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Assessment Report

Proposal by Bath, Stewart Associates Pty Ltd to establish a Poultry Layer Farm, Grading Floor and Feed Mill Complex at West Wyalong, NSW

Department of Planning

June 2002

EXECUTIVE SUMMARY

The Development Proposal
On 1 May 2002, Bath, Stewart Associates Pty Ltd (the Applicant) lodged a Development Application (DA) with the Department of Planning for the establishment of a poultry layer farm, grading floor and feed mill complex, at West Wyalong, in the Bland local government area. The project involves the following components:

- A layer farm consisting of twelve enclosed, climate controlled sheds, each housing 60,000 birds;
- A grading floor containing equipment for the washing, grading, packaging and distribution of eggs; and
- A feed mill with the capacity to produce 100,000 tonnes of grain per annum to service the layer farm.

Under the *Environmental Planning and Assessment Act 1979*, (the Act), the proposed development is classified as State Significant, Integrated and Designated Development. The Minister for Planning is the consent authority for the DA.

Public Exhibition and Submissions
In accordance with the *Environmental Planning and Assessment Regulation 2000* (the Regulation), the DA and supporting Environmental Impact Statement (EIS) were publicly exhibited from Tuesday 7 May 2002 until Friday 7 June 2002. The Department received approximately 300 submissions in response to the public exhibition of the DA. Of these, 6 were from government bodies and public authorities, the remainder from members of the public.

Public Submissions
Aside from a small number of submissions supporting the development, the public submissions either objected to, or were concerned about the proposal. The main issues raised in these submissions were:

- Animal welfare issues;
- Impacts on human health;
- Impacts upon the surrounding environment;
- Disease issues; and
- Waste management issues.

However, Bland Shire Council expressed support for the proposed development due to the potential economic benefits for the local economy, and the creation of between 20 and 30 full-time employment opportunities for the local community.

Agency Submissions
The Environment Protection Authority (EPA), Bland Shire Council, Goldenfields Water County Council, the Roads and Traffic Authority (RTA), the Department of Land and Water Conservation (DLWC) and the National Parks and Wildlife Service (NPWS), also provided comments, or requested additional information on the proposal. The main issues raised by government agencies are summarised below:

- The EPA requested additional information to identify impacts associated with air, noise, water and waste management issues;
- The RTA supplied specific requirements for the upgrading of roads;
- Goldenfields Water County Council provided comments on water supply issues associated with the proposed development;
- Bland Shire Council expressed support for the proposed development due to potential economic benefits for the local economy and job creation, stated that appropriate environmental management practices were required for the proposed development, and recommended conditions of consent should proposal be approved;

- The DLWC requested further information to clarify specific issues associated with the proposal, including surface water management, quarrying activities, and fuel storage, and also recommended conditions of consent should the proposal be approved;
- The NPWS stated that it had no comments on the proposal.

Department's Conclusion

The Department has assessed the DA, the EIS and the submissions received on the proposed development. Through this assessment, the Department is satisfied that the proposal could be adequately managed, subject to the imposition of recommended conditions of consent, which are attached, tagged 'A'. The conditions of consent incorporate measures to manage the future environmental performance of the proposed development, and set in place on-going environmental management, monitoring and reporting mechanisms, should it be approved. Key issues covered by the conditions of consent include:

- Environmental management and monitoring, including the preparation of Environmental Management Plans and an Environmental Monitoring Program;
- Disease management and quarantine protocols;
- Waste management protocols;
- Measures to protect the surrounding environment, including the control of noise, odour and dust emissions, and the protection of soils, surface water and ground water; and
- Measures for the handling and receiving complaints.

The Department therefore recommends that the Minister approve the DA, subject to the imposition of the recommended conditions of consent.

1. PROPOSED SITE AND SURROUNDING LAND USE

The proposed development site is located within Lot A DP 433786 and Lot B DP 433786. This land has previously been used for agricultural purposes and the majority has been cleared and farmed or grazed.

The following land which surrounds the development site would be maintained as a quarantine buffer for the poultry complex:

- Lot 36 DP 753092;
- Lot 6 DP 753092; and
- Lot 903 DP 753092.

The site for the proposed development is shown in Figure 1 below.

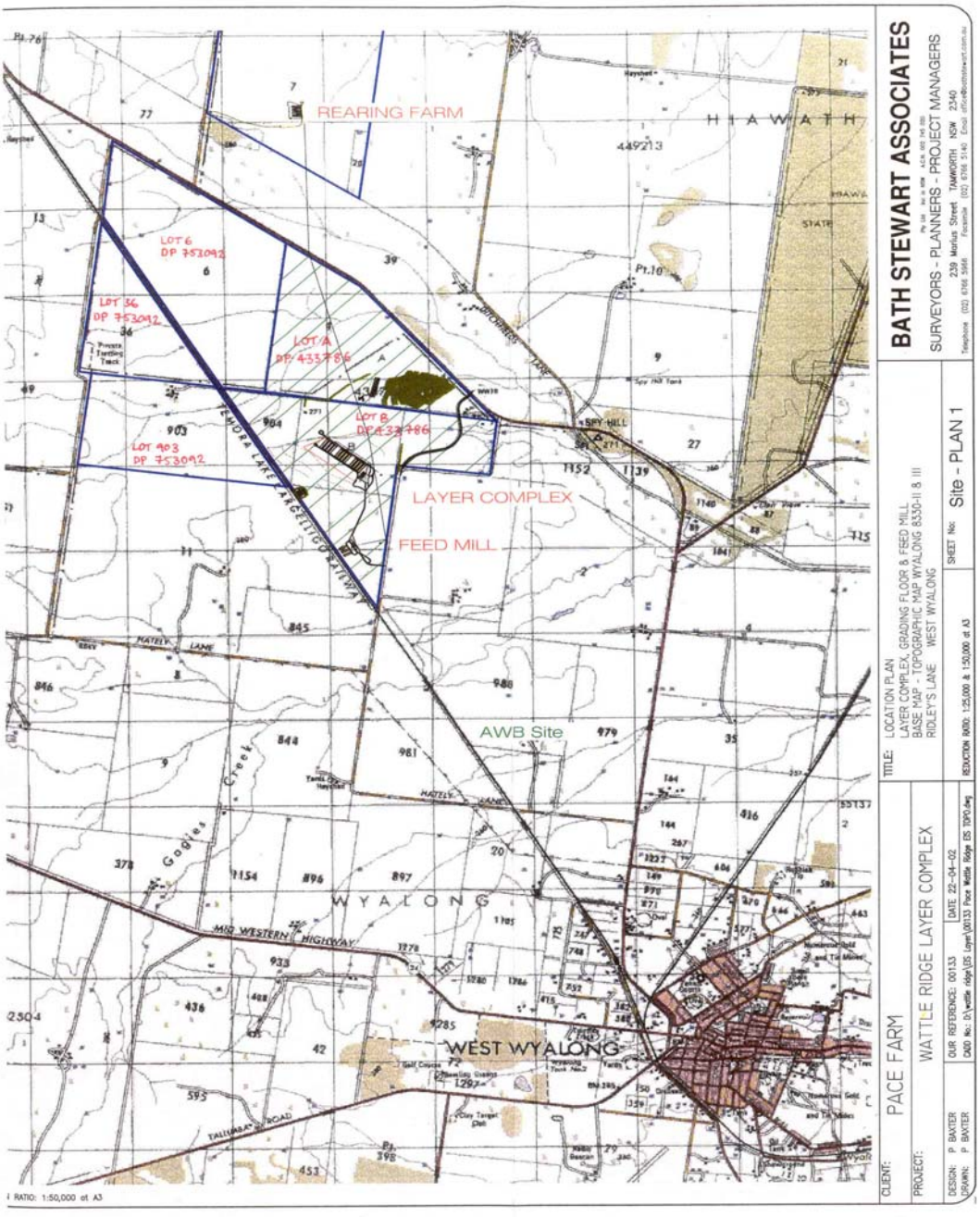

Figure 1: Site for proposed development

2. THE DEVELOPMENT PROPOSAL

Bath, Stewart Associates Pty Ltd, (the Applicant), proposes to establish a poultry layer farm, grading floor an feed mill, as part of an integrated poultry rearing farm/layer farm complex at West Wyalong, in the Bland local government area.

The project involves the following components:

- A layer farm consisting of twelve enclosed, climate controlled sheds, each housing 60,000 birds;
- A grading floor containing equipment for the washing, grading, packaging and distribution of eggs; and
- A feed mill with the capacity to produce 100,000 tonnes of grain per annum to service the layer farm.

Figure 2 on the following page provides a general overview of the proposed development.

