



Department of Primary Industries

OUT15/34046

Mr Daniel Gorgioski
Infrastructure and Industry Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Daniel.Gorgioski@planning.nsw.gov.au

Dear Mr Gorgioski,

Albion Park Rail Bypass Project (SSI_6878) Response to exhibition of Environmental Impact Statement

I refer to your email dated 27 October 2015 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Please note that any ongoing correspondence or requests to DPI in relation to major projects can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

The key issue for DPI is the impact on high quality agricultural land and a major dairy enterprise, and further consultation with DPI Agriculture is requested to assist with the mitigation of impact to the dairy industry.

DPI Lands, Water and Fisheries are broadly satisfied, and ongoing consultation throughout the project construction is requested with DPI Water & Fisheries in relation to work around watercourses, as outlined further below.

Comment by DPI Lands

DPI - Lands is satisfied that the EIS sufficiently addresses the protection of Crown waterways affected by the development, being Macquarie Rivulet and Duck Creek, however note that ongoing engagement is requested with DPI Water & Fisheries (see below).

For further information please contact Rebecca Johnson, Co-ordinator Client Services, (Newcastle Office) on 4920 5040 or at rebecca.johnson@crowmland.nsw.gov.au.

Comment by DPI Water

DPI Water has reviewed the subject Environmental Impact Statement (EIS) and provides the following comments:

Identification of water supply;

- It is noted that the EIS confirms that groundwater extraction is not proposed for the purposes of water supply during construction works and that water will be obtained from other sources.
- DPI Water recommends that adequate and secure water supply from other sources is identified for the life of the project and that water can be sourced from an appropriately authorised and reliable supply.

DPI Water is supportive of ongoing engagement through the detailed design and construction phases of the project as outlined in the EIS and supporting documents. Specific areas of interest include:

- Detailed design of permanent and temporary creek crossings,
- Detailed design of creek realignments and reconstruction works,
- Preparation of Vegetation Management Plans for riparian revegetation works,
- Soil and water management design and management.

For further information please contact Jeremy Morice, Water Regulation Officer (Wollongong office) on 4224 9736 or at Jeremy.morice@dpi.nsw.gov.au.

Comment by DPI Fisheries

DPI Fisheries reiterates comments made in response to the draft EIS including the following;

DPI Fisheries supports a policy of **Neutral** or Beneficial (NorBe) impact to receiving waters resulting from developments. DPI Fisheries concur with the proposed safeguards and mitigation measures outlined in section 16.5 of the EIS and request that a copy of the CEMP (ID No: SW02) and sedimentation basin plan (ID No: SW03), be provided to the Department for review prior to the commencement of works. Monitoring, auditing and reporting requirements should be designed to ensure that outcomes predicted in Table 16-3 are achieved. It is requested that the use of bioremediation tools (eg: s200 oil gone) rather than disbursement methods be investigated in relation to emergency spill response procedures.

DPI Fisheries concurs with the Environmental Management Measures detailed in section 9.5 of the EIS to manage impacts to biodiversity, in particular those relating to aquatic habitat. It is requested that designs for watercourse crossings (both temporary (ID No: HF04), and permanent (Table 5-3) be provided to the Department for comment and approval prior to the commencement of works.

DPI Fisheries concurs with the commitments outlined in Table 9-14, in particular the revegetation of the riparian zone along Macquarie Rivulet and for the design and features of the Frazers Creek Realignment to be developed in conjunction with our Department. Section 5.14 identifies the potential for other small watercourse or

water bodies to be subject to minor realignment or adjustment as part of the project. It is requested that any such realignments or adjustments located within Key Fish Habitat be referred to the Department for comment and approval. All such works should be designed in accordance with the principals outlined in ID No. HF05.

For further information please contact Jillian Reynolds, Regional Assessment Officer, [Huskisson office], on 4428 3406 or at jillian.reynolds@dpi.nsw.gov.au.

