to underpay p establishing a formal employment relationship for the purpose of avoiding payment of regular wages or the provision of legally required benefits, such as health and safety protections.		
6.7.2	**Indicator:** Evidence of a policy to ensure social compliance of its suppliers and contractors **Requirement:** Yes **Applicability:** All	a. Farm has a policy to ensure that all companies contracted to provide supplies or services (e.g. divers, cleaning, maintenance) have socially responsible practices and policies.	The company has a robust screening process to ensure that companies contracted to provide supplies and/or services are socially responsible. This includes, for example, a supplier evaluation form to confirm socially responsibl suppliers according to the QA staff responsible for supplier approval. A complete approved vendors list does exist and records of the supplier screening do exist, although not 100% have been screened uniformly.
		b. Producing company has criteria for evaluating its suppliers and contractors. The company keeps a list of approved suppliers and contractors.	
		c. Producing company keeps records of communications with suppliers and subcontractors that relate to compliance with 6.7.2.	
Criterion 6.8 Conflict resolution			
		Compliance Criteria	
6.8.1	**Indicator:** Evidence of worker access to effective, fair and confidential grievance procedures **Requirement:** Yes **Applicability:** All	a. Employer has a clear labor conflict resolution policy for the presentation, treatment, and resolution of worker grievances in a confidential manner.	The company does have a grievance policy with a focus on resolution at the worker-supervisor level. The policy and procedure escalates depending on the outcome of early attempts to resolve issues. At the site audit, the audi outstanding issues exist. Some informal documentation exists regarding complaints and grievances, but this is primarily via email and not consolidated.
		b. Workers are familiar with the company's labor conflict policies and procedures. There is evidence that workers have fair access.	
		c. Maintain documentary evidence (e.g. complaint or grievance filings, minutes from review meetings) and be advised that workers will be interviewed to confirm the above.	
6.8.2	**Indicator:** Percentage of grievances handled that are addressed [142] within a 90-day timeframe **Requirement:** 100% **Applicability:** All	a. Employer maintains a record of all grievances, complaints and labor conflicts that are raised.	Currently, the company does not maintain clear records of all grievances, complaints, and labor conflicts that may arise, nor are there records to confirm resolution within 90 days. Despite the lack of formal records in this area all complaints were responded to promptly, thus meeting the 90 day ASC requirement. As a result of the indicator being met, this has been designated as an observation due to the lack of documentation.
		b. Employer keeps a record of follow-up (i.e. corrective actions) and timeframe in which grievances are addressed.	
		c. Maintain documentary evidence and be advised that workers will be interviewed to confirm that grievances are addressed within a 90-day timeframe.	
Footnote	[142] Addressed: Acknowledged and received, moving through the company's process for grievances, corrective action taken when necessary.		
Criterion 6.9 Disciplinary practices			
		Compliance criteria	
6.9.1	**Indicator:** Incidences of excessive or abusive disciplinary actions **Requirement:** None **Applicability:** All	a. Employer does not use threatening, humiliating or punishing disciplinary practices that negatively impact a worker's physical and mental health or dignity.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Allegations of corporeal punishment, mental abuse [144], physical coercion, or verbal abuse will be investigated by auditors.	
		c. Be advised that workers will be interviewed to confirm there is no evidence for excessive or abusive disciplinary actions.	
Footnote	[144] Mental Abuse: Characterized by the intentional use of power, including verbal abuse, isolation, sexual or racial harassment, intimidation or threat of physical force.		
6.9.2	**Indicator:** Evidence of a functioning disciplinary action policy whose aim is to improve the worker [143] **Requirement:** Yes **Applicability:** All	a. Employer has written policy for disciplinary action which explicitly states that its aim is to improve the worker [143].	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Maintain documentary evidence (e.g. worker evaluation reports) and be advised that workers will be interviewed to confirm that the disciplinary action policy is fair and effective.	
Footnote	[143] If disciplinary action is required, progressive verbal and written warnings shall be engaged. The aim shall always be to improve the worker; dismissal shall be the last resort. Policies for bonuses, incentives, access to training and promotions are clearly stated and understood, and not used arbitrarily. Fines or basic wage deductions shall not be acceptable disciplinary practices.		
Criterion 6.10 Working hours and overtime			
		Compliance criteria	
6.10.1		Note: Working hours, night work and rest periods for workers in agriculture should be in accordance with national laws and regulations or collective agreements (e.g. The Safety and Health in Agriculture Convention, 2001). Additional information can be found on the website of the International Labour Organization (www.ilo.org).	
	Indicator: Incidences, violations or abuse of working hours and overtime laws [145] **Requirement:** None **Applicability:** All	a. Employer has documentation showing the legal requirements for working hours and overtime in the region where the farm operates. If local legislation allows workers to exceed internationally accepted recommendations (48 regular hours, 12 hours overtime) then requirements of the international standards apply.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Records (e.g. time sheets and payroll) show that farm workers do not exceed the number of working hours allowed under the law.	
		c. If an employer requires employees to work shifts at the farm (e.g. 10 days on and six days off), the employer compensates workers with an equivalent time off in the calendar month and there is evidence that employees have agreed to this schedule (e.g. in the hiring contract).	
		d. Be advised that workers will be interviewed to confirm there is no abuse of working hours and overtime laws.	
Footnote	[145] In cases where local legislation on working hours and overtime exceed internationally accepted recommendations (48 regular hours, 12 hours overtime), the international standards will apply.		
6.10.2	**Indicator:** Overtime is limited, voluntary [146], paid at a premium rate and restricted to exceptional circumstances **Requirement:** Yes **Applicability:** All except as noted in [146]	a. Payment records (e.g. pay slips) show that workers are paid a premium rate for overtime hours.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Overtime is limited and occurs in exceptional circumstances as evidenced by farm records (e.g. production records, time sheets, and other records of working hours).	
		c. Be advised that workers will be interviewed to confirm that all overtime is voluntary except where there is a collective bargaining agreement which specifically allows for compulsory overtime.	
Footnote	[146] Compulsory overtime is permitted if previously agreed to under a collective bargaining agreement.		
Footnote	[147] Premium rate: A rate of pay higher than the regular work week rate. Must comply with national laws/regulations and/or industry standards.		
Criterion 6.11 Education and training			
		Compliance criteria	
6.11.1	**Indicator:** Evidence that the company encourages and sometimes supports education initiatives for all workers (e.g., courses, certificates and degrees) **Requirement:** Yes **Applicability:** All	a. Company has written policies related to continuing education of workers. Company provides incentives (e.g. subsidies for tuition or textbooks, time off prior to exams, flexibility in work schedule) that encourage workers to participate in educational initiatives. Note that such offers may be contingent on workers committing to stay with the company for a pre- arranged time.	Based on managerial and worker interviews, the auditor confirmed that the company does support its employees with additional education, particularly for various certifications that apply to the farm sites (e.g. diver certificat are maintained by the company.
		b. Employer maintains records of worker participation in educational opportunities as evidenced by course documentation (e.g. list of courses, curricula, certificates, degrees).	
		c. Be advised that workers will be interviewed to confirm that educational initiatives are encouraged and supported by the company.	
Criterion 6.12 Corporate policies for social responsibility			

		Compliance criteria	
6.12.1	**Indicator:** Demonstration of company-level [148] policies in line with the standards under 6.1 to 6.11 above **Requirement:** Yes **Applicability:** All	a. Company-level policies are in line with all social and labor requirements presented in 6.1 through 6.11.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Company-level policies (see 6.12.1a) are approved by the company headquarters in the region where the site applying for certification is located.	
		c. The scope of corporate policies (see 6.12.1a) covers all company operations relating to salmonid production in the region (i.e. all smolt production facilities, grow-out facilities and processing plants).	
		d. The site that is applying for certification provides auditors with access to all company-level policies and procedures as are needed to verify compliance with 6.12.1a (above).	
Footnote	[148] Applies to the headquarters of the company in a region or country where the site applying for certification is located. The policy shall relate to all of the company's operations in the region or country, including grow-out, smolt production and processing facilities.		

PRINCIPLE 7: BE A GOOD NEIGHBOR AND CONSCIENTIOUS CITIZEN

Criterion 7.1 Community engagement

		Compliance Criteria	
7.1.1	**Indicator:** Evidence of regular and meaningful [149] consultation and engagement with community representatives and organizations **Requirement:** Yes **Applicability:** All	a. The farm pro-actively arranges for consultations with the local community at least twice every year (bi-annually).	A.) The company is holding regular community meetings in Strahan with a diverse group of stakeholders. The auditor reviewed minutes and meeting notes from these meetings which show action items and follow-ups.
		b. Consultations are meaningful. OPTIONAL: the farm may choose to use participatory Social Impact Assessment (pSIA) or an equivalent method for consultations.	B.) The stakeholder meetings appear to be meaningful as evidence suggests that positive outcomes have come from them. For example, community concerns regarding truck noise were addressed via these meetings. Alternate
		c. Consultations include participation by representatives from the local community who were asked to contribute to the agenda.	C.) The on-going community meetings include a variety of business, government, environmental and other local stakeholders.
		d. Consultations include communication about, or discussion of, the potential health risks of therapeutic treatments (see Indicator 7.1.3).	D.) Communication about antibiotic use is done in 2 ways - 1.) via the ASC dashboard on the company's website, and 2.) via community newsletters.
		e. Maintain records and documentary evidence (e.g. meeting agenda, minutes, report) to demonstrate that consultations comply with the above.	E.) The auditor reviewed meeting notes and agendas from the community meetings that have taken place.
		f. Be advised that representatives from the local community and organizations may be interviewed to confirm the above.	
Footnote	[149] Regular and meaningful: Meetings shall be held at least bi-annually with elected representatives of affected communities. The agenda for the meetings should in part be set by the community representatives. Participatory Social Impact Assessment methods may be one option to consider here.		
7.1.2	**Indicator:** Presence and evidence of an effective [150] policy and mechanism for the presentation, treatment and resolution of complaints by community stakeholders and organizations **Requirement:** Yes **Applicability:** All	a. Farm policy provides a mechanism for presentation, treatment and resolution of complaints lodged by stakeholders, community members, and organizations.	The company formalized a complaints procedure on 7/17/15 and a complaints policy was finalized corporate-wide prior to the end of this surveillance audit. The company documents and responds to all complaints as evidence Engagement Officer meets with community members continuously to discuss concerns, answer questions, and ensure that all stakeholders have vehicle for communicating concerns to the company so that they may be addres hotline specifically for trucking related issues around the Strahan community. This was a collaborative effort with other salmon farming companies operating in the area.
		b. The farm follows its policy for handling stakeholder complaints as evidenced by farm documentation (e.g. follow-up communications with stakeholders, reports to stakeholder describing corrective actions).	
		c. The farm's mechanism for handling complaints is effective based on resolution of stakeholder complaints (e.g. follow-up correspondence from stakeholders).	
		d. Be advised that representatives from the local community, including complainants where applicable, may be interviewed to confirm the above.	
Footnote	[150] Effective: In order to demonstrate that the mechanism is effective, evidence of resolutions of complaints can be given.		
7.1.3	**Indicator:** Evidence that the farm has posted visible notice [151] at the farm during times of therapeutic treatments and has, as part of consultation with communities under 7.1.1, communicated about potential health risks from treatments **Requirement:** Yes **Applicability:** All	a. Farm has a system for posting notifications at the farm during periods of therapeutic treatment. (use of aneastatic baths is not regarded a therapeutant)	The company needed to treat its fish on 2 occasions in 2015. The auditor reviewed emails and photos of signage used during these treatments which served as evidence of compliance with this criteria. The corporate level proc events. With regards to criteria 'c,' the company has sent a community newsletter outlining the infrequent uses of antibiotics at its farms. This information is also available on the company website.
		b. Notices (above) are posted where they will be visible to affected stakeholders (e.g. posted on waterways for fishermen who pass by the farm).	
		c. Farm communicates about the potential health risks from treatments during community consultations (see 7.1.1)	
		d. Be advised that members of the local community may be interviewed to confirm the above.	
Footnote	[151] Signage shall be visible to mariners and, for example, to fishermen passing by the farm.		

