# **ALLIANCE FOR WATER STEWARDSHIP Audit Report**



### CONFIDENTIAL

Client name	Ingham's Enterprises Pty Ltd
Audit date/s	6-7 October 2021
Audit location	50 Goodman Place, Murarrie, QLD 4172 Australia
Audit report completed by	Sam Ponder (Lead Auditor)
Proposed date	1 September 2022

### Introduction to the Alliance for Water Stewardship

The AWS Standard ("the Standard") is intended to drive water stewardship, which is defined as the use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site- and catchment-based actions. Good water stewards understand their own water use, catchment context and shared concerns in terms of water governance, water balance, water quality and Important Water-Related Areas, then engage in meaningful individual and collective actions that benefit people and nature.

The Standard outlines a series of actions, criteria and indicators for how one should manage water at the site level and how water management should be stewarded beyond the boundaries of a site. In this Standard, the "site" refers to the implementing entity that is responsible for fulfilling the criteria. The site includes the facility and the property over which the implementer that is using or managing water (i.e., withdrawing, consuming, diverting, managing, treating and/or discharging water or effluent into the environment) has control.

The current AWS Standard is Version 2.0 launched on 22nd March 2019.

### **Disclaimer**

The BM TRADA audit was based on a sampling approach and therefore non conformities may exist which have not been identified. A copy of this report shall be distributed to the certified client and to BM TRADA. The ownership of this audit report is maintained by BM TRADA. BM TRADA shall keep confidential all information relating to the audit and your organisation and shall not disclose such information to any third party except as required by law of by Accreditation Bodies. BM TRADA assumes no responsibility (legal or otherwise) or accepts no liability to any person(s) for any loss, damage or expense caused by reliance on information provided in this audit report.

# Guidance on BM TRADA nonconformities issued against the AWS standard requirements

Details of all nonconformities issued at the audit are contained in separate nonconformity reports and should have been presented to you at the closing meeting.

Please send all nonconformity responses to your auditor for review. We will contact you if further submission is required.

Audit finding shall be assigned (or 'graded') into one of three categories: major non-conformity, minor non-conformity, and observation.

### **Major Non-Conformities**

A major non-conformity is raised if:

- The issue represents a systematic problem of substantial consequence;
- The issue is a known and recurring problem that the client has failed to resolve;
- The issue fundamentally undermines the intent of the AWS Standard; or
- The nature of the problem may jeopardize the credibility of AWS.

All major non-conformities must satisfactorily address by the client within thirty (30) days.

### **Minor Non-Conformities**

Where the audit team has evaluated an audit finding and determines that the seriousness of the issue does not meet the any of the criteria for major non-compliance the audit team shall grade the finding as a minor non-conformity.

All minor non-conformities must satisfactorily address by the client within thirty **(90)** days unless an alternative timeframe, supported by written justification, has otherwise been agreed with the CAB.

2.9.3 For certificate holders, the CAB shall require that minor non-conformities are satisfactorily addressed within ninety **(90)** days

If corrective actions are inadequate to resolve a minor non-conformity by the time of the next scheduled audit, the CAB shall upgrade the audit finding to a major non-conformity.

## All other finding that are not major or minor non – conformities can be raised as observations.

BM TRADA is unable to issue an AWS certificate of approval until all non-conformities are verified and closed.

Failure to address and close nonconformities within required timescales will result in suspension of certification.

Your auditor will clarify at the closing meeting if you require a follow up audit to verify correction and corrective action implementation or if documentary evidence will be acceptable to close the nonconformity.

Note: non-conformity will hereinafter be referred to as NCR.

## 1. Client and Certificate Details

Address of certified operation	Murarr	50 Goodman Place, Murarrie, QLD 4172 Australia				
Management representative	Brett F	Porter	Job title	HS	E Manager	
Email address	bporte	r@inghams.com.au	Phone number	043	88 337 202	
AWS Registration #	AWS-0	010-INT-BMT-00-07-0002-0073				
Certificate Number	BMT-A	AWS-008	Date of fi certificat		10/9/18	
Current Certificate start date:	10/9/1	8	Current Certificat expiry da		9/9/21	
	f Aud	dit & Scope of Certi				
Audit type:		☐ Certification ☐	Surveillance		⊠ Recertification	
Audit team and roles:		Sam Ponder – Lead auditor				
Standard:		The AWS International Water S	Stewardship	Stand	dard Version V 2.0	
Scope of certification	ation:	Water Stewardship in the slaug	hter and pro	cess	ing of poultry	
Operations covered by scope of certification:		Ingham's Chickens - Murarrie site 50 Goodman Place, Murarrie, QLD 4172 Australia				
Other certification scheme/s this company is certifor:		Halal Safe Food Free range				
		operations or activities within the attention are not considered outsourcing.	scope to ind	epen	dent third parties? *	
□ Yes	$\square$	No				

## 3. Executive Summary

Main items / Critical Control Points / Places inspected (including names & affiliations of people consulted)	Number of NCRs
Commit – Brett Porter	0
Gather and Understand – Brett Porter	0
Gather and Oriderstand – Brett Forter	0
Plan - Brett Porter	o o
Implement – Brett Porter	0
Evaluate – Brett Porter	0
Communicate and disclose – Brett Porter	0

Were there any NCR(s) issued at the previous audit?  $\Box$  Yes  $\boxtimes$  No

### **Allocation of points and Lead Auditor Recommendations**

Total number of points awarded to site *collated number from end of report	93 points allocated – Recommend AWS Platinum Certified
Recommended level of certification	Platinum

Note: the above recommendation is subject to review and (continued) Certification / Recertification decision.

#### **Allocation of Points**

The audit team shall complete the allocation of points within thirty (30) days of completion of the on-site audit and, in any event, before finalizing the assessment report.

Where a client has one or more unresolved major nonconformity, the audit team shall not allocate points to any advanced-level indicators.

Prior to allocating points, the audit team shall review the assessment results to confirm that the client has met all core indicators.

Where one or more minor non-conformity has been raised against core indicators, the audit team should consider the adequacy of corrective action plans submitted by the client when applying.

Audit teams shall award points in accordance with the indicator-specific point allocation system given in the AWS Standard.

Certification level shall be determined based on the total sum of points awarded, in any combination, to all advanced-level indicators.

Thresholds for the three (3) AWS certification levels are given below.

#### Thresholds for AWS Certification Levels.

Point Total	AWS Certification Level
0 to 39	AWS Core Certified
40 to 79	AWS Gold Certified
80 or greater	AWS Platinum Certified

### 4. Audit Observations, Findings and Conclusions

### **Description of Operation and Catchment**

### Company History

The site was built 20 years ago - as a purpose built chicken processing site

#### **Processes**

Chickens only - processing 1.4m per week x 5 day week

#### **Facilities**

Poultry Primary Processing

### Number of Employee

1400 FTE's

### Other Informatio

The site is a former winner of the PM's Water Wise Award 2010 (Water Efficiencies and Excellence by commercial and industrial water users in Australia 2021 recipient of the University of Queensland UQ Partnership Excellence Award for Protein-rich feed production from agri-industrial wastewaters by phototrophic bacteria

#### Catchmen t Narrative (from discussions with catchment expert)

Catchment Narrative (from discussions with the catchment expert) The site

The Murarrie site is located approximately 20km east of the City of Brisbane in the suburb of Murarrie. The north eastern aspect is defined by the Doboy Swamp and Bulimba creek. Directly south is the only direct neighbour which is currently a construction site owned by Goodman Fielder.

The Plant occupies approximately 20% of the site with the remaining area being wetlands and pasture. In this area there are several redundant ponds and two constructed wetlands that treat stormwater from the site, otherwise no commercial activity occurs primarily due to the flood risks. The occupied area comprises of 2 large car parks, main processing building, truck wash, live bird holding area and, Advanced Water Treatment Plant (AWTP) including, a 22ML Anaerobic Pond, Sequencing Batch Reactor (SBR) and membrane plant.