Comment by DPI Agriculture

DPI Agriculture advises that the proposed bypass will have significant impacts on dairy land. The attached submission highlights some of the critical aspects of the proposal including the loss of highly fertile land to agriculture, access for dairy cows to the dairy and flood free land, flooding and potential erosion issues as well as the placement of the underpass and entry and exit ramps. These issues have a direct impact on the operational and financial aspects of a dairy.

DPI Agriculture requests consultation with the proponent in relation to the impacts identified.

Further detailed comments from DPI Agriculture are provided at Attachment A.

For further information please contact Wendy Goodburn, Resource Management Officer (Goulburn Office) on 4824 3736 or at wendy.goodburn@dpi.nsw.gov.au.

Yours sincerely



Mitchell Isaacs
Director, Planning Policy & Assessment Advice
4/12/2015

Attachment A

Albion Park Rail Bypass Project (SSI_6878) EIS DPI Agriculture Detailed Comments

A dairy farm will be significantly impacted by the Albion Park Rail bypass. It should be noted that currently the farm is well positioned to expand and grow to meet the requirements of the ever increasing demand for milk from the cities. It is the second largest milk supplier within 150km of Sydney markets and major processors; it has an established business scale and all weather access to allow milk collection during flooding events.

The dairy farm will be impacted significantly by the bypass through increased area of land subjected to flooding, restricted access, a substantial land loss of highly fertile land and loss of one of the dairies that will impact on the operational aspects of the business, its functionality and scale.

Maintaining land for agricultural industries is a key Policy of NSW Agriculture. Key aspects of that policy are:

- land for agricultural production is a limited resource in New South Wales and should be maintained for future generations;
- agricultural land should not be alienated directly through lands being used for non-agricultural purposes and indirectly by incompatible developments on adjacent land restricting routine agricultural practices; and
- agricultural industries are a fundamental asset to the state of NSW as they provide a long term means of providing employment, raw materials and fresh safe secure food while supporting regional communities.

The document can be found at:

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/396458/Policy-O-104-maintaining-land-agricultural-industries.pdf

Cycleway, stock and farm machinery crossing

It is understood from the EIS that there is a proposed cycleway on the motorway itself that joins with the cycleway at Lake Illawarra and another proposed cycleway at ground level which goes through the proposed underpass at Frazer's Creek.

In other sections of the EIS, it is noted that the Frazer's Creek Bridge is intended to be used as an underpass for stock movements, tractor and silage carting to allow the farmer to access both sides of the property for operational requirements of their dairy business. It appears that cyclists, cows and farm machinery will all have access to the Frazer's Creek underpass. Allowing combined use of the underpass for agricultural machinery, cows and pedestrians/ cyclists will be potentially hazardous, and consideration will need to be given to appropriate safety measures.

There are serious safety implications for that proposal. Farm machinery is dangerous, big and bulky and is not designed to be used in the vicinity of pedestrians or cyclists. Manure for instance, can cause slip hazards, carting hay and silage is equally hazardous with the potential for collisions with cyclists as fast moving cyclists could collide with slow moving trucks and cows. Cows, also, cannot be quickly stopped or redirected should a cyclist be approaching. Cows can also take a fright at an approaching cyclist and scatter or stampede putting the cyclist in a dangerous situation.

Appropriate safety measures should be put in place, preferably to separate the cyclist/pedestrian path from farm machinery and cows.

It is understood however that a cycleway is an integral part of the proposal. An alternative for the cycleway could be to have a small ramp near Darcy Dunster's Reserve that joins the proposed cycleway (on the motorway) with the existing cycleway to Lake Illawarra. The proposed cycleway at ground level underneath Frazers Bridge will also remove further productive land from the dairy.

Flooding

Presently, flooding impacts only a small area of the dairy farm. With the proposed bypass, the Dairy will be flooded to a higher level, as a result of Frazer's Creek bridge, which will impact on the operations of the farm and their dairying business. The EIS indicates that the flood impact will be less than 250mm increase, localised up to 400mm over areas less than 5ha in 20 and 100 yr ARI (Table 8.10).