Criterion 7.2 Respect for indigenous and aboriginal cultures and traditional territories

		Compliance Criteria	
Instruction to Clients and CABs on Criterion 7.2 - Traditional Territories of Indigenous Groups The ASC Salmon Standard requires that farms must be respectful of the traditional territories of indigenous groups. The Indicators listed under Criterion 7.2 were designed to fulfill this purpose in a manner consistent with the United Nations Declaration on the Rights of Indigenous Peoples. In many locales, the territorial boundaries of indigenous groups have a defined legal status according to local or national law. In such cases, it is st are undefined or unknown, there is no simple way to establish whether the farm is operating in close proximity to indigenous groups. Here ASC provides the following guidance. The intent behind the ASC Salmon Standard is that the farm will identify all neighboring groups who are potentially negatively impacted by the farm's activities. The actual physical distance between the farm and an indigenous group is less important than understanding whether the farm is having a detrimental impact upon its neighbors. Effective community consultations are one of the best ways to identify such impacts to neighbor voice their concerns about the nature of the farm's impacts. Continued consultations between farm and neighbors should create a forum where any key issue can be discussed and resolved.			
7.2.1	**Indicator:** Evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations **Requirement:** Yes **Applicability:** All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]	a. Documentary evidence establishes that the farm does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people [152]). If not then the requirements of 7.2.1 do not apply.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated in its entirety during the 2016 surveillance audit; howeve about emergency procedures.
		b. Farm management demonstrates an understanding of relevant local and/or national laws and regulations that pertain to consultations with indigenous groups.	
		c. As required by law in the jurisdiction: - farm consults with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR - farm confirms that government-to-government consultation occurred and obtains documentary evidence.	
		d. Be advised that representatives from indigenous groups may be interviewed to confirm the above.	
7.2.2	**Indicator:** Evidence that the farm has undertaken proactive consultation with indigenous communities **Requirement:** Yes [152] **Applicability:** All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.2 apply to the farm.	As part of this 2016 surveillance audit, the auditor met with indigenous leaders from the Aboriginal Land Council of Tasmania (ALCT). The organization confirmed that Tassal was in communication with them and lines of comm and both were committed to establishing a long term relationship.
		b. Be advised that representatives from indigenous communities may be interviewed to confirm that the farm has undertaken proactive consultations.	
Footnote	[152] All standards related to indigenous rights only apply where relevant, based on proximity of indigenous territories.		
7.2.3	**Indicator:** Evidence of a protocol agreement, or an active process [153] to establish a protocol agreement, with indigenous communities	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.3 apply to the farm.	N/A in Tasmania, Australia.
		b. Maintain evidence to show that the farm has either: 1) reached a protocol agreement with the indigenous community and this fact is documented; or 2) continued engagement in an active process [153] to reach a protocol agreement with the indigenous community.	

	Requirement: Yes **Applicability:** All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]	c. Be advised that representatives from indigenous communities may be interviewed to confirm either 7.2.3b1 or b2 (above) as applicable.		
Footnote	[153] To demonstrate an active process, a farm must show ongoing efforts to communicate with indigenous communities, an understanding of key community concerns and responsiveness to key community concerns through adaptive farm management and other actions.			
Criterion 7.3 Access to resources				
		Compliance Criteria		
7.3.1	**Indicator:** Changes undertaken restricting access to vital community resources [154] without community approval **Requirement:** None **Applicability:** All	a. Resources that are vital [155] to the community have been documented and are known by the farm (i.e. through the assessment process required under Indicator 7.3.2).		The visual inspection of the farm provided evidence that no access to resources, such as fishing, were being impeded upon by the company. Since the previous audit, no additional changes to the farm sites had taken place whic
		b. The farm seeks and obtains community approval before undertaking changes that restrict access to vital community resources. Approvals are documented.		
		c. Be advised that representatives from the community may be interviewed to confirm that the farm has not restricted access to vital resources without prior community approval.		
Footnote	[154] Vital community resources can include freshwater, land or other natural resources that communities rely on for their livelihood. If a farm site were to block, for example, a community's sole access point to a needed freshwater resource, this would be unacceptable under the Dialogue standard.			
7.3.2	**Indicator:** Evidence of assessments of company's **impact on access to resources** **Requirement:** Yes **Applicability:** All	a. There is a documented assessment of the farm's impact upon access to resources. Can be completed as part of community consultations under 7.1.1.		As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated in its entirety during the 2016 surveillance audit.
		b. Be advised that representatives from the community may be interviewed to generally corroborate the accuracy of conclusions presented in 7.3.2a.		
Footnote	[155] The SAD SC proposes this approach to addressing environmental and social performance during the smolt phase of production. In the medium term, the SC anticipates a system to audit smolt production facilities on site. In the meantime, farms will need to work with their smolt suppliers to generate the necessary documentation to demonstrate compliance with the standards. The documentation will be reviewed			
SECTION 8: STANDARDS FOR SUPPLIERS OF SMOLT				
Standards related to Principle 1				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
8.1	**Indicator**: Compliance with local and national regulations on water use and discharge, specifically providing permits related to water quality **Requirement:** Yes **Applicability:** All Smolt Producers	a. Identify all of the farm's smolt suppliers. For each supplier, identify the type of smolt production system used (e.g. open, semi or closed systems) and submit this information to ASC (Appendix VI).	A. Review the farm's list of smolt suppliers. Confirm that the client submitted to ASC information on the type of production system used by smolt suppliers (Appendix VI).	a. Smolt are sourced from two Tassal owned, fully-owned hatcheries Rookwood Rd (Fish Farm Licence 9, closed recirculation system) and Russell Falls (FFL 5 semi closed operated jointly with Karanja FF29) and also from an Inc Hatchery, both are semi closed). A third Tassal hatchery (Rookwood II) is being commissioned, it is expected to produce its first smolt by mid-year. It is anticipated that the majority of the smolt YC15 being stocked this year w Only triploids are stocked in MH. Smolt are transferred from hatchery to sea. Initial stocked pens are grown for approximately 6 months or to an average size >800 g for 34 mm net mesh transfer (grow out nets). b. The hatcheries operate under FFL from Inland Fisheries. Local councils issue EPNs that form the requirements of water quality monitoring and reporting. Reviewed copies of: - Fish farm Licenses for each fully owned hatcheries, Rookwood Rd and Russell Falls as well as Saltas. - Wastewater disposal system at Rookwood Rd. - Rookwood Road Hatchery EPN (Huon Valley Council) - Rookwood also operates under Special Plumbing Permit (SPP) (Huon Valley Council) for an onsite waste water system. c. Comments from the Senior Manager – Freshwater and documents on regulations & requirements include: - Schedule 1 outlines conditions for the Environmental Protection Notice for both Rookwood Rd and Russell Falls in accordance with section 44(3) EMPC Act 1994. - Huon Valley Council Rookwood EPN. This is a total recirculation system – only biosolids and effluent for irrigation are sent off site. There are specific requirements for this disposal to be documented. - Russell Falls EPN (Derwent Valley Council) – Tassal has Development Approval for expansion & effluent treatment works. The DA requires them to carry out monthly water quality sampling and 6-monthly biological monitori request has been made. Only contact from EPA in this respect was an inquiry to confirm that they had initiated the sampling. An annual report also has to be submitted to the EPA with an expert summary and interpretation, w interpretation of the data to describe the nutrient loads emitted of the combined FT and RAS discharge on the river & broader catchment. - Saltas doesn't operate under an EPN however its two Fish Farm Licences (FFL) are valid for 10 years. There is no DA requirement for the SALTAS hatcheries to carry out any monitoring. The DPIPWE Hatchery License requires no such requirement to date. The biological and water quality monitoring that is carried out at the SALTAS hatcheries is an ASC requirement only. The Hatchery License does require Tassal to make available any monitoring rec The regular assessment of the farm's potential impacts on biodiversity and nearby ecosystems contains the same components as the assessment for grow-out facilities as described above in 2.4.1. In 2015 the DPIPWE discusse correspondence on site in 2015. d. Reviewed copies of data spreadsheets for each hatchery on water quality measures to show compliance with regulations for 2014, 2015 and YTD2016. These are discussed below.
		b. Where legal authorisation related to water quality are required, obtain copies of smolt suppliers' permits.	B. Verify that client obtains copies of legal authorisation from smolt suppliers (if applicable).	
		c. Obtain records from smolt suppliers showing monitoring and compliance with discharge laws, regulations, and permit requirements as required.	C. Verify that farm obtains records from smolt suppliers to show compliance with discharge laws, regulations, and permit requirements.	
		-	D. Verify that farm keeps records to show how smolt suppliers comply with regulations on discharge and applicable permitting requirements related to water quality.	
8.2	**Indicator**: Compliance with labor laws and regulations **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain declarations from smolt suppliers affirming compliance with labor laws and regulations.	A. Verify farm obtains declaration from smolt suppliers.	a. All smolt producers comply with comply with labour laws and regulations as documented under Principle 6, including Saltas (Freshwater Operations) Union Collective Agreement 2014 and SALTAS Industrial Agreement 2014 b. Other than visits by Trade Union reps to enhance membership, there have been no visits or inspection from authorities related to labour laws and regulations. For Marine Operations a new Enterprise Bargaining Agreement
		b. Keep records of supplier inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation; see 1.1.3a)	B. Verify that farm obtains inspection records from suppliers (as applicable).	
Standards related to Principle 2				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
		Note: If the smolt facility has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may obtain and use such documents as evidence to demonstrate compliance with Indicator 8.3 as long as all components are covered.		
		a. Obtain from the smolt supplier(s) a documented assessment of the smolt site's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3.	A. Review the assessment to confirm that it complies with all components outlined in Appendix I-3.	a. For the Rookwood Road Hatchery (Huon River Hatchery) the Construction Environmental Management Plan (DPEMP) show compliance for the components outlined in Appendix I-3. There is no outfall, all water recirculated Biomonitoring (benthic macroinvertebrates) reports examined with results (C = complaint with requirements, NC = noncompliant) to achieve three years of consistent results against the components outlined in Appendix I-3: - Saltas Hatchery Wayatinah River 13/14 Autumn (C), 14/15 Autumn (NC), 15/16 Spring (NC);