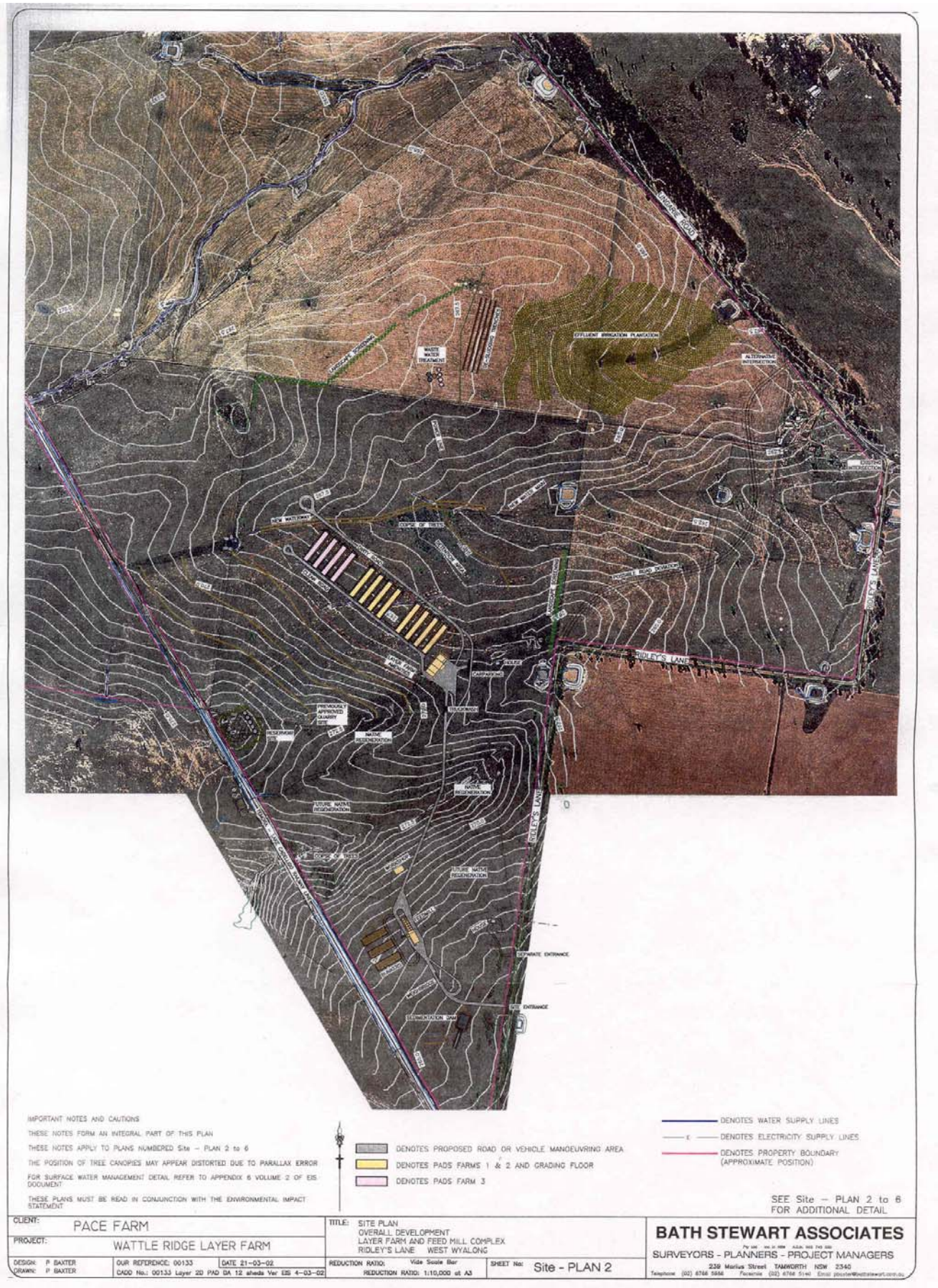

Figure 2: Proposed Poultry Layer Farm, Grading Floor and Feed Mill Complex

2.1 Project Components

The proposed development would consist of three distinct components, being the layer farm, the grading floor and the feed mill.

The Layer Farm
The layer farm would consist of twelve enclosed, climate controlled sheds. The sheds would be constructed in groups of four, with each group of sheds referred to as a farm. Within each farm, the sheds would be separated by a distance of 20m, and each farm would be separated from the next by a distance of 60m.

The layout of the layer farm complex is provided in Figure 3 on the following page.

The sheds would be approximately 114m long, 15m wide, and have a ceiling height of 6.1m and a ridge height of 9.2m. They would be constructed using coolpanel walls and ceiling for insulation, and fitted with a zincalume roof.

The environment within the sheds would be monitored and controlled using computers. A manure drying system would be fitted within each shed, and manure would be removed from the sheds via conveyor every three or four days.

Each shed would house 60,000 birds within five rows of cages, each row being six tiers high. An egg conveyor would be constructed to transport eggs from the layer farm to the grading floor.

Pre-enriched Cage
The cages to be installed in the sheds would be 'pre-enriched cages', and would comply with European legislation effective in 2012. Animal welfare issues associated with the cage system are discussed in Section 5 of this report.

Figure 3: Layout of Proposed Poultry Layer Farm and Grading Floor Complex

The Grading Floor
The grading floor would consist of a building 60m long, 30m wide, with a ceiling height of approximately 6m and a ridge height of approximately 9.2m. As with the layer farm, the building would be fitted with coolpanel walls and ceiling and would have a zincalume roof.

The layout of the grading floor is provided in Figure 3.

The grading floor would include:

- an enclosed goods inwards section;
- a farm vehicle garage/workshop;
- packaging storage area;
- a climate controlled grading floor;
- a coolroom for packaged egg storage;
- a loading dock; and
- an office and staff amenities.

A truck manoeuvring area and dock access would be provided on the eastern side of the grading floor.

The Feed Mill
The feed mill would consist of:

- a metal building for the storage of raw materials and mill equipment;
- a grain receival annex on the western side of the main building;
- a bulk outloading annex on the eastern side of the main building;
- an office annex with grain sampling catwalk.

The feed mill would also require the following storage facilities:

- Bunded liquid tanks (alimet and tallow storage);
- 10 x 250 tonne grain silos;
- 5 x 60 tonne meal silos;
- 12 x 40 tonne ingredient bins;
- 8 premix micro ingredient bins;
- 8 x 40 tonne outloading bins.

In addition, the feed mill would require:

- bulk and bagged road tip hopper;
- two drum magnets and rubble bags;
- one intake sieve;
- two roller mills – one fitted with a collecting hopper;
- two weigh hoppers;
- one 2 tonne horizontal ribbon mixer;
- one 2 tonne mixer dump hopper;
- various conveyors, elevators and floveyors.

A gatehouse would be constructed at the south-west corner of the feed mill building. A weighbridge would also be constructed to the south of the feed mill building.

Figure 4 on the following page shows the layout of the proposed feed mill.

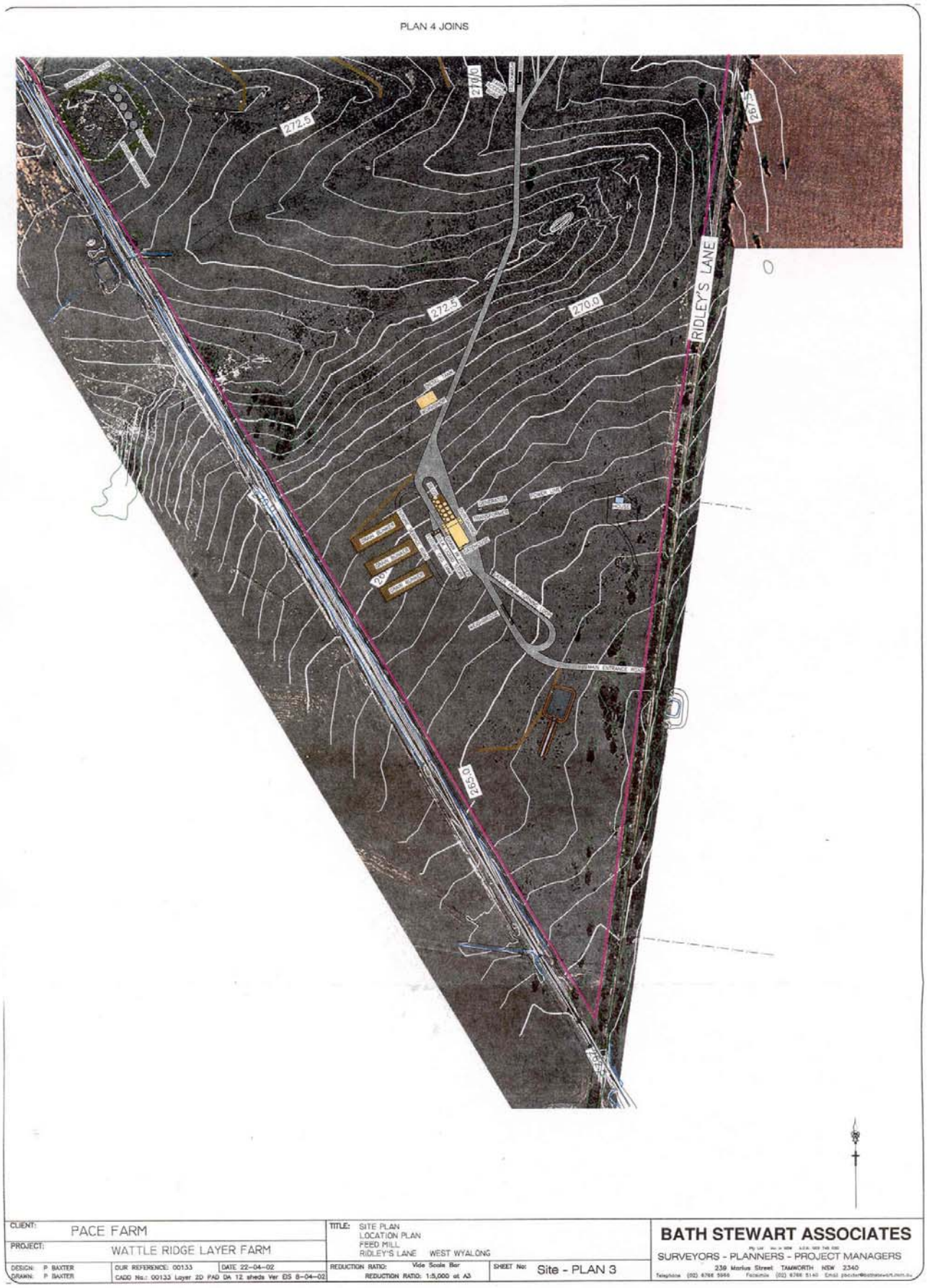

Figure 4: Layout of Proposed Feed Mill

Additional Infrastructure

Water Storage

Five water storage tanks with a useable capacity of 750 kilolitres would be constructed on elevated ground to the south of the complex. These tanks would be constructed of corrugated iron with a food grade plastic liner, and would be used to supply water to the complex, and provide backup water supply during hot periods when cooling of the sheds required more water.

Waste Water Treatment Plant

A waste water treatment plant would be constructed approximately 900m north of the grading floor. The plant would consist of:

- two shed wash down water holding tanks (225,000 litre capacity) which will be used to add make up water to the treatment process;
- one 225,000 litre aeration tank;
- two 225,000 litre sedimentation tanks;
- two 850,000 litre sedimentation/holding tanks;
- an effluent irrigated plantation; and
- four de-sludging trenches.

Waste water management is discussed in Section 5 of this report.

Amenities Building

A building will be erected to the south of the grading floor, containing staff amenities, an administration office and a goods receival room.

Carparking and Internal Roads

An internal road network and two carparks would be constructed on the site. The first carpark would be located to the east of the truck manoeuvring area with 20 spaces for grading floor staff and visitors, the second adjacent to the amenities building with 9 spaces for operations associated with the layer farm.

2.2 Construction Activities

The construction schedule for the proposed development is summarised in Table 1.

Table 1: Proposed Construction Schedule

Feature	Completion
First 4 layer sheds and grading floor	January 2003
Associated infrastructure	June 2003
Landscaping	6ha units to be planted at two year interval
Second 4 layer sheds	June 2003
Third 4 layer sheds	To be determined
Feed mill	July 2004

2.3 Operation Activities

Layer Farm

Stocking and Evacuation of Sheds

Birds would be raised to sexual maturity at the rearing farm approved by Bland Shire Council (see Section 1.5 of this report), which is located approximately 3.5km to the north of the site for the proposed layer farm complex.

Birds would be delivered to the layer farm complex on a 63 week cycle. The birds would remain in the sheds from 16 weeks of age (week 1 of the cycle) until 72 weeks of age (week 56 of the cycle). The birds would be removed from the sheds between weeks 57 and 61 of the cycle and placed in crates for transport to an approved processing facility. This would

occur at night to reduce stress for the birds. Once empty, the sheds would be cleaned and sanitised prior to stocking with the next batch of birds.

Feed Delivery
Each shed would be fitted with two silos, and feed would be delivered to the silos by a semi-trailer with a blower unit.

Shed Ventilation
The sheds would be 'tunnel' ventilated, which provides a consistent controlled environment, and minimises moisture and odour production. Tunnel ventilation involves three ventilation systems:

- tunnel or hot weather ventilation – the use of more than half the fans to ventilate the sheds and create a wind chill effect when the ambient air temperature is 1-2° higher than required by the chickens;
- good weather ventilation – the use of natural or fan assisted ventilation when the ambient air temperature is similar to that required by chickens; and
- minimum or cold weather ventilation – when the ambient temperature is 1-2° less than that required by the chickens, the temperature is dependent upon the heat produced by the chickens. In this case the ventilation rate is maintained at a rate sufficient to remove moisture and gasses from the shed and provide suitable oxygen levels.

Manure Management
Manure management issues are discussed in detail in Section 5 of this report.

The proposed cage system would use manure belts below each tier of cages to collect manure, which would be dried on the belts to reduce odour and density using an air delivery system. The manure would be removed via the belts every four days.

The complex would produce manure 365 days per year. The EIS predicts that for the 12 sheds, the amount of manure produced would be 57,622m^3 per annum (28,811 tonnes) at approximately 50% moisture content.

Cleaning
Following evacuation, the sheds would be cleaned, washed and sterilised prior to stocking with the next batch of birds. The sheds would be washed with a high pressure spray containing phosphoric acid. Washdown water would be directed to sumps in the side walls of the sheds, and then transferred by underground pipes to the shed washdown water holding tanks. Once washed, a sanitising agent would be applied to the floor and walls of the sheds.

Bio-Security and Disease Management
The EIS states that the site for the proposed complex has been chosen because it is isolated from other commercial poultry establishments, public places and large water bodies which provide habitat for wild water fowl in order to significantly reduce the likelihood of disease outbreak. It is stated that the complex would be operated with strict quarantine standards and site security measures.

Disease management and bio-security measures are discussed further in Section 5 of this report.

Mortality
Two types of mortality occur on poultry farms, being mortality due to normal attrition and mortality due to an exotic disease outbreak. The EIS provides includes consideration of disposal measures for normal attrition mortality and a disaster plan should a catastrophe mortality event occur.

These issues are also discussed further in Section 5 of this report.

The Grading Floor
Eggs would be transported from the cages via the egg belt to a series of escalators at the southern end of the sheds. The eggs would be transferred from the escalator onto the egg conveyor which would run from shed 12 to the grading floor.

The eggs would be transported from the egg conveyor to the egg washing machine. Following washing the eggs would pass through a crack detector, and would be graded for size and packed into egg cartons (inners). The inners would be placed in boxes (outers) which would be loaded onto pallets and shrink wrapped. The pallets would be stored in a cool room at the northern and of the grading floor building prior to transportation. Refrigerated trucks would be loaded at the loading docks on the eastern side of the grading floor.

The grading floor would operate seven days per week. The main shift would be between 7.30am and 4.30pm with cleaning operations up to 9.00pm.

The Feed Mill
The mill would produce four different mixes for the birds in the rearing farm and layer farm complex. The feed would be delivered to the birds as mash.

The proposed feedmilling operation would involve the following procedures:

- bulk ingredients such as grains, legumes and protein meals would be received in bulk trucks;
- material would be tipped into an in-ground receival hopper from which the materials would be conveyed either to a silo or ingredient bin storage;
- grains and legumes would be drawn from the silos and processed through a rollermill to achieve reduction in particle size. The rolled grain would then be stored in an ingredient bin;
- minor ingredients such as vitamins, minerals, pre-mixes and salt would be received in bags which would be manually loaded into the minor ingredient bin;
- material would then be weighed out, according to required formulation into both the 2 tonne and 50kg weigh hoppers;
- once the correct weight was achieved both weigh hoppers would discharge into the horizontal ribbon mixer where the required amount of liquid would be added;
- after the appropriate mixing time, the finished product would be discharged from the mixer into the dump hopper and then transferred to a bulk outloading bin. The finished product would pass over a drum magnet to remove any ferrous objects and then through a sifter to remove any oversize particles;
- bulk delivery trucks would then be loaded from the outloading bins for delivery to the required farm/shed.

The feed mill would be developed in stages. The initial capacity of the mill would be up to 30,000 tonne per annum and it would eventually be upgraded with a final capacity of 100,000 tonne per annum. Feed from the mill in excess of the requirements of the rearing farm and layer complex would be transported to other poultry facilities in NSW and Victoria.

The mill would operate from 7.30am to 5.30pm five days per week. Typically the mill would process feed for six hours per day at a capacity of up to 30 tonne per hour. Time outside of the milling process would be required for start up and shut down. Once upgraded to produce 100,000 tonne per annum it would be required to process feed six days a week for up to 15 hours a day. The mill operating hours would be from 7.00am to 10.00pm to allow for start up and shut down procedures to be implemented.