The land area is owned by The Trust Company (Australia) Limited and managed through Charter Hall. Ingham's leases the operating area in the immediate fence line surrounding the building.

#### Site water

The Murarrie site's water supply is drawn from the municipal system and is in the South East Queensland water grid. Wastewater from the plant is treated on site in an Advanced Water Treatment Plant (AWTP) and recycled into a range of uses within the plant. Approximately two thirds of the site's water use comes from AWTP treated water.

Water storage, treatment and bulk supply for Brisbane is handled by SEQ Water, which sells on to Brisbane Water for distribution to the Greater Brisbane area. Water for the area is stored in three major dams; Wivenhoe Dam on the Brisbane River, Somerset on

the Stanley River and North Pine on the North Pine River. Water is also provided by a number of smaller dams that are connected via the SEQ Water Grid. The Wivenhoe Dam is shared with the Gold Coast, which has two more water sources, the Hinze Dam and the smaller Little Nerang Dam, both on the Nerang River. Groundwater from North Stradbroke Island is also transferred to the mainland to supplement the area's water supply. Gold Coast Water has constructed a desalination plant at Tugun, commissioned in 2009. A Southern Regional Pipeline is also under construction that will share Gold Coast water with the rest of South East Queensland.

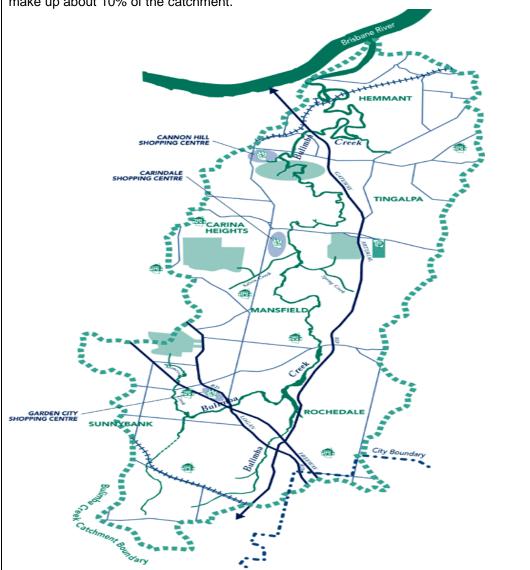
The catchment (Source http://bulimbacreek.org.au/about/the-bulimba-creek-catchment)

Bulimba Creek is located in the eastern and south-eastern areas of Brisbane and generally flows northwards into the Brisbane River. The catchment is impacted by urban development, tree clearing, damaging land uses and weeds. Brisbane hasn't been planned well; and infrastructure, services and inappropriate land use, including filling and building on flood plains and waterway corridors are problematic.

The Bulimba Creek catchment comprises a complex network of creeks and major tributaries, some of which are unnamed, occupying 122 square kilometres, or about 10% of Brisbane's area.

The catchment area extends from the southern suburbs of Kuraby and Runcorn, through Mt Gravatt, Mansfield, Carindale and Tingalpa to Hemmant and Murarrie in the north.

The catchment is ringed by significant remnant forest and has extensive areas along the creek corridor that can be restored. It contains 16 bushland remnants, seven freshwater swamplands and 10 significant riparian remnants. Bushland vegetation and wetlands make up about 10% of the catchment.





Covered Anaerobic Lagoon



Gas burner



Ponding system





Barn owl roost

### KEY DOCUMENTS ANNUAL REPORT 2021

 $\frac{https://investors.inghams.com.au/Resources/files/2021\%20Inghams\%20Group\%20Limited\%20-\%20web\%20copy.pdf}{}$ 

### SUSTAINABILITY REPORT 2021

https://investors.inghams.com.au/Resources/files/2021%20Inghams%20Group%20Limited%20-%20Sustainability%20Report%20-%20web%20copy.pdf

### **STEP 1: GATHER AND UNDERSTAND**

### Gather data to understand shared water challenges and water risks, impacts and opportunities

Intent: To ensure that the site gathers data on its water use and its catchment context and that the site uses these data to understand its shared water challenges as well as its contributions (both positive and negative) to these challenges, water risks, impacts, and opportunities. This information also informs the development of the site's water stewardship strategy and plan (Step 2) and guides the actions (Step 3) necessary to fulfil the site's commitments.

Criteria		Indicators	Response Area	Points Allocated
1.1 Gather information to define the site's physical scope for water stewardship purposes, including:  • its operational boundaries;  • the water sources from which the site draws;  • the locations to which the site returns its discharges; the catchment(s) that the site affect(s) and upon which it is reliant.	1.1.1	The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:  Site boundaries; Water-related infrastructure, including piping network, owned or managed by the site or its parent organization; Any water sources providing water to the site that are owned or managed by the site or its parent organization; Water service provider (if applicable) and its ultimate water source; Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies; Catchment(s) that the site affect(s) and is reliant upon for water.	Site maps exist in the Water Stewardship plan. The Trust Company of Australia owns the land and has a management company (Charter Hall) as landlord. Ingham's leases the site only so work on any peripheral areas are dependent on the Landlord's permission and cooperation. Amended from the Landlord – including surveillance and town planning maps (Lot and Lease area including easements) – documents dated 2/4/09  Site infrastructure owned by Ingham's Corporate owned by TPG (ASX listed); all information related to the site is detailed above  This section is detailed in 1.1 Physical scope of the Ingham's Enterprise Limited Water Stewardship Plan Murarrie Processing Plant September 2020 AWS Standard 2 (referred to as The Plan); with 1.1.1 detailing Site Boundaries; 1.1.2 Water Sources; 1.1.3 Site Discharges; (noted that there is a significant reduction 70% in trade waste volume and contaminants 1.1.4 Site Catchments	
1.2 Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.	1.2.1	Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified.  This process shall: Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people; Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies; Provide evidence of stakeholder consultation on water-related interests and challenges; Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;	Evidence reviewed in Table at 1.2.1 Traditional Owners Minutes of meeting with TO's dated 17/11/18 Briefing held with TO's by S Coghill Email of minutes noting minutes and attachments of attendees (14 TO's) 23/11/19 B4C – Steve Hattingh QUU – Alyssa Sennema, Fiona Urwin (Trade Waste) Charter Hall – Management and Landlord for business	

Identify the degree of stakeholder engagement based on their level of interest and influence.	Queensland University – Dr Tim Heulsen BioGene – Grant Smith	
	Government – Joan Pease is aware through other initiatives – no physical meeting to date	

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	1.2.2	influence between site and stakeholder shall be identified, within the catchment and considering the site's ultimate water source and ultimate receiving water body for wastewater.	Evidence for 2021 Urban Utilities; Certificate of Appreciation B4C; Water in the Landscape Conference as Keynote speaker B4C As above for minutes of AGM dated 13/11/20 tabled  Additional meetings for 2021 are contained in 1.2.2.1	
1.3 Gather water- related data for the site including:  • water balance • water quality • important water related	1.3.1	Existing water- related incident response plans shall be identified.	Noted in the Business Continuity Plan – lessons learnt from April 2018  No incidents since then. If there was an issue it would be a breach of License with the Brisbane City Council which would result in improvement notice/fines/formal letters.  There has been some issues with the Advanced Water Treatment Plant (AWPT)  However these have been minor and fixed on-site.  2021 - no changes during the past year.	
areas  water governance  WASH (water related costs, revenues and shared value creation)	1.3.2	Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped.	Monitored – daily/weekly/monthly to management using the FY22 Ops Scorecard and Murarrie AWTP Operational Monitoring v2.88 Lab tests on quality, communicates with staff,  Evidence Litres/Bird graph notes reduction to average 15 l/bird with major cost reductions of around \$70-80 K per week – dropping 30% in costs weekly Reported in ENVIZI weekly  Notes what comes in from Potable water, what is recycled through AWPT and the volume discharged to Trade Waste – presented to the weekly Management Meeting. Minutes recorded and posted to ENVIZI	
	1.3.3	Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates, shall be quantified. Where there is a water-related challenge that	30 year plan with SEQ Water - "On 24 March 2017, SEQ published version 2 of Our Water Security Program – 30-year plan for South East Queensland's water security program' – link below  https://www.seqwater.com.au/sites/default/files/2019- 08/Water%20for%20life Water%20Security%20Program.pdf  Evidence As noted above in the Table of Risks of the Shared Water Challenges An additional 4 Megalitres is recycled weekly through the pond system which reduces reliance on potable water	

	would be a threat to good water balance for people or environment, an indication of annual high and low variances shall be quantified.		
1.3.4	Water quality of the site's water source(s), provided waters, effluent and receiving water bodies shall be quantified. Where there is a waterrelated challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.	All information is captured in the following sources Water in from QUU – monthly report on state of potable water (shared on the internet).  Evidence Water Reporting Zone 1 Table Additional information from SAS Laboratories weekly reports for anaerobic pond – notes Pond inflow/outflow Sample: Table reviewed dated 17/11/20 Reviewed Annual summary 16-20 th Nov 2020  Minimal change to flows and BOD approx. 75% reduction There are copies of emails forwarded to QUU advising Fiona Irwin – Trade Waste Supervisor (key stakeholder) Reviewed ATOM internal water quality analysis – provided monthly for the site management (not for dissemination) Chlorine, Turbidity, Solids etc	
1.3.5	Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.	Outlined as areas identified as per the Environmental Management Plan and reviewed as part of Emergency Evacuation Procedure.  Table - Water Risks and Opportunities 1.7.1 notes 1.3.5 AWS Criteria. Identifies Storm Water run-off as an opportunity.  All chemical is stored in the Chemical Storage Room – sighted during inspection of facility	
1.3.6	On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.	Evidence This is detailed in the Water Stewardship Plan October 2021 in Section 1.4.5 Site Important Water Related Areas The site has never been identified as a cultural site. It was however a transit area for peoples to access the hunting and gathering areas. The site map in 1.3.5 identifies areas to the North and East of the secure compound as important water related areas	
1.3.7	Annual water- related costs, revenues, and a	Evidence Water related cost comparison detailed in Section 1.4.6 between 2018-2019 and 2020-2021	

		description or quantification of the social, cultural, environmental, or economic waterrelated value generated by the site shall be identified and used to inform the evaluation of the plan in 4.1.2.	Commentary regarding annual improvements noted.  Project Proposal notes a potential saving of \$859K when fully implemented – recent data indicates there is a 70% reduction in Trade Waste through the Gibson Island facility.  Also see Action 5 and Action 12 of Table 2.3 which is the updated Strategy and Plan  The benefits are compliance to trade waste & environment licence, burning free fuel from biogas and significant cost savings  Social values gained with water flow into the fresh water swamp area are consistency of flow and maintaining ecosystem and for salt water swamp areas for fish and biodiversity wetlands	
	1.3.8	Levels of access and adequacy of WASH at the site shall be identified.	Amenities include potable drinking water which is supplied to the site for drinking, sanitation, hygiene (food safety). This is discharged straight to grey water sewage and trade waste. Bypasses the recycling system. All site water hydraulic P&ID's are maintained on file	
1.4 Gather data on the site's indirect water use, including: its primary inputs; the water use embedded in the production of those primary inputs the status of the waters at the origin of the inputs	1.4.1	The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.	All captured in Envizi – see screen shot in section 1.5 of Water Stewardship Plan Murarrie October 2021 Standard 2.0	
(where they can be identified); and water used in out-sourced water-related services.	1.4.2	The embedded water use of outsourced services shall be identified, and where those services originate within the site's catchment, quantified.	All captured in Envizi – see screen shot in section 1.5 (as above)	
	1.4.3	Advanced Indicator The embedded water use of primary inputs in catchment(s) of origin shall be quantified.	All captured in Envizi – see screen shot in section 1.5 (as above)	7
1.5 Gather water- related data for the	1.5.1	Water governance initiatives shall be	Reviewed as part of 1.3.1	

catchment, including: water governance, water balance, water quality, Important Water-Related Areas, infrastructure, and WASH		identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.	There is a list of relevant aspects of catchment plan(s), significant publicly led initiatives and/or relevant water related public policy goals. Ingham's are still developing more this information.  E.g. plans from State government, Brisbane city, QLD Water.	
	1.5.2		Reviewed as part of 1.3.2 in Table format	
	1.5.3		Reviewed as part of 1.3.1 Gold Coast, Brisbane City Council and Sunshine Coast – noted as a Flow Diagram Managing Natural Assets for a Prosperous SE Qld 2014-2031 SE Water produces an annual report – see link at <a href="https://www.seqwater.com.au/results?query=annual+reports">https://www.seqwater.com.au/results?query=annual+reports</a>	
	1.5.4		Detailed in 1.3.4 Catchment Water Quality with accompanying Table as example. Further information is at the following links; <a href="https://urbanutilities.com.au/residential/help-and-advice/drinking-water-quality/water-quality-data">https://urbanutilities.com.au/residential/help-and-advice/drinking-water-quality/water-quality-data</a> <a href="https://urbanutilities.com.au/business/business-services/water-quality-data">https://urbanutilities.com.au/business/business-services/water-quality-data</a>	

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	status for people		
	or environment, an		
	indication of		
	annual, and where		
	appropriate,		
	seasonal, high and		
	low variances shall		
	be identified		
1.5.5	Important Water-	Detailed in 1.3.5 Important Water Related Areas	
	Related Areas	The Morton Bay RAMSAR site is identified in the Water Stewardship plan. The current status and future trends	
	shall be identified,		
	and where	are publically documented e.g. <a href="https://wetlandinfo.ehp.qld.gov.au/wetlands/facts-maps/ramsar-wetland-moreton-">https://wetlandinfo.ehp.qld.gov.au/wetlands/facts-maps/ramsar-wetland-moreton-</a>	
	appropriate,	<u>bay/</u>	
	mapped, and their		
	status assessed	https://investors.inghams.com.au/Resources/files/2021%20Inghams%20Group%20Limited%20-	
	including any	%20web%20copy.pdf	
		<u> </u>	
	threats to people		
	or the natural		
	environment,		
	using scientific		
	information and		
	through		
	stakeholder		
	engagement.		
1.5.6	Existing and	Detailed in 1.3.6 Water Related Infrastructure	
	planned water-	Existing, publicly available reports or plans that assess water-related infrastructure are is covered by a narrative	
	related	in the water Stewardship plan.	
	infrastructure shall	There is a map of all relevant assets e.g. pipelines.	
	be identified,	There is a map of all relevant assets e.g. pipelines.	
	including condition		
	and potential	(https://www.seqwater.com.au/sites/default/files/PDF%20Documents/Publications/201306%20MajorAssetMap.pdf	
	exposure to	SEQ Water for Life 2016-2046 v2 March 2017 as detailed in 2.3.6 of the Water Stewardship Plan	
	extreme events.	· ·	
	CALIOTIO OVOITO.		
4.5.7	The edge	Washing have a see to refer water affective application as the street of the first	
1.5.7		Workers have access to safe water, effective sanitation and protective hygiene.	
	available WASH		
	services within the	There are monthly checks on potable water coming on site.	
	catchment shall be	There is monthly testing of facilities for TPC, E Coli, and Coliforms.	
	identified.	, , , , , , , , , , , , , , , , , , , ,	
		Protective hygiene is provided and required and auditable under Food safety requirements.	
		Trotoctive riggions is provided and required and additable dilder rood safety requirements.	
		There is a maintainaine askedule in MAVIMO (the maintaine and according). This is not a little to Maying	
		There is a maintenance schedule in MAXIMO (the maintenance management system). This is noted in the Water	
		Stewardship Plan section 1.4.3 Site Water Quality. Checks are daily and weekly	

	1.5.8	Advanced	Ongoing works in collaboration with B4C	6
	1.0.0	Indicator	Chigoling works in collaboration with 640	
		Efforts by the site to support and undertake	Detailed in section 1.3.4 Catchment Map of Sampling Along Bullimba Creek and Table 2 Averaged Horiba Sampling Results for Baseline Flow and Flood Events – notes Murarrie and Doughboy Roads	
		catchment level	B4C Report – Water Quality of onsite ponds - August 2018 – commissioned water sampling, soil monitoring, fish survey of ponds at Murarrie site	
		identified.	ANGFA survey - informal survey of existing storm and waste water handling points in January 2019	
			Land for Wildlife (BCC) partnership agreement signed for improvement of flora and fauna within the adjoining boundary – first commercial member	
			Reviewing sludge for waste reuse	
			De-sludged the anaerobic lagoon reducing BOD	
			Soil and water testing through GEMS and additional to the Bass Hatchery to see whether the pond system can support a breeding program – noted that Murray Cod could be used	
			Increased on-site water storage/capacity during the year	
			Working with BCC Rangers using satellite imagery detailing vegetation increases in ponding area – email M Thorley 14/4/21	
	1.5.9	Advanced Indicator	Workers have access to safe water, effective sanitation and protective hygiene.	4
		The adequacy of WASH provision	There are monthly checks on potable water coming on site.	amended 21/10/21
		within the catchments of	There is monthly testing of facilities for TPC, E Coli, and Coliforms.	21/10/21
		origin of primary inputs shall be identified.	Protective hygiene is provided and required and auditable under Food safety requirements. This is all recorded in Envizi	
			All on-site potable water is tested	
1.6 Understand current and future shared water challenges in the catchment, by linking the water challenges identified by	1.6.1	Shared water challenges shall be identified and prioritized from the information gathered.	Table at 1.6 Shared Water Challenges ranks 4 areas identified with QUU, TO's and Department of Environment and Sciences	
stakeholders with the site's water challenges.	1.6.2	Initiatives to address shared water challenges shall be identified.	As above – notes Rationale to Priorities and further detailed in Tables 1.7.1 Water Risks and Opportunities 1.7.2 Opportunities	

	1.6.3	Advanced Indicator Future water issues shall be identified, including anticipated impacts and trends Advanced	Covered Anaerobic Lagoon completed CAPEX project for diversion of waters for truck/crate washing facilities and treatments – still pending and will become ROI project Pre testing for COR water	3
	1.0.4	Indicator Potential water- related social impacts from the site shall be identified, resulting in a social impact assessment with a particular focus on water.	Data has been produced for collection of Nitrogen levels around river mouth into Morton Bay. B4C and Birdwatchers – see Table 1.7.2  Detailed in 1.9 Additional Water Related Data  Additional Bird Survey – biggest diversity of birds in the Brisbane area – by Kathy Clark Bird Life S QLD – Winter 2021 report  Shared document with B4C – Doboy Water Stewardship Project – MitzSpring 2021 update notes Pond 8 changes from 2019  River Symposium field trip/tour in Brisbane area was cancelled due to COVID  Urban Utilities – impact of waste water downstream of Ingham's – testing notes increased levels of Sulphur leachate due to volume reduction of dilutable water. Meeting held 9/9/21- minutes sighted; bio-augmentation process has been implemented to reduce Sulphates and increase COD to reduce BOD.	3
1.7 Understand the site's water risks and opportunities: Assess and prioritize the water risks and opportunities affecting the site based upon the status of the site, existing risk management plans and/or the issues and	1.7.1	Water risks faced by the site shall be identified, and prioritized, including likelihood and severity of impact within a given timeframe, potential costs and business impact.	Detailed in 1.7.1 Water Risks Table Anaerobic ponds full of sludge Contaminated storm water to wetlands Restricted Town Water Supply Damage to IWRA Loss of town water	
future risk trends identified in 1.6	1.7.2		Detailed in 1.7.2 Water Opportunities Table Notes 6 opportunities and includes costs and whether they are economic, social or environmental This has resulted in 2.3 of the Water Stewardship strategy where the plan which references the shared challenges and opportunities/risks and the outcomes. These are detailed in 12 Action points. There has been a 6 monthly review with most recent dated 11/11/20 with the results posted on the Ingham's internet page links  www.inghams.com.au/our-purpose/planet/ https://inghams.com.au/wp-content/uploads/2020/11/Murarrie-Nov-2020-WS-public-disclosure.pdf	
1.8 Understand best practice towards achieving AWS outcomes:	1.8.1	Relevant catchment best practice for water governance shall be identified.	Current holder of Platinum Certificate for Water Stewardship dated 2020 Acknowledged by B4C Dec 2018 in the Industrial Partners Award and Certificate of Appreciation Nov 2020 UQ Partnership Excellence Award – September 2021	

Determining sectoral best practices having a			Brisbane City Council Councillor Lisa Atwood (for Doboy) – formation of business expertise on sustainability under Business After Dark – cancelled due to COVID lockdown – email dated 15/7/21	
local/catchment, regional, or national relevance.	1.8.2	and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.	Significant reduction in water use per bird processed achieved as detailed in 'Meter readings for Advanced Water Treatment Plant' – November 2018 (22 Litres/bird) to September 2019 (average 15 Litres/bird). This is noted as preforming better than the KPI rate set at (16-17.5 litres/bird) action 3 of Site Water Stewardship Plan The most recent KPI stipulates 15.6 ltrs per bird for 2021 – currently sitting on 15.59L/. This is bird volume dependent – very stable at present at 21/5 MgL/Week	
	1.8.3	and/or catchment best practice for water quality shall be identified, including rationale for data source.	Outgoing waste water trends are identified and documented. Ingham's is charged accordingly. Significant reduction in Trade Waste volume and BOD contaminants by approximately 70%	
	1.8.4	Relevant catchment best practice for site maintenance of Important Water- Related Areas shall be identified.	Upgrading of all Ponds has been completed and planting of floating wetlands and wildlife access points along the banks is underway.  Fish and aquatic life have been released into the system	
	1.8.5		All potable as per section 1.5.7 Workers have access to safe water, effective sanitation and protective hygiene.  There are monthly checks on potable water coming on site.  There is monthly testing of facilities for TPC, E Coli, and Coliforms.  Protective hygiene is provided and required and auditable under Food safety requirements.  There is a maintenance schedule in MAXIMO (the maintenance management system) and an onsite plumber conducting maintenance for eye wash stations and hand sanitiser station with contractors used on an as needs basis. CORE Water look after the Cooling Towers. This is noted in the Water Stewardship Plan section 1.4.3 Site Water Quality. Checks are daily and weekly	

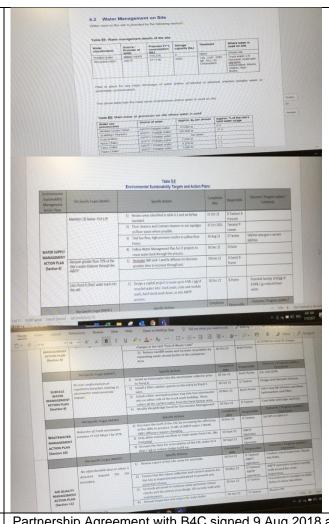
### STEP 2: COMMIT AND PLAN

### Commit to be a responsible water steward and develop a water stewardship plan

Intent: To ensure there is sufficient leadership support, site authority, and allocated resources for the site to implement the AWS Standard. It focuses on how a site will act on shared water challenges and improve its performance and the status of its catchment in terms of the AWS water stewardship outcomes. Step 2 links the information gathered in Step 1 to the actions implemented in Step 3, by describing who will do what and when.

Criteria		Indicators	Response Area	Points Allocated
2.1 Commit to water stewardship by having the senior-most manager in charge of water at the site, or if necessary, a suitable individual within the organization head office, sign and publicly disclose a commitment to water stewardship, the implementation of the AWS Standard and achieving its five outcomes, and the allocation of required resources.	2.1.1	A signed and publicly disclosed site statement OR organizational document shall be identified.  The statement or document shall include the following commitments:  That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes; That the site implementation will be aligned to and in support of existing catchment sustainability plans; That the site's stakeholders will be engaged in an open and transparent way; That the site will allocate resources to implement the Standard.  Advanced Indicator A statement that explicitly	No changes Updated November 2020 signed by Plant Manager and Chief Executive Officer  Noted under section 2.1 Leadership Commitment together with the Policy 2.1.1  Also noted to be on the following link: <a href="https://inghams.com.au/wp-content/uploads/2020/11/Murarrie-Nov-2020-WS-public-disclosure.pdf">https://inghams.com.au/wp-content/uploads/2020/11/Murarrie-Nov-2020-WS-public-disclosure.pdf</a> Updated November 2020 signed by Plant Manager and Chief Executive Officer — copy sighted at the front Gatehouse to Murarrie site	1
		covers all requirements set out in Indicator 2.1.1 and is signed by the organization's seniormost executive or governance body and publicly disclosed shall be identified.	Noted under section 2.1 Leadership Commitment together with the Policy 2.1.1	
2.2 Develop and document a process to achieve and maintain legal and regulatory compliance.	2.2.1	The system to maintain compliance obligations for water and wastewater management shall be identified, including: Identification of responsible persons/positions within facility	1.3.2 Water Related Legal and Regulatory Requirements  Organisation chart displays responsibilities – Water-Related Internal Governance  2.2 Responsibility is outlined in the Table	

		organizational structure; Process for submissions to regulatory agencies.		
2.3 Create a water stewardship strategy and plan including addressing risks (to and from the site), shared catchment water challenges, and opportunities	2.3.1	A water stewardship strategy shall be identified that defines the overarching mission, vision, and goals of the organization towards good water stewardship in line with this AWS Standard.	This is outlined in Table situated at 2.3 Water Stewardship Strategy and Plan and 2.4 Demonstrate the Sites responsiveness and resilience to respond to water risks	
	2.3.2	A water stewardship plan shall be identified, including for each target:  How it will be measured and monitored; Actions to achieve and maintain (or exceed) it; Planned timeframes to achieve it; Financial budgets allocated for actions; Positions of persons responsible for actions and achieving targets; Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.	Table as above for 2.3 Water Stewardship Strategy and Plan Table details all requirements — Objective, Smart Target, Action, Cost/Benefit, Shared Opportunities, Relevant criteria, Responsible person, Accountability, Start & End dates. The photos below depict screenshots of the Environmental Management Plan — in particular Section 6 Water Supply Management, Targets, Action Plans and Responsibilities.  **Targets, Action Plans and Responsibilities.**  **Targets a section of the sectio	



#### 2.3.3 Advanced Indicator

The site's partnership/water stewardship activities with other sites within the same catchment (which may or may not be under the same organisational ownership) shall be identified and described.

Partnership Agreement with B4C signed 9 Aug 2018 and Fellowship agreement with QU dated 20/7/18

Land for Wildlife Agreement (improvement for healthy land and water) dated 14/12/18 – applied for a grant to improve the vegetation around Pond 8 and reduce invasive species (submitted documents dated April 2021)

Project with UQ for Protein Rich Feed Production from Agri-industrial waste water by phototrophic bacteria dated 30/8/19 – (resulting in 0 trade waste i.e. N). This is now operable. Meeting with QUU to brief CEO Luncheon on Water Stewardship challenges QUU, B4C, International Water Centre - Griffith University – invitation to attend panel on 25 November 2021 – Bio from BP sent 24/9/21. TAFE groups presentations on AWS advantages

		and achievements to date held during the year. Annual meeting held with QUU 9/9/21 (minutes reviewed)  UPDATED for 2021 - Support for the Doboy Wetlands project with B4C – this is reported in the 2021 Sustainability Report	
2.3.4	Advanced Indicator The site's partnership/water stewardship activities with other sites in another catchment(s) (either under same corporate structure or with another corporate site) shall be identified.	Previous Somerville Ingham's key plant personnel visited Murarrie site (16/8/19) and shared information in best practice for AWTP Reverse Osmosis – email communication with Andrew Perry Capital Projects Manager Somerville.  Murarrie provided assistance to Ingham's Bolivar plant in SA., who has since achieved AWS certification.  Annual discussion between Murarrie in assisting Sommerville with their sludge management Project earmarked (held up by COVID since April 2020) for Shane Clouston to assist Sommerville with their waste water treatment plant and identify beneficial re-use of water over the site to govern environmental flows and sustainable water use.  Email notification dated 8/12/20 to Andrew Perry on the Murarrie RO project and how Sommerville could benefit  1/7/21 Discussion with Murarrie in assisting other Ingham's sites with improvements to their environmental/water stewardship plans.  NOTE: Due to COVID travel restrictions and lockdowns this has not been able to occur in person this year.	1
2.3.5	Advanced Indicator Stakeholder consensus shall be sought on the site's water stewardship plan. Consensus should be achieved on at least one target. A list of targets that have consensus and in which stakeholders are involved shall be identified.	Stakeholder engagement is set out in Table 1.2.1 Stakeholder List and Ability to Influence Target is to recycle 4 megs a week through the onsite pond system. COMPLETED Table 2.3 sets out the Water Stewardship Strategy and Plan in Shared Challenges  Traditional Owners – Steve Coghill (release of feeder fish/aquatic species into ponds (Action 9) - COMPLETED  B4C – Steve Hattingh – completed connection of ponds 3-8 (Action 4, 6 & 10) - COMPLETED  QUU – Alyssa Sennema – RO trade waste significantly reduced to zero (Action 10) and reduction in purchase of potable water (Action 3) by reducing water / bird use; (Action 1) – reducing BOD impact of trade waste by desludging anaerobic pond - COMPLETED  Charter Hall – Management and Landlord for business	5

			Queensland University – Dr Tim Hulsen – reached 3437 Kg/quarter (Action 5) – update report from QU 27/1/21 removed 75% of total N = <2000 Kg/Qrtr - COMPLETED  Brisbane City Council – Land for Wildlife - completed ponds 3-8; and release of water into BCC wetlands (inspected during audit) (Action 4, 6 & 10) – COMPLETED  State Government – Joan Pease (Local member) is aware through other initiatives – no physical meeting to date – Email 5/7/21 email from Tim Huelsen re-meeting with Hon Trevor Evans on PPB Project.	
2.4 Demonstrate the site's responsiveness and resilience to respond to water risks	2.4.1	A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.	Water scarcity to the fresh water wetlands and the saltwater marshes – Ingham's is working with BCC to ensure that sufficient water is available. This is outlined in Land for Wildlife Agreement (improvement for healthy land and water) dated 14/12/18 – key contact is Fleur Collier Key document numbers noted as:  Council Lot Number 5 SP225214 Property Number 00310050-4 15111 for 26.13 Ha Land for Wildlife membership numbers – 6698 and 8049 (the only commercial members in Queensland)	
	2.4.2	Advanced Indicator A plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.	Identified in points 1-4 of Table 2.3 Water Stewardship Strategy and Plan; the following link in the Annual Report is; <a href="https://investors.inghams.com.au/FormBuilder/_Resource/_module/eeODKPcYSUCaXLPDAXx-9A/file/ING-FY20-Annual-Report.pdf">https://investors.inghams.com.au/FormBuilder/_Resource/_module/eeODKPcYSUCaXLPDAXx-9A/file/ING-FY20-Annual-Report.pdf</a> Noted in page 14 & 15  Tables 1.7.1 Water Risks 1.7.2 Water Opportunities details flood levels, returning water to the wetlands and increasing environmental flow to the creek lands, returning water to groundwater, developing water security mechanisms, reducing reliance on potable water resources – all in collaboration with BCC and QUU  Plan is in place and is being executed – e.g. changing product stream which would reduce reliance on potable water; changes to use of advanced water in cooling tours; installing new modern equipment in the RED areas which will increase the amount of Advanced Water for other purposes.	5

### STEP 3: IMPLEMENT

### Implement the site's stewardship plan and improve impacts

Intent: To ensure that the site is implementing the plan outlined in Step 2, mitigating risks and driving actual improvements in performance.

Criteria		Indicators	Response Area	Points Allocated
3.1 Implement plan to participate positively in catchment governance.	3.1.1	Evidence that the site has supported good catchment governance shall be identified.	Detailed in 3.1.1 site meetings with QUU and the discussions on improving trade waste to the Gibson Island AWTP	
	3.1.2	Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented.	Engagement has occurred with TO however at this stage management have indicated that there are no relevant water rights in respect to the Ingham's site	
	3.1.3	Advanced Indicator Evidence of improvements in water governance capacity from a site-selected baseline date shall be identified.	First review dated 1/3/19 with follow up November 2020. Results of Summary of Water Stewardship Plan Progress and Effort to Address Shared Water Challenges showed % completed and actions of the plant. Significant improvement in water efficiencies shown.    The plant   Dept.   D	2 - amended 21/10/21
	3.1.4	Advanced Indicator Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the good	As per Stakeholder feedback Stefan Hattingh - email dated 7/10/21  Urban Utilities Alyssa Sennema - Commercial Account Manager Environmental & Industrial - email dated 7/10/21	2 - amended 21/10/21

		water governance of the catchment shall be identified.	Wayne Cameron - email dated 3/12/20 from B4C provided positive feedback on Water stewardship initiatives and the recent presentation made by Ingham's commenting that 'it was highly newsworthy'.	
3.2 Implement system to comply with water-related legal and regulatory requirements and respect water rights.	3.2.1	A process to verify full legal and regulatory compliance shall be implemented.	Detailed in 2.2 of the Water Stewardship Plan 2021 Outlined in Annual returns to Department Environment Services (DES) – reviewed NPI report and annual returns and reports to QUU for Trade Waste	
	3.2.2	Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including Indigenous peoples, shall be implemented.	Detailed in 3.3 Implement plan to achieve Site Water Balance Targets Reviewed 6 monthly Actions Report made to B4C dated 13/11/20 at their AGM. This is on the Ingham's internet at the following link; <a href="https://inghams.com.au/wp-content/uploads/2020/11/Murarrie-Nov-2020-WS-public-disclosure.pdf">https://inghams.com.au/wp-content/uploads/2020/11/Murarrie-Nov-2020-WS-public-disclosure.pdf</a>	
3.3 Implement plan to achieve site water balance targets.	3.3.1	Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.	Detailed in 3.3 Implement plan to achieve Site Water Balance Targets Carried over the sites EMP on Table 1.1 and captured in the weekly COO data report for water and monthly KPI Planet Report	
	3.3.2	Where water scarcity is a shared water challenge, annual targets to improve the site's water use efficiency, or if practical and applicable, reduce volumetric total use shall be implemented.	Detailed in 3.3 Water consumption is lodged in the sites EMP. These are reviewed weekly at the site Management Meetings.  Monthly water consumption meetings are held with management.  Evidence Reviewed Environment Plant Performance Weekly Management Report for Week 8 see below – all records maintained on file.  Business Quarterly review to Supervisors and Team Leaders – have not been reviewed due to COVID restrictions	

			Plant Performance Pt22 Week 3 ppts  Q. Search  Tile Home Insert Draw Design Transitions Animations  Open in Desktop App  Search  The Performance Pt22 Week 3 ppts  ENVIRONMENT  ENVIRONMENT  ENVIRONMENT  ENVIRONMENT  Water Mark Service Search  Total Search Search	
	3.3.3	Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.	Not relevant – no legally binding re-allocation	
	3.3.4	Advanced Indicator The total volume of water voluntarily re-allocated (from site water savings) for social, cultural and environmental needs shall be quantified.	This has been identified as 4 Megalitres per week to replenish the ponds. Measured by solar powered water metre – sighted during inspection of facility. Data shows that an average of 3.981MgL per week is entering the ponding system	4
3.4 Implement plan to achieve site water quality targets.	3.4.1	Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.	First review dated 1/3/19 with consequent reviews undertaken – these are detailed in Weekly Reporting reports. Results of Summary of Water Stewardship Plan Progress and Effort to Address Shared Water Challenges showed % completed and actions of the plant. Significant improvement in water efficiencies shown. These are highlighted in the Annual Report 2021 and Sustainability Report 2021	
	3.4.2	Where water quality is a shared water challenge, continual improvement to achieve best practice for the site's effluent shall be identified and where applicable, quantified.	As above – detailed in Trade Waste Discharge report	

3.5 Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas.	3.5.1	Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented.	The Water Stewardship Plan outlines the enhancements to the site ponds systems and the riparian zone along the creek.  Inspected during audit – noted that ponds and activities had been implemented.  *****Photo evidence attached.	
	3.5.2	Advanced Indicator Evidence of completed restoration of non-functioning or severely degraded Important Water-Related Areas including where appropriate cultural values from a site-selected baseline date shall be identified. Restored areas may be outside of the site, but within the catchment.	Improvements to the BCC controlled Doboy Wetlands; recognised by B4C Chairman (Wayne Cameron) as a protected habitat. Pond 7 storm water release point – with an average of 3 MgL per week being released into the creek system.  Separately a bird survey identified 45 different species now living in the area.  Reduction of N, Ph and BOD load into the Morton Bay RAMSAR site is recognised by QUU. Data supports the Zero target release from Ingham's into the Gibson Island Trade Waste Processing facility. Detailed in the annual Trade Waste Report from QUU.	4
	3.5.3	Advanced Indicator Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the healthy status of Important Water-Related Areas in the catchment shall be identified.	Detailed in the Stakeholder consultation. See 3.1.4 & 3.2.2 for evidence	2
3.6 Implement plan to provide access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers at all premises under the site's control.	3.6.1	Evidence of the site's provision of adequate access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers onsite shall be identified and where applicable, quantified.	All incoming WASH water is potable as per section 1.5.7 Workers have access to safe water, effective sanitation and protective hygiene.  There are monthly checks on potable water coming on site.  There is monthly testing of facilities for TPC, E Coli, and Coliforms.  Protective hygiene is provided and required and auditable under Food safety requirements.	
			As per 1.8.5 - There is a maintenance schedule in MAXIMO (the maintenance management system) and there is an on-site plumber (Paul Gale) with contractors used as required for larger jobs. The on-site plumber will conduct ongoing maintenance for eye wash stations and hand sanitiser station. CORE Water look after the Cooling Towers. This is noted in the Water Stewardship Plan section 1.4.3 Site Water Quality. Checks are daily and weekly	
	0.00		Also noted in 3.6 of the Plan was the planning for a manual bypass for the hygiene system – inspected placement of valves to re-direct water from AWTP flush water to ponds and also option to redirect water from Pond 6 into the amenities flush system – still to be actioned.	
	3.6.2	Evidence that the site is not impinging on the human right to	The site is under the ownership and management of Charter Hall. It is however maintained by Ingham's who fill the legal and regulatory requirements	

