Department of Primary Industries and Regional Development

Project profile analysis for land based permits

For the long-term sustainability of an aquaculture enterprise, an environmentally sound, low risk site needs to be identified. This is the first step in establishing a sustainable aquaculture facility. Site selection should consider climate, topography, soil type, water availability, and permissibility within existing land use zoning.

Please refer to the NSW Land Based Sustainable Aquaculture Strategy for further details.

1. Minimum requirements

The following are minimum performance criteria that proposals **must** meet to be permissible development within NSW. Your application needs to demonstrate that you meet these criteria.

Locational Criteria	Minimum performance
1. LEP zones for ponds or tanks[1]	Within permitted zones of LEP zoning table
2. Conservation exclusion areas[1]	(1) Must not be carried out on land dedicated or reserved under the *National Parks and Wildlife Act 1974*: (2) Must not be carried out on the following land, except to the extent necessary to gain access to water: (a) land declared an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*, (b) vacant Crown land, (c) land within a wetland of international significance declared under the Ramsar Convention on Wetlands. (3) Must not be carried out on the following land, except for purposes of minimal infrastructure to support the extraction of water from, and discharge of water to, the land concerned: (a) land declared as an aquatic reserve under the *Marine Estate Management Act 2014,* (b) land declared as a marine park under the *Marine Estate Management Act 2014*

Operation criteria	Minimum performance
1. Species selection	Species of fish or aquatic plants cultivated or kept must be consistent with the relevant Aquaculture Industry Development Plan (AIDP).
2. Intesive pond aquaculture – pond design	Ponds must be capable of being drained or pumped and then completely dried.
3. Intensive pond and tank aquaculture freshwater discharges	No discharge of freshwater used to intensively cultivate or keep fish to natural waterbodies or wetlands is permitted, except freshwater discharge from open flow through systems

Operation criteria	Minimum performance
4. Outlets from ponds etc	All outlets from culture ponds, tanks or other culture facilities must be screened to avoid the escape of fish or aquatic plant propagules.

[1]Nothing in subclause (2) or (3) affects any requirement under an Act relating to land specified in subclause (2) or (3) to obtain a licence or other authority under that Act for development of the land.

LEP zoning table

LEP Rural Zones	Aquaculture Type	
LEP Rural Zones	**Pond**	**Tank**
RU1 Primary Production	Permissible	Permissible
RU2 Rural Landscape	Permissible	Permissible
RU3 Forestry	Permissible	Permissible
RU4 Rural Small Holdings	Permissible	Permissible
RU5 Village	Permissible (1)	Permissible
RU6 Transition	Permissible (1)	Permissible

LEP Residential Zones	Pond	Tank
R1 General Residential	Permissible (1)	Permissible (1)
R2 Low Density Residential	Permissible (1)	Permissible (1)
R3 Medium Density Residential	Permissible (1)	Permissible (1)
R4 High Density Residential	Permissible (1)	Permissible (1)
R5 Large Lot Residential	Permissible (1)	Permissible (1)

LEP Business Zones	Pond	Tank
B1 Neighbourhood Centre	Permissible (1)	Permissible
B2 Local Centre	Permissible (1)	Permissible
B3 Commercial Core	Permissible (1)	Permissible
B4 Mixed Use	Permissible (1)	Permissible
B5 Business Development	Permissible (1)	Permissible
B6 Enterprise Corridor	Permissible (1)	Permissible
B7 Business Park	Permissible (1)	Permissible
B8 Metropolitan Centre	Permissible (1)	Permissible

LEP Industrial Zones	Pond	Tank
IN1 General Industrial	Permissible (1)	Permissible
IN2 Light Industrial	Permissible (1)	Permissible
IN3 Heavy Industrial	Permissible (1)	Permissible
IN4 Working Waterfront	Permissible	Permissible

LEP Special Purpose Zones	Pond	Tank
SP1 Special Activities	Permissible	Permissible

LEP Special Purpose Zones	Pond	Tank
SP2 Infrastructure	Permissible	Permissible
SP3 Tourist	Permissible	Permissible

LEP Recreation Zones	Pond	Tank
RE1 Public Recreation	Permissible	Permissible
RE2 Private Recreation	Permissible	Permissible

