15th May 2015

Health
Western NSW
Local Health District

The Manager Industry Assessments
NSW Department of Planning
GPO Box 39
SYDNEY NSW 2001

Via email: robert.byrne@planning.nsw.gov.au

Dear Sir,

Blayney Export Meats Smallstock Abattoirs (SSD6594)
137 Newbridge Road Blayney

Thank you for the opportunity to comment on this proposal.

Should this proposal proceed, Western NSW Local Health District (WNSWLHD) has significant concerns regarding the possible health impacts that may eventuate in the local Blayney community and in communities along travel routes from the locations that animals are placed on trucks for transportation to Blayney.

WNSWLHD is concerned that Appendix N - Environmental Health Risk Assessment (HRA) of the Environmental Impact Statement has failed to adequately quantify and address the health risks associated with the proposal, particularly in relation to zoonotic diseases, with Q fever being of greatest concern.

The HRA has failed to articulate the acute and chronic manifestation of Q fever as a zoonotic disease in humans that can range from a reasonably mild flu-like illness of a few weeks duration, through to a debilitating chronic disease that can produce cardiac endocarditis, and if left untreated has produced fatalities.

The HRA is presented in very general terms and any analysis of risk is qualitative in nature. WNSWLHD would expect to see any analysis of risks to include significant quantitative methods to be able to fully demonstrate the level of risk to the staff of the abattoir and the wider community. The HRA has generally failed to quote any primary scientific sources in the form of journal articles to support their conclusions, but rather is relying on government department facts sheets and the like. These primarily relate to Q fever in the occupational setting.

In 2014 the standardised rate of Q fever in NSW is 2.29/100,000 whereas for WNSWLHD (the source of many of the feral goats and transport routes to Blayney) the rate is 10.52/100,000. The HRA's conclusion that the risk is low, because it is low across the breadth of the Australian population does not satisfactorily (or quantitatively) review the risk to the Blayney community or communities along the transport routes. It is the view of WNSWLHD that a large portion of the health risk associated with this proposal is in the community setting.

Population Health Unit

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The infectious agent for Q fever, *Coxiella burnetti* has been shown to be very hardy in the environment and accordingly has been carried long distances before causing infection. The organism can be found in large concentrations in the tissues of infected animals particularly placenta tissues. Aerosol infection is the likely form of transmission and any creation of dust from dried placenta tissues, birth fluids or excreta of infected animals is likely to be highly infectious. Studies have shown that exposure to as few as one to two organisms can produce illness in people (Brooke et al 2013).

The prevalence of *C. burnetti* infection in Australian feral goats is not accurately known but one study (Hein et al 1981) has shown that it could be as high as 51% which is significantly higher than domestic goat stock which has effective animal health and husbandry practices in place. Infected animals are often asymptomatic, but shed massive numbers of organisms. Accordingly, it does not seem appropriate for the HRA to place the risk of feral goat movement in the same category as those for domestic goats and other domestic stock. Feral goats are known to be a source of Q fever infection in Australia and other parts of the world and were clearly identified with an outbreak in Victoria soon after an abattoir started slaughtering these animals in 1979 (Buckley 1980).

Pregnant goats that are infected with *C. burnetti* are known to be more likely to spontaneously abort when stressed, such as when placed onto trucks for transportation over long distances. As the goats for slaughter at the Blayney abattoir are feral there is no way of knowing their reproductive status, however it is likely that a significant number on any one truck would be pregnant or have just aborted during the emptying out period. Together with hot/dry weather conditions, this creates a likelihood of significant numbers of infectious micro-organisms becoming airborne all along the transportation route to the Blayney site. It is likely that these transportation routes will pass through a number of towns with significant residential and commercial areas (and populations) surrounding the routes. The risk to these populations along the routes, including that of Blayney itself needs to be quantified. To this extent the HRA has failed to convince us that the health risk along the transport route and Blayney populations should be considered to be negligible.

The HRA has a focus on potential Q fever as a Work Health and Safety issue for those at the site of processing in Blayