

## DELEGATED REPORT

TO: SENIOR PLANNER

FROM: PLANNING OFFICER

FILE: OPW/17/0002

DATE: 14 August 2017

## APPLICATION DETAILS

APPLICATION		PREMISES	
APPLICANT	JPK Farming Pty Ltd	ADDRESS	110 Horse Creek Road, Mutchilba
DATE LODGED	4 August 2017	RPD	Lot 3 on RP723067
TYPE OF APPROVAL	Development Permit		
PROPOSED DEVELOPMENT	Operational Works - Earthworks (Water Storage Dam)		
FILE NO	OPW/17/0002	AREA	59.388 hectares
LODGED BY	JPK Farming Pty Ltd	OWNER	DBC RSA Holdings Pty Ltd
PLANNING SCHEME	Mareeba Shire Council Planning Scheme - July 2016		
ZONE	Rural		
LEVEL OF ASSESSMENT	Code assessment		
SUBMISSIONS	N/A - Code assessment only		

**ATTACHMENTS:**

1. Proposal Plan/s
2. Letter from PDR Engineers dated 19 May 2017

## THE SITE

The subject site is situated at 110 Horse Creek Road, Mutchilba and is described as Lot 3 on RP723067. The site has an area of 59.388 hectares and is zoned *Rural* under the Mareeba Shire Council Planning Scheme - July 2016.

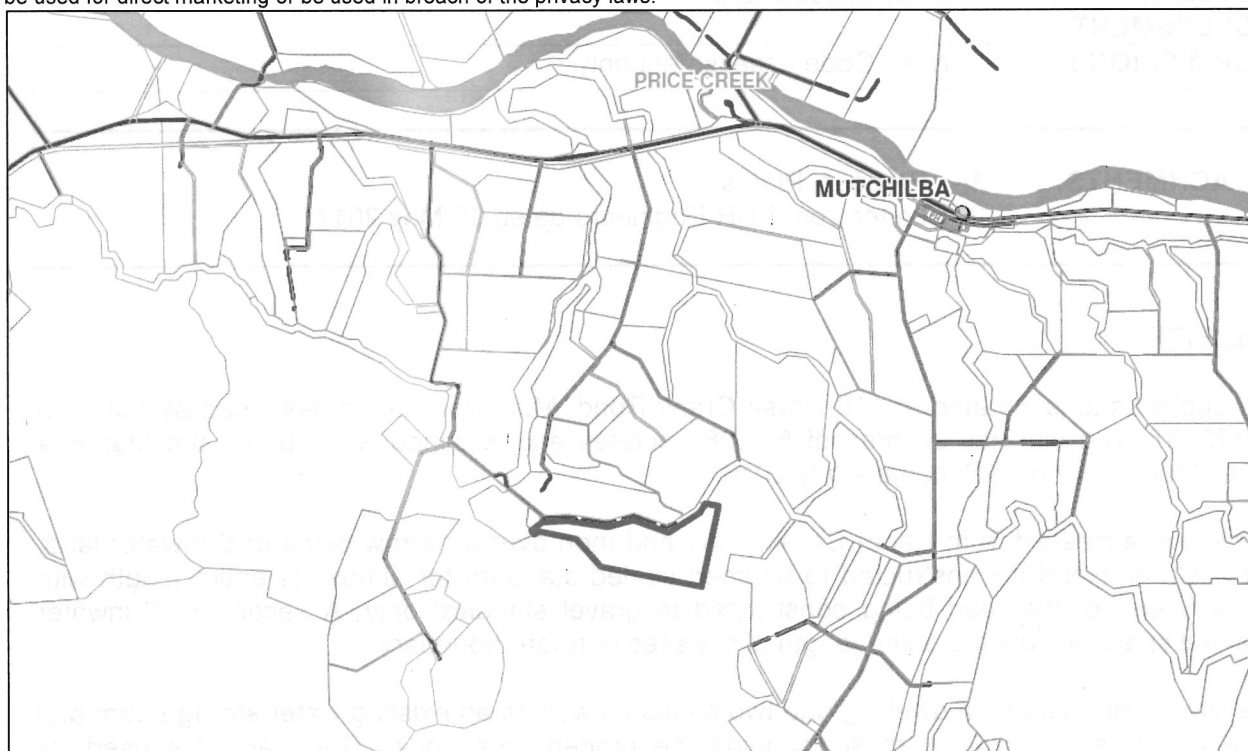
The site is accessed from Horse Creek Road and then over a narrow piece of Sunwater land. Horse Creek Road is constructed to bitumen sealed standard for almost its entire length with the very end of the road being constructed to gravel standard only. A section of Sunwater Channel spans almost the entire length of the sites northern boundary.

The site is improved by a dwelling and two sheds as well as an existing water storage dam and large fruit tree orchard. Lots surrounding the property are zoned Rural and are used for cropping and livestock grazing.



**Map Disclaimer:**

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## PREVIOUS APPLICATIONS & APPROVALS

Nil

## DESCRIPTION OF PROPOSED DEVELOPMENT

The application seeks a Development Permit for Operational Works - Earthworks (Water Storage Dam) in accordance with the plans shown in **Attachment 1**.

The proposed water storage dam will involve the construction of large dam wall in the north-east corner of the site across an existing seasonal watercourse which is a tributary to Horse Creek. The dam wall will have an approximate length of 270 metres and at its highest point (bottom of watercourse) will be approximately 7.25 metres high.

The estimated holding capacity of the dam is 70 mega litres.

A spillway will be constructed on the western side of the dam wall and will discharge excess water into the existing gully downstream of the wall.

PDR Engineers have reviewed and certified the dam wall design subject to particular amendments to the dam wall design (see **Attachment 2**).

## ASSESSMENT

### Relevant Development Codes

The following Development Codes are considered to be applicable to the assessment of the application:

- 6.2.9 Rural zone code
- 8.2.4 Environmental significance overlay code
- 9.4.5 Works, services and infrastructure code

The application did not include a planning report and assessment against the planning scheme. An officer assessment has found that the application satisfies the relevant acceptable solutions (or probable solutions/performance criteria where no acceptable solution applies) of the relevant codes set out below.