	1		
		safe water and sanitation of communities through their operations, and that traditional access rights for Indigenous and local communities are being respected, and that remedial actions are in place where this is not the case, and that these are effective.	
	3.6.3	Advanced Indicator	Not relevant
		A list of actions taken to support the provision to stakeholders in the catchment of access to safe drinking water, adequate sanitation and hygiene awareness shall be identified.	- amended 21/10/21 All incoming shared infrastructure is owned by SEQ Water and managed with (piping) maintained by QUU
	3.6.4		Not relevant
		In catchments where WASH has been identified as a shared water challenge, evidence of efforts taken with relevant public-sector agencies to share information and to advocate for change to address access to safe drinking water and sanitation shall be identified.	- amended 21/10/21 All incoming shared infrastructure is owned by SEQ Water and managed with (piping) maintained by QUU
3.7 Implement plan to maintain or	3.7.1	Evidence that indirect water use	Evidence is available that supplier growers report usage into ENVIZI
improve indirect water use within the catchment.	<b>G</b>	targets set in the water stewardship plan, as applicable, have been met shall be quantified.	Evidence is available that supplier growers report asage into Erry izi
	3.7.2	Evidence of engagement with suppliers and service providers, as well as, when applicable, actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be identified.	QUU – is the supplier of potable water; multiple meetings with minutes of attendance and email correspondence with Alyssa Sennema – Commercial Account Manager Environmental & Industrial
	3.7.3	Advanced Indicator Actions taken to address water related risks and challenges related to indirect water use outside the catchment shall be documented and evaluated.	Not relevant - amended 21/10/21 All incoming shared infrastructure is owned by SEQ Water and managed with (piping) maintained by QUU
3.8 Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have.	3.8.1	Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.	Not relevant All incoming shared infrastructure is owned by SEQ Water and managed with (piping) maintained by QUU

3.9 Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a local/catchment, regional, or national relevance.	3.9.1	Actions towards achieving best practice, related to water governance, as applicable, shall be implemented.	Achieving best practice, related to water governance is detailed in 2.3 Create a water Stewardship strategy and plan	
	3.9.2	Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.	Achieving best practice, related to targets in terms of water balance is per 2.3 Create a water Stewardship strategy and plan	
	3.9.3	Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.	Achieving best practice, related to targets in terms of water balance is per 2.3 Create a water Stewardship strategy and plan	
	3.9.4 Actions to practice, reterms of the Important shall be in 3.9.5 Actions to practice re	Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented.	Achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas is completed.  Inspected ponding. The Hydraulic Water Design produced by Civil and Water details all Ingham's activities – with more floating wetland islands are to be added	
		Actions towards achieving best practice related to targets in terms of WASH shall be implemented.	Not relevant – all potable water provided is from QUU	
	3.9.6	Advanced Indicator Achievement of identified best practice related to targets in terms of good water governance shall be quantified.	Achievement of identified best practice related to targets in terms of good water governance is detailed in the Annual Return to DES on environmental licence requirements  NPI – National Pollutant Inventory Report  NGERS Report – Green-house gases Ingham's website – Annual Report Ingham's Sustainability Report	6
	3.9.7	Advanced Indicator Achievement of identified best practice related to targets in terms of sustainable water balance shall be quantified.	Not relevant - amended 21/10/21 Ingham's monitors for best practice water use and trade waste against other Ingham's sites	
	3.9.8	Advanced Indicator Achievement of identified best practices related to targets in terms of water quality shall be quantified.	Evidence of identified best practices related to targets in terms of water quality are detailed in the:  Water Reporting Zone 1 Table continued  Additional information from SAS Laboratories weekly reports for anaerobic pond – notes Pond inflow/outflow	8
			Sample: Significant change to flows and BOD shows an approx. 70% reduction There is a copy of the email forwarded to QUU Fiona Irwin – Trade waste Supervisor (key stakeholder) – lab report on Trade Waste results emailed on 5/10/21	

3.9.9	Advanced Indicator Achievement of identified best practices related to targets in terms of the site's maintenance of Important Water-Related Areas have been implemented.	Reviewed AWTP/ATOM internal water quality analysis reporting – provided monthly for the site management (not for dissemination) Chlorine, Turbidity, Solids etc Reviewed summary of Table most recently dated 25/9/21  Reviewed summary for Environment Plant Performance week 9  Photo evidence for B4C, Doboy, Waterstewardship initiative provided in the Annual report.	6
3.9.10	Advanced Indicator Achievement of identified best practice related to targets in terms of WASH shall be quantified.	Not relevant - amended 21/10/21 The site has reduced reliance on Wash water by increasing efficiencies in site usage	
3.9.11	Advanced Indicator A list of efforts to spread best practices shall be identified.	Ongoing email communications with QUU – Stakeholder email 7/10/21 indicated that there is an extremely good relationship; annual review of Trade Waste site visit is scheduled for 27/10/21  AGM B4C – due November 2021  Liaised with Ingham's Somerville Vic and Bolivar SA – evidence contained in FY22 Ops Scorecard	3
3.9.12	Advanced Indicator A list of collective action efforts, including the organizations involved, positions of responsible persons of other entities involved, and a description of the role played by the site shall be identified.	Collective action efforts, include Ingham's Somerville Vic and Bolivar SA – email contacts and sharing of the FY22 Ops Scorecard – benchmarking/weekly reporting B4C annual report is due in November 2021 This is clearly outlined in 2.3 of the Plan under Metrics. This is reported 6 monthly and available on the Ingham's website as the Progress Action Report	6
3.9.13	Advanced Indicator Evidence of the quantified improvement that has resulted from the collective action relative to a site-selected baseline date shall be identified and evidence from an appropriate range of stakeholders linked to the collective action (including both those implementing the action and those affected by the action) that the site is materially and positively contributing to the achievement of the collective action shall be identified.	See above. Reviewed the Internal Table of sites x key performance indicators. These are maintained and reported weekly to senior management	6

### STEP 4: EVALUATE

Evaluate the site's performance
Intent: To review a site's performance against the actions taken in Step 3, learn from the results – both intended and unintended – and inform the next iteration of the site's water stewardship plan. This evaluation shall occur at least annually, but sites should consider more frequent evaluations.

Criteria		Indicators	Response Area	Points Allocated
4.1 Evaluate the site's performance in light of its actions and targets from its water stewardship plan and demonstrate its contribution to achieving water stewardship outcomes.		Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.	Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes are detailed in the biennial February and November Reviews – see photo evidence of ongoing progress.	
	4.1.2	Value creation resulting from the water stewardship plan shall be evaluated.	Value creation resulting from the water stewardship plan is noted in 1.3.7	
	4.1.3	The shared value benefits in the catchment shall be identified and where applicable, quantified.	The shared value benefits in the catchment are identified in the B4C Catchment Management Plan – outlined in the Partnership Agreement under Roles for Ingham's and B4C	
	4.1.4	Advanced Indicator A governance or executive-level review, including discussion of shared water challenges, water risks, and opportunities, and any water-related cost savings or benefits realized, and any relevant incidents shall be identified.	Value creation resulting from the water stewardship plan is noted in 1.3.7  All information from ENVIZI is collated by the Group Sustainability Manager for Board consideration	2
4.2 Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.	4.2.1	A written annual review and (where appropriate) root-cause analysis of the year's emergency incident(s) shall be prepared and the site's response to the incident(s) shall be evaluated and proposed preventative and corrective actions and mitigations against future incidents shall be identified.	No changes There has been no water related issues in the past 12 months. However there is evidence of the previous issues from 2017-2018 highlighted in the 2018 report	
4.3 Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process.	4.3.1	Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.	Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies are detailed in 5.2.1  Ongoing meetings are held with QUU. These cover reductions in Trade Waste quality and quantity. The BCC – Land for Wildlife, B4C, an update on project progress from Dr Tim Heulsen from UQ detailed in email dated 27/1/21; reports are prepared and sent to DES are for the Annual Return for maintaining the Environmental Licence and Annual Ingham's Board Report.  Information is available via the website at the following link;	