2.4 Employment and Capital Investment

The proposed development has a capital investment of approximately $21 million. Upon completion, the proposal will employ between 20 and 30 people on a full-time basis.

2.5 Existing Rearing Farm

The rearing farm, which would supply mature birds to the proposed layer farm complex, was approved by Bland Shire Council on 23 March 2001. The rearing farm is located on Collins Lane, approximately 3.75km north of the proposed layer farm complex, and consists of:

- a sealed entry road;
- a managers residence;
- a truckwash;
- water reservoirs;
- wastewater collection tanks;
- a farm amenities building;
- two ancillary sheds, one housing the control room and emergency generator, the other containing the workshop and farm vehicles; and
- four climate controlled rearing sheds.

3. STATUTORY PLANNING FRAMEWORK

3.1 Environmental Planning and Assessment Act 1979

State Significant Development
On 3 July 2001, the Minister for Planning agreed that the proposed development was State Significant Development under *State Environmental Planning Policy No. 34 – Major Employment Generating Industrial Development* (SEPP 34).

This is because the proposal satisfies the criteria in Schedule 1 of SEPP 34 as it fits within the definition of 'intensive livestock operations' in paragraph (b) of schedule 1 of the policy. Further, the proposal has an estimated capital investment of approximately $21 million, and on completion will employ between 20 and 30 people on a full-time basis. The proposal therefore satisfies paragraph (a) of Schedule 1 of the policy, as it is an intensive livestock operation with a capital investment value in excess of $20 million that will employ 20 or more persons on a full-time basis. The proposal therefore meets the criteria of SEPP 34.

The Minister for Planning is therefore the consent authority and will determine the application.

Integrated Development
The proposal is classified as Integrated Development because it requires additional approval from the Environment Protection Authority (EPA) under the *Protection of the Environment Operations Act 1997*.

The EPA was consulted during the preparation of the Director-General's requirements for the EIS, and notified of the lodgement of the DA for the proposal. Following the supply of copies of submissions in response to the public exhibition of the DA, the EPA forwarded comments and General Terms of Approval (GTA's) to the Department. The GTA's have been incorporated into the recommended conditions of consent for the proposal, which are attached, tagged 'A'.

Designated Development
Developments listed in Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*, (the Regulation), are classified as Designated Development as they have the potential, if not managed responsibly, to significantly affect the environment.

The proposed development is classified as Designated Development under Section 21(4)(a) of Part 1 of Schedule 3 of the Regulation, as it is a poultry farm that accommodates more than 250,000 birds.

As required for Designated Development, an Environmental Impact Statement (EIS) was prepared to address the environmental impacts associated with the proposed development.

3.2 Relevant Environmental Planning Instruments and Strategies

The assessment of the proposed development is subject to the following environmental planning instruments and strategies:

- *Bland Local Environmental Plan 1993*; and
- *State Environmental Planning Policy No. 34 – Major Employment Generating Industrial Development* (SEPP 34).

The Department considers that the development proposal is generally consistent with the aims and objectives of the above planning instruments. An assessment of the proposal against the requirements of relevant planning instruments is contained in the Section 79(C) consideration at Appendix A.

4. EIS EXHIBITION AND ISSUES RAISED IN SUBMISSIONS

4.1 Date of DA Lodgement

The DA and supporting EIS were lodged with the Department of Planning on 1 May 2002.

4.2 Exhibition Dates and Venues

The DA and EIS were placed on public exhibition at the following locations, from Tuesday 7 May 2002 until Friday 7 June 2002:

- Department of Planning, Planning Centre, Sydney;
- Department of Planning, Riverina and South East Region, Queanbeyan;
- Bland Shire Council;
- Nature Conservation Council of NSW, Sydney.

4.3 Notification

Advertisements regarding the proposed development were placed in the West Wyalong Advocate. Residents considered by the Department to be potentially affected by the proposed development were notified by mail regarding the public exhibition dates, locations, and the Department's contact officer. In addition, a number of signs displaying the details of the DA were placed on the site for the proposed development during the public exhibition period.

4.4 Submissions Received

A summary of all submissions received in response to the public exhibition of the DA and EIS is attached at Appendix B.

Public Submissions
The Department received approximately 300 submissions from members of the public. The vast majority of the submissions were from interstate, were concerned with animal welfare issues associated with the proposal, and raised philosophical objections to this type of development in general. The other main issues raised in the submissions were:

- Impacts upon the surrounding environment;
- Disease issues; and
- Waste management issues.

Agency Submissions
The Environment Protection Authority (EPA), Bland Shire Council, Goldenfields Water County Council, the Roads and Traffic Authority (RTA), the Department of Land and Water Conservation (DLWC) and the National Parks and Wildlife Service (NPWS), provided comments, or requested additional information on the proposal. The main issues raised by government agencies are summarised below:

- The EPA requested additional information to identify impacts associated with air, noise, water and waste management issues;
- The RTA supplied specific requirements for the upgrading of roads;
- Goldenfields Water County Council provided comments on water supply issues associated with the proposed development;
- Bland Shire Council expressed support for the proposed development due to potential economic benefits for the local economy and job creation, stated that appropriate environmental management practices were required for the proposed development, and recommended conditions of consent should proposal be approved;
- The DLWC requested further information to clarify specific issues associated with the proposal, including surface water management, quarrying activities, and fuel storage, and also recommended conditions of consent should the proposal be approved; and

- The NPWS stated that it had no comments on the proposal.

The issues raised in submissions by members of the public and government agencies are discussed in Section 5 of this report.

5. ENVIRONMENTAL ISSUES

5.1 Disease Management

Applicant's Position
Disease management and bio-security issues are addressed in Section 7.1.9 of the EIS prepared for the proposed development.

Bio-Security
The EIS states that the site for the proposed complex has been chosen because:

- it is isolated from other commercial poultry establishments;
- it is isolated from large water bodies and inland rivers which form a habitat for wild water fowl;
- it is substantially isolated from the paths of migratory birds;
- it is isolated from public places; and
- it is isolated from the rearing farm.

The complex would be operated with strict quarantine standards. Site security measures would include:

- one access point to the complex;
- a gatehouse to control vehicular access;
- washing and sanitising of vehicles entering the site;
- prohibiting grading staff from entering the layer complex;
- requiring all people entering the layer complex to shower and change into clothing provided by Pace Farms;
- sterilising personal effects and all goods delivered to the site; and
- requiring all people leaving the layer complex to shower off-site.

Mortality
Two types of mortality occur on poultry farms, being mortality due to normal attrition and mortality due to an exotic disease outbreak.

Normal attrition mortality is predicted to account for approximately 6 birds per shed per day, or approximately 6.7% of stock at the end of the laying cycle.

Dead birds would be placed in one of a pair of BioBins, which would be located to the north-east of the truck wash. Once full, the bins would be removed for completion of the composting process. It is estimated that each shed would require one BioBin per cycle.

Catastrophe mortality events occur due to the outbreak of an exotic disease within the layer farm. Should this occur, and it became necessary to destroy all the birds on the three farms, a 'disaster plan' program would be implemented for the euthanasia of the birds and disposal of carcasses. This plan would be based on the principle of keeping the birds alive in order to manage disposal issues and would include the following procedures:

- maintenance of total quarantine conditions;
- maintenance of birds feed and water supply and shed environment;
- withholding feed for a 24hr period and then providing a modified feed ration to encourage the birds to stop laying eggs;
- pulping all eggs and placing waste in sealed plastic bags for removal;
- crushing all egg shells and placing in sealed plastic bags;
- storing pulp and egg shells in grading floor cool room;
- arranging for refrigerated containers to be delivered to the farm;
- liasing with rendering operators for a schedule for quantity of birds to be rendered;
- euthanasing birds (in numbers determined by rendering plants) and placing carcases in refrigerated coolers;
- sealing containers to Austvet standards for transport to rendering plants;

- washing and sanitising all vehicles; and
- once all birds removed, washing and sanitising the entire complex in accordance with requirements of NSW Agriculture.

Submissions
Approximately 30 submissions from members of the public raised concern regarding the potential for disease outbreak at the proposed poultry complex.

None of the Government agencies that commented on the proposed development raised concern regarding disease management issues.

Department's Position
The Department considers that disease management issues have been adequately addressed in the EIS prepared for the proposed development, which includes measures to maintain high levels of bio-security at the facility. Not withstanding this, the Department has incorporated a requirement into the recommended conditions of consent for the Applicant to submit a detailed Quarantine Protocol and Mass Bird Disposal Plan, as part of the overall Environmental Management Plan for the facility, which is to be approved by the Director-General prior to the commencement of operations of the proposed development.

5.2 Solid Waste Management

5.2.1 Manure

Applicant's Position
Manure management issues associated with the proposed development are addressed in Section 8.3 of the main volume of the EIS, and in the Solid Waste Management Plan at Appendix 8 of the EIS.

Moisture Reduction
The EIS states that poultry manure contains between 75-80% moisture, and that reducing the amount of moisture in the manure minimises the bulk mass to be exported off-site and consequently reduces logistics requirements.

Each tier of cages within the layer sheds would be serviced by a conveyor belt for the collection of manure, and a specialised manure drying system. Air from within the sheds would be drawn into an air pumping system and delivered to the manure on the belts via a perforated duct running the length of the belt above the manure. This system would ensure manure leaving the shed would be at 50% lower moisture content.

Disposal
The EIS calculates the quantities of manure produced from the 12 sheds to be 57,622m3 per annum, or 28,811 tonnes per annum at approximately 50% moisture content, and proposes four options for the disposal of manure:

- Transportation to a local 'Dynamic Lifter' manufacturing plant for processing and value adding;
- Transportation to an alternate local fertiliser/compost manufacturing plant for processing and value adding;
- Transportation to local farmers directly to be used as fertiliser; and/or
- Transportation to the existing 'Dynamic Lifter' manufacturing plant near Gosford for processing and value adding.

The EIS identifies the preferred option as being the transport of manure to a local processing facility, as this option represents the most economical and environmentally sustainable approach. However, no local processing facilities exist in the West Wyalong area and the Applicant is currently exploring avenues for the establishment of such a facility. It is therefore recognised that transport to the Dynamic Lifter plant in Gosford would be the chosen short term option.

On-site storage of manure would be limited to occasions where inclement weather precluded the removal of manure from the layer complex. The manure would be stored temporarily on the in-shed conveyor belts, which would be able to hold manure for approximately two weeks.

Submissions
Approximately 30 submissions from members of the public raised the production, management, and disposal of manure as an issue of concern.

The EPA requested that the Applicant provide further information on the disposal options for manure, and in particular the proposal to sell manure to local farmers for use as fertiliser. The EPA requested that the Applicant:

- identify the potential market for the sale of manure;
- the seasonality of the demand for manure;
- the requirements for on-site storage of manure including the infrastructure required for stockpiling; and
- management protocols to minimise odour generation from stockpiles.

No other agencies raised solid waste management as an issue of concern.

Department's Position
On request from the EPA, the Applicant provided further information on manure disposal options. The EPA subsequently informed the Department that the information provided adequately addressed outstanding issues associated with solid waste management, and the Department is therefore satisfied that the management and disposal of manure has been adequately addressed by the Applicant. Not withstanding this, the Department has incorporated a requirement into the recommended conditions of consent for the Applicant to prepare a Solid Waste Management Plan to address issues associated with the management and disposal of solid waste.

5.2.2 Disposal of Dead Birds

Issues associated with the disposal of dead birds are addressed in the Solid Waste Management Plan at Appendix 8 of the EIS.

It is predicted that the operational mortality of the layer farm would be approximately 6.2 birds per shed per day. This equates to a mortality of approximately 2436 birds per cycle per shed. The EIS states that dead birds will be placed in one of two BioBins, which are large, fully enclosed, forced aeration systems used to treat organic waste. The system has been designed to address five major issues:

- Bio-security requirements;
- Odour from decomposting organic wastes;
- Containment of leachate preventing the potential for release into waterways;
- Elimination of fly and rodent infestation;
- All occupational health and safety issues for handling of decomposting chickens; and
- Control of diseases and bacteria.

Management issues associated with the disposal of chickens in the event of an exotic disease outbreak are discussed is Section 5.1 of this report.

Submissions
None of the submissions received by the Department raised concern regarding the management of dead birds.

Department's Position
The Department considers that the EIS adequately addresses issues associated with the management and disposal of dead birds, and that this is unlikely to be a significant issue.

5.3 Waste Water Management

Applicant's Position
Issues associated with waste water management are addressed in Section 8.4 and Appendix 9 of the EIS prepared for the proposed development.

Waste Water Treatment Plant
Process waste water from the layer sheds, egg washer and grading floor is diverted to a waste water treatment plant. This plant would be constructed approximately 900m north of the grading floor, and would consist of:

- two shed wash down water holding tanks (225,000 litre capacity) which will be used to add make up water to the treatment process;
- one 225,000 litre aeration tank;
- two 225,000 litre sedimentation tanks;
- two 850,000 litre sedimentation/holding tanks;
- an effluent irrigated plantation; and
- four de-sludging trenches.

Waste Water Sources
Waste water would be generated from the following sources:

- Layer Sheds - Cleaning and sanitising of sheds is expected to consume 120KL of water per shed during each cleaning period. This equates to 1.44ML/63 weeks for the twelve sheds. All waste water generated would be directed through the drains within the sheds to the waste water treatment tanks. The water would be stored in two 225m^3 layer shed waste water storage and pre-treatment tanks for release at an average rate of 7KL per day to the main aeration tank;
- Egg Washer & Grading Floor - Process water from the egg washer and grading floor would also be directed to the treatment tanks for irrigation. Due to the high levels of disinfection agents within the washer, the effluent would be neutralised with hydrochloric acid, prior to transfer to the aeration tank. The main contaminants within the process waste water would be:
    - BOD – removed through aerobic treatment;
    - Suspended solids – removed in the main aeration tank and the sedimentation/disinfection tanks; and
    - Residual faecal coliforms – to be treated through natural ultra-violet exposure in the sedimentation/disinfection tanks;
- Truck Wash - The washdown water from the truckwash would be treated independently from all other waste water treatment facilities. A sump below the truck wash would collect sediment and waste water for treatment in three underground tanks, each with a 10m^3 capacity. The first tank would be a sedimentation tank where solids are separated, the second would be used to separate any oily residue and scum, and the third would be used as a clean recycled water supply tank within the truck wash process;
- Septic Systems - The domestic waste from the houses and the feed mill would be pumped into isolated septic systems. The amenities building would have a separate septic tank, and overflow from this tank would gravity feed to the grading floor waste water treatment system.

Irrigation
The EIS includes an irrigation plan for the proposed development. Figure 5 on the following page shows the layout of the irrigation area in relation to the rearing farm.

A variety of tree species would be planted in rows, seven meters apart, to achieve a density of 500 trees per hectare. The minimum irrigation area required to utilise the effluent would be 12ha. Initially two crop areas of 6ha would be planted with a third crop area to be planted one year later giving a total irrigation area of 18ha. The EIS provides details of the crops to be used and rotation schedules.

Figure 5: Proposed Irrigation Area

Submissions
No public submissions raised concern regarding waste water treatment issues associated with the proposed development.

The EPA requested further information on the following issues:

- Washing procedures for the sheds, including the cleaning agent to be used and the impact this agent may have on biological processes involved in the treatment of wash down water;
- Aeration procedures for the two aerated storage tanks and the primary aeration tank;
- The design capacity of the aerated storage tanks;
- Bunding of the liquid storage area; and
- Procedures for management of waste water associated with truck wash, including the sanitising agent and fabric curtain.

Department's Position
The Applicant provided the additional information requested by the EPA. The EPA has indicated that this information addresses the outstanding issues associated with waste water management. The Department therefore considers that waste water management issues have been adequately addressed by the Applicant and that such issues could be adequately managed so as not to have a significant impact upon the surrounding environment.

5.4 Surface Water Management

Applicant's Position
Surface water management issues are addressed in Section 8.8 and Appendix 6 of the EIS prepared for the proposed development, which includes a Surface Water Management Strategy.

The Surface Water Management Strategy provides detailed design specifications, and implementation and maintenance schemes for the layer farm, grading floor, feed mill and additional infrastructure associated with the proposed development.

Layer Farm and Grading Floor
Surface water would be diverted away from the layer farm and grading floor complex through the construction of contour banks up-slope of the complex. Water would be diverted via three contour drains to an existing ephemeral drainage line to the north-west of the development site.

Feed Mill
The EIS states that the impact of the feed mill on surface drainage patterns will be minimal, and provides details of the stormwater detention system to manage surface water flowing from this site.

Submissions

A submission from DLWC supported the Surface Water Management Strategy provided in the EIS, stating that the document addressed most issues. However, DLWC did raise some concern with regard to the final arrangements for the management of the existing defined drainage line on the site, and recommended that the strategy be amended to incorporate measures to address this issue.

No other submissions received by the Department raised concern regarding surface water management issues associated with the proposed development.

Department's Position

The Applicant submitted further information to provide final details for the management of surface water, and the DLWC has indicated that it is satisfied with the information supplied by the Applicant. The Department therefore considers that surface water management

issues have been adequately addressed in the EIS, and that such issues are not likely to be significant.

Not withstanding the above, the Department has incorporated a requirement into the recommended conditions of consent to ensure that all water storage ponds associated with the development are be designed to the satisfaction of the DLWC. In addition, under the conditions of consent, the Applicant must prepare an Erosion and Sediment Control Plan and a Stormwater Management Plan to address issues associated with soil erosion, runoff and sediment control during both the construction and operation of the proposed development.

5.5 Air Quality

Applicant's Position
Air quality issues associated with the proposed development are addressed in Section 8.5 and Appendix 11 of the EIS.

An assessment of air quality impacts associated with the proposal was undertaken by Pacific Air and Environment Pty Ltd. It is stated that odour and dust emissions are the only significant air quality issues associated with the proposed development.

Odour
The assessment concluded that the most significant source of odour emissions associated with the proposed development is manure.

Layer Farm - Baseline odour emission rates were established by conducting odour modelling at a similar layer farm operation at Bendick Murrel, NSW. It is stated that the sheds on this farm use a similar belt-clean and manure drying system as that proposed for the rearing farm at West Wyalong. The odour emission rates from the farm were calculated for two modes of operation:

- Normal ventilation – the actual 'normal' operating conditions at the time of sampling; and
- Full ventilation – this condition was set in place specifically for the odour sampling and was operating for approximately 10 minutes prior to sampling.

The EIS concludes that based on dispersion modelling using the above results, there would be no significant cumulative impacts associated with odour emissions from the proposed layer farm.

Feed Mill – It is stated that all of the ingredients used at the feed mill will have no objectionable odours, and that all ingredients would be stored in sealed containers such as silos, bins, tanks and bags and would be transferred to conveying systems under a negative air pressure exhaust.

Steam is required for pelletising in the pallet mills/conditioners, and is supplied by gas fired boilers. Steam aids in partially cooking the feedmix, destroying Salmonella and softens the mix to aid in extrusion (forcing the feedmix through a pelleting die). Hot pellets are then dried in evaporative coolers, with any residual steam discharged to the atmosphere. The EIS therefore identifies steam as the likely dominant odour emission source from the feedmill.

The EIS concludes that all odour emissions from the proposed development will be within relevant performance criteria set out by the EPA.

Dust
The EIS states that dust, consisting of feather particles, feed particles and dry manure particles may be emitted via the shed ventilation fans. Dust levels within the sheds may increase slightly for a short period of time when clean-out belts are operated and partially dried manure is dropped from the holding belts.

No other significant dust sources are identified. All on-site roadways and vehicle movement areas would be sealed and the feed delivery system used at the fed mill would employ Burnley baffles and negative air pressure.

Some dust may be generated during the construction phase, but it is stated that this would have relatively localised effects and given the rural setting of the development site would not be a significant issue.

Dust would be generated within the sheds by moving birds, internal ventilation air movements, and mechanical disturbance. It is stated that typical dust concentrations in air emitted from the sheds would be 0.09mg/m^3 ventilation exhaust air. Using a typical ventilation rate of 0.1m^3 of ventilation air per bird per minute, the result is a dust emission rate of 0.12mg/bird/min. Therefore the overall dust emission rate from each shed is estimated to be 0.012 x 60,000/60 = 12.0mg/s for the layer farm.

The EIS concludes that all dust emissions associated with the proposed development will be within relevant performance criteria set out by the EPA.

Submissions
A small number of submissions from members of the public raised concern with regard to odour emissions from the proposed development.

The EPA requested additional information on the following:

- The location of all air discharge points at the proposed development;
- The maximum emission concentrations from all discharge points;
- All aspects of all air quality control systems;
- Details of the proposed boiler for the pelleting plant;
- Details of the stand-by generators; and
- Details regarding the methodology adopted for the air quality assessment.

Department's Position
The Applicant supplied the additional information requested by the EPA. The EPA has indicated that this additional information satisfactorily addresses outstanding issues, and has provided the Department with General Terms of Approval (GTA's) for the development. The GTA's include a series of measures to minimise impacts on air quality, including the requirement to monitor air emissions from the development, and measures to limit the dust and odour emissions.

The Department is therefore satisfied that air quality issues associated with the proposed development can be adequately managed and minimised through the recommended conditions of consent for the proposal.

5.6 Noise

Applicant's Position
Noise issues associated with the proposed development are addressed in Section 8.6 and Appendix 12 of the EIS.

An independent noise assessment of the proposed development was undertaken by Mirrabooka Consulting.

Sensitive Receptors
It is stated that there are six residences lying within approximately 4km of the development site. The furthermost of these residences, located approximately 3900m north-northeast of the layer farm, was not included in the assessment as noise levels at this residence would be below those determined at a similar residence located 2300m to the north-northeast of the layer sheds. The location of the receptors is shown in Table 2.

Table 2: Location of Sensitive Receptors

Receptor No.	Distance and Direction from Potential Noise Source (m)		
	Layer Farm Fans	Grading Room	Feed Mill
1	2000m south-southeast	1600m south-southeast	1100m east-southeast
2	3600m southeast	3200m southeast	3000m east south-east
3	2400m east	2200m east	2500m northeast
4	2200m northeast	2300m north-northeast	3200m north-northeast
5	1800m southwest	1600m southwest	1200m west

Background Noise
Background noise levels were not measured for the assessment. Typical background noise levels for rural areas, being 38 dB(A) (daytime), 34 dB(A) (evening) and 30 dB(A) (night time) were adopted for the assessment.

Construction Noise and Vibration
The assessment concludes that given the location of the proposed development, noise and vibration emissions associated with construction activities would be unlikely to have any significant impacts, and that further evaluation is not warranted.

Operation Noise
The assessment adopted the noise criteria shown in Table 3, as taken from the NSW EPA's Industrial Noise Policy, which is considered acceptable for a rural residential location where other industrial and commercial noise sources are essentially non-existent.

Table 3: Operational Noise Amenity Criteria

Time Period	Acceptable Noise Level (L_{Aeq})	Recommended Maximum Noise Level (L_{Aeq})
Day	50	55
Evening	45	50
Night	40	45

Predicted Operational Noise Levels
The assessment established typical sound power levels for significant noise sources associated with the proposed development, during four operational scenarios, being:

- Daytime Operations – assuming the layer sheds, grading room and feed mill are operating simultaneously;
- Evening Operations – similar to daytime operations, but no grading floor, forklift, tractor, manure conveyor or feed delivery operations;
- Normal Night Time Operations – only operations associated with layer farm;
- Night Time Operations with Bird Removal and Replacement – including truck movements.

The total predicted noise levels at the sensitive receptors, calculated for all operating scenarios, allowing for noise attenuation due to geometric divergence, atmospheric absorption and ground effects are summarised in Table 4 on the following page.

The assessment concludes that the predicted noise levels are well below the assumed background level during both daytime and evening periods, and are close to background levels during night time periods, and well below the recommended acceptable noise levels shown in Table 3.

Table 4: Predicted Noise Levels at Sensitive Receptors

Receptor Number	Total Predicted Noise Level (dB(A))			
	Daytime	Evening	Normal Night Time	Night Time with Bird Removal
1	30.1	29.8	29.4	29.7
2	22.3	22.0	21.8	21.9
3	27.6	27.4	27.3	27.3
4	28.4	28.1	28.1	28.1
5	31.3	31.0	30.8	30.8

Traffic Noise
The EIS includes an assessment of the potential noise impacts associated with traffic generated by the proposed development. This assessment concludes that any such traffic is extremely unlikely to generate sufficient noise to impact on nearby sensitive receptors.

Submissions
Very few public submissions raised concern regarding noise emissions associated with the proposed development.

The EPA, upon review of the noise assessment provided in the EIS, requested further information on the following issues:

- The hours during which birds would be transported to and from the development site; and
- Operating hours for each component of the proposed development.

Department's Position
The Applicant submitted further information requested by the EPA. The EPA has indicated that this information adequately addressed outstanding issues and has provided the Department with GTA's which include limits to noise emissions from operations associated with the proposed development. The Department has incorporated the GTA's into the recommended conditions of consent for the proposed development and is satisfied that given the location of the proposed development and the findings of the noise assessment provided in the EIS, noise emissions associated with the proposed development are unlikely to be a significant issue.

5.7 Animal Welfare – Cage System

Applicant's Position
Animal welfare issues associated with the proposed development are addressed in Section 7.1.2 of the EIS.

It is stated that the cages to be installed in the sheds would be 'pre-enriched cages', which would comply with European legislation for poultry effective in 2012. The enriched cage system must comply with the following specifications:

- Area per bird 750cm^2 – of which a minimum of 600cm^2 must be useable;
- 12cm feed space per bird;
- Birds to be able to reach two water sources;
- Nest area (allowing a minimum height between it and the roof of the cage of 20cm);
- 15cm perch area per bird;
- Dust bath area;
- Claw shortening device;
- Minimum height to floor of the bottom tier 35cm; and
- Minimum aisle width between the cage rows of 90cm.

The EIS states that the cages will comply with these requirements, and the requirements set down in the *'Model Code of Practice for the Welfare of Animals – Domestic Poultry'*, prepared by the Standing Committee on Agriculture and Resource Management – Animal Health Committee.