8.3	**Indicator**: Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1 **Requirement:** Yes **Applicability:** All Smolt Producers	b. Obtain from the smolt supplier(s) a declaration confirming they have developed and are implementing a plan to address potential impacts identified in the assessment.	B. Review declaration.	- Saltas Hatchery Florentine River 13/14 Autumn (NC), 14/15 Spring (NC), 14/15 Autumn (NC), 15/16 Spring (NC); - Russell Fall Hatchery - Tyenna River 13/14 Spring (C), 14/15 Spring (C) & 15/16 Spring (C). b. The spreadsheet Tassal ASC Macroinvert schedule projections has been developed to plan for twice annual testing (Spring & Autumn, X = Future sampling year). It indicates the requirement for a period of 3 years of 'consist back to every 2 years (non-compliant results pushes sampling schedule back to annual): - Saltas Hatchery Wayatinah River planned for 15/16 Autumn, 16/17 Spring, 16/17 Autumn and 17/18 Spring - Saltas Hatchery Florentine River planned for 15/16 Autumn then 16/17 Spring - Russell Fall Hatchery – due to 3 years of complaint result, next sampling scheduled for 17/18 Spring Tassal is addressing any impacts as they are identified in the ongoing sampling
8.4	**Indicator**: Maximum total amount of phosphorus released into the environment per metric ton (mt) of fish produced over a 12- month period (see Appendix VIII-1) **Requirement:** 5 kg/mt of fish produced over a 12-month period; within three years of publication of the SAD standards, 4 kg/mt of fish produced over a 12-month period **Applicability**: All Smolt Producers	**Instruction to Clients for Indicator 8.4 - Calculating Total Phosphorus Released per Ton of Fish Produced** Farms must confirm that each of their smolt suppliers complies with the requirement of indicator 8.4. This specifies the maximum amount of phosphorus that a smolt production facility can release into the environment per metric ton (mt) of fish produced over a 12-month period. The requirement is set at 5 kg/mt for the first three years from date of publication of the ASC Salmon St "mass balance" approach. Detailed instructions and formulas are given in Appendix VIII-1. If applicable, farms may take account of any physical removals of phosphorus in the form of sludge provided there is evidence to show: - the smolt supplier has records showing the total quantity of sludge removed from site over the relevant time period; - the supplier determined phosphorus concentration (% P) in removed sludge by sampling and analyzing representative batches; and - the sludge was properly disposed off site and in accordance with the farm's biosolid management plan.		
		a. Obtain records from smolt suppliers showing amount and type of feeds used for smolt production during the past 12 months.	A. Verify that farm has records for feeds used by smolt suppliers over the relevant time period.	a. The Rookwood Rd hatchery is fully recirculating, with no effluent discharge into the environment other than onto licensed agricultural land. The annual Skretting ASC Feed phosphorous declaration (DH 31.18.16 V1) is provided to the other three hatcheries as a feed declaration detailing the total amount of phosphorous in their smolt feeds. This allows the hatchery the spreadsheet ASC Feed nitrogen, carbon & phosphorous (latest declaration v1). b. Both the Russel Falls and the SALTAS hatcheries calculate the total phosphorous discharged per ton of smolt produced in the spreadsheets: - Phosphorus release - RF - Calendar year 2013_2014_2015 - Phosphorus release - Saltas - Calendar year 2013_2014_2015 c. This is calculated by: P released to the water body per unit of smolt produced = (P in – P out)/biomass produced For the above P in calculation, the total phosphorous is derived from the value specified on the product data sheet. d. Both the Russel Falls and the SALTAS hatcheries calculate the total phosphorous discharged per ton of smolt produced in the spreadsheets: - Phosphorus release - RF - Calendar year 2013_2014_2015 - Phosphorus release - Saltas - Calendar year 2013_2014_2015 e. Fish biomass removed from hatchery through sales in period + biomass removed from hatchery through mortality in period + biomass culled in period + closing biomass) - opening biomass)/1000 Total P in biomass produced + total P in sludge removed) Note: phosphorus percentages for harvest fish/ mortalities detailed in Appendix VIII-1 f. Settling pond sludge removal has been undertaken: - Wayatinah in January 2016 - Florentine last 2011, planned for 2017 - The settling pond at RF has not emptied for over 5 years; it is planned to use a drum screen to remove solids and dewater for cheaper transport of the sludge. The small recirculation tank is being emptied this week. Removal of phosphorus is calculated by multiplying the amount of sediment removal and the phosphorus content calculated from the Analytical Services Tasmania (AST) Reports: - #68334 (11/12/14) for Saltas Sediment Pond (Wayatinah) records 86,000 mg-P/kgDMB of Total Phosphorus; and - #55030 (21/08/12) for Tassal Settlement Pond/Hatchery (RF) records 61,000 mg-P/kgDMB of Total Phosphorus. Saltas Hatchery Manager stated that sludge was removed from Wayatinah settlement pond in November 2015. The samples were taken in Dec 2014 which awarded the licence to remove sludge valid for 12 months. Florentin e. Tassal has noted the June 2018 changed requirement to 4 kg/mt of fish produced over a 12-month period which meets ASC requirements. The two Saltas hatcheries (combined feed inputs and biomass outputs) have been complaint for 2013 & 2014 and noncompliant in 2015; however sludge removal means it will be compliant for 2016: - Calendar year 2013 = 0.85 kg/mt fish (48,000 L sludge removed from settling pond); - Calendar year 2014 = 3.38 kg/mt fish (20,000 L sludge removed from settling pond); - Calendar year 2015 = 9.51 kg/mt fish (no sludge removed). Note: Saltas settling pond again emptied 20/01/16 which will bring Saltas into compliance for 2016 calendar year. The ASC formulae assumes that settling ponds are emptied every year; however, this is not a requirement in Tasmania. The EPA are now requiring monthly water quality sampling and 6-monthly biological monitoring at the ha there has been no such requests. Nothing in scope to estimate what remains in the pond
		b. For all feeds used by the smolt suppliers (result from 8.4a), keep records showing phosphorus content as determined by chemical analysis or based on feed supplier declaration (Appendix VIII-1).	B. Verify that farm has records showing that smolt supplier determined phosphorus content in feeds.	
		c. Using the equation from Appendix VIII-1 and results from 8.4a and b, calculate the total amount of phosphorus added as feed during the last 12 months of smolt production.	C. Confirm that calculations are done according to Appendix VIII-1.	
		d. Obtain from smolt suppliers records for stocking, harvest and mortality which are sufficient to calculate the amount of biomass produced (formula in Appendix VIII-1) during the past 12 months.	D. Verify that farm obtained from the smolt supplier all records needed to calculate the amount of biomass produced during the past 12 months.	
		e. Calculate the amount of phosphorus in fish biomass produced (result from 8.4d) using the formula in Appendix VIII-1.	E. Confirm that calculations are done according to Appendix VIII-1.	
		f. If applicable, obtain records from smolt suppliers showing the total amount of P removed as sludge (formula in Appendix VIII-1) during the past 12 months.	F. As applicable, verify farm has records showing that smolt supplier determined the amount of phosphorus removed from the system as sludge.	
		g. Using the formula in Appendix VIII-1 and results from 8.4a-f (above), calculate total phosphorus released per ton of smolt produced and verify that the smolt supplier is in compliance with requirements.	G. Review calculations to confirm that the farm's smolt supplier(s) do not exceed requirements for release of phosphorus.	

				Russell Falls was compliant in 2013, however lack of sediment removal has meant that levels are non-compliant for 2014 and 2015: - Calendar year 2013 = 2.14 kg/mt fish (30,000 L sludge removed from recirculation tank); - Calendar year 2014 = 9.52 kg/mt fish (no sediment removal); and - Calendar year 2015 = 10.03 kg/mt fish (no sediment removal). Note: Recirculation tank has not been emptied since calendar year 2013, as it is not full or concentrated enough to be cost effective. The RF Hatchery Manager estimates 12,000 L of sludge, which would reduce phosphorus rele next batch of eggs in June-August16 (no fry in the system = no solids being generated). The latest plan is for the sediment to be removed this month. The RF Hatchery Manager has concerns that emptying the settling pond will have a negative impact on the Tyenna River, as a result of the settling pond being stirred up and releasing sludge and H2S (hydrogen sulphide). Cost is a secondary concern for emptying the settling pond as they will they will mostly be pumping water. Freshwater Manager estimates this being approximately $30,000.00. The Hatchery Manager estimates 576,000L of sl new drum screen to be in place (as per Russell Falls DA see below) before they are in a position to safely remove any sludge from the settling pond. Development Application (DA) from the Derwent Valley Council for Russell Falls - #DA 127/2013 24/03/15 provides the planning permit for extensions & alterations to hatchery and associated site works including the installati in sued within the next 12 months. The Russell Falls DA requires Tassal to provide EPA/Council an Environmental Report to the EPA within 15 months of the commencement of the development. Status of Nonconformance: Progress is evident on the control of sediments and the routine emptying or removal of sludge. The installation of a drum screen on the RF settling ponds has a high probability of significantly reducing sediments (and phosphor hatcheries. Updates on the progress will become available during the 2016 surveillance audits of the 5 other Tassal farm zones, the Nonconformance is to be maintained at the Minor level. A more in-depth analysis of the sys Summary: As significant progress has been made and there are limitations for implementing these corrective actions which will close the NC out entirely, this minor non-conformity has been extended for 12 months per ASC CA