However, it is understood that is a general assessment and the full impacts will be known once the Macquarie Rivulet flood model undertaken by Shellharbour Council is completed. It is critical that RMS provide detailed information on flood impacts to the farmer in order that the dairy farmers are able to assess the direct impacts on the dairying operations, including for milking, feeding, watering, pasture loss and animal health and welfare. It is critical that the discussions between RMS and the dairy farmers include direct impacts on the financial aspects of the business and access arrangements that are suitable for the continuation and expansion of the dairy farm operation as proposed by the farmer. Discussions to address those issues will need to be undertaken and DPI Agriculture will be pleased to assist with those discussions.

There are some critical aspects in relation to flooding and access that are evident at this stage and need to be addressed for the dairy to be operational.

Firstly, there is limited high ground that cows can retreat to in times of flood. Those areas include: land parcel numbers 33 and the northern part of 37 (north of the western runway of the airport) as well as above Marshall Mount Creek (as per the map on page 481 of the EIS). Land parcel 33 and north of 37 is highly suitable for dairy cows, being highly fertile land with the highest dry matter yield for the dairy. Land to the north of Marshall Mount Creek is used for dry cows and the farmer is currently discussing right of way access to that paddock.

In flood, there is no access to land parcel 33. It should be noted that in times of flood milking cows need to be managed to ensure there is adequate feed and clean water, and to manage health and milking issues. That means enabling access for trucks for feed and milk collection. Cows for instance need to be milked daily. They are highly susceptible to mastitis and other health issues as well as losing their ability to produce milk if left unmilked. This has serious financial implications for the farmer. Land parcel 33 currently houses dairy number 2 on high ground which enables the farmer to milk and manage the herd in times of flood. However, the proposed bypass will result in the demolition of that dairy.

NSW DPI has a Primefact on Livestock Flood Refuge Mounds, Number 961, October 2009 that covers the management and requirements of dairy cattle in flood events. The document can be accessed at <http://www.dpi.nsw.gov.au/agriculture/emergency/flood/refuge-mounds>
A summary of the key points of that document are provided in Appendix 1.

Page 223 of the EIS states that no modelling of flood impacts has been done for the construction phase. This will be important to undertake because there is a risk of scoring of the bed and bank erosion will impact water quality and sedimentation of the watercourse and therefore quality of

the pastures that cows graze, reducing the size of the area able to be grazed. Erosion management measures will need to ensure there is minimal disturbance to pastures and an agreement entered whereby such impacts are managed by RMS in the event there is an erosion event.

Access

As the dairy number 2 on land parcel 33 (P481 of the EIS) will be demolished, cows will need to access dairy number 1 which is located on Calderwood Rd. The critical issue for the farmer is accessing the dairy with minimal walking distance for the cows to minimise the loss of cow condition and reduction in milk production. Current stock permit enables cattle crossing at several points along the Illawarra Highway depending on stock rotation requirements. The proposed underpass at Frazer's Creek Bridge limits the access to dairy number 1 from paddocks the other side of Macquarie Rivulet (due to cow time travel distance) and is therefore not suitable for milker movements.

The underpass under Frazer's Bridge that would allow cows to cross to the dairy (No1) will result in an additional 1 kilometre walk each way for the cows. Significant research has been undertaken by the dairy industry that links cow condition and milk production. Losses in time (as a result of herding cows) and a reduction in cow condition will have significant financial implications for the dairy business.

An alternative location for a crossing would be over the Macquarie Rivulet at land parcel 32. That would enable cows from 37 to cross to the dairy at Calderwood with a significant reduction in distance for milking.

It is noted that an additional access for cows and machinery across Macquarie Rivulet has been proposed in the EIS at Darcy Dunster's Reserve. However, the reserve is not suitable for farm machinery ie hay, cattle truck, tractors or other farm machinery due to the minimal bridge height of 3m. As previously outlined also, it is not flood free, so cows could not cross during a flood event.