LEP Environmental Protection Zones	Pond	Tank
E1 National Parks and Nature Reserves	Prohibited	Prohibited
E2 Environmental Conservation	Prohibited	Prohibited
E3 Environmental Management	Permissible (2)	Permissible (4)
E4 Environmental Living	Permissible (2)	Permissible (4)

LEP Waterway Zones	Pond	Tank
W1 Natural Waterways	Permissible (3)	Permissible (3)
W2 Recreational Waterways	Permissible (3)	Permissible (3)
W3 Working Waterways	Permissible (3)	Permissible (3)

Note (1) Permissible only if the development is for the purposes of small scale aquarium fish production.
Note (2) Permissible only if the development is for the purposes of extensive aquaculture.
Note (3) Permissible only if the development will utilise waterways to source water.
Note (4) Permissible only if the development is for the purposes of small scale aquarium fish, shellfish nursery or shellfish hatchery production.

2. Project profile analysis

You must demonstrate that you can meet the relevant criteria.

*Important - Please indicate for each item, what level (1, 2 or 3) your project is evaluated as. Circle what level applies to your proposal and put a short answer or explanation next to each of the questions. If something does not apply, put N/A and the reason why it does not apply.

Further information relating to each of these criteria can be found in the NSW Land Based Sustainable Aquaculture Strategy.

Information for Tier 1 site evaluation criteria is generally available from government sources such as Councils, Land & Property Management Authority, Department of Planning and other relevant government agencies. **Note:** this section does not apply to existing farm dams, where no new development will occur.

Tier 1 – site evaluation criteria

1. Water supply information	Level 1	Level 2	Level 3
a) Saline ground water availability	Saline water available from Saline Interception and Evaporation Scheme.	Bore required to source saline waters	
b) Fresh water availability	• Existing licence approved for bore or river extraction, or • Licence available	• New licence required for bore or river extraction or • Reliant upon on-farm dam and 10% of local run-off. • Use of a mains water supply for growout nursery or hatchery	
c) Freshwater projects that plan to pump water from a river – Environmental flows	No access restrictions based on flows in normal conditions	Access permitted only during high flows in normal conditions	

WaterNSW holds important information relating to water licence and approval requirements under the *Water Management Act 2000* and *Water Act 1912*, as per Table 8 of the NSW LBSAS.

Please contact WaterNSW before submitting your application to find out your requirements with regards to:

- Water access licence approval (www.waternsw.com.au/customer-services/water-licensing/licences)
- Water supply works approval and Water use approval (www.waternsw.com.au/customer-services/water-licensing/approvals)

2. Acid Sulphate Soils (sourced from ASS Risk Maps)	Level 1	Level 2	Level 3
a) If site is less than 2 metres AHD based on survey data, ASS soil profile based on ASS Risk Maps	ASS Landform Process Class A with Landform Element Class b, l, t, p, y or w.	ASS Landform Process Classes A,W, B, E, L, S with other Landform Element than b, l, t, p, y or w	

3. European Heritage Issues	Level 1	Level 2	Level 3
a) Heritage sites based on LEP or REP maps and State Heritage Inventory	No listings on the proposed site	Listings onsite	

4. Native Title issues	Level 1	Level 2	Level 3
Status of native title interests (Crown Land)	Crown Land, previous determination native title extinguished	Crown Land native title interest needs to be determined	

5. Flooding (sourced from Environment, Energy and Science (EES) or Council information where available)	Level 1	Level 2	Level 3
a) Consistency with Council and/or EES floodplain management plans	Development is consistent with the outcomes of management plans and needs no controls	Development of the site is consistent with the management plan but will be restricted or controlled	Development of the site is inconsistent with the outcomes of management plans
b) Floodway area	Development is not proposed in a floodway	Development is proposed in a floodway	

Tier 2 – site evaluation criteria

Tier 2 requires the proponent to undertake a detailed site assessment which may include investigations by technical experts and in some cases, laboratory analysis. The information gained from this investigation can provide the basis for preliminary design and operation planning.

6. Water supply quality	Level 1	Level 2	Level 3
a) Water quality risks from nearby land uses	Growout water quality is consistently suitable for aquaculture and has low risk of contamination.	Growout water quality is mostly suitable for aquaculture and has low risk of contamination.	Growout water quality is not generally suitable for aquaculture and requires treatment OR has a high risk of contamination.

6. Water supply quality	Level 1	Level 2	Level 3
b) Potable water for processing.	• Mains water; or • Reliable supply of potable water on-site.	• Insecure supply of potable water requiring supplementation during dry periods; or • No existing potable water supply on-site.	

7. Water Supply Access	Level 1	Level 2	Level 3
a) Saline groundwater supply access	Via piping from a saline groundwater interception and evaporation scheme	Via saline groundwater bore on property	Via compacted earthen channel from a saline groundwater interception and evaporation scheme.
b) Location of inlet/outlet pipe for estuarine or marine farms.	• Existing infrastructure suitable to carry inlet/outlet pipe, or • Sump/pit or any deepening of bed of estuary or waterway is not required.	• Rock anchoring of inlet/outlet pipeline for marine water, or • Requires a sump/pit in estuary or waterway, or • Establishment across ocean beach	
c) Fresh water pump station site	Does not require sump/pit or any deepening of bed of river	Requires a sump/pit in river	

8. Stock Security	Level 1	Level 2	Level 3
a) Proposed species consistent with Appendix 2 (species culture methods and constraints) of the NSW Land Based Sustainable Aquaculture Strategy.	Pond or tank site above the PMF level in the eastern drainage or above 1:100 ARI flood level in the western drainage. [3]	Pond or tank site below PMF level in the eastern drainage or below 1:100 ARI flood level in the western drainage but constructed so unlikely to be inundated and lose stock in a flood event. [3]	

9. Hydrology Issues	Level 1	Level 2	Level 3
a) Catchment Drainage including Stormwater	• No catchment drainage across site, or • Provision to manage across site flows not likely to affect surrounding area	• Catchment drainage across site; or • Alteration of the drainage of stormwater likely to affect surrounding properties	Flood management likely to alter the course of the river or drainage patterns.

9. Hydrology Issues	Level 1	Level 2	Level 3
b) Discharge water storage pond/dam.	No stormwater catchment drainage into excess water storage pond/dam.		

10. Mean site elevation	Level 1	Level 2	Level 3
Mean elevation of the area occupied by ponds or tanks	>1 metre AHD	< 1 metre AHD	

11. Ecology	Level 1	Level 2	Level 3
a) Vegetation type on the actual development site (flora survey required)	Cultivated land, improved pasture, or predominantly cleared and no need for consent to clear or disturb native vegetation under the *Local Land Services Act 2013* or- SEPP (Vegetation in Non-Rural Areas) 2017 or *Water Management Act 2000*.	Predominantly native vegetation – trees, shrubs, grasslands OR clearing vegetation requires consent under the *Local Land Services Act 2013* or- SEPP (Vegetation in Non-Rural Areas) 2017 or *Water Management Act 2000*.	Proposal likely to impact on vegetation of ecological significance.
b) Occurrence of threatened species, populations or ecological communities or their habitats (flora & fauna survey required)	No threatened species, populations or ecological communities or their habitats known or likely to occur –Test of significance not required.	Threatened species, populations or ecological communities or their habitats known or likely to occur – Test of significance required.	Likely to significantly affect threatened species, populations or ecological communities or their habitats. [4]
c) Biodiversity.	Does not trigger the Biodiversity Offsets Scheme under the *Biodiversity Conservation Act 2016*. Biodiversity development assessment report is not required.	Triggers the Biodiversity Offsets Scheme under the *Biodiversity Conservation Act 2016*. Biodiversity development assessment report is required.[5]	
d) Likely impact on aquatic habitats and mangroves.	No likely disturbance or impact.	Disturbance or impact on aquatic habitat or mangroves – approval or permit needed to disturb mangroves or seagrasses, reclamation or dredging works or impeding fish passages.	

12. Aboriginal Heritage	Level 1	Level 2	Level 3
a) Aboriginal heritage based on Heritage NSW Aboriginal Heritage Information Management System and Local Aboriginal Land Council.	No recorded sites or places and Heritage NSW advises that no cultural or archaeological assessment is required.	Sites or places recorded on the land and/or Heritage NSW advises that a cultural and/or archaeological assessment is required.	Sites/places of regional or national significance present and likely to impact on sites/places.
b) Consultation with Aboriginal community (Call Heritage NSW for appropriate contacts).	No values of cultural significance to the Aboriginal community identified.	Values of cultural significance to the Aboriginal community identified. Agreement reached between Aboriginal community, Heritage NSW and proponent on the management of these values.	Values of cultural significance and no agreement reached with Aboriginal community or Heritage NSW on the management of these values.
c) Location of Aboriginal Sites.	No recorded Aboriginal site/place and Heritage NSW advises that no cultural or archaeological assessment is required.	Recorded Aboriginal site/place and/or Heritage NSW advises that a cultural and/or archaeological assessment is required	
d) Likely impact on Aboriginal heritage.	No impact on Aboriginal sites/places or values of cultural significance to Aboriginal community.	Impact on Aboriginal sites/places or values of cultural significance to Aboriginal community.[4]	Sites/places of regional or national significance present and likely to impact on sites/places.[4]

13. Provision of Riparian Buffer	Level 1	Level 2	Level 3
Riparian buffer distance from the edge of the culture or discharge water pond.	> 50 metres	< 50 metres	

14. Excess Water Disposal	Level 1	Level 2	Level 3
a) Management of excess freshwater from closed systems (ponds and tanks).	• Non-irrigation re-use scheme (e.g. Hydroponics, re-use, discharge to sewer with a trade waste agreement); OR • Irrigation re-use scheme and irrigation site has adequate area and soils have slight limitations.[6]	Irrigation re-use scheme and irrigation site has inadequate area and/or soils have moderate or severe limitations.[6]	
b) Management of excess saline groundwater.	Disposed to a saline groundwater interception and evaporation scheme, estuary or ocean via piping or channels lined with impervious liner.	Disposal from a closed system to an on-site evaporation system or direct injection to a saline aquifer.	Disposed to a saline groundwater interception and evaporation scheme, estuary or ocean via earthen channel.

15. Adjacent Land Use	Level 1	Level 2	Level 3
Potential for conflict with neighbours	Neighbouring land zoning compatible e.g. agriculture/industrial development.	Neighbouring land zoned for residential or rural residential purposes or has been identified as suitable for this purpose in an LEP or SEPP.	

16. Flooding - Proponent Studies considering EES or council information where available	Level 1	Level 2	Level 3
Impacts of development on flooding.	Development not likely to adversely impact flood behaviour.	Development likely to adversely impact on flood behaviour.	

3. Note: Highest historical flood level may be considered where 1:100 ARI flood level is not readily available in the western drainage.
4. Note: Approval from EES is required.
5. Note: You will need to determine if the Biodiversity Offsets Scheme under the *Biodiversity Conservation Act 2016* applies to your proposal regardless of the level of assessment. Information on the Biodiversity Offsets Scheme is available on the EES website.
6. Note: See Table 1 & Table 3 respectively in Agnote DPI-493 Landform and soil requirements for biosolids and effluent re-use for more details.

Tier 3 – operational evaluation criteria

The proponent in Tier 3 is required to investigate operational criterial for species, design, layout and operation of the aquaculture proposal.

17. Health Management	Level 1	Level 2	Level 3
Identification and treatment of disease.	•On site trained staff with appropriate facilities, or •Demonstrated arrangement with accredited laboratory or veterinary practice.	No onsite provision for diagnosis of disease and no backup arrangements with an accredited laboratory or veterinary practice.	

18. Feed Management	Level 1	Level 2	Level 3
Feed storage.	Vermin proof facilities to store feed (eg. enclosed shed, cool, low humidity).	Feed stored outdoors or so as not to minimise odour or other problems.	

19. Water Monitoring for Intensive Culture	Level 1	Level 2	Level 3
a) Capacity to monitor water quality.	Provisions of high quality water quality meters or test kits to monitor DO, Temperature, ammonia, salinity and pH.	No provisions for regular monitoring.	

20. Organic Waste Management (eg. mortalities, processing waste and other waste)	Level 1	Level 2	Level 3
a) Temporary storage of organic waste.	•Daily disposal; or •Held prior to disposal so no odour generated (eg. frozen or chilled)	Held in sealed or covered containers prior to intermittent disposal.	No specific arrangements.
b) Disposal of organic waste on-site or off-site.	•Disposed at an approved off-site recycling, composting or landfill facility; or •Buried (with lime) or composted in an area which is > 100m from a waterway and where the groundwater is > 3m and the soil has low permeability.	Buried (with lime) or composted in an area which is < 100m from a waterway or where the groundwater is < 3m or the soil is not low permeability.	No specific arrangements.
c) Disposal of stock in the event of a mass mortality, on-site or off-site.	Arrangements in place for disposal at an approved off-site recycling or landfill facility.	Buried (with lime) or composed in an approved onsite disposal area.	No specific arrangements.