Relevant Codes	Comments
Rural zone code	The application complies with the relevant acceptable/performance outcomes contained within the code.
Environmental significance overlay code	The application complies with the relevant acceptable outcomes contained within the development codes with the exception of AO3.1, AO3.2 and AO4.1. Despite this non-compliance, the proposed development is considered to comply with higher order performance outcomes PO3 and PO4.  Refer to Environmental significance overlay code below.
Works, services and infrastructure code	The application complies with the relevant acceptable outcomes contained within the development code with the exception of AO7.2, AO7.3, AO7.6 and AO7.7. Despite this non-compliance, the proposed development is considered to

	<p>comply with higher order performance outcome PO7. Refer to Works, services and infrastructure code below.</p>
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## 6.2.9 Rural zone code

### 6.2.9.1 Application

- (1) This code applies to assessing development where:
- (a) located in the Rural zone; and
  - (b) it is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

### 6.2.9.2 Purpose

- (1) The purpose of the Rural zone code is to:
- (a) provide for rural uses including cropping, intensive horticulture, intensive animal industries, animal husbandry, animal keeping and other primary production activities;
  - (b) provide opportunities for non-rural uses that are compatible with agriculture, the environmental features, and landscape character of the rural area where the uses do not compromise the long-term use of the land for rural purposes;
  - (c) protect or manage significant natural resources and processes to maintain the capacity for primary production.
- (2) Mareeba Shire Council's purpose of the Rural zone code is to recognise the importance of primary production to the economy of the region and to maintain and strengthen the range of primary industries which contribute to the rural economy.

The purpose of the Rural zone code is to:

- (a) recognise the diversity of rural uses that exists throughout the region;
  - (b) protect the rural character of the region;
  - (c) provide facilities for visitors and tourists that are accessible and offer a unique experience;
  - (d) protect the infrastructure of the Mareeba-Dimbulah Irrigation Scheme Area from development which may compromise long term use for primary production;
  - (e) maintain distinct boundaries between the rural areas and the villages, towns and urban areas of the region;
  - (f) provide for a range of uses, compatible and associated with rural or ecological values including recreational pursuits and tourist activities;
  - (g) prevent adverse impacts of development on ecological values;
  - (h) preserve land in large holdings; and
  - (i) facilitate the protection of strategic corridors across the landscape which link remnant areas of intact habitat and transport corridors.
- (3) The purpose of the Rural zone code will be achieved through the following overall outcomes:
- (a) Areas for use for primary production are conserved and fragmentation below economically viable lot sizes is avoided;
  - (b) The establishment of a wide range of rural pursuits is facilitated, including cropping, intensive horticulture, forestry, intensive animal industries, animal husbandry and animal keeping and other compatible primary production uses;
  - (c) The establishment of extractive industries, mining and associated activities and alternative forms of energy generation is appropriate where environmental impacts and land use conflicts are minimised;
  - (d) Uses that require isolation from urban areas as a consequence of their impacts such as noise or odour may be appropriate where land use conflicts are minimised;
  - (e) Development is reflective of and responsive to the environmental constraints of the land;
  - (f) Residential and other development is appropriate only where directly associated with the rural nature of the zone;
  - (g) Low-impact tourism and recreation activities do not compromise the long-term use of the land for rural purposes;
  - (h) The viability of both existing and future rural uses and activities is protected from the intrusion of incompatible uses;



- (i) Visual impacts of clearing, building, materials, access ways and other aspects of development are minimised or appropriately managed;
- (j) Adverse impacts of development both on-site and from adjoining areas are avoided and any impacts are minimised through location, design, operation and management; and
- (k) Natural features such as creeks, gullies, waterways, wetlands and bushland are retained, managed, enhanced and separated from adjacent development.

**6.2.9.3 Criteria for assessment**

**Table 6.2.9.3—Rural zone code - For self-assessable and assessable development**

Performance outcomes	Acceptable outcomes	Complies	Comments
<b>For self-assessable and assessable development</b>			
<b>Height</b>			
<b>PO1</b> Building height takes into consideration and respects the following: <ul style="list-style-type: none"> <li>(a) the height of existing buildings on adjoining premises;</li> <li>(b) the development potential, with respect to height, on adjoining premises;</li> <li>(c) the height of buildings in the vicinity of the site;</li> <li>(d) access to sunlight and daylight for the site and adjoining sites;</li> <li>(e) privacy and overlooking; and</li> <li>(f) site area and street frontage length.</li> </ul>	<b>AO1.1</b> Development, other than buildings used for rural activities, has a maximum building height of: <ul style="list-style-type: none"> <li>(a) 8.5 metres; and</li> <li>(b) 2 storeys above ground level.</li> </ul>	n/a	
	<b>AO1.2</b> Buildings and structures associated with a rural activity including machinery, equipment, packing or storage buildings do not exceed 10 metres in height.	n/a	
<b>Siting, where not involving a Dwelling house</b>			
Note—Where for Dwelling house, the setbacks of the Queensland Development Code apply.			
<b>PO2</b> Development is sited in a manner that considers and respects: <ul style="list-style-type: none"> <li>(a) the siting and use of adjoining premises;</li> <li>(b) access to sunlight and daylight for the site and adjoining sites;</li> <li>(c) privacy and overlooking;</li> <li>(d) air circulation and access to natural breezes;</li> <li>(e) appearance of building bulk; and</li> <li>(f) relationship with road corridors.</li> </ul>	<b>AO2.1</b> Buildings and structures include a minimum setback of: <ul style="list-style-type: none"> <li>(a) 40 metres from a frontage to a State-controlled road; and</li> <li>(b) 10 metres from a boundary to an adjoining lot.</li> </ul>	✓	Complies.
	<b>AO2.2</b> Buildings and structures, where for a Roadside stall, include a minimum setback of 0 metres from a frontage to a road that is not a State-controlled road.	n/a	
	<b>AO2.3</b> Buildings and structures,	✓	

Performance outcomes	Acceptable outcomes	Complies	Comments
	expect where a Roadside stall, include a minimum setback of: (a) 10 metres from a frontage to a sealed road that is not a State-controlled road; and (b) 100 metres from a frontage to any other road that is not a State-controlled road;		
<b>Accommodation density</b>			
<b>PO3</b> The density of Accommodation activities: (a) respects the nature and density of surrounding land use; (b) is complementary and subordinate to the rural and natural landscape values of the area; and (c) is commensurate to the scale and frontage of the site.	<b>AO3.1</b> Residential density does not exceed one dwelling house per lot.  <b>AO3.2</b> Residential density does not exceed two dwellings per lot and development is for: (a) a secondary dwelling; or (b) Caretaker's accommodation and includes building work or minor building work with a maximum gross floor area of 100m <sup>2</sup> ; or (c) Rural worker's accommodation.	n/a	
		n/a	
<b>For assessable development</b>			
<b>Site cover</b>			
<b>PO4</b> Buildings and structures occupy the site in a manner that: (a) makes efficient use of land; (b) is consistent with the bulk and scale of buildings in the surrounding area; and (c) appropriately balances built and natural features.	<b>AO4</b> No acceptable outcome is provided.	✓	The proposed development is for a water storage dam which is sited in a logical location on site and will not impact on the sites existing agricultural activity.

Performance outcomes	Acceptable outcomes	Complies	Comments
<p><b>PO5</b> Development complements and integrates with the established built character of the Rural zone, having regard to:</p> <ul style="list-style-type: none"> <li>(a) roof form and pitch;</li> <li>(b) eaves and awnings;</li> <li>(c) building materials, colours and textures; and</li> <li>(d) window and door size and location.</li> </ul>	<p><b>AO5</b> No acceptable outcome is provided.</p>	✓	Complies where relevant.
<b>Amenity</b>			
<p><b>PO6</b> Development must not detract from the amenity of the local area, having regard to:</p> <ul style="list-style-type: none"> <li>(a) noise;</li> <li>(b) hours of operation;</li> <li>(c) traffic;</li> <li>(d) advertising devices;</li> <li>(e) visual amenity;</li> <li>(f) privacy;</li> <li>(g) lighting;</li> <li>(h) odour; and</li> <li>(i) emissions.</li> </ul>	<p><b>AO6</b> No acceptable outcome is provided.</p>	✓	Complies.
<p><b>PO7</b> Development must take into account and seek to ameliorate any existing negative environmental impacts, having regard to:</p> <ul style="list-style-type: none"> <li>(a) noise;</li> <li>(b) hours of operation;</li> <li>(c) traffic;</li> <li>(d) advertising devices;</li> <li>(e) visual amenity;</li> <li>(f) privacy;</li> <li>(g) lighting;</li> <li>(h) odour; and</li> <li>(i) emissions.</li> </ul>	<p><b>AO7</b> No acceptable outcome is provided.</p>	✓	Complies where relevant.

## 8.2.4 Environmental significance overlay code

### 8.2.4.1 Application

- (1) This code applies to assessing development where:
  - (a) land the subject of development is affected by a constraint category identified on the **Environmental significance overlay maps (OM-004a-z)**; and
  - (b) it is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

Note—Biodiversity and Water quality are appropriately reflected in Overlay Map 4 and is required to be mapped by State Government in response to Environment and Heritage State Interests.

### 8.2.4.2 Purpose

- (1) The purpose of the Environmental significance overlay code is to identify and protect matters of environmental significance, which include matters of state environmental significance (MSES) as defined under the state planning policy.

The Environmental significance overlay code ensures that:

- (a) waterways and high ecological significance wetlands are protected and enhanced to maintain ecosystem services and hydrological processes and provide aquatic habitat for flora and fauna; and
  - (b) the environmental values of regulated vegetation, wildlife habitat, protected areas and legally secured offset areas are protected and managed.
- (2) The purpose of the code will be achieved through the following overall outcomes:
    - (a) the biodiversity values, ecosystem services and climate change resilience of areas of environmental significance are protected, managed and enhanced;
    - (b) the biodiversity values of protected areas and legally secured offset areas are protected from development unless overriding community need is demonstrated;
    - (c) development is located, designed and managed to minimise the edge effects of development on areas of regulated vegetation and wildlife habitat;
    - (d) areas of regulated vegetation and wildlife habitat are managed to minimise biodiversity losses;
    - (e) development maintains, protects and enhances a regional network of vegetated corridors that assist in wildlife movement and contribute to the maintenance of habitat and biological diversity;
    - (f) development is appropriately setback from waterways and high ecological significance wetlands to minimise direct and indirect impacts on water quality and biodiversity; and
    - (g) riparian vegetation and vegetation associated with high ecological significance wetlands is protected and enhanced to improve water quality and natural ecosystem function.

8.2.4.3 Criteria for assessment

Table 8.2.4.3A - Environmental significance overlay code - For self-assessable and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
<b>For self-assessable and assessable development</b>			
<b>Regulated vegetation</b>			
<p><b>PO1</b> Vegetation clearing in areas mapped as 'Regulated vegetation' identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b> is avoided unless:</p> <ul style="list-style-type: none"> <li>(a) it is demonstrated that the area does not support regulated vegetation as mapped;</li> <li>(b) the loss or reduction in regulated vegetation is for community infrastructure and associated access facilities that cannot be avoided;</li> <li>(c) wildlife interconnectivity is maintained or enhanced at a local and regional scale; and</li> <li>(d) the loss or reduction in regulated vegetation is minimised and any residual impacts are offset.</li> </ul> <p>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.</p> <p>Note—Refer to Ecological corridors identified on SFM001-009 in consideration of wildlife connectivity at a regional scale.</p>	<p><b>AO1.1</b> No clearing of native vegetation is undertaken within areas of 'Regulated vegetation' identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b>.</p>	✓	Complies.
<p><b>PO2</b> Development on sites adjacent to areas of 'Regulated vegetation' identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b> protects the environmental significance of regulated vegetation and:</p> <ul style="list-style-type: none"> <li>(a) does not interrupt, interfere, alter or otherwise impact on underlying natural</li> </ul>	<p><b>AO2</b> Development (excluding roads, earthworks, drainage infrastructure and underground infrastructure) is not located within 20 metres of 'Regulated vegetation' areas identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b>.</p>	✓	Complies.



Performance outcomes	Acceptable outcomes	Complies	Comments
<p>ecosystem processes such as water quality, hydrology, geomorphology and biophysical processes;</p> <p>(b) does not negatively impact the movement of wildlife at a local or regional scale; and</p> <p>(c) avoids noise, light, vibration or other edge affects, including weed and pest incursion on identified environmental values.</p> <p>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.</p> <p>Note—Refer to Ecological corridors identified on SFM001-009 in consideration of wildlife connectivity at a regional scale.</p>			
<b>Regulated vegetation intersecting a watercourse</b>			
<p><b>PO3</b> Vegetation clearing in areas mapped as 'Regulated vegetation intersecting a watercourse', identified as 'Waterway' and 'Waterway buffer' on the <b>Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b> is avoided unless wildlife interconnectivity between habitats is maintained or enhanced at a local and regional scale, to the extent that migration or normal movement of significant species between habitats or normal gene flow between populations is not inhibited.</p> <p>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.</p> <p>Note—Refer to Ecological corridors identified on SFM001-009 in consideration of wildlife</p>	<p><b>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b></p> <p><b>AO3.1</b> A minimum setback in accordance with <b>Table 8.2.4.3B</b> is provided between development and the top of the high bank of a 'Waterway' identified on the <b>Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b>.</p>	<p>✓ Complies with Performance Outcome where relevant.</p>	<p>The waterway (subject to the dam works) is only a minor seasonal waterway and is not recognised as a 'watercourse' under the <i>Water Act 2000</i>.</p> <p>Clearing of vegetation is occurring within the waterway buffer, however is not likely to detrimentally impact on wildlife movement on a local or regional scale. Wildlife movement is somewhat already hindered as a result of the Sunwater channel which spans the entire northern boundary of the site.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
connectivity at a regional scale.	<p><b>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b></p> <p><b>AO3.2</b> No clearing of native vegetation is undertaken within the minimum setback identified at <b>AO3.1</b>.</p>	<p>✓ Complies with performance outcome</p>	As above.
<b>Waterways and wetlands</b>			
<p><b>PO4</b> 'High ecological significance wetlands' identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b> and 'Waterways' on <b>Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b> and are protected by:</p> <p>(a) maintaining adequate separation distances between waterways/wetlands and development;</p> <p>(b) maintaining and enhancing aquatic and terrestrial habitat including vegetated corridors to allow for native fauna (terrestrial and aquatic) movement;</p> <p>(c) maintaining waterway bank stability by minimising bank erosion and slumping;</p> <p>(d) maintaining water quality by providing buffers to allow filtering of sediments, nutrients and other pollutants; and</p> <p>(e) retaining and improving existing riparian</p>	<p><b>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b></p> <p><b>AO4.1</b> A minimum setback in accordance with <b>Table 8.2.4.3B</b> is provided between development and the top of the high bank of a 'Waterway' identified on the <b>Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b>.</p> <p><b>Where within a 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o)</b></p> <p><b>AO4.2</b> A minimum buffer of 200 metres is provided between development and the edge of a 'High ecological significance wetland' identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b>.</p>	<p>✓ Complies with performance outcome.</p> <p>n/a</p>	<p>The waterway (subject to the dam works) is only a minor seasonal waterway and is not recognised as a 'watercourse' under the <i>Water Act 2000</i>. The development will not conflict with PO4.</p> <p>Not applicable - The subject site is not mapped as containing a high ecological significance wetland buffer.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>vegetation and existing vegetation associated with a wetland.</p> <p>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.</p>	<p><b>Where within a ‘Waterway buffer’ on Environmental Significance - Waterway Overlay Maps (OM-004p-z) or ‘High ecological significance wetland buffer’ on Environmental Significance Overlay Maps (OM-004a-o) AO4.3</b></p> <p>No stormwater is discharged to a ‘Waterway’ on <b>Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b> or ‘High ecological significance wetland’ identified on the <b>Environmental Significance Overlay Maps (OM-004a-o)</b>.</p> <p>Note— An alternative outcome is required to demonstrate that the ecological impacts of stormwater discharge to a ‘Waterway’ or ‘High ecological significance wetland’ are mitigated in accordance with PO3 through appropriate stormwater management / treatment (where possible).</p>	<p>n/a</p>	<p>Not applicable - the proposed water storage dam will collect stormwater travelling along the gully.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p><b>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z) or 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o) AO4.4</b></p> <p>No wastewater is discharged to a 'Waterway' on <b>Environmental Significance - Waterway Overlay Maps (OM-004p-z)</b> or 'High ecological significance wetland' identified on the <b>Environmental Significance Overlay Map (OM-004a-z)</b>.</p> <p>Note— A alternative outcome is required to demonstrate that the ecological impacts of wastewater discharge to a 'Waterway' or 'High ecological significance wetland' are mitigated in accordance with PO3 through appropriate wastewater management / treatment (where possible).</p>	n/a	Not applicable - the proposed water storage dam will collect stormwater travelling along the gully.

**Table 8.2.4.3B - Setback and buffer distances from waterways**

Stream order	Setback and buffer from waterways
1	10 metres from top of high bank
2-4	25 metres from top of high bank
5 or more	50 metres from top of high bank

Note—The steam order of a 'waterway' is to be determined on a case by case basis.

**9.4.5 Works, services and infrastructure code**

**9.4.5.1 Application**

- (1) This code applies to assessing development where it is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

**9.4.5.2 Purpose**

- (1) The purpose of the Works, services and infrastructure code is to ensure that all development is appropriately serviced by physical infrastructure, public utilities and services and that work associated with development is carried out in a manner that does not adversely impact on the surrounding area.
- (2) The purpose of the code will be achieved through the following overall outcomes:
  - (a) Development provides an adequate, safe and reliable supply of potable, fire-fighting and general use water in accordance with relevant standards;
  - (b) Development provides for the treatment and disposal of wastewater and ensures there are no adverse impacts on water quality, public health, local amenity or ecological processes;
  - (c) Development provides for the disposal of stormwater and ensures that there are no adverse impacts on water quality or ecological processes;
  - (d) Development connects to the road network and any adjoining public transport, pedestrian and cycle networks while ensuring no adverse impacts on the safe, convenient and efficient operation of these networks;
  - (e) Development provides electricity and telecommunications services that meet its desired requirements;
  - (f) Development is connected to a nearby electricity network with adequate capacity without significant environment, social or amenity impact;
  - (g) Development does not affect the efficient functioning of public utility mains, services or installations;
  - (h) Infrastructure dedicated to Council is cost effective over its life cycle;
  - (i) Work associated with development does not cause adverse impacts on the surrounding area; and
  - (j) Development prevents the spread of weeds, seeds or other pests.

**9.4.5.3 Criteria for assessment**

**Table 9.4.5.3 - Works, services and infrastructure code – For self-assessable and assessable development**

Performance outcomes	Acceptable outcomes	Complies	Comments
<b>For self-assessable and assessable development</b>			
<b>Water supply</b>			
<p><b>PO1</b> Each lot has an adequate volume and supply of water that:</p> <ul style="list-style-type: none"> <li>(a) meets the needs of users;</li> <li>(b) is adequate for fire-fighting purposes;</li> <li>(c) ensures the health, safety and convenience of the community; and</li> <li>(d) minimises adverse impacts on the receiving environment.</li> </ul>	<p><b>AO1.1</b> Development is connected to a reticulated water supply system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located:</p> <ul style="list-style-type: none"> <li>(a) in the Conservation zone, Rural zone or Rural residential zone; and</li> <li>(b) outside a reticulated water supply service area.</li> </ul>	n/a	Not applicable - the development is for a water storage dam and does not require a water supply.



Performance outcomes	Acceptable outcomes	Complies	Comments
	<p><b>AO1.2</b> Development, where located outside a reticulated water supply service area and in the Conservation zone, Rural zone or Rural residential zone is provided with:</p> <p>(a) a bore or bores are provided in accordance with the Design Guidelines set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; or</p> <p>(b) on-site water storage tank/s:</p> <p>(i) with a minimum capacity of 90,000L;</p> <p>(ii) fitted with a 50mm ball valve with a camlock fitting; and</p> <p>(iii) which are installed and connected prior to the occupation or use of the development.</p>	n/a	See above.
<b>Wastewater disposal</b>			
<p><b>PO2</b> Each lot provides for the treatment and disposal of effluent and other waste water that:</p> <p>(a) meets the needs of users;</p> <p>(b) is adequate for fire-fighting purposes;</p> <p>(c) ensures the health, safety and convenience of the community; and</p> <p>(d) minimises adverse impacts on the receiving environment.</p>	<p><b>AO2.1</b> Development is connected to a reticulated sewerage system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located:</p> <p>(a) in the Conservation zone, Rural zone or Rural residential zone; and</p> <p>(b) outside a reticulated sewerage service area.</p>	n/a	The proposed development is for a water storage dam and does not require wastewater disposal.
	<p><b>AO2.2</b> An effluent disposal system is provided in accordance with ASNZ 1547 On-Site Domestic Wastewater Management (as amended) where development is located:</p> <p>(a) in the Conservation zone, Rural zone or Rural residential zone; and</p> <p>(b) outside a reticulated sewerage service area.</p>	n/a	See above.

Stormwater infrastructure			
<p><b>PO3</b> Stormwater infrastructure is designed and constructed to collect and convey the design storm event to a lawful point of discharge in a manner that mitigates impacts on life and property.</p>	<p><b>AO3.1</b> Where located within a Priority infrastructure area or where stormwater infrastructure is available, development is connected to Council's stormwater network in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.</p>	<p>n/a</p>	<p>The proposed development is for a water storage dam and does not require a stormwater connection.</p>
	<p><b>AO3.2</b> On-site drainage systems are constructed: (a) to convey stormwater from the premises to a lawful point of discharge; and (b) in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.</p>	<p>✓</p>	<p>The proposed dam will include a spillway which will direct excess water downstream of the dam through the existing gully.</p>
Electricity supply			
<p><b>PO4</b> Each lot is provided with an adequate supply of electricity</p>	<p><b>AO4</b> The premises: (a) is connected to the electricity supply network; or (b) has arranged a connection to the transmission grid; or (c) where not connected to the network, an independent energy system with sufficient capacity to service the development (at near average energy demands associated with the use) may be provided as an alternative to reticulated electricity where: (i) it is approved by the relevant regulatory authority; and (ii) it can be demonstrated that no air or noise emissions; and (iii) it can be demonstrated that no adverse impact on visual amenity will occur.</p>	<p>n/a</p>	

Telecommunications infrastructure			
<p><b>P05</b> Each lot is provided with an adequate supply of telecommunication infrastructure</p>	<p><b>A05</b> Development is provided with a connection to the national broadband network or telecommunication services.</p>	<p>n/a</p>	
Existing public utility services			
<p><b>P06</b> Development and associated works do not affect the efficient functioning of public utility mains, services or installations.</p>	<p><b>A06</b> Public utility mains, services are relocated, altered or repaired in association with the works so that they continue to function and satisfy the relevant Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.</p>	<p>n/a</p>	
Excavation or filling			
<p><b>P07</b> Excavation or filling must not have an adverse impact on the:</p> <ul style="list-style-type: none"> <li>(a) streetscape;</li> <li>(b) scenic amenity;</li> <li>(c) environmental values;</li> <li>(d) slope stability;</li> <li>(e) accessibility; or</li> <li>(f) privacy of adjoining premises.</li> </ul>	<p><b>A07.1</b> Excavation or filling does not occur within 1.5 metres of any site boundary.</p>	<p>✓</p>	<p>Complies.</p>
	<p><b>A07.2</b> Excavation or filling at any point on a lot is to be no greater than 1.5 metres above or below natural ground level.</p>	<p>✓ Complies with performance outcome</p>	<p>The proposed water storage dam which will involve the construction of a dam wall approx. 7 metres high is not likely to have a visual impact on surrounding properties given the rural locality and separation from surrounding dwellings. The dam wall has been designed with slope stability in mind and has preliminary endorsement from an RPEQ.</p>
	<p><b>A07.3</b> Earthworks batters:</p> <ul style="list-style-type: none"> <li>(a) are no greater than 1.5 metres in height;</li> <li>(b) are stepped with a minimum width 2 metre berm;</li> <li>(c) do not exceed a maximum of two batters and two berms (not greater than 3.6</li> </ul>	<p>✓ Complies with performance outcome.</p>	<p>The dam wall has been designed with slope stability in mind and has preliminary endorsement from an RPEQ.</p>

	metres in total height) on any one lot; (d) have a slope no greater than 1 in 4; and (e) are retained.		
	<b>AO7.4</b> Soil used for filling or spoil from excavation is not stockpiled in locations that can be viewed from: (a) adjoining premises; or (b) a road frontage, for a period exceeding 1 month from the commencement of the filling or excavation.	✓	Can be conditioned to comply.
	<b>AO7.5</b> All batters and berms to be constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	✓	Can be conditioned to comply.
	<b>AO7.6</b> Retaining walls have a maximum height of 1.5 metres and are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	✓ Complies with performance outcome.	The dam wall has been designed with slope stability in mind and has preliminary endorsement from an RPEQ.
	<b>AO7.7</b> Excavation or filling at any point on a lot is to include measures that protect trees at the foot or top of cut or fill batters by the use of appropriate retaining methods and sensitive earth removal or placement and in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	✓ Complies with performance outcome.	Existing trees will be cleared from the proposed dam development area. The dam wall has been designed with slope stability in mind and has preliminary endorsement from an RPEQ.
<b>For assessable development</b>			
<b>Transport network</b>			
<b>PO8</b> The development has access to a transport network of adequate standard to provide for the safe and efficient movement of vehicles, pedestrians and cyclists.	<b>AO8.1</b> Vehicle access, crossovers, road geometry, pavement, utilities and landscaping to the frontage/s of the site are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	n/a	

	<p><b>AO8.2</b> Development provides footpath pavement treatments in accordance with Planning Scheme Policy 9 – Footpath Paving.</p>	n/a	
<b>Public infrastructure</b>			
<p><b>PO9</b> The design, construction and provision of any infrastructure that is to be dedicated to Council is cost effective over its life cycle and incorporates provisions to minimise adverse impacts.</p>	<p><b>AO9</b> Development is in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.</p>	n/a	
<b>Stormwater quality</b>			
<p><b>PO10</b> Development has a non-worsening effect on the site and surrounding land and is designed to:</p> <ul style="list-style-type: none"> <li>(a) optimise the interception, retention and removal of waterborne pollutants, prior to the discharge to receiving waters;</li> <li>(b) protect the environmental values of waterbodies affected by the development, including upstream, on-site and downstream waterbodies;</li> <li>(c) achieve specified water quality objectives;</li> <li>(d) minimise flooding;</li> <li>(e) maximise the use of natural channel design principles;</li> <li>(f) maximise community benefit; and</li> <li>(g) minimise risk to public safety.</li> </ul>	<p><b>AO10.1</b> The following reporting is prepared for all Material change of use or Reconfiguring a lot proposals:</p> <ul style="list-style-type: none"> <li>(a) a Stormwater Management Plan and Report that meets or exceeds the standards of design and construction set out in the Queensland Urban Drainage Manual (QUDM) and the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; and</li> <li>(b) an Erosion and Sediment Control Plan that meets or exceeds the Soil Erosion and Sedimentation Control Guidelines (Institute of Engineers Australia), including: <ul style="list-style-type: none"> <li>(i) drainage control;</li> <li>(ii) erosion control;</li> <li>(iii) sediment control; and</li> <li>(iv) water quality outcomes.</li> </ul> </li> </ul>	n/a	
	<p><b>AO10.2</b> For development on land greater than 2,500m<sup>2</sup> or that result in more than 5 lots or more than 5 dwellings or accommodation units, a Stormwater Quality Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) is prepared that demonstrates that the development:</p> <ul style="list-style-type: none"> <li>(a) meets or exceeds the standards of design and</li> </ul>	n/a	



	<p>construction set out in the Urban Stormwater Quality Planning Guideline and the Queensland Water Quality Guideline;</p> <p>(b) is consistent with any local area stormwater water management planning;</p> <p>(c) accounts for development type, construction phase, local climatic conditions and design objectives; and</p> <p>(d) provides for stormwater quality treatment measures reflecting land use constraints, such as soil type, landscape features (including landform), nutrient hazardous areas, acid sulfate soil and rainfall erosivity.</p>		
<p><b>PO11</b> Storage areas for stormwater detention and retention:</p> <p>(a) protect or enhance the environmental values of receiving waters;</p> <p>(b) achieve specified water quality objectives;</p> <p>(c) where possible, provide for recreational use;</p> <p>(d) maximise community benefit; and</p> <p>(e) minimise risk to public safety.</p>	<p><b>AO11</b> No acceptable outcome is provided.</p>	n/a	
<b>Excavation or filling</b>			
<p><b>PO12</b> Traffic generated by filling or excavation does not impact on the amenity of the surrounding area.</p>	<p><b>AO12.1</b> Haul routes used for transportation of fill to or from the site only use major roads and avoid residential areas.</p>	n/a	Not applicable - The subject site is only accessible via rural roads.
	<p><b>AO12.2</b> Transportation of fill to or from the site does not occur:</p> <p>(a) within peak traffic times; and</p> <p>(b) before 7am or after 6pm Monday to Friday;</p> <p>(c) before 7am or after 1pm Saturdays; and</p> <p>(d) on Sundays or Public Holidays.</p>	✓	Can be conditioned to comply.

<p><b>PO13</b> Air pollutants, dust and sediment particles from excavation or filling, do not cause significant environmental harm or nuisance impacts.</p>	<p><b>AO13.1</b> Dust emissions do not extend beyond the boundary of the site.</p>	✓	Can be conditioned to comply. If dust does extend beyond the boundary it is unlikely to cause nuisance as the closest neighbouring dwelling is approximately 600 metres away.
	<p><b>AO13.2</b> No other air pollutants, including odours, are detectable at the boundary of the site.</p>	✓	Can be conditioned to comply.
	<p><b>AO13.3</b> A management plan for control of dust and air pollutants is prepared and implemented.</p>	✓	Can be conditioned to comply.
<p><b>PO14</b> Access to the premises (including driveways and paths) does not have an adverse impact on: (a) safety; (b) drainage; (c) visual amenity; and (d) privacy of adjoining premises.</p>	<p><b>AO14</b> Access to the premises (including all works associated with the access): (a) must follow as close as possible to the existing contours; (b) be contained within the premises and not the road reserve, and (c) are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.</p>	✓	Can be conditioned to comply.
<b>Weed and pest management</b>			
<p><b>PO15</b> Development prevents the spread of weeds, seeds or other pests into clean areas or away from infested areas.</p>	<p><b>AO15</b> No acceptable outcome is provided.</p>	✓	Can be conditioned to comply.
<b>Contaminated land</b>			
<p><b>PO16</b> Development is located and designed to ensure that users and nearby sensitive land uses are not exposed to unacceptable levels of contaminants</p>	<p><b>AO16</b> Development is located where: (a) soils are not contaminated by pollutants which represent a health or safety risk to users; or (b) contaminated soils are remediated prior to plan sealing, operational works permit, or issuing of building works permit.</p>	✓	Can be conditioned to comply.