Standards related to Principle 3

		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
8.5	**Indicator**: If a non-native species is being produced, the species shall have been widely commercially produced in the area prior to the publication [156] of the SAD standards **Requirement:** Yes [157] **Applicability:** All Smolt Producers except as noted in [157]	a. Obtain written evidence showing whether the smolt supplier produces a non-native species or not. If not, then Indicator 8.5 does not apply.	A. Verify that the farm has evidence that their smolt suppliers do not produce non-native species. If the farm can show that smolt suppliers produces only native species, then Indicator 8.5 does not apply.	a. Evidence as provided under Principle 3.2.1, evidence includes: - Farm produces a non-native species, only triploids are allowed to be stocked in Macquarie Harbour. - TSGA Website - http://www.tsga.com.au/history/ - Our History page of Tassal website - http://www.tassal.com.au/our-history/
		b. Provide the farm with documentary evidence that the non-native species was widely commercially produced in the area before publication of the SAD Standard. (See definition of area under 3.2.1).	B. If applicable, verify the farm has evidence from smolt suppliers confirming when the non-native species was first brought into wide commercial production in the area where production is occurring now.	b. Evidence as provided under Principle 3 confirms that the non-native species was widely commercially produced in the area before publication of the SAD Standard. (See definition of area under 3.2.1). c. N/A
		c. If the smolt supplier cannot provide the farm with evidence for 8.5b, provide documentary evidence that the farm uses only 100% sterile fish.	C. Review evidence to confirm that smolt suppliers use only 100% sterile fish.	d. Statement from Company Vet re: Triploid checks (4/2/14) at freshwater stage to ensure that the stocks are triploid and don't include diploid fish.
		d. If the smolt supplier cannot provide the farm with evidence for 8.5b or 8.5c, provide documented evidence for each of the following: 1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained; 2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce; and 3) barriers ensure there are no escapes of biological material that might survive and subsequently reproduce.	D. Review evidence that the farm's smolt suppliers comply with each point raised in 8.5d.	e. Evidence as retained under Principle 3.
		e. Retain evidence as described in 8.5a-d necessary to show compliance of each facility supplying smolt to the farm.	E. Verify that farm retains evidence of compliance by all smolt suppliers.	
Footnote	[156] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.			
Footnote	[157] Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.			
8.6	**Indicator**: Maximum number of escapees [158] in the most recent production cycle **Requirement:** 300 fish [159] **Applicability:** All Smolt Producers except as noted in [159]	a. Obtain documentary evidence to show that smolt suppliers maintained monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.	A. Review the farm's records for escape monitoring by the smolt supplier to confirm completeness and accuracy of information.	a. Reviewed copy of Escape Prevention and Response Protocol (MO-146 Issue4) that includes hatcheries (see page 6). Signed declaration (22/05/15) from Senior Manager FW Operations that Tassal and Saltas have not had any escapes from their hatcheries. There have been no escapes from the hatcheries since then.
		b. Using smolt supplier records from 8.6a, determine the total number of fish that escaped. Verify that there were fewer than 300 escapees from the smolt production facility in the most recent production cycle.	B. Review the farm's calculation and confirm that the smolt supplier complied with the requirement.	b. None, as above. c. Acknowledged by Tassal - Tassal is a vertically integrated company from egg to plate. Tassal now conduct quarterly WQ monitoring and coordinate Benthic Macroinvertebrate reporting at the Saltas hatcheries. These recor at least 10 years beginning 2015.
		c. Inform smolt suppliers in writing that monitoring records described in 8.6a must be maintained for at least 10 years beginning with the production cycle for which the farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [159]).	C. Confirm that the farm informs their smolt suppliers that they must maintain records for escape monitoring for > 10 years.	d. Noted by Tassal for its two (soon to be 3) and the two Saltas hatcheries.
		d. If an escape episode occurs at the smolt production facility (i.e. an incident where > 300 fish escaped), the farm may request a rare exception to the Standard [159]. Requests must provide a full account of the episode and must document how the smolt producer could not have predicted the events that caused the escape episode.	D. Review the farm's request for a rare exception to the Standard for an escape event at the smolt production site. Confirm no prior exceptional events were documented during the previous 10 years, or since the date of the start of the production cycle during which the farm first applied for certification. An example of an exceptional event is vandalization of the farm. Events that are not considered exceptional include failures in moorings due to bad weather and boat traffic incidents due to poor marking of the smolt production facility.	
Footnote	[158] Farms shall report all escapes; the total aggregated number of escapees per production cycle must be less than 300 fish.			
Footnote	[159] A rare exception to this standard may be made for an escape event that is clearly documented as being outside of the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10- year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to p waterways are not intended to be covered under this exception.			

8.7	**Indicator**: Accuracy [160] of the counting technology or counting method used for calculating the number of fish **Requirement:** ≥98% **Applicability:** All Smolt Producers	a. Obtain records showing the accuracy of the counting technology used by smolt suppliers. Records must include copies of spec sheets for counting machines and common estimates of error for hand-counts.	A. Confirm that the farm keeps records of counting accuracy for the counting technology or method used on site at stocking and harvest.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		B. Review records to verify that accuracy of the smolt supplier's counting technology or counting method is ≥ 98%.	B. Verify that farm has records showing that the accuracy of the smolt supplier's counting technology or counting method is ≥ 98%.	
Footnote	[160] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand counts.			
Standards related to Principle 4				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
8.8	**Indicator**: Evidence of a functioning policy for proper and responsible treatment of non-biological waste from production (e.g., disposal and recycling) **Requirement:** Yes **Applicability:** All Smolt Producers	a. From each smolt supplier obtain a policy which states the supplier's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the supplier's policy is consistent with best practice in the area of operation.	A. Confirm that the farm has relevant policies on file from each smolt supplier and review those policies to verify the farm's suppliers are in compliance with the requirement.	a. Reviewed copy of Marine Operations Waste Management Plan (MO-130 Issue 2) and Environmental Policy (IMS-P1002 Issue 3) which describe Tassal's WMP. Reviewed copies of invoices for waste collection at: - Rookwood hatchery – Spectran fortnightly sludge removal invoice (2/10/15), Spectran Pump Fish waste Invoice (29/09/15) and Veolia general waste Invoices. - Saltas hatcheries – Veolia (27/12/15) for 11 collections for total of 33m3 - Russell Falls/Karnja hatcheries - Tassal doesn't pay to remove waste as a rule, other than council fees for rubbish and recycling as part of their rates. Larger items can be transported to the Hamilton tip (no fee).
8.9	**Indicator**: Presence of an energy-use assessment verifying the energy consumption at the smolt production facility (see Appendix V subsection 1 for guidance and required components of the records and assessment) **Requirement:** Yes, measured in kilojoule/mt fish/production cycle **Applicability:** All Smolt Producers	Note: see instructions for Indicator 4.6.1.		Assumptions for clauses 4.6.1, 4.6.2, 8.9 and 8.10: 1. Production cycle data requested for much of ASC clauses refers to the most recently completed year class – for this report data from 13YC is used (the production cycle for a YC can range from 15-22 months, assume average 2. Tassal energy and GHG calculations for their reporting (e.g. Annual Sustainability report, etc.) is for financial year – for this report data is from FY14 which covers much of the 13YC production cycle. 3. Sometimes individual farm data for energy & GHG is not able to be determined, however the MH data is more relevant as it includes the three farms, all the vessels and the land base operations and facilities. 4. Trends in the indices reported (kilojoule/mt fish/production cycle) can be compared between audit reports from year to year. Data for FY14: Stage of Production Energy Use (GJ) Explanation Total Hatchery 80,800; 99% from electricity Calculations have been provided and reviewed by the auditor. b Confirm that the smolt supplier calculates total energy consumption in kilojoules (kj) during the last production cycle. Yes in GJ. Unlike the assessment made in 2013 which only accounted for the impacts associated with the direct use of these fuels using the NGERs methodology, this assessment is more comprehensive as it includes the inputs required u c Obtain records to show the smolt supplier calculated the total weight of fish in metric tons (mt) produced during the last smolt production cycle. Data for the FY 14 was provided to the audit team for all three hatcheries (Rockwood, Russel Falls and Saltas) showing the production information for each hatchery. d Confirm that the smolt supplier used results from 8.9b and 8.9c to calculate energy consumption on the supplier's facility as required and that the units are reported as kilojoule/mt fish/production cycle. Energy consumption was calculated using the results of total weight of fish in metric tons (mt) produced and reported as reported as GJ/mt fish/ last production cycle for the 3 hatcheries (see 8.9a). Unlike the assessment made in 2013 which only accounted for the impacts associated with the direct use of these fuels using the NGERs methodology, this assessment is more comprehensive as it includes the inputs required u e Obtain evidence to show that smolt supplier has undergone an energy use assessment in compliance with requirements of Appendix V- 1. Can take the form of a declaration detailing a-e. See above
		a. Obtain records from the smolt supplier for energy consumption by source (fuel, electricity) at the supplier's facility throughout each year.	A. Verify that the farm obtains records for energy consumption from smolt suppliers.	
		b. Confirm that the smolt supplier calculates total energy consumption in kilojoules (kj) during the last year.	B. Verify that the farm has reviewed the supplier's calculations for completeness and accuracy.	
		c. Obtain records to show the smolt supplier calculated the total weight of fish in metric tons (mt) produced during the last year.	C. Verify that the farm has supplier records for total weight of fish produced during the last year.	
		d. Confirm that the smolt supplier used results from 8.9b and 8.9c to calculate energy consumption on the supplier's facility as required and that the units are reported as kilojoule/mt fish/production cycle.	D. Verify that the farm has records to show that the smolt supplier's calculations are complete and accurate.	
		e. Obtain evidence to show that smolt supplier has undergone an energy use assessment in compliance with requirements of Appendix V-1. Can take the form of a declaration detailing a-e.	E. Verify that the farm has evidence that its smolt supplier(s) has undergone an energy use assessment verifying the supplier's energy consumption.	
8.10	**Indicator**: Records of greenhouse gas (GHG [161]) emissions [162] at the smolt production facility and evidence of an annual GHG assessment (See Appendix V, subsection 1)	Note: see instructions for Indicator 4.6.2.		As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		a. Obtain records of greenhouse gas emissions from the smolt supplier's facility.	A. Verify that the farm obtains records of GHG emissions from smolt suppliers.	
		b. Confirm that, on at least an annual basis, the smolt supplier calculates all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.	B. Verify that the farm confirms that calculations by smolt suppliers are done annually and in compliance with Appendix V-1.	
		c. For GHG calculations, confirm that the smolt supplier selects the emission factors which are best suited to the supplier's operation. Confirm that the supplier documents the source of the emissions factors.	C. Verify that the farm has records from smolt suppliers for all emissions factors used and their sources.	