Darcy Dunster's Reserve is marked as a Reserve on the map. It is unclear from the EIS what that land is zoned and therefore what land uses are permitted on the reserve. Regardless, we understand that people visit the area for relaxation as it is adjacent to the River. Cows and vehicles crossing the Macquarie Rivulet could potentially cause conflicts with people visiting the reserve. Cows cause odour, dust, flies and manure and noise from tractors and other machinery. There is also a public safety issue for the farmer if people get too close or cows get a fright and suddenly move or stampede. Gates to the reserve are also locked each afternoon and access is only available by arrangement for a key or when council unlock it.

Darcy's reserve is therefore generally unsuitable for the purposes of a cow crossing.

The EIS states (p485) that property access will be maintained or alternative arrangements made in consultation with the affected landowners. To date this has not been achieved as the alternative arrangements will result in an unacceptable impact to the operations of the farm.

Dairy Expansion

With the demolition of dairy number 2 proposed, the farmer will need to expand the operations of dairy number 1 on Calderwood Rd. There will be significant costs involved in undertaking that upgrade including dairy expansion, laneway development and crossings required to operate the dairy. The necessary expansion and the financial aspects of that impact on the business will

need to be considered by RMS in consultation with the farmer to ensure continuation and profitability of the farming enterprise.

Entry and exit ramps

Entry and exit ramps at Frazer's Creek will impact on the high quality dairy land. The area of impact is the most fertile land of the entire dairy that produces a higher volume of dry matter than any other area on farm. That land is classified as class 2 on the Agricultural Land Classification Maps undertaken by the Department of Agriculture in 1986. Class 2 land is "Arable land having a very good capability for agriculture. Minor to moderate constraints to sustained high level of production are present." That land is some of the best land in the state.

A more suitable proposal would be to locate the entry and exit ramps to Frazer's Bridge on land at the intersection of land parcel 35 and the southern part of 37 where there is swampy ground and of much less agricultural value.

Dairy Farming in the Shellharbour LGA

While the socio economic paper of the EIS (appendix, page 110 to 111) states the importance of dairying and milk to the Illawarra region, the significance of that commodity requires further explanation.

The EIS provides figures on the numbers of dairy farms and hectares under dairying rather than considering actual milk production figures. The number of dairy farms in the Shellharbour LGA is declining and the area of dairy farms is also decreasing overall as stated in the report but the actual production value of the farms remaining is increasing. Between 2000 and 2005, milk value increased by \$200,000. Between 2006 and 2011 milk value increased by \$300,000. Milk production in the Shellharbour LGA is therefore growing. There has been an increase in milk production value by \$500,000.

Year	Milk Production (millions)	Farms
2000-01	\$ 3.3	21
2005-6	\$ 3.5	11
2010-11	\$ 3.8	9

Since deregulation, those farms that remain in production have had to increase their efficiencies to hedge against the deregulated market. Efficiencies in cattle movements, feed, property, water and heat management as well as many other aspects have been addressed by dairy farmers. Those efficiencies continue to be implemented for the dairy industry to remain viable, productive and profitable. Aspects such as allowing access to minimise cattle movements at critical times is fundamental to the operations of a dairy farm. This is further discussed under the heading "Access" above.

It is important to note that Illawarra milk production is important for the expanding Sydney and Wollongong markets. Ready access to milk for those large population centres is critical, particularly as the dairy is located within 150km of the Sydney market and is the second largest milk supplier in that radius.

Strategic Plans and Maps

The Illawarra Regional Plan 2015 identified agriculture as one its important goals for the Illawarra. That is "Goal 4 - A Region makes appropriate use of its agricultural and Resource Lands."

Agriculture has clear importance in the region. There are clear priorities within that plan to retain important agricultural land including actions within the plan:

Action 4.1.1

- Identify land on a map that is highly suitable for leading agricultural land and industries in the region to better inform strategic and local planning processes.
- Develop profiles of leading agricultural industries to guide future investment decisions

Additionally, it should be noted (as outlined above) that land taken for the bypass at the dairy is classified as class 2 on the Agricultural Land Classification Maps undertaken by the Department of Agriculture in 1986. Class 2 land is "Arable land having a very good capability for agriculture. Minor to moderate constraints to sustained high level of production are present." That land is some of the best land in the state.

