Photograph 1

Coleambally site looking NW from channel

Photograph 2

Coleambally site looking south, powerlines visible.

Photograph 3

Community farm and Rice Sheds to North

Photograph 4

Ercildoune Road looking north

Photograph 5

Ercildoune Road looking west

Photograph 6

Tubbo Channel and site looking south

3 PROJECT DESCRIPTION

3.1 SITE LAYOUT

The proposal includes locating the main components of the ethanol production facility in the eastern portion of the site. The remainder of the site will be used for dams and plantations.

The plant footprint proposed as part of the ethanol facility will be approximately 300m x 300m and will include:

- an office/administration area comprising a reception area, offices, meeting room areas, bathroom facilities and a first aid room;
- a storage building providing for storage of all chemicals and products (other than grain) on the site;
- a grain storage building (silo). This building will be the tallest building on the site and will have a maximum height of 35 metres;
- a fermentation building;
- a liquefaction and saccharification building;
- a maintenance workshop and store which also includes a plantation services facility;
- a pumping station adjacent to the Tubbo channel and associated pipeline to the plant;
- Liquid Petroleum Gas storage;
- shift silo; and
- a distillation building and tower.

A grain storage area will be located adjacent to the main buildings with a one-way road access provided around the storage areas. This area will be surfaced with a prepared road base foundation and maintained to minimise dust generation.

A new shallow run-off catchment dam is proposed adjacent to the production buildings which will contain and evaporate runoff from the buildings and hard surface areas.

The proposal will require the extraction of approximately 8ML of water per day from the Murrumbidgee River via the Tubbo Irrigation Channel. A new process water dam, with a capacity of up to 100 ML, is proposed adjacent to the production buildings. This dam will be used to store water to be used in the ethanol production process.

A new effluent storage dam is also proposed and will be located adjacent to the process water dam. This dam will have a capacity of approximately 30ML and will be used to store effluent waste water from the facility, which may also be used to irrigate the plantation.

An aerated wastewater treatment system will also be installed on the site to treat sewerage and allow the majority of wastewater to be reused within the production process.

Access to the site will be provided by Ercildoune Road which will require sealing for part of its length. The access road through the site will be sealed to minimise dust and will be wide enough to accommodate passing road-train trucks. Ethanol product will be transported from the site by truck and/or rail.

Detailed plans of the proposed ethanol production facility are yet to be finalised however will be provided in the project application.

Figure 3 shows the indicative layout for the production facility and *Photograph 7* shows an ethanol production plant in the United States, similar to that proposed at Coleambally.

3.2 *PROPOSED ETHANOL PRODUCTION PROCESS*

The following sections provide a detailed description of the ethanol production process.

The production of ethanol involves the receival and storage of grain, milling of the grain to flour followed by a cooking, fermentation and distillation process.

Grain Receival and Storage

The ethanol production facility will be capable of processing a range of cereal grains (corn, wheat, barley and sorghum), which are grown in the Murrumbidgee region of NSW. The facility will require, at full capacity approximately 600,000 tonnes of grain each year from wheat, barley and corn.

Grain will be received principally via semi-trailers and B-double trucks.

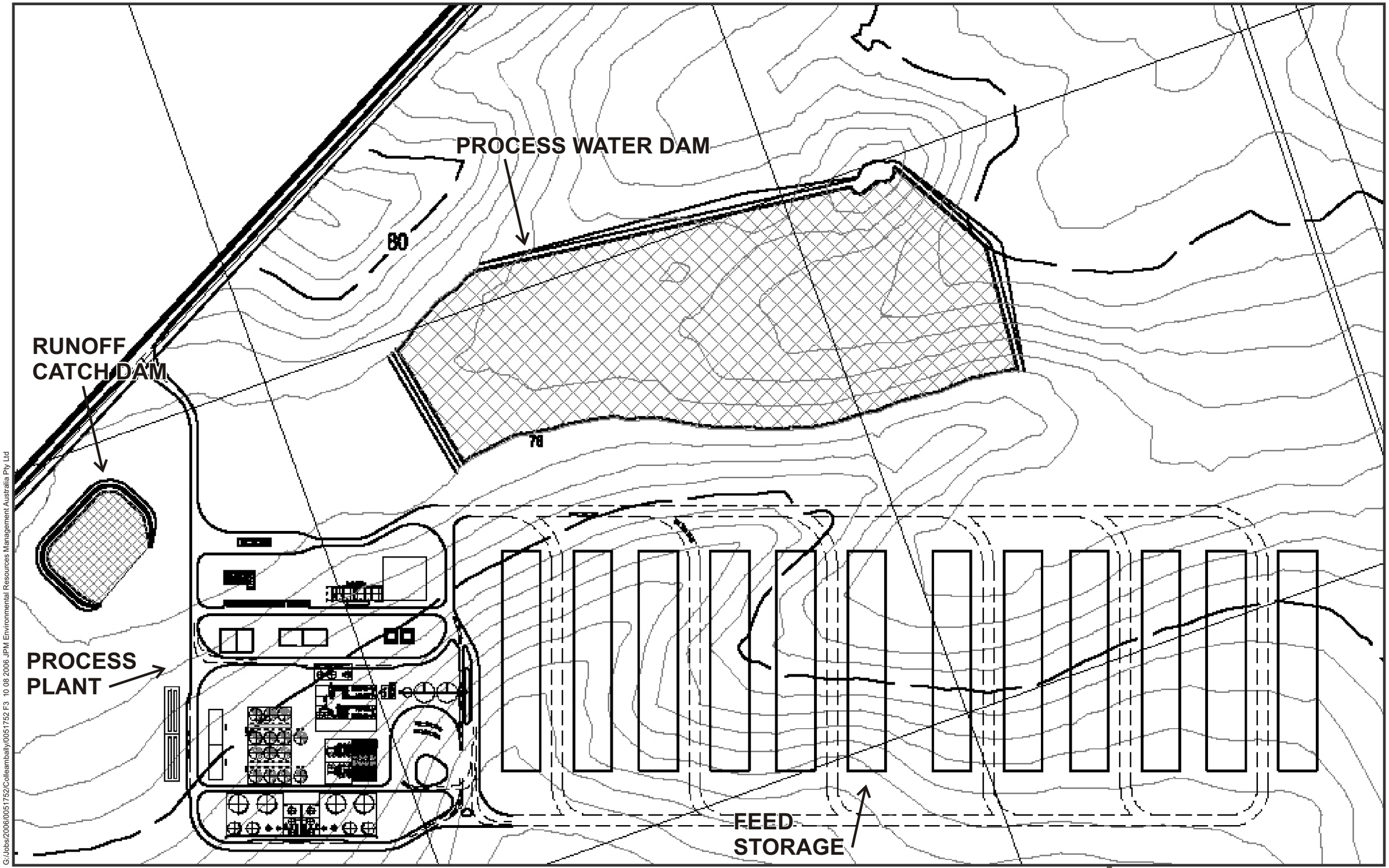

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Figure 3 **Indicative Ethanol Production Plant Layout (Swan Hill Plant)**

Photograph 7

Photograph of similar ethanol facility in United States, indicative of current proposal.