	Requirement: Yes **Applicability:** All Smolt Producers	d. For GHG calculations involving conversion of non-CO2 gases to CO2 equivalents, confirm that the smolt suppliers specify the Global Warming Potential (GWP) used and its source.	D. Verify that the farm has records from smolt suppliers for all GWPs used and their sources.	
		e. Obtain evidence to show that the smolt supplier has undergone a GHG assessment in compliance with requirements Appendix V-1 at least annually.	E. Verify that the farm has evidence that smolt suppliers undergo a GHG assessment annually and that the methods used are in compliance with requirements of Appendix V-1.	
Footnote	[161] For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).			
Footnote	[162] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.			
Standards related to Principle 5				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
8.11	**Indicator**: Evidence of a fish health management plan, approved by the designated veterinarian, for the identification and monitoring of fish diseases and parasites **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain a copy of the supplier's fish health management plan for the identification and monitoring of fish disease and parasites.	A. Verify that the farm obtains copies of fish health management plans from smolt suppliers.	a. Reviewed copies of Fish Health Management Plan - Macquarie Harbour (MO-182 Issue 2) includes Tassal hatcheries; the Fish Health Management Plans are approved by designated veterinarian. Saltas are also covered as the Certificate (MO-182 Issue 2) which summarises the identification and monitoring of fish disease and parasites before they are transferred to MH. b. These are approved by the Tassal designated fish health veterinarian during development and have been reviewed and approved by the current Senior Manager – Fish health.
		b. Keep documentary evidence to show that the smolt supplier's health plans were approved by the supplier's designated veterinarian.	B. Verify that farm has evidence that supplier's fish health management plan was approved by designated veterinarian.	
8.12	**Indicator**: Percentage of fish that are vaccinated for selected diseases that are known to present a significant risk in the region and for which an effective vaccine exists [163] **Requirement:** 100% **Applicability:** All Smolt Producers	a. Maintain a list of diseases that are known to present a significant risk in the region, developed by farm veterinarian and supported by scientific evidence.	A. Review list and the supporting analysis.	a. The Macquarie Harbour Fish Health Management Plan (MO-182 Issue 2) approved by the Tassal veterinarian, has a list of exotic and endemic diseases: - Diseases Of Concern Which Are Known To Be Present In The Macquarie Harbour • Tasmanian Salmonid Rickettsiosis (Tas-SR) – SE strain (List B Disease) • Aquareovirus • Amoebic Gill Disease - Viral Diseases: • Tasmanian aquabirnavirus (TAB) (List B Disease) • Aquareovirus - Bacterial Diseases: • Marine Aeromonad Disease of Salmonids (MAS – Aeromonas salmonicida biovar acheron) (List B Disease) • Yersiniosis (Yersinia ruckeri, serotype O1b, biotype 1 and 2) • Vibriosis (Vibrio anguillarum) • Nocardiosis (Nocardia spp.) b. Reviewed summary of testing and results undertaken as part of the Tasmanian Salmonid Health Surveillance Program (TSHSP) for the 5-year period 2004/05 through to 2008/09 that confirmed the MH area is free of disease c. The Smolt vaccination declaration from the company vet (26/02/14) indicating that all fry are vaccinated with Yersinivac-B against Yersinia ruckeri. Fry destined for Macquarie Harbour are also vaccinated with Anguimonas a d. See above, all available vaccines have been used for fry destined for MH sites.
		b. Maintain a list of diseases for which effective vaccines exist for the region, developed by the farm veterinarian and supported by scientific evidence.	B. Review list and the supporting analysis.	
		c. Obtain from the smolt supplier(s) a declaration detailing the vaccines the fish received.	C. Verify client has the list from the smolt supplier(s).	
		d. Demonstrate, using the lists from 8.12a-c above, that all salmon on the farm received vaccination against all selected diseases known to present a significant risk in the regions for which an effective vaccine exists.	D. Cross-check lists to verify that all required vaccines were received by all batches of smolt received by the farm during the current production cycle.	
Footnote	[163] The farm's designated veterinarian is responsible for undertaking and providing written documentation of the analysis of the diseases that pose a risk in the region and the vaccines that are effective. The veterinarian shall determine which vaccinations to use and demonstrate to the auditor that this decision is consistent with the analysis.			
8.13		**Instruction to Clients for Indicator 8.13-- Testing of Smolt for Select Diseases** The farm is responsible for developing and maintaining a list of diseases of regional concern for which each smolt group should be tested. The list of diseases shall include diseases that originate in freshwater and are proven or suspected to occur in seawater (and for which seawater fish-to-fish transmission is a concern). The designated veterinarian to the smolt supplier is required to evaluate, based on scientific criteria and publicly available information, which diseases should be tested for. This analysis shall include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from b Note: A "smolt group" is defined as a population that shares disease risk, including environment, husbandry, and host factors that might contribute to sharing disease agents for each group.		
	Indicator: Percentage of smolt groups [164] tested for select diseases of regional concern prior to entering the grow-out phase on farm **Requirement:** 100% **Applicability:** All Smolt Producers	a. Obtain from the smolt supplier a list of diseases of regional concern for which smolt should be tested. List shall be supported by scientific analysis as described in the Instruction above.	A. Review list. If auditor has questions about the list, request and review supporting analysis.	a Obtain from the smolt supplier a list of diseases of regional concern for which smolt should be tested. List shall be supported by scientific analysis as described in the instruction above. Reports reviewed have relevance to all 3 hatcheries; they include: - Tasmanian Salmonid Health Surveillance Program 2012/2013 - Tasmanian Salmonid Health Surveillance Program 2013/2014 - TSHSP Regional Submission Targets (July-Sept) 2014-15. Refer 8.12a above for list of potential pathogens.
		b. Obtain from the smolt supplier(s) a declaration and records confirming that each smolt group received by the farm has been tested for the diseases in the list (8.13a).	B. Verify records show that each smolt group was tested prior to entering the water at the farm (the grow-out site).	b. 100% of smolt groups are tested prior to entering the grow-out phase on farm. Tassal have vet certification of smolts; however, they do not test specifically for diseases, just general analysis (histology & microbiology). Macquarie Harbour 14YC Vet Health Certificates signed by Company vet include deliveries from all 3 hatcheries (RF, RWR & SAL): - 1500x Tassal Vet Health Certificate for Salmonids Apr 14 - RF MH - 1500x Tassal Vet Health Certificate for SalmonidsApr14 - RWR Huon NWB Bruny MH - 1500x Tassal Vet Health Certificate for Salmonids May 14 - RF MH -1500x Tassal Vet Health Certificate for Salmonids June 14 - RF MH
Footnote	[164] A smolt group is any population that shares disease risk, including environment, husbandry and host factors that might contribute to sharing disease agents for each group. Only diseases that are proven, or suspected, as occurring in seawater (and for which seawater fish-to-fish transmission is a concern) but originating in freshwater should be on the list of diseases tested. The designated veterinarian to the smolt f include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from being transferred. A written analysis must be available to the certifier on demand.			
8.14	**Indicator**: Detailed information, provided by the designated veterinarian, of all chemicals and therapeutants used during the smolt production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing and all disease and pathogens detected on the site **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain from the smolt supplier(s) a detailed record of all chemical and therapeutant use for the fish sold to the farm that is signed by their veterinarian and includes: - name of the veterinarian prescribing treatment; - product name and chemical name; - reason for use (specific disease) - date(s) of treatment; - amount (g) of product used; - dosage; - mt of fish treated; - the WHO classification of antibiotics (also see note under 5.2.8); and - the supplier of the chemical or therapeutant.	A. Review records of chemical and therapeutant use for completeness and confirm the records were signed by a qualified veterinarian.	a. Reviewed the log of antibiotics used at each of the 3 hatcheries over the last 3 production cycles (spreadsheet Antibiotic use – Freshwater. This contains the data required. No treatments occurred at Rookwood Hatchery. Re Tassal's Antibiotics document lists only Trimethoprim & Tetrafish, both are supplied from Allfarm.
	Indicator: Allowance for use of therapeutic treatments that include antibiotics or chemicals that are	a. Provide to the smolt supplier the list (see 5.2.2a) of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [166].	A. Verify list has been provided and is consistent with the list in 5.2.2a.	a. Reviewed files and records of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries. These documents have been provi - List of Banned Therapeutants – updated for EU (UK, France) & Norway, USA, Japan; - Chile - Approved Therapeutants – there isn't a list of banned therapeutants - only nine authorised antibacterial treatments (whatever is not on the spreadsheet attached cannot be used). - Canada has a list of Banned therapeutants – "CFIA Aquaculture Therapeutant Residue Monitoring List"