<b>Fire services in developments accessed by common private title</b>			
<b>PO17</b> Fire hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently.	<b>AO17.1</b> Fire hydrants are located in accessways or private roads held in common private title at a maximum spacing of: (a) 120 metres for residential development; and (b) 90 metres for any other development.	n/a	
	<b>AO17.2</b> Fire hydrants are located at all intersections of accessways or private roads held in common private title.	n/a	

### FNQROC Regional Development Manual

<b>Section</b>	<b>Assessment</b>
DP1 - Development Principles	N/A
AP1 - Application Procedures	OK
D1 - Road Geometry	N/A
D2 - Site Regrading	OK
D3 - Road Pavements	N/A
D4 - Stormwater Drainage	N/A
D5 - Stormwater Quality Management	N/A
D6 - Water Reticulation	N/A
D7 - Sewerage System	N/A
D8 - Utilities	N/A
D9 - Landscaping	N/A
CP1 - Construction Procedures	OK
S1 - Earthworks Specifications	OK
S2 - Road Pavement Specifications	N/A
S3 - Segmental Paving Specifications	N/A
S4 - Stormwater Drainage Specifications	N/A
S5 - Water Reticulation Specifications	N/A
S6 - Sewerage Reticulation Specifications	N/A
S7 - Concrete Works Specifications	N/A
S8 - Landscaping Specifications	N/A
LG Specific -TRC Requirements	N/A
Standard Drawings	N/A

### REFERRALS

#### Internal Consultation

Development Engineering

**OFFICER'S RECOMMENDATION**

1. That in relation to the following development application:

APPLICATION		PREMISES	
<b>APPLICANT</b>	JPK Farming Pty Ltd	<b>ADDRESS</b>	110 Horse Creek Road, Mutchilba
<b>DATE LODGED</b>	4 August 2017	<b>RPD</b>	Lot 3 on RP723067
<b>TYPE OF APPROVAL</b>	Development Permit		
<b>PROPOSED DEVELOPMENT</b>	Operational Works - Earthworks (Water Storage Dam)		

(A) APPROVED DEVELOPMENT: Development Permit for Operational Works - Earthworks (Water Storage Dam)

(B) APPROVED PLANS:

Plan/Document Number	Plan/Document Title	Prepared by	Dated
-	Proposed Gully Dam on U/T of Horse Creek	North Australian Water Strategies	28/03/2017

(C) ASSESSMENT MANAGER'S CONDITIONS (COUNCIL)

(a) General

- (i) All operational works must be designed and constructed in accordance with the procedures as set out in the FNQROC Development Manual.
- (ii) Development must be carried out substantially in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, and subject to any alterations:
  - found necessary by the Council's Delegated Officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements;
  - to ensure the works comply in all respects with the requirements and procedures of the FNQROC Development Manual and good engineering practice; and
  - to ensure compliance with the following conditions of approval.
- (iii) Council's examination of the documents should not be taken to mean that the documents have been checked in detail and Council takes no responsibility for their accuracy. If during construction, inadequacies of the design are discovered, it is the responsibility of the Principal Consulting Engineer to resubmit amended plans to Council for approval and rectify works accordingly.
- (iv) Note, this approval is for a water storage dam only. The dam is NOT to be used for swimming. If it is to be used for swimming then a separate Development Permit will need to be obtained for building work.

(b) Filling or excavation (excluding access roads) is not permitted within 1.5 metres of any property boundary.

## (c) Hours of Work

- (i) Work involving the operation of construction plant and equipment of any description, shall only be carried out on site during the following times:
- 7.00am to 6.00pm, Monday to Friday;
  - 7.00am to 1.00pm Saturdays;
  - No work is permitted on Sundays or Public Holidays.
- (ii) No variation to the above working hours is allowed unless otherwise agreed in writing by Council.

## (d) Transportation of Soil

- (i) All soil transported to or from the site must be covered to prevent dust or spillage during transport. If soil is tracked or spilt onto the road pavement from works on the subject land, it must be removed no later than at the end of each working day. Sediment must not enter Council's stormwater drainage network.

## (e) Dam Construction

- (i) Dam construction must be undertaken in accordance with design plan prepared by North Australian Water Strategies dated 28 March 2017 and subject to the design amendments listed by PDR Engineers in their letter dated 19 May 2017.
- (ii) Within three (3) months following the completion of construction of dam works, any disturbed areas are grassed to provide a coverage of at least 8m<sup>2</sup> in every 10m<sup>2</sup> to minimise the potential for erosion or dust.
- (iii) At the completion of construction, the applicant/developer is to provide Council with certification from a RPEQ engineer confirming that the dam has been constructed in accordance with the certified design plan and engineering advice listed in (i) above.

## (D) RELEVANT PERIOD

When approval lapses if development not started (s.85)

- Any other development – two (2) years (starting the day the approval takes effect).

## (E) OTHER NECESSARY DEVELOPMENT PERMITS AND/OR COMPLIANCE PERMITS

- Nil

## (F) OTHER NECESSARY DEVELOPMENT PERMITS AND/OR COMPLIANCE PERMITS

- Nil



DECISION BY DELEGATE

DECISION

Having considered the Planning Officer's report detailed above, I approve, as delegate of Council, the application subject to the conditions listed in the report.