21. Recirculating water management for intensive culture	Level 1	Level 2	Level 3
Storage capacity for discharge water in semi-closed and closed intensive culture systems.	> 2 times the volume of largest growout pond or tank.	1 - 2 times the volume of largest growout pond or tank.	< the volume of largest growout pond or tank.

22. Discharge Water Management for Open (flow through) freshwater (for approved species) or estuarine, marine or saline ground water systems	Level 1	Level 2	Level 3
a) POEO Act Licence	POEO Act licence required (oysters exempt).	POEO Act licence required (oysters exempt).	
b) In stream water quality objectives.	In stream water quality objectives met.	In stream water quality objectives not met. Mitigation measures to meet WQOs required.	
c) Discharge water treatment.	Discharge water screened to avoid escapement of stock and a water treatment system.	Discharge water screened to avoid escapement of stock and no treatment.	
d) Daily Discharge limits for species approved for freshwater open systems eg. salmonids.	Upland Rivers • Turbidity 25NTU • Total nitrogen 0.25mg/L • Total phospherous 0.015mg/L Lowland Rivers (inland) • Turbidity 50NTU • Total nitrogen 0.5mg/L • Total phospherous 0.05mg/L Lowland Rivers (coastal) • Turbidity 50NTU • Total nitrogen 0.35mg/L • Total phospherous 0.01mg/L Freshwater lakes and reservoirs • Turbidity 20NTU • Total nitrogen 0.35mg/L • Total phospherous 0.01mg/L Estuaries • Turbidity 10NTU • Total nitrogen 0.3mg/L • Total phospherous 0.03mg/L Marine (inshore)	Upland Rivers • Turbidity 25NTU • Total nitrogen 0.25mg/L • Total phospherous 0.015mg/L Lowland Rivers (inland) • Turbidity 50NTU • Total nitrogen 0.5mg/L • Total phospherous 0.05mg/L Lowland Rivers (coastal) • Turbidity 50NTU • Total nitrogen 0.35mg/L • Total phospherous 0.01mg/L Freshwater lakes and reservoirs • Turbidity 20NTU • Total nitrogen 0.35mg/L • Total phospherous 0.01mg/L Estuaries • Turbidity 10NTU • Total nitrogen 0.3mg/L • Total phospherous 0.03mg/L Marine (inshore)	

22. Discharge Water Management for Open (flow through) freshwater (for approved species) or estuarine, marine or saline ground water systems	Level 1	Level 2	Level 3
	• Turbidity 10NTU • Total nitrogen 0.12mg/L • Total phospherous 0.025mg/L	• Turbidity 10NTU • Total nitrogen 0.12mg/L • Total phospherous 0.025mg/L	

3. Additional criteria for pond aquaculture

Tier 1 – Additional specific site evaluation criteria for pond aquaculture

1. Water Supply information for PONDS	Level 1	Level 2	Level 3
Estuarine - Tidal amplitude	Greater than 600mm	Less than 600mm	

Tier 2 – Additional specific site evaluation for pond aquaculture

2. Topography criteria for PONDS	Level 1	Level 2	Level 3
a) Estuarine ponds – slope of land	< 2% slope.	>2% slope.	
b) Freshwater ponds – slope of land	< 5% slope.	>5% slope.	

3. Soils criteria for PONDS	Level 1	Level 2	Level 3
a) Soil Characteristics – Suitability for pond/dam construction.	Clay with mixture of soil/sand and low erosion potential and suitable for dam construction.	Sandy/gravely with erosion potential and/or limited water holding capacity – may need to import most pond clay for lining material or an artificial liner.	
b) Soil Contamination based on SEPP 55 criteria for the area occupied by any pond.	Suitable for residential use or for animal occupation.	Exceed levels safe for animal or residential uses.	