Submissions
None of the submissions from government agencies raised concern regarding animal welfare issues associated with the proposed development.

The Department received approximately 300 submissions from members of the public and animal rights organisations. The vast majority of these submissions raised concern regarding animal welfare issues associated with the caging of birds. The following issues were raised in these submissions:

Cruelty
Many of the submissions considered the battery cage system to be inherently cruel, stating that it denies the sentient birds confined within them the fulfilment of their behavioural instincts.

Difficulty to monitor health of birds
A small number of the submissions stated that due to the scale of the operations proposed, it would be impossible to monitor the welfare of the birds, and that many sick or diseased birds would remain untreated and be subjected to unnecessary suffering.

Inappropriate cage system
A small number of the submissions stated that the battery cage system is outdated, and being phased out in other countries, particularly in Europe.

Department's Position
The Department has assessed the proposed development in terms of the criteria stipulated in the *'Model Code of Practice for the Welfare of Animals – Domestic Poultry'*, (the Code of Practice) prepared by the Standing Committee on Agriculture and Resource Management – Animal Health Committee.

The Code of Practice has been prepared to assist in the care and management of poultry, and to promote the adoption of standards of husbandry that are acceptable. It recognises the basic requirement for the welfare of poultry is a husbandry system appropriate to their physiological and behavioural needs.

Basic Requirements
The Code of Practice states that the basic needs of poultry are:

- Readily accessible food and water to maintain health and vigour;
- Freedom to move, stand, turn around, stretch, sit and lie down;
- Visual contact with other members of the species;
- Accommodation which provides protection from the weather and which neither harms nor causes distress; and
- Prevention of disease, injury and vice, and their rapid treatment should they occur.

The Department considers that the proposed development meets the needs specified above.

Cage Design and Construction
Specific requirements set down under the Code of Practice refer to standards for cage design and construction. These requirements are listed below:

- The floor must be constructed to enable support for each forward pointing toe and the slope of the floor should not exceed 8 degrees;
- Multi-deck cages must be arranged so that birds in the lower tiers are protected from excreta from above and so that all birds are fully visible for regular inspection and individual birds can be easily removed from cages as required;

- Not less than 10cm feed trough per bird must be provided;
- Not less than 10cm water trough per bird and no fewer than two independent nipple or cup drinkers must be provided within reach of the cage. The splash cup under a nipple drinker is not an independent drinking point.
- In cages, birds must be able to stand at normal height. Cages must be at least higher than the maximum height of the birds standing normally. The height of all cages must be at least 40cm over 65% of the cage floor area and not less than 35cm at any point;
- The design and size of cage openings must be such that birds can be placed in them and removed from them without causing injury or unnecessary suffering. Cages must have doors the full height and width of the cage. Since 1995, larger cages have been introduced and their doors must open either to full width or to a width of 50cm.

The Department considers that the cages, which are of the 'pre-enriched cage' design specification, meet all of the above requirements.

Stocking Density
The Model Code of Practice also sets down requirements for the minimum stocking densities for cage systems:

- All new cage systems commissioned (ie. point when the contract to purchase or lease the cages was signed) from 1 January 2001 (ie. post 1 January 2001 cages) must provide a minimum floor space allowance of 550cm2 per layer for cages with three or more birds per cage where the birds weigh less than 2.4kg.

From the information supplied by the Applicant, the Department is satisfied that the cages will meet this stocking density requirement.

Environmental Conditions
The Code of Practice also details specific requirements for environmental conditions to be maintained for the caged birds, including details for:

- Lighting;
- Ventilation;
- Equipment;
- Temperature and humidity;
- Protection;
- Food and Water;
- Inspections; and
- Health and Distress.

The Department considers that the proposed development meets the specific requirements for environmental conditions as stipulated in the Code of Practice, and concludes that animal welfare issues have been adequately addressed in the EIS.

5.8 Traffic and Transport

Applicant's Position
Traffic and transport issues associated with the proposed development are addressed in Section 8.2 of the EIS.

Traffic - Construction
The EIS did not provide any assessment of the potential impacts associated with traffic generated by construction activities associated with the proposed development.

On the request of the Department, the Applicant submitted further information, providing details of the likely level of traffic generated by construction activities. It is stated that traffic would consist of:

- Small vehicles;

- Large rigids; and
- Semi trailers.

Small vehicles – It is predicted that site workers travelling to and from the construction site would generate approximately 15 daily return trips (30 vehicle movements), and that deliveries would on average generate 2 return trips (4 vehicle movements) per day.

Large rigids – It is stated that large rigids would be required for concrete deliveries, soil and crushed rock deliveries, and the delivery of cranes used during construction.

Semi trailers – It is stated that semi trailers would be required to deliver all other construction material to and from the development site. Steel and cladding deliveries would generate 10 deliveries per shed (20 vehicle movements), and container deliveries and returns would generate 100 deliveries per shed (200 vehicle movements).

Traffic - Operation
Predicted vehicle movements associated with the proposal are outlined in Table 5.

Table 5: Traffic Movements to and from Proposed Development

Activity	Type of Vehicle	Daily Trips	Daily Movements
Staff	Car	24	48
Local Deliveries	Medium	1	2
Deliveries Feed Mill – (>30k tonne)	Semi and B Double	3.7	7.4
Deliveries Feed Mill – (<30k tonne)	Semi and B Double	10.2	20.4
Feed Deliveries – Rearing Farm	Semi	0.35	0.7
Feed Deliveries – Layer Complex	Semi and B Double	1.67	3.34
Manure Removal – Layer Complex	B Double	3.37	6.74
Packaging Material Deliveries – Grading Floor	Semi	0.61	1.22
Product Out	Semi and B Double	1.16	2.32
Birds In	Semi	2.4	4.8
Birds Out	Semi	5.8	11.6
Total: All Vehicles		40.69	81.38
Total: Cars		24	48
Total: Medium		1	2
Total: Heavy		15.69	31.38

Using traffic data supplied by Bland Shire Council, the EIS estimates the impact the proposed development would have on Annual Average Daily Traffic (AADT) levels on local roads servicing the development. These impacts are summarised in the following table, as a percentage of the existing AADT.

Table 6: Traffic Generation - % of Existing Annual Average Daily Traffic (AADT)

Class of Vehicle	Proposed Total Daily Movements – All Directions	Annual Average Daily Traffic (AADT)	% of Existing AADT
Cars	48	505	10.52
Medium	2	505	0.01
Heavy	31.38	505	6.21
Total	81.38	505	16.115

It is apparent that traffic generated by the proposed development, is moderate, particularly for medium and heavy vehicles, where the volumes generated would account for 0.01%, and 6.21% of existing traffic levels respectively. Car movements generated by the proposal can also be seen to be moderate, at 10.52% of the existing AADT.

Submissions
No submissions received by members of the public or government authorities, including the Roads and Traffic Authority (RTA), raised concern regarding the level of traffic generated by the proposed development, and the potential impacts on the surrounding road network.

Department's Position
The Department is satisfied with the traffic assessment provided in the EIS and the additional information supplied by the Applicant, and considers that the level of traffic generated by the proposed development is unlikely to have a significant impact upon the surrounding road network.

5.9 Flora and Fauna

Applicant's Position
An assessment of the potential impacts of the proposed development on flora and fauna is provided in Appendix 5 of the EIS.

Methodology
The EIS states that the site for the proposed development is a mixture of cleared open paddock that has been cropped and grazed, with areas of remnant/re-growth vegetation. The survey focussed on areas that could contain native vegetation, including grassland, and areas of possible habitat. Specific emphasis was placed on searching for threatened species known to occur in the West Wyalong area.

Flora – Random stratified sampling was undertaken to identify plant species present. Searches were also carried out by vehicle and on foot, looking for species not found in the quadrat samples, and opportunistic sightings/collections were made while carrying out fieldwork.

Fauna – Daytime and night time surveys were conducted for fauna, with the emphasis placed on large mammals, birds, amphibians and reptiles, and an assessment of habitat values. Sample locations and transects were chosen in the field with the assistance of aerial photography. Information from the NPWS Wildlife Atlas was used to determine species likely to be present within the study area.

Elliot traps were used for small mammals, and bat surveys were conducted using trip lines and the Anabat system. Nocturnal call playback and spotlighting techniques were also used, alongside opportunistic surveys and targeted habitat searches.

Results
Flora – The EIS states that the majority of the site has been cleared or cropped, and that most of the vegetation on the site is re-growth. The site for the layer farm is approximately 98% cleared, having previously been used for cropping.

Very few mature trees remain on the site, and the majority of the re-growth vegetation is made up of native shrubs and small trees. It is stated that the re-growth consists of a good diversity of native species, and significant native grasses. The survey identified 33 plant families, 27 being native, incorporating 55 native species.