Dated the 14<sup>TH</sup> day of AUGUST 2017



**BRIAN MILLARD**  
**SENIOR PLANNER**

MAREEBA SHIRE  
AS DELEGATE OF THE COUNCIL

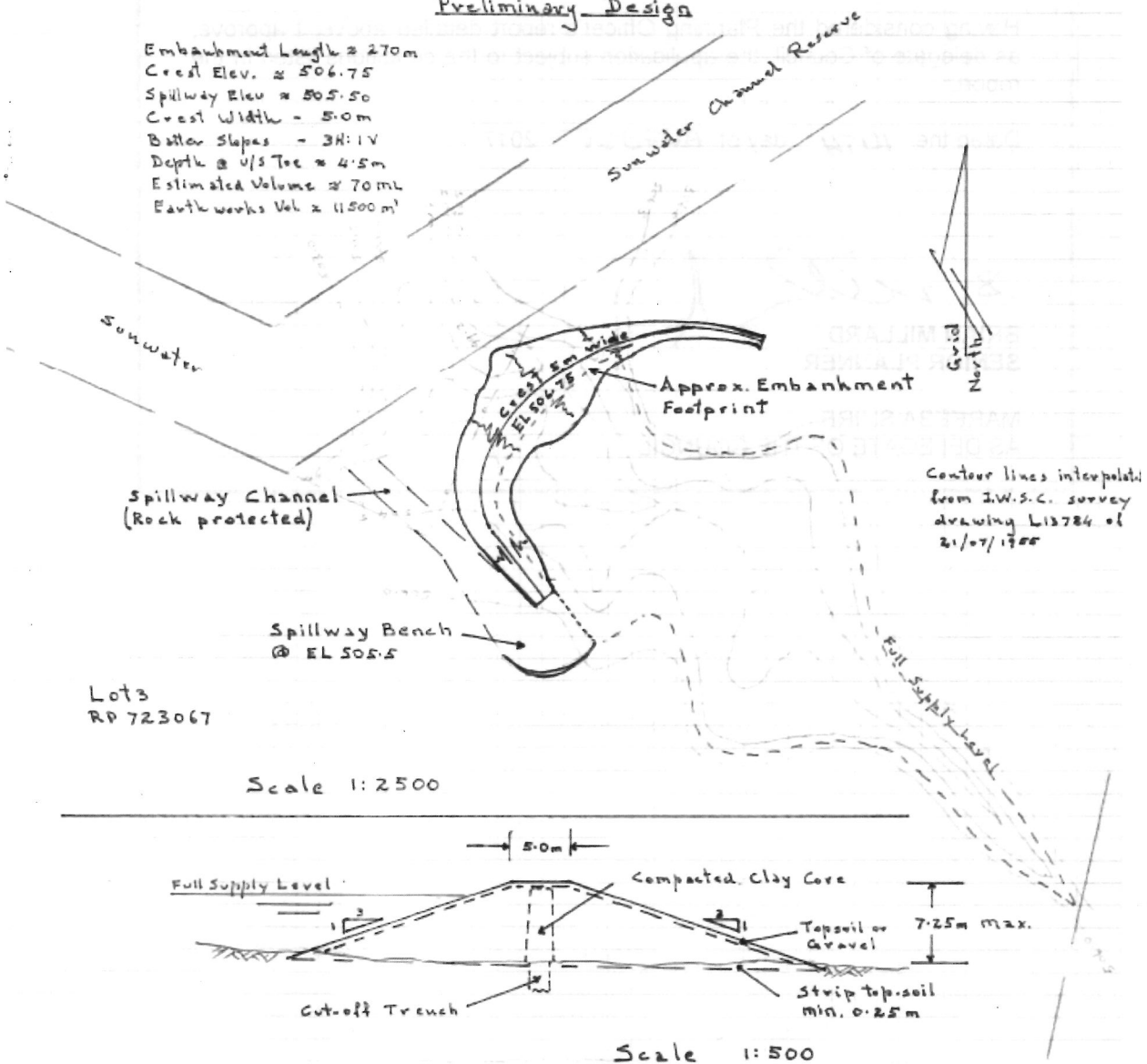
APPROVED PLANS (ECM Doc Set ID 3274686)

Proposed Gully Dam on v/T of Horse Ck.

Lot 3 RP 723067 JPK Farming Pty. Ltd.

Preliminary Design

Embankment Length  $\approx$  270m  
Crest Elev.  $\approx$  506.75  
Spillway Elev.  $\approx$  505.50  
Crest Width - 5.0m  
Bottom Slopes - 3H:1V  
Depth @ v/s Toe  $\approx$  4.5m  
Estimated Volume  $\approx$  70ml  
Earth works Vol  $\approx$  11500m<sup>3</sup>



Lot 3  
RP 723067

Design : JAB

Drawn : JAB

28<sup>th</sup> March '11

*Benjamin*

**NORTH AUSTRALIAN WATER STRATEGIES**

ABN 52 007 200 721

Phone: 07 4092 6720  
Mobile: 0409 8929 33  
Email: jeff.benjamin@bigpond.com

PO Box 1491  
94 Byrnes Street  
MAREEBA QLD 4880

## ATTACHMENT 2



19 May 2017

PDR 17335

Chief Executive Officer,  
Mareeba Shire Council,  
PO Box 154,  
Mareeba Qld 4880

Attention: Carl Ewin

Dear Carl,

RE: Proposed dam on Lot 3 RP723067 at Robinson Road Dimbulah – JPK Farming Pty Ltd. – Certification of design.

We advise that our firm has been engaged by JPK Farming Pty Ltd to check and certify the design of a dam located on an unnamed tributary of Horse Creek.

Prior to our involvement design work was completed by North Australia Water Strategies and submitted to Council as part of an operational works application. Council advised the applicant that they require the design to be checked and approved by an RPEQ.

We advise that we have reviewed the work and design completed by North Australia Water Strategies and generally find it to be acceptable subject to our comments below.

The following requirements are to be incorporated in the design:

1. The embankment width is to be increased to 8.0 metres.
2. The compacted clay core is to be 2.5 metres thick.
3. The clay cut-off trench is to be a minimum of 2.5 metres thick and a minimum of 1.5 metres deep. If rock is encountered at less than 1.5 metres deep then the bottom of the trench is to extend into the rock by 300mm.
4. The upstream face of the dam is to be clay lined to a depth of 200mm. If insufficient clay is available on site then a shot rock face of minimum 200 rock is to be used as facing. If rock is used it shall be placed on an approved geotextile fabric such as A34.
5. Clay used for the core or face is to be treated with gypsum, at the rate of 1 Kg/cubm, prior to placement.
6. The spillway channel shall be lined with rock with a minimum dimension of 300mm. Rock shall be used to create a 1 metre deep toe at the end of the spillway channel.
7. When the area is stripped for the construction of the wall any fissures found in the underlying rock shall be cleaned out and sealed with compacted clay.

Provided that the preceding amendments are taken and implemented we certify the design prepared by North Australia Water Strategies is acceptable based on small earth dam principles.



We have been advised that all other required approvals are in place. Should Council require further details or additional information they should not hesitate to contact our office,

Yours faithfully  
PDR Engineers

A handwritten signature in black ink, appearing to read 'Alan McPherson', with a horizontal line underneath.

Alan McPherson  
Senior Civil Engineer  
RPEQ 809