4. Hydrology Issues for PONDS	Level 1	Level 2	Level 3
Potential to affect groundwater below any pond.	No underlying potable or high quality fresh groundwater within 3m of the surface.	Underlying groundwater within 3m of the surface.	

5. Saline Groundwater Pond Design for PONDS	Level 1	Level 2	Level 3
a) Saline groundwater ponds including excess water storage ponds.	Artificial liner with compacted clay underneath and ground water monitoring bores.	Compacted clay and groundwater monitoring bores.	

Tier 3 – Additional specific operational evaluation criteria for ponds

6. Health Management for Intensive Culture for PONDS	Level 1	Level 2	Level 3
a) Period of total farm dryout after every production cycle for prawns.	>6 weeks between crops.	<6 weeks between crops.	
b) Predators management of fingerling or growout ponds.	All fingerling ponds screened/netted, or other management systems not intending harm to predators in place for growout ponds.	Only 'scare' systems (Note: may trigger need for Test of significance if threatened bird species are affected).	

7. Pond Water Management for Intensive Culture for PONDS	Level 1	Level 2	Level 3
a) Supply pipe or channel capacity	Largest growout pond can be filled in < 1 day.	Largest pond can be filled in > 1 days.	
b) Intensive Pond Outlet system	No pumping required to drain a pond completely.	Requires pumping from an internal or external sump to drain pond.	

4. Additional criteria for tank aquaculture

Tier 1 – Additional specific site evaluation criteria for tanks

1. Water Supply Information for TANKS	Level 1	Level 2	Level 3
Estuarine – Tidal amplitude	>300mm	< 300mm	

Tier 2 – Additional specific operational evaluation criteria for tanks

2. Health Management criteria for TANKS	Level 1	Level 2	Level 3
Disinfection of tank aquaculture system.	Systems capable of disinfection and dry-out to break pathogen cycle.	Difficulty in total disinfection and dry-out of facility or no provisions.	

3. Culture water management criteria for TANKS	Level 1	Level 2	Level 3
Semi-closed and closed tank aquaculture systems.	Recirculating aquaculture system with biofiltration, solids filtration (fine, suspended, settleable) oxygen, UV, or ozone, pH control	Recirculating aquaculture system having reduced or non-standard componentary.	

5. Extensive pond aquaculture permissible without consent

Extensive pond aquaculture that is authorised under a Class C or E aquaculture permit that utilises existing on-farm water storages (dams or ponds) and buildings and meets all of the following criteria is permissible without consent from your local council.

It should be noted that only crustacean and mollusc species are permitted in extensive aquaculture under a Class E aquaculture permit.

It is strongly recommended that you discuss with NSW DPIRD as to whether your proposal complies with the requirements of this section before you submit your application.

Locational Criteria	Minimum performance
1. LEP zones	Within rural zone RU1 (Primary Production), RU2 (Rural Landscape), RU3 (Forestry), RU4 (Rural Small Holdings), or RU6 (Transition).
2. Conservation exclusion areas[7]	(1) Must not be carried out on land dedicated or reserved under the *National Parks and Wildlife Act 1974*: (2) Must not be carried out on the following land, except to the extent necessary to gain access to water: a. land declared an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*, or b. vacant Crown land, or c. land within a wetland of international significance declared under the Ramsar Convention on Wetlands.
3. Flood liability	Must be designed or constructed on land so that it will not be inundated by the discharge of a 1:100 ARI (average recurrent interval) flood event.

Operation criteria	Minimum performance
1. Species selection.	Species of fish or marine vegetation cultivated or kept must be consistent with the relevant Aquaculture Industry Development Plan (AIDP).
2. Pond design.	1. Must not require the construction of new ponds, water storages, dams or buildings. 2. Must not be located on permanent watercourses, creeks, billabongs or isolated outreaches of creeks or rivers. 3. Must be capable of preventing the escape of stock into natural water bodies or wetlands.
3. Culture water.	Must use freshwater.

[7] Nothing in in subclause (2) affects any requirement under an Act relating to land specified in subclause (2) to obtain a licence or other authority under that Act for development of the land.