8.15	antibiotics or chemicals that are banned [165] in any of the primary salmon producing or importing countries [166] **Requirement:** Yes **Applicability:** All Smolt Producers	b. Inform smolt supplier that the treatments on the list cannot be used on fish sold to a farm with ASC certification.	B. Verify that the farm informed the smolt supplier.	b. Acknowledged by Tassal c. Confirmed by the auditor and acknowledged by Tassal.
		c. Compare therapeutant records from smolt supplier (8.14) to the list (8.15a) and confirm that no therapeutants appearing on the list (8.15a) were used on the smolt purchased by the farm.	C. Review farm's comparison to verify accuracy.	
Footnote	[165] "Banned" means proactively prohibited by a government entity because of concerns around the substance.			
Footnote	[166] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.			
8.16	**Indicator**: Number of treatments of antibiotics over the most recent production cycle **Requirement:** ≤ 3 **Applicability:** All Smolt Producers	a. Obtain from the smolt supplier records of all treatments of antibiotics (see 8.14a).	A. Verify farm obtains treatment records from smolt supplier (See also 8.14A).	a. The spreadsheet Antibiotic use - Freshwater . b. For the most recent production cycle there were a total of 3 treatments at the Russell Falls hatchery. At Saltas 18 cohorts within the population of the two hatcheries (Florentine and Wayatinah) received an antibiotic treatment. There were no treatments at the Rockwood hatchery.
		b. Calculate the total number of treatments of antibiotics from their most recent production cycle.	B. Confirm that the smolt supplier used ≤ 3 treatments of antibiotics over the most recent production cycle.	
8.17	**Indicator**: Allowance for use of antibiotics listed as critically important for human medicine by the WHO [167] **Requirement:** None [168] **Applicability:** All Smolt Producers	a. Provide to smolt supplier(s) a current version of the WHO list of antimicrobials critically and highly important for human health [167].	A. Confirm that the farm provided smolt supplier with the current copy of the WHO list of antibiotics.	a. Tassal has the current version of the World Health Organisation (WHO) Critically Important Antimicrobials for Human Medicine (3rd Revision 2011) which has been supplied to its own and the Saltas hatcheries. b. Acknowledged by Tassal that they have informed their smolt suppliers that the antibiotics on the WHO list (8.17a) cannot be used on fish sold to a farm with ASC certification. c. A review of spreadsheet Antibiotic use - Freshwater confirmed that the antibiotics used are not listed as critically important on WHO list.
		b. Inform smolt supplier that the antibiotics on the WHO list (8.17a) cannot be used on fish sold to a farm with ASC certification.	B. Verify that the farm informed the smolt supplier.	
		c. Compare smolt supplier's records for antibiotic usage (8.14, 8.15a) with the WHO list (8.17a) to confirm that no antibiotics listed as critically important for human medicine by the WHO were used on fish purchased by the farm.	C. Review farm's comparison to verify accuracy.	
Footnote	[167] The 3rd edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: http://www.who.int/foodborne_disease/resistance/CIA_3.pdf.			
Footnote	[168] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.			
8.18	**Indicator**: Evidence of compliance [169] with the OIE Aquatic Animal Health Code [170] **Requirement:** Yes **Applicability:** All Smolt Producers	Note: see instructions for Indicator 5.4.3 regarding evidence of compliance with the OIE Aquatic Animal Health Code.		
		a. Provide the smolt supplier with a current version of the OIE Aquatic Animal Health Code (or inform the supplier how to access it from the internet).	A. Verify that farm has provided the smolt supplier with copies of (or access to) the OIE Aquatic Animal Health Code.	a. Tassal hatcheries and Saltas hatcheries all have access to current version (3rd Revision 2011) through: - Email to Russell Falls and Rookwood Road Hatchery Managers with link to OIE Aquatic Animal Health Code - Email to Saltas Manager with link to OIE Aquatic Animal Health Code - Declaration (22/5/15) from that states Saltas intend to comply with OIE Aquatic Animal Health Code as per this clause of the ASC. b. Confirmed by Tassal and Saltas. c. As per 5.4.3 for companywide (all incl. Tassal-owned hatcheries) the OIE requirements are described in the industry-wide TSGA Biosecurity Program (Issue 1 Sep14) of which Tassal & Saltas are members.
		b. Inform the supplier that an ASC certified farm can only source smolt from a facility with policies and procedures that ensure that its smolt production practices are compliant with the OIE Aquatic Animal Health Code.	B. Confirm that the farm informed its smolt supplier(s) that any supplier to an ASC certified farm must show compliance with the OIE Aquatic Animal Health Code.	
		c. Obtain a declaration from the supplier stating their intent to comply with the OIE code and copies of the smolt suppliers policies and procedures that are relevant to demonstrate compliance with the OIE Aquatic Animal Health Code.	C. Review the smolt supplier's declaration and supporting policies and procedures to verify compliance with the OIE Aquatic Animal Health Code.	
Footnote	[169] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Exotic			
Footnote	[170] OIE 2011. Aquatic Animal Health Code. http://www.oie.int/index.php?id=171.			
Standards related to Principle 6				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
8.19	**Indicator**: Evidence of company-level policies and procedures in line with the labor standards under 6.1 to 6.11 **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain copies of smolt supplier's company-level policies and procedures and a declaration of compliance with the labor standards under 6.1 to 6.11.	A. Verify that farm obtains copies of company-level policies and procedures from all of its smolt suppliers and a declaration of compliance.	a. The companywide documents in 6.1-6.11 include Tassal-owned hatcheries. Saltas (Freshwater Operations) Union Collective Agreement 2014 b. See above
		b. Review the documentation and declaration from 8.19a to verify that smolt supplier's policies and procedures are in compliance with the requirements of labor standards under 6.1 to 6.11.	B. Review supplier documents provided by the farm to verify compliance of the smolt supplier's policies and procedures with labor requirements.	
Standards related to Principle 7				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**	
8.20		**Instruction to Clients for Indicator 8.20 - Consultation and Engagement with Community Representatives** Farms must comply with Indicator 7.1.1 which requires that farms engage in regular consultation and engagement with community representatives and organizations. Under Indicator 8.20, farms must show how each of their smolt suppliers complies with an equivalent requirement. Farms are obligated to maintain evidence that is sufficient to show their suppliers remain in full comp - the smolt supplier engaged in "regular" consultations with the local community at least twice every year (bi-annually); - the supplier's consultations were effective (e.g. using participatory Social Impact Assessment (pSIA) or similar methods); and - the supplier's consultations included participation by elected representatives from the local community who were asked to contribute to the agenda.		
	Indicator: Evidence of regular consultation and engagement with community representatives and organizations **Requirement:** Yes **Applicability:** All Smolt Producers	a. From each smolt supplier obtain documentary evidence of consultations and engagement with the community.	A. Verify that farm obtains required information from each smolt supplier.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Review documentation from 8.20a to verify that the smolt supplier's consultations and community engagement complied with requirements.	B. Review evidence for compliance.	
8.21	**Indicator**: Evidence of a policy for the presentation, treatment and resolution of complaints by community stakeholders and organizations **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain a copy of the smolt supplier's policy for presentation, treatment and resolution of complaints by community stakeholders and organizations.	A. Verify that farm obtains copies of supplier's complaints procedures from each of its smolt suppliers.	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.

8.22	**Indicator**: Where relevant, evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain documentary evidence showing that the smolt supplier does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people (see Indicator 7.2.1). If not then the requirements of 8.22 do not apply.	A. Review evidence to determine whether Indicator 8.22 is applicable to the farm's smolt supplier(s).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Obtain documentation to demonstrate that, as required by law in the jurisdiction: smolt supplier consulted with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR smolt supplier confirms that government-to-government consultation occurred and obtains documentary evidence.	B. Verify that the smolt supplier complies with relevant requirements.	
8.23	**Indicator**: Where relevant, evidence that the farm has undertaken proactive consultation with indigenous communities **Requirement:** Yes **Applicability:** All Smolt Producers	a. See results of 8.22a (above) to determine whether the requirements of 8.23 apply to the smolt supplier.	A. Review evidence to determine whether Indicator 8.23 is applicable to the farm's smolt supplier(s).	As a surveillance audit, the focus of the audit has revolved around open non-conformities, with several other criteria checked at random. This criteria was not evaluated during the 2016 surveillance audit.
		b. Where relevant, obtain documentary evidence that smolt suppliers undertake proactive consultations with indigenous communities.	B. Review documentary evidence to confirm that the smolt supplier has undertaken proactive consultations.	
ADDITIONAL REQUIREMENTS FOR OPEN (NET-PEN) PRODUCTION OF SMOLT In addition to the requirements above, if the smolt is produced in an open system, evidence shall be provided that the following are met:				
Instruction to Clients for Indicators 8.24 through 8.31 - Requirements for Smolt Produced in Open Systems Client shall provide documentary evidence to the CAB about the production system(s) from which they source smolt. If smolt used by the farm are produced, for part or all of the growth phase from alevin to smolt, in open (net-pen) systems, indicators 8.24 - 8.31 are applicable.				
8.24		**Scope of Exemption Allowed Under Indicator 8.24:** For the first audit, farms that were stocked prior to the publication of the standard on June 13, 2012 may request an exemption, applicable for that production cycle, to the requirement under 8.24. A farm that sourced smolt that were produced in an open system (net pen) in a water body with native salmonids may request this exemption if: 1. the farm was stocked prior to June 13, 2012; and 2. the farm demonstrates through supporting evidence (e.g. purchasing agreement) that they will source smolt from a semi-closed or closed production system for their next production cycle. If the CAB determines that the farm has fulfilled the above criteria, then an exemption may be granted and the farm may be awarded certification. However, no salmon products originating from a farm which utilizes this exemption shall be eligible to bear the ASC logo or otherwise claim to be an ASC-certified product until the farm can demonstrate that smolt were sourced in full con that may be associated with non-certified products entering into further certified chains of custody. Native: native to the area and with a history of naturally occurring and also if intentionally stocked for restorational purposes. Areas with a combination of wild native and enhanced native populations are included.		
	Indicator: Allowance for producing or holding smolt in net pens in water bodies with native salmonids **Requirement:** None **Applicability:** All Smolt Producers Using Open Systems	a. Obtain a declaration from the farm's smolt supplier stating whether the supplier operates in water bodies with native salmonids.	A. Verify that the farm obtains relevant declarations from its smolt supplier(s).	a. N/A = Salmonids are not endemic to Australia, there are no river run stocks in Tasmania. b. N/A c. N/A
		b. Request smolt suppliers to identify all water bodies in which they operate net pens for producing smolt and from which facilities they sell to the client.	B. Confirm that the farm obtains information on the water bodies in which its suppliers are operating net pens for smolt production.	
		c. For any water body identified in 8.24b as a source of smolt for the farm, determine if native salmonids are present by doing a literature search or by consulting with a reputable authority. Retain evidence of search results.	C. Review search results and cross-check against the other lines of evidence for salmonid distribution in the region (e.g. results from 3.1.5a).	
8.25	**Indicator**: Allowance for producing or holding smolt in net pens in any water body **Requirement:** Permitted until five years from publication of the SAD standards (i.e. full compliance by June 13, 2017) **Applicability:** All Smolt Producers Using Open Systems	a. Take steps to ensure that by June 13, 2017 the farm does not source smolt that was produced or held in net pens.	A. Prior to the effective date, confirm that the client understands the requirement of Indicator 8.25. After the effective date, confirm that the farm is in full compliance with the requirement.	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken.
8.26	**Indicator**: Evidence that carrying capacity (assimilative capacity) of the freshwater body has been established by a reliable entity [171] within the past five years [172, and total biomass in the water body is within the limits established by that study (see Appendix VIII-5 for minimum requirements) **Requirement:** Yes **Applicability:** All Smolt Producers Using Open Systems	a. For the water body(s) where the supplier produces smolt for the client (see 8.24b), obtain a copy of the most recent assessment of assimilative capacity.	A. Verify that the farm obtains copies of assimilative capacity assessments as are relevant to the water bodies in which its smolt supplier(s) operate.	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken. b. N/A c. N/A d. N/A e. N/A
		b. Identify which entity was responsible for conducting the assessment (8.26a) and obtain evidence for their reliability.	B. Verify that the assessment was done by a reliable entity (e.g. government body or academic institution).	
		c. Review the assessment (8.26a) to confirm that it establishes a carrying capacity for the water body, it is less than five years old, and it meets the minimum requirements presented in Appendix VIII-5.	C. Verify that the assessment report is in compliance with requirements.	
		d. Review information to confirm that the total biomass in the water body is within the limits established in the assessment (8.26a).	D. Verify that the farm confirms that total biomass in the water body does not exceed carrying capacity.	
		e. If the study in 8.26a is more than two years old and there has been a significant increase in nutrient input to the water body since completion, request evidence that an updated assessment study has been done.	E. Verify that the farm requests an updated assessment (< 2 years old) if there was a significant increase in nutrient inputs to the water body.	
Footnote	[171] E.g., Government body or academic institution.			
Footnote	[172] If the study is older than two years, and there has been a significant increase in nutrient input to the water body since the completion of the study, a more recent assessment is required.			
8.27		**Instruction to Clients for Indicator 8.27 and 8.28 - Monitoring TP and DO in Receiving Water for Open Smolt Systems** Farms must confirm that any smolt supplier using an open (net-pen) system is also engaged in monitoring of water quality of receiving waters. Requirements for the supplier's water quality monitoring program are presented in detail in Appendix VIII-6 and only re-stated briefly here. Monitoring shall sample total phosphorus (TP) and dissolved oxygen (DO). TP is measured in water sa an accredited laboratory for analysis of TP to a method detection limit of < 0.002 mg/L. DO measurements will be taken at 50 centimeters from the bottom sediment. The required sampling regime is as follows: - all stations are identified with GPS coordinates on a map of the farm and/or available satellite imagery; - stations are at the limit of the farm management zone on each side of the farm, roughly 50 meters from the edge of enclosures; - the spatial arrangement of stations is shown in the table in Appendix VIII-6; - sampling is done at least quarterly (1X per 3 months) during periods without ice, including peak biomass; and - samples are also collected at two reference stations located ~ 1-2 km upcurrent and downcurrent from the farm. Note: Some flexibility on the exact location and method of sampling is allowed to avoid smolt suppliers needing to duplicate similar sampling for their local regulatory regime.		
	Indicator: Maximum baseline total phosphorus concentration of the	a. Obtain documentary evidence to show that smolt suppliers conducted water quality monitoring in compliance with the requirements of Appendix VIII-6.	A. Verify that the farm obtains copies of the smolt supplier's monitoring records (datasets, protocols, reports).	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken. b. N/A c. N/A d. N/A e. N/A
		b. Obtain from smolt suppliers a map with GPS coordinates showing the sampling locations.	B. Review and confirm that the spatial arrangement of sampling stations complies with requirements of Appendix VIII-6.	