			https://inghams.com.au/wp- content/uploads/2020/12/Murarrie-Nov-2020-WS-public- disclosure.pdf	
	4.3.2	Advanced Indicator The site's efforts to address shared water challenges shall be evaluated by stakeholders. This shall include stakeholder reviewing of the site's efforts across all five outcome areas, and their suggestions for continual improvement.	Table 2.3 sets out the Water Stewardship Strategy and Plan in Shared Challenges. The link below has been used to present to the B4C AGM; <a href="https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf">https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf</a>	4
			Traditional Owners – Steve Coghill (release of feeder fish/aquatic species into ponds (Action 9)	
			B4C – Steve Hattingh – completed ponds 3-8 (Action 4, 6 & 10)	
			QUU – Alyssa Sennema – RO trade waste significantly reduced to zero (Action 10) and reduction in purchase of potable water (Action 3) by reducing water / bird use; (Action 1) – reducing BOD impact of trade waste by desludging anaerobic pond	
			Charter Hall – Management and Landlord for business	
			Queensland University – Dr Tim Hulsen – reached 3347 Kg/qrtr (Action 5)	
			Brisbane City Council – Land for Wildlife - completed ponds 3-8; and release of water into BCC wetlands (inspected during audit) (Action 4, 6 & 10)	
4.4 Evaluate and update the site's water stewardship plan, incorporating the information obtained from the evaluation process in the context of continual improvement.	4.4.1	The site's water stewardship plan shall be modified and adapted to incorporate any relevant information and lessons learned from the evaluations in this step and these changes shall be identified.	The site's water stewardship plan has been modified and adapted to incorporate any relevant information and lessons learned.  Evidence Evaluation of the actions in the Feb and Nov reviews have led to changes in the Plan. Primarily this has been updating of the Plan to meet the AWS Standard Version 2.0 criteria. Examples include: Commitment 2.1.2, 2.1.3 and 2.1.4 The site HSE Manager creating awareness of Water Stewardship at various industry events and across the site.	

Presentation/site inspection to Department of and Sciences on Ingham's waste water mana systems – email dated 23/11/20 from Sasha F Senior Environmental Officer advising complia Environmental License regulations.	gement Hindmarsh
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### STEP 5: COMMUNCATE & DISCLOSE

Communicate about water stewardship and disclose the site's stewardship efforts
Intent: To encourage transparency and accountability through communication of performance relative to commitments, policies, and plans. The disclosure of relevant information allows others to make informed opinions on a site's operations and tailor their involvement to suit.

Criteria		Indicators	Response Area	Points Allocated
5.1 Disclose water-related internal governance of the site's management, including the positions of those accountable for legal compliance with water-related local laws and regulations.	5.1.1	The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.	Murarrie Operational Plant Structure outlines all of the positions. Legal requirements are outlined in 1.3.2 of the Plan Also included on the company internet site under Water Related Internal Governance detailed at the following link; <a href="https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf">https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf</a>	
5.2 Communicate the water stewardship plan with relevant stakeholders.	5.2.1	The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.	Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies are detailed in 5.2.1  Ongoing meetings are held with QUU. These cover reductions in Trade Waste quality and quantity. The BCC – Land for Wildlife, B4C, an update on project progress from Dr Tim Heulsen from UQ on progress detailed in email dated Jan 27/1/21 reports are prepared and sent to DES are for the Annual Return for maintaining the Environmental Licence and Annual Ingham's Board Report.	
5.3 Disclose annual site water stewardship summary, including the relevant information about the site's annual water stewardship performance and results against the site's targets.	5.3.1	A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.	A summary of the site's water stewardship performance is detailed on the company web site at the following link:  https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf  Document is entitled the 'Summary of Water Stewardship Plan Progress and Effort to Address Shared Water Challenges – Ingham's Murarrie 2018-19'	
	5.3.2	Advanced Indicator The site's efforts to implement the AWS Standard shall be	Annual Report 2020-21 and Ingham's Sustainability Report 2021 – photo of Pond 8 on front of report	1

	disclosed in the organization's annual report.		The site's efforts to implement the AWS Standard is detailed in the following links; ANNUAL REPORT 2021 <a href="https://investors.inghams.com.au/Resources/files/2021%20Inghams%20Group%20Limited%20-%20web%20copy.pdf">https://investors.inghams.com.au/Resources/files/2021%20Inghams%20Group%20Limited%20-%20Web%20copy.pdf</a> SUSTAINABILITY REPORT 2021 <a href="https://investors.inghams.com.au/Resources/files/2021%20Inghams%20Group%20Limited%20-%20Sustainability%20Report%20-%20web%20copy.pdf">https://investors.inghams.com.au/Resources/files/2021%20Inghams%20Group%20Limited%20-%20Sustainability%20Report%20-%20web%20copy.pdf</a>		
	5.3.3	Advanced Indicator Benefits to the site and stakeholders from implementation of the AWS Standard shall be quantified in the organization's annual report.	Annual Report 2020-21 and Ingham's Sustainability Report 2021 - photo of Pond 8 on front of report and Bulimba Creek Catchment Committee members inspecting return of wildlife to habitat  Letter of Support to Belong dated 8/7/21 (NFP for unskilled labour for Cert 1 & 2 training in Conservation & Land Management)	1	
5.4 Disclose efforts to collectively address shared water challenges, including: efforts to address the challenges; engagement with stakeholders; and coordination with public-sector agencies.	5.4.1	The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.	The site's shared water-related challenges and efforts made to address these challenges with Key stakeholders are disclosed. These are detailed in 1.6 Shared Water Challenges and reported on the company internet at: <a href="https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf">https://inghams.com.au/wp-content/uploads/2020/12/Murarrie-Nov-2020-WS-public-disclosure.pdf</a> Document is entitled the 'Summary of Water Stewardship Plan Progress and Effort to Address Shared Water Challenges – Ingham's Murarrie 2018-19'		
	5.4.2	Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.	Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies are detailed in 5.2.1  Ongoing meetings are held with QUU. These cover reductions in Trade Waste quality and quantity.  The BCC – Land for Wildlife, B4C, an update on project progress on N from Dr. Tim Heulsen from UQ detailed in email dated 27/1/21; reports are prepared and sent to DES are for the Annual Return for maintaining the Environmental Licence and Annual Ingham's Board Report.  Highlights - 23/9/21 UQ  YUM Environmental audit – 1.0 Water Management Recognised by KFC with senior group site visit (part of the Collins Food Group) dated 2/6/21 in email exchange to David Gent – Site Manager  Sent water quality results to Hanwood Hatchery – Craig to check if suitable for BASS. Good for Murray Cod breeding program		

5.5 Communicate transparency in water-related compliance: make any site water-related compliance violations available upon request as well as any corrective actions the site has taken to prevent future occurrences.	5.5.1	Any site water-related compliance violations and associated corrections shall be disclosed.	There are no changes or known compliance violations reported. This is part of the DES Licence requirement.  DES Licence Number #EPPR00405713  Trade Waste Licence Number with QUU #9823	
	5.5.2	Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.	Not relevant - amended 21/10/21 Nil issues to date. The Environmental Management Pan is reviewed quarterly	
	5.5.3	Any site water-related violation that may pose significant risk and threat to human or ecosystem health shall be immediately communicated to relevant public agencies and disclosed.	Not relevant - amended 21/10/21 No issues to date	
			TOTAL POINTS ALLOCATED	96 amended 21/10/21

### **END OF REPORT**