The EIS states that there is no dairy land that is identified as Biophysical Strategic Agricultural land. It is important to note that the BSAL mapping was undertaken to address land use conflicts between agricultural land uses and mining activities at the state level and was not intended for planning at the regional level. The Albion Park Rail Bypass would be a classic case of planning at the regional level. Also, as outlined above, actions have been included in the Illawarra Regional Plan to address the retention of agricultural land as a limited resource.

Overall impacts of the Highway

P474 of the EIS mentions the direct impacts the project would have on the dairy enterprise adjacent to the Illawarra Highway, including:

- Loss of pasture land
- Loss of dairy infrastructure, such as milking sheds, fencing, silos and feed pad facilities
- Change in access across the Illawarra Highway for stock movements and silage transport
- Loss of flood free land
- Loss of access by road to flood free land.

However, the loss of the residence on the dairy farm is not mentioned and should be included as it is a significant impact.

Loss of dairy Land

The EIS states (p147) that 27 hectares of dairy will be converted to transport land uses. Also, the EIS states that land lost to milking herd is 6.7%. It is important to note that the land loss is much higher due to portions of the farm being unable to be used due to the lack of suitable underpass at Frazers Bridge and Darcy Dunster's Reserve and the inability to access that land. It should also be calculated based on the land for the milking herd, not breeders or dry heifers. The farm for the milking herd would be impacted by 37% if no bridge were provided and 23% if a bridge is provided (land parcel 33 would be unusable in flood). This is not small loss as outlined on page 406. If a bridge were provided at lot 32, only 12% of the farm would be impacted.

To achieve minimal impact, a bridge at lot 32 to cross the Macquarie rivulet is the preferred option.

Operational aspects

Impacts on the farm of reduced areas of fertile land will be a reduction in the quality of home grown feed and having to purchase feed or reduce numbers reducing milk production. The farm currently produced 4.5 million litres from milking 440 cows in 2013 (as stated in the EIS).

However, production in 2015 is 5.4 million litres, milking 570 cows and projections for growth in the business were to milk 650 to 660 cows in 2016 with a production target of 6 million litres in order to meet increasing milk demands from the market.

The land take of the most highly fertile land of the farm for the bypass will clearly have a significant impact on the projected production levels for the farm into the future.

Appendix 1

NSW DPI has a Primefact on Livestock Flood Refuge Mounds, Number 961, October 2009 that covers the management and requirements of dairy cattle in flood events. The document can be accessed at <http://www.dpi.nsw.gov.au/agriculture/emergency/flood/refuge-mounds>

Key messages from that document are outlined below:

Access to cattle on small pockets of higher ground is critical for their management and maintenance particularly as they will be under stress from boggy, wet and cold conditions. Access to cattle for feeding, watering, milking and general animal health is required.

Feed and Water

- Care for dairy cattle on flood mounds is required for up to 14 days until the surrounding soils dry out. They will be dependent on supplied feed and clean water during that time. Lactating dairy cows require about 3.5% of their body weight, if milk production is to be sustained and about 120 litres of water per day increasing to 250 litres during hot summer periods.

Milking

- Dairy cows require milking as they may develop mastitis, other health problems or go dry if unable to be milked.

Pasture Management

- Lower lying coastal areas can be inundated for 2 - 14 days during major floods. Pastures may also be buried by debris and mud. Livestock will need to be kept off flood sodden pastures for as long as possible to avoid 'pugging' and productivity losses (around 2 - 4 weeks).

The greater the flood impact area, the greater the impact on the dairy business.

Page 2

Holding livestock in confined circumstances requires owners to provide additional care and management for dairy cattle as outlined below.

- To ensure appropriate livestock welfare a flood refuge mound must be accessible; Access to the mound via a formed access track or a compacted, gravel surface is required.

End Attachment A