	phosphorus concentration of the water body (see Appendix VIII-6) **Requirement:** ≤ 20 µg/l [174] **Applicability:** All Smolt Producers Using Open Systems	c. Obtain from smolt suppliers the TP monitoring results for the past 12 months and calculate the average value at each sampling station.	C. Review TP monitoring results.	
		d. Compare results to the baseline TP concentration established below (see 8.29) or determined by a regulatory body.	D. Repeat comparison.	
		e. Confirm that the average value for TP over the last 12 months did not exceed 20 ug/l at any of the sampling stations nor at the reference station.	E. Verify that TP ≤ 20 ug/l in the receiving water body.	
Footnote	[173] This concentration is equivalent to the upper limit of the Mesotrophic Trophic Status classification as described in Appendix VIII-7.			
		Note: see instructions for Indicator 8.27.		
8.28	**Indicator**: Minimum percent oxygen saturation of water 50 centimeters above bottom sediment (at all oxygen monitoring locations described in Appendix VIII-6) **Requirement:** ≥ 50% **Applicability:** All Smolt Producers Using Open Systems	a. Obtain evidence that smolt supplier conducted water quality monitoring in compliance with the requirements (see 8.27a).	A. Verify as above (see 8.27A).	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken. b. N/A c. N/A
		b. Obtain from smolt suppliers the DO monitoring results from all monitoring stations for the past 12 months.	B. Verify that farm has copies of supplier's DO monitoring results.	
		c. Review results (8.28b) to confirm that no values were below the minimum percent oxygen saturation.	C. Review the supplier's monitoring results to verify compliance with requirements.	
8.29	**Indicator**: Trophic status classification of water body remains unchanged from baseline (see Appendix VIII-7) **Requirement:** Yes **Applicability:** All Smolt Producers Using Open Systems	a. Obtain documentary evidence from the supplier stating the trophic status of water body if previously set by a regulator body (if applicable).	A. Verify that farm obtains evidence from suppliers (as applicable).	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken. b. N/A c. N/A d. N/A
		b. If the trophic status of the waterbody has not been classified (see 8.29a), obtain evidence from the supplier to show how the supplier determined trophic status based on the concentration of TP.	B. Review how supplier determined trophic status (as applicable).	
		c. As applicable, review results from 8.29b to verify that the supplier accurately assigned a trophic status to the water body in accordance with the table in Appendix VIII-7 and the observed concentration of TP over the past 12 months.	C. Verify that the farm conducts a review of the supplier's results and conclusions regarding trophic status of the water body.	
		d. Compare the above results (8.29c) to trophic status of the water body as reported for all previous time periods. Verify that there has been no change.	D. Review the farm's conclusion to verify compliance with the requirement.	
8.30	**Indicator**: Maximum allowed increase in total phosphorus concentration in lake from baseline (see Appendix VIII-7) **Requirement:** 25% **Applicability:** All Smolt Producers Using Open Systems	a. Determine the baseline value for TP concentration in the water body using results from either 8.29a or 8.29b as applicable.	A. Verify that farm has supplier's records for baseline TP concentrations in the water body.	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken. b. N/A c. N/A
		b. Compare the baseline TP concentration (result from 8.30a) to the average observed TP concentration over the past 12 months (result from 8.27e).	B. Repeat comparison.	
		c. Verify that the average observed TP concentration did not increase by more than 25% from baseline TP concentration.	C. Repeat calculation to verify compliance with the requirement.	
8.31	**Indicator**: Allowance for use of aeration systems or other technological means to increase oxygen levels in the water body **Requirement:** None **Applicability:** All Smolt Producers Using Open Systems	a. Obtain a declaration from the farm's smolt supplier stating that the supplier does not use aeration systems or other technological means to increase oxygen levels in the water bodies where the supplier operates.	A. Verify that the farm obtains relevant declarations from its smolt supplier(s).	a. Not Applicable as Open (Net-Pen) Production of Smolt not undertaken.
ADDITIONAL REQUIREMENTS FOR SEMI-CLOSED AND CLOSED PRODUCTION OF SMOLTS Additionally, if the smolt is produced in a closed or semi-closed system (flow through or recirculation) that discharges into freshwater, evidence shall be provided that the following are met [177]:				
Instructions to Client for Indicators 8.32-8.35 - Requirement for smolts produced in open systems Client shall provide documentary evidence to the CAB about the production system(s) from which they source smolt. -If smolt used by the farm are not produced, for part or all of the growth phase from alevin to smolt, in open (net-pen) systems, indicators 8.32 - 8.35 are applicable. -If the production system is closed or semi-closed and does not discharge into freshwater, Indicators 8.32 - 8.35 are not applicable to smolt producers as per [176]. For such an exemption, farms must provide documentary evidence to the CAB. Auditors shall fully document their rationale for awarding exemptions in the audit report.				
Footnote	[176] Production systems that don't discharge into fresh water are exempt from these standards.			
8.32	**Indicator**: Water quality monitoring matrix completed and submitted to ASC (see Appendix VIII-2) **Requirement:** Yes [177] **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	a. Obtain records from smolt suppliers showing that water quality monitoring was conducted at least quarterly (i.e. once every 3 months) over the last 12 months.	A. Verify that farm has records to show smolt suppliers conducted water quality monitoring at the required frequency and duration.	a. The Rookwood Rd hatchery is fully recirculating, with no effluent discharge into the environment other than onto licensed agricultural land. The spreadsheet HRH_Re-UseWaterQuality_CrossTab confirms monthly recording has been done for Jan and Feb 16, results are not all available yet. Spreadsheets are also in use for the semi-RAS hatcheries with mostly quarterly sampling: - Saltas - Florentine and Wayatinah Cross Tab since 17/01/00, latest 16/12/15; and - Russell Falls & KaranjaCrossTab (RF since 2/08/99, latest 28/01/16, Karanja since 16/01/12, latest 20/10/15, sampling done Dec/Jan, waiting for results). b. All monthly water quality monitoring complete for at least the past 12 months. Corrective Action: Tassal now conduct all Saltas water quality sampling and have scheduled them in line with the Russell Falls quarterly sampling schedule of Spring & Autumn of each financial year. Tassal has gained permission from Saltas to have access to lab results from service providers removing sludge at their sites. The settling ponds have been emptied of sludge over the past five years (refer Clause 8.4). This is continuing. Preventive Action: Ongoing sampling and reporting to be maintained by Tassal for all hatcheries.
		b. Obtain water quality monitoring matrix from smolt suppliers and review for completeness.	B. Confirm that smolt supplier's water quality monitoring program covers sampling of all parameters given in Appendix VIII-2 (i.e. TP, TN, BOD, TSS).	
		c. Submit the smolt supplier's water quality monitoring matrix to ASC as per Appendix VIII- 2 and Appendix VI at least once per year.	C. Confirm that client has submitted to ASC the smolt supplier's water quality monitoring matrix for the last 12 month period.	
Footnote	[177] See Appendix VI for transparency requirements for 8.32.			
		a. Obtain the water quality monitoring matrix from each smolt supplier (see 8.32b).	A. Verify that the farm obtains water quality monitoring records from its smolt supplier(s).	a. See 8.32a above and 8.33b below.
		b. Review the results (8.33a) for percentage dissolved oxygen saturation in the effluent to confirm that no measurements fell below 60%	B. Review the supplier's monitoring results to verify compliance with requirements.	b. Rookwood Road is a closed system therefore there is no effluent; for 15YC a majority of smolt that were stocked in Macquarie Harbour are from that hatchery.