From searches of the NPWS ROTAP database, two species of threatened flora were identified as potentially occurring in the study area, being *Lepidium aschersonii and Austrostipa wakoolica*. Neither of these species were identified during the flora survey.

The EIS concludes that the proposed development will not impact upon any endangered or threatened flora species or ecological communities. The EIS recognises however, that the proposal will result in the removal of some vegetation, primarily during the construction of roads, and recommends that vegetation is preserved and set aside where possible, and a re-vegetation scheme implemented.

Fauna – The survey identified:

- 40 native bird species;
- 2 introduced bird species;
- 5 reptile species;
- 2 amphibians;
- 6 mammals; and
- 2 bat species.

No threatened species listed in the NPWS Wildlife Atlas as potentially occurring within the study area were identified during the survey. The EIS includes an 8 part test for threatened fauna species.

Conclusions
The EIS provides a number of recommendations, which are listed below. It is concluded that with the implementation of these recommendations, the proposed development will not have a significant impact on threatened species of flora and fauna, and any impacts should be minor and temporary.

- Remnant/re-growth vegetation in the southern area of the development site should be conserved. As a minimum, the area bound by the internal roads, Ridley's Lane to the corner of near the proposed dam should be set aside;
- Widening of Ridley's Lane should be kept to a minimum, and in particular the removal of old growth or dead trees should be avoided;
- Local land care group should be invited to use the re-growth vegetation as a seed bank for re-vegetation projects; and
- A planting program for the development site should be implemented.

Submissions
None of the submissions from government agencies, including the National Parks and Wildlife Service (NPWS), and only a very small number of submissions from members of the public, raised the potential impacts of the development proposal on flora and fauna as an issue of concern.

Department's Position
The Department considers that the flora and fauna assessment, at Appendix 5 of the EIS, adequately addresses impacts associated with the proposal development on flora and fauna species.

The survey effort is considered adequate to identify species potentially affected by the proposal. Although it is unclear which species the 8 Part test has been applied to, the Department agrees with the conclusion that the proposed development is not likely to have a significant impact on any threatened flora or fauna species.

It is noted that the assessment was undertaken with the assumption that the layer farm would consist of nine sheds as was originally proposed, and that the development has since been modified to incorporate an additional three sheds. However, the Department considers that any potential impacts on flora and fauna would not change due to the addition of three sheds, as these sheds are to be located on a site which has previously been cleared of vegetation.

The Department supports the mitigation measures proposed in the EIS, and has incorporated a requirement into the recommended conditions of consent for the Applicant to

prepare a Landscape Management Plan, which incorporates these mitigation measures, and provides details on revegetation/planting schemes, and residual land management issues.

5.10 Hazards

Applicant's Position
Hazard issues associated with the proposed development are addressed in Appendix 10 of the EIS, which includes a Preliminary Hazard Analysis (PHA) for the proposal.

The PHA was prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (1992)*. A hazard identification session was conducted to identify all relevant hazards, including a number of hazard scenarios involving liquid petroleum gas (LPG) storage and grain storage.

The only credible hazard scenario with demonstrated potential for off-site impacts was a Boiling Liquid Expanding Vapour Explosion (BLEVE) of the LPG storage vessel. The assessment concluded that calculated risk values would not exceed relevant acceptable risk criteria, and that the proposed development would not be hazardous.

Submissions
None of the submissions received by the Department raised concern regarding hazard issues associated with the proposed development.

Department's Position
The Department considers that the EIS adequately addresses all potential hazard issues associated with the proposed development. Not withstanding this, the Department has incorporated a number of measures into the recommended conditions of consent for the proposal to ensure that any potential hazard issues are management and minimised throughout the life of the development. These conditions include:

- The preparation of a fire safety study and a safety management system;
- Installation and maintenance standards for the fuel storage area, including bunding requirements; and
- Hazard audit requirements.

5.11 Landscaping and Management of Residual Lands

Applicant's Position
Landscaping of the development site, and issues associated with the management of residual land are addressed in Sections 8.9 and 8.10 of the EIS prepared for the proposed development.

Landscaping
A landscaping strategy for the proposed development is included at Appendix 15 of the EIS. This strategy includes details on plant selection, and planting requirements. A detailed Landscape Plan is also included at Appendix 16 of the EIS, which includes details of areas to be screened, and the effluent irrigation plantation.

Management of Residual Lands
The majority of the land purchased for the proposed development would be used to provide a buffer between it and the general public and neighbouring properties for quarantine purposes.

The EIS includes a report detailing management practices for residual lands which addresses:

- Grazing management issues;
- Stocking policies;
- Noxious weed control issues;
- Disease control issues; and

- Feral and noxious animal control issues.

Submissions
No submissions received by the Department raised concern over landscaping and residual land management issues associated with the proposed development.

Department's Position
The Department considers that issues associated with landscaping of the proposed development and residual land management have been adequately addressed in the EIS, and are unlikely to be an issue of concern.

Not withstanding this, the Department has incorporated a requirement into the recommended conditions of consent for the Applicant to prepare a final Landscape Management Plan, providing details on revegetation/planting schemes and mitigation measures as proposed in the flora and fauna impact assessment (see Section 5.9 of this report), and residual land management issues.

5.12 Indigenous and Non-Indigenous Heritage

Applicant's Position
Indigenous and non-indigenous heritage issues are addressed in Appendix 4 of the EIS prepared for the proposed development.

Central West Archaeological and Heritage Services Pty Ltd (Central West) was commissioned by the Applicant to conduct a survey of the proposed development site to identify any items of indigenous or non-indigenous heritage value.

The subsequent report prepared by Central West concluded that:

- Given the absence of known indigenous sites within the survey area, a conclusion based on the results of the field survey, a search of the NPWS database and discussions with the West Wyalong Local Aboriginal Land Council, there should be no indigenous constraints to the proposed development proceeding; and
- Given that there were no items of non-indigenous heritage value found during the survey, there should be no impediments of a non-indigenous heritage nature to the proposed development proceeding.

Submissions
No submissions received by the Department raised concern regarding indigenous and non-indigenous heritage issues.

Department's Position
The Department considers that indigenous and non-indigenous heritage issues have been adequately addressed by the Applicant. Based on the findings of the assessment provided at Appendix 4 of the EIS, it is concluded that impacts upon items of indigenous and non-indigenous heritage value are not likely to be significant.

Not withstanding this, the Department has incorporated a requirement into the recommended conditions of consent for the Applicant to cease all works associated with the proposal, and notify the NPWS and/or Heritage Office, should any item of indigenous or non-indigenous heritage value be uncovered during excavation works.

6. SECTION 79(C) CONSIDERATIONS

The Department has evaluated the DA in accordance with the matters for consideration listed under Section 79(C) of the *Environmental Planning and Assessment Act 1979*. Based on this evaluation, attached at Appendix A, it is considered that the merits of the proposal warrant the granting of development consent, subject to the recommended conditions of consent.

7. CONDITIONS OF CONSENT

The recommended conditions of consent, at Schedule 2 of the Instrument of Consent (tagged 'A'), contain the General Terms of Approval provided by the Environment Protection Authority. The conditions of consent also take into account the issues raised in submissions received from the community and government authorities, including Bland Shire Council, Goldenfields Water County Council, the Department of Land and Water Conservation, the Roads and Traffic Authority, and the National Parks and Wildlife Service. The Department has consulted with the Applicant with regard to the draft conditions, and the Applicant has agreed with the draft conditions as proposed.

The conditions of consent have been drafted with the aim of controlling and monitoring the future environmental performance of the proposed development. Key issues covered by the conditions of consent include:

- Environmental management and monitoring, including the preparation of Environmental Management Plans and an Environmental Monitoring Program;
- Disease management and quarantine protocols;
- Waste management protocols;
- Measures to protect the surrounding environment, including the control of noise, odour and dust emissions, and the protection of soils, surface water and ground water; and
- Measures for the handling and receiving complaints.

8. CONCLUSION

The Department considers that the proposed development is consistent with State and regional planning objectives relating to environmental management, sustainable economic development and employment generation.

It is further considered that the essential environmental issues relating to the proposal can be suitably managed such that they do not preclude the granting of development consent. The proposed development as conditioned and properly monitored will not result in substantial negative environmental, social nor economic impacts as to outweigh the benefits of the proposal to the region and the State. It is therefore concluded that the proposal should be approved, subject to the conditions of consent designed to control and mitigate potential environmental impacts.

9. RECOMMENDATION

It is RECOMMENDED that the Minister:

(1) consider the contents of this report;

(2) grant development consent to the Development Application in accordance with Section 80 of the *Environmental Planning and Assessment Act 1979* subject to the conditions set out in Schedule 2 of the Instrument of Consent (tagged 'A');

(3) sign the Instrument of Consent (tagged 'A').

Gordon Kirkby
Manager, Manufacturing and Rural
Major Development Assessment

ENDORSED

Sam Haddad
Executive Director
Sustainable Development

Report prepared by Tom Evans.