6. The farm

Please attach several photographs to illustrate the whole area(s) to be developed.

a) Are the aquaculture facilities:

☐ Constructed ponds ☐ Tanks ☐ Raceways ☐ Farm dams

☐ Other (please specify): _____

Please provide brief details and plan, if applicable, of the following facilities:

b) Grow-out ponds (including dimensions, volume, dike slope and sump design for harvest and include a diagram)

c) Grow out tanks (including dimensions of tanks and buildings)

d) Other grow out facilities (including dimensions and volume)

e) Drainage/overflow mechanisms

f) Aeration facilities (emergency and/or supplementary)

g) Pumping facilities (number, KW, output)

h) Feeding equipment

i) Harvesting equipment

j) Purging facilities

k) Emergency electricity generation

7. Water sources and systems

a) What is the major water source for the project?

☐ Rain-fed catchment (harvestable right) ☐ Pumping from aquifer (bore)

☐ Pumping from surface water supply (river, estuary) ☐ Irrigation scheme

☐ Other (please specify): _____

Note: Have you consulted the NSW Office of Water website www.waternsw.com.au/customer-service/water-licensing/basic-water-rights/harvestable-rights-dams/maximum-harvestable-right-calculator to check your permitted harvestable right?

Water NSW holds important information relating to water licence and approval requirements under the *Water Management Act 2000* and *Water Act 1912*, as per Table 8 of the Strategy.

Please contact Water NSW before submitting your application to find out your requirements with regards to:

- Water access licence approval (www.waternsw.com.au/customer-services/water-licensing/licences)
- Water supply works approval and Water use approval (www.waternsw.com.au/customer-services/water-licensing/approvals)

b) Describe methods for managing the major water supplies. Please include size of pump lines and water storage capacity (other than culture facilities).

c) Does each pond/tank/raceway have an independent water supply and drainage system?

☐ Yes ☐ No

If yes provide details including an attached plan

d) Can ponds/tanks/raceways or other grow-out facilities be gravity drained completely to dry bottom?

☐ Yes ☐ No

Please explain the method and estimated time to drain

e) What is the total water surface production area? Water Surface Production Area (WSPA) = the total water area that will be used for aquaculture production (all ponds/dams/tanks/raceways), including areas that may be fallow at times, but not including any water storage or effluent storage areas.. Please attach plans showing dimensions of all ponds/tanks/raceways or other facilities

_____M^2

f) If culture water is to be recirculated, describe methods of:

Recirculation

Biological and mechanical filtration

Expected exchange rates

8. Containment of stock, disease, pollution and prevention of predators

a) Describe predators (e.g., cormorants, water rats, and wild fish) likely to occur in the area and how you propose to manage them.

b) How will you prevent farmed fish escaping? Give details of screens (material, aperture, size), barriers and methods to prevent escape during heavy rain for all of the facilities.

c) What feeds will you be using to grow your fish

☐ Live feeds ☐ Frozen feeds ☐ Commercially prepared pellet feeds

☐ Other feeds. Please provide details: _____

If using live or frozen feeds please provide details of the proposed source of the feeds:

9. Environmental effects

a) Will the project involve:

Discharge of effluent to public water land ☐ Yes ☐ No

Discharge of effluent for use in irrigation (indicate on plan) ☐ Yes ☐ No

Has an EIS or an REF been prepared for the DA? ☐ Yes ☐ No

If you answered 'yes' to any of these effects, please give details and provide a copy.

b) Will the project involve alteration, clearing or other harmful effects to:

Wetlands (e.g., mangroves, salt marshes, freshwater swamps ☐ Yes ☐ No

Seagrass beds ☐ Yes ☐ No

Creeks or rivers (including intermittent streams) e.g., damming, alteration of flow

☐ Yes ☐ No

Trees, shrubs, bush along watercourses ☐ Yes ☐ No

Major native faunal habitats ☐ Yes ☐ No

Terrestrial vegetation ☐ Yes ☐ No

Nearby residences or developments e.g. through noise ☐ Yes ☐ No

If you answered 'yes' to any of these effects, please give details

c) Are there rare or endangered plants on the site? ☐ Yes ☐ No

d) Are there rare or endangered animals on the site? ☐ Yes ☐ No

What steps have been taken to establish this? (enquire at Office of Environment & Heritage)

If present, what is being done to conserve them?

e) Are there traditional aboriginal sites on the land? ☐ Yes ☐ No

What steps have been taken to establish this? (enquire at Office of Environment & Heritage)

If present, what is being done to conserve them?