8.33	**Indicator**: Minimum oxygen saturation in the outflow (methodology in Appendix VIII-2) **Requirement:** 60% [178,179] **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	c. If a single DO reading (as reported in 8.33a) fell below 60%, obtain evidence that the smolt supplier performed daily continuous monitoring with an electronic probe and recorder for a least a week demonstrating a minimum 60% saturation at all times (Appendix VIII-2).	C. Verify that the farm obtained evidence for enhanced DO monitoring by the smolt supplier (as applicable).	Russell Falls is a semi-closed system with a proportion of the water recirculated, none of 15YC at MH from this hatchery Saltas hatchery has outflows into Florentine & Wayatinah Rivers; approx. 20% 15YC smolt were derived from this hatchery. Records reviewed for all three flow through hatcheries during the 2015 audits: - 2/10/14 to 4/5/15 for RF/KJ (MO-F343), lowest 86%, highest 113% - Florentine 20/8/14 to 4/3/15, lowest 71%, highest 111% - Wayatinah 20/8/14 to 4/3/15 lowest 92%, highest 102% c. Data on DOs was submitted to ASC.
Footnote	[178] A single oxygen reading below 60 percent would require daily continuous monitoring with an electronic probe and recorder for at least a week demonstrating a minimum 60 percent saturation at all times.			
Footnote	[179] See Appendix VI for transparency requirements for 8.33.			
8.34	**Indicator**: Macro-invertebrate surveys downstream from the farm's effluent discharge demonstrate benthic health that is similar or better than surveys upstream from the discharge (methodology in Appendix VIII-3) **Requirement:** Yes **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	a. Obtain documentation from smolt supplier(s) showing the results of macro-invertebrate surveys.	A. Verify that the farm has documentation of macro-invertebrate benthic surveys from its smolt supplier(s).	a. This is not relevant for the Rockwood Hatchery as it is a full recirculation system with no discharge. However, it is relevant to the mostly flow through systems at the two Saltas Hatcheries (Wayatinah River & Florentine Rive A Minor Non-Conformance was raised in 2015 against 8.34c: Two consecutive Biomonitoring reports for 2014 (initial and follow-up monitoring) at the SALTAS Hatchery Florentine River showed lack of equivalence in benthic h upstream and downstream sites. A watching brief has been recommended for Florentine Hatchery. Corrective Action: Tassal are conducting all Saltas water quality sampling including the benthic sampling, and have scheduled them in line with the Russell Falls 6-monthly benthic sampling schedule. Tassal has gained permission from Saltas to have access to lab results from service providers removing sludge at their sites. Tassal has funded a context report by the consultants Freshwater Systems to compare the current sampling regime with the ASC requirements and provide options for achieving ASC compliance. The settling ponds have been emptied of sludge over the past five years (refer Clause 8.4). This is continuing. Preventive Action: Tassal will work with Saltas and consultants to determine the scale of works required to improve the abundance aspect of macroinvertebrate conditions downstream of both the Saltas Florentine hatchery and the Wayatinah h Tassal have council approval to install a drum screen on the effluent at Russell Falls. The results of this will determine if similar technology can be used at the two SALTAS sites. b. The Freshwater Systems contractors are following the prescribed methodology (Appendix VIII-3). Tassal funded an October 2015 report from Peter Davies, Freshwater Systems, titled "Context for the Tassal-Saltas ASC compliance assessments under the ASC macroinvertebrate standard". OBS: A copy of the Oct15 Davies report could be provided with other sampling results to ASC. This document provides contextual information to support interpretation and discussion of results from assessment of Tassal and Saltas hatchery compliance with the benthic macroinvertebrate component of the ASC Salmon (rivers). Part 2 describes the ASC standard, how it is being adapted to the Tasmanian situation, and its suitability in the Tasmanian context. Part 3 describes the results of ASC benthic macroinvertebrate assessments conducted to date on the Tyenna (National Park), Florentine and Wayatinah hatcheries and their receiving streams (noting that no assessment has bee Parts 4 to 6 describes the riverine environmental context for the ASC assessments at each of the three Tassal-Saltas hatchery sites assessed to date, implications for the ASC macroinvertebrate assessment, and possible options OBS: The Karanja facility on the Tyenna River be included in the next 6-monthly sampling. c. Biomonitoring reports examined with results (C = complaint with requirements, NC = noncompliant) to achieve three years of consistent results: - Saltas Hatchery Wayatinah River 13/14 Autumn (C), 14/15 Autumn (NC), 15/16 Spring (NC); - Saltas Hatchery Florentine River 13/14 Autumn (NC), 14/15 Spring (NC), 14/15 Autumn (NC), 15/16 Spring (NC); - Russell Fall Hatchery - Tyenna River 13/14 Spring (C), 14/15 Spring (C) & 15/16 Spring (C). Thus neither of the Saltas hatcheries are compliant. The spreadsheet Tassal ASC Macroinvert schedule projections has been developed to plan for twice annual testing (Spring & Autumn, X = Future sampling year). It indicates the requirement for a period of 3 years of 'consisten to every 2 years (non-compliant results pushes sampling schedule back to annual). - Saltas Hatchery Wayatinah River planned for 15/16 Autumn, 16/17 Spring, 16/17 Autumn and 17/18 Spring - Saltas Hatchery Florentine River planned for 15/16 Autumn then 16/17 Spring - Russell Fall Hatchery – due to 3 years of complaint result, next sampling scheduled for 17/18 Spring. Status of Nonconformance: Given that the results of the 15/16 Autumn sampling of the two SALTAS hatcheries will become available during the surveillance audits of the 5 other Tassal farm zones, the Nonconformance is to be maintained at the Minor le during the 2017 recertification audits. Summary: As significant progress has been made and there are limitations for implementing these corrective actions which will close the NC out entirely, this minor non-conformity has been extended for 12 months per ASC CA
		b. Review supplier documents (8.34a) to confirm that the surveys followed the prescribed methodology (Appendix VIII-3).	B. Review documents from the farm's smolt supplier to verify the surveys were conducted as required in Appendix III-3.	
		c. Review supplier documents (8.34a) to confirm the survey results show that benthic health is similar to or better than upstream of the supplier's discharge.	C. Review documents to verify that survey results demonstrate compliance with requirements.	
8.35	**Indicator**: Evidence of implementation of biosolids (sludge) Best Management Practices (BMPs) (Appendix VIII-4) **Requirement:** Yes **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	a. Maintain a copy of smolt supplier's biosolids (sludge) management plan and confirm that the plan addresses all requirements in Appendix VIII-2.	A. Review the supplier's biosolids management plan for compliance with Appendix VIII-2.	a Maintain a copy of smolt supplier's biosolids (sludge) management plan and confirm that the plan addresses all requirements in Appendix VIII The Tassal LCA report, section 5.6, describes estimated amount of nutrients that were recovered and redistributed from sludge from the Rookwood Rd Hatchery to agriculture. It does not cover other hatcheries. Received copy of the Huon Valley Council Environmental Protection Notice 2008/1 and the Southern Water Tankered Trade Waste Consent. Refer also records in 8.4 Sludge removal b. The Water Treatment Process document for the Rookwood Road hatchery has a flow diagram. Other flow diagrams on file: - Florentine Process Flow - Wayatinah Process Flow - Russell Falls Process Flow Diagram c. At all 3 hatcheries all biosolids trucked off site and spread onto licensed agricultural land. Reviewed a copy of a biosolids statement for each hatchery for past 12 months: - Russell Falls 30/6/14 - Rookwood Rd 25/05/15 (current), all goes to agricultural properties - Saltas – 30/6/14 (Acting Manager Saltas) all biosolids accumulated in settling ponds/basis are removed and transported as required by approved contractor Spectran and used for land spreading on agricultural land – Spectra d. For Russell Falls hatchery reviewed copies of Veolia invoice for biosolids disposal, Spectran Invoice (x2) for desludging of underground sludge attenuators, also Tassal Biosolids declarations. For Rookwood hatchery reviewed Spectran sludge removal correspondence including proposal and AST report and Huon River Hatchery Water Re-use Scheme; also Tassal Biosolids declarations, Huon Valley Council EPN No. 2((29/09/15) and Veolia general waste Invoices. Saltas have 3 effluent tanks - 2 x hatchery and 1 x broodstock. Approx. 10,000L of sludge is removed fortnightly. Also for Saltas hatchery reviewed Saltas Biosolids removal document, Saltas Sludge removal correspondence, Sa data. Analytical Service Tas lab report (11/12/14 94p) for Spectran for Saltas sediment pond sludge disposal 5/12/14 and 15/11/15 with inorganic, organic & nutrient tests.
		b. Obtain from smolt suppliers a process flow diagram (detailed in Appendix VIII-2) showing how the farm is dealing with biosolids responsibly.	B. Review the supplier's biosolids process flow diagram for compliance with Appendix VII- 2.	
		c. Obtain a declaration from smolt supplier stating that no biosolids were discharged into natural water bodies in the past 12 months.	C. Confirm that farm obtains declarations from smolt suppliers.	
		d. Obtain records from smolt suppliers showing monitoring of biosolid (sludge) cleaning maintenance, and disposal as described in Appendix VIII-2.	D. Review the farm's records from smolt suppliers to verify there is evidence of implementation of biosolids management as required in Appendix VIII-2.	

ASC Audit Report Summary

11 Findings

11.1 A summary table that lists all non-conformities and observations

NC reference	NC Status	Clause Reference	Description of NC	Descriptions of actions pending
NC 2015 - 5	Open (extended)	8.4 g	Calculations of total phosphorus released per ton of smolt produced show that for 1/1/14 to 31/12/14 for Russell Falls it was greater than the ASC Requirement 5kg/mt (until 2015) and 4kg/mt thereafter. No calculations have been provided for Saltas.	Tassal are still proposing to install a drum screen within the RAS and an effluent drum screen on the outfall from the settlement pond. Approx. timeframe is 12 months. Recirculation tank has been emptied (March 2016) and Russell Falls is now in compliance. Calculation provided for Saltas

NC 2015 - 7	Open (extended)	8.34 c	Two consecutive biomonitoring reports in 2014 for the industry owned Saltas Florentine hatchery showed lack of equivalence in TRCI Aquatic life macroinvertebrate condition status ratings between the upstream and downstream sites. While a high score was observed for two aspects at the downstream site, the abundance metric was classified as low, although the report concluded that there was an improved condition rating observed since the initial survey.	Tassal will continue to work with Saltas and consultants to determine the scale of works required to improve the abundance aspect of macroinvertebrate conditions downstream of both the Saltas Florentine hatchery and the Wayatinah hatchery. Tassal has completed a context report by the consultants Freshwater Systems to compare the current sampling regime with the ASC requirements and provide options for achieving ASC compliance
NC 2016 - 1	Open	6.7.2 a	The company has a robust screening process to ensure that companies contracted to provide supplies and/or services are socially responsible. This includes, for example, a supplier evaluation form to confirm socially responsible practices and policies. However, the supplier screening procedures are not being applied to all suppliers.	A review of the outstanding supplier evaluations for Western Zone to occur and completion to be scheduled.

NC 2016 - 2	Open	6.8.2	Currently, the company does not maintain clear records of all grievances, complaints, and labor conflicts that may arise, nor are there records to confirm resolution within 90 days. Despite the lack of formal records in this area, additional evidence was collected via worker and managerial interviews, which confirmed that all complaints were responded to promptly, thus meeting the 90 day ASC requirement. As a result of the indicator being met, this has been designated as an observation.

12.1 A report of the results of the audit of the operation against the specific elements in the standard and guidance documents.	As a surveillance audit, the audit team focused primarily on the non-conformities from the 2015 surveillance audit, as well as spot-checking other indicators at random. Through this exercise, the team found the company to be in compliance nearly all social and environmental indicators reviewed.
12.2 A clear statement on whether or not the audited operation has the capability to consistently meet the objectives of the relevant standard(s).	The audit team found Tassal Pty Ltd to largely in compliance with the requirements of the ASC Salmon Standard v1.0. Per the results of this surveillance audit, Tassal has demonstrated its ability to consistently meet the objectives of this standard.

12.3 In cases where Biodiversity Environmental Impact Assessment (BEIA) or Participatory Social Impact Assessment (PSIA) it shall be added in full to the audit report. IF these documents are not in English, then a synopsis in English shall be added to the report as well.	N/A - surveillance audit.

13 Decision

13.1 Has a certificate been issued? (yes/no)	Yes
13.2 The Eligibility Date (if applicable)	4/14/2014
13.3 Is a separate CoC certificate required for the producer? (yes/no)	Yes
13.4 If a certificate has been issued this section shall include:	
13.4.1 The date of issue and date of expiry of the certificate.	Certificate issuance date: April 4, 2014 Certified expiry date: April 3, 2017
13.4.2 The scope of the certificate	Aquaculture production of Atlantic salmon (Salmo salar) from Macquarie Harbour MF 214, MF 219 and MF 266.

14 Surveillance

14.1 Next planned Surveillance	
14.1.1 Planned date	Jan-17
14.1.2 Planned site	Western Zone Cluster
14.2 Next audit type	
14.2.1 Surveillance 1	
14.2.2 Surveillance 2	
14.2.3 Re-certification	x
14.2.4 Other (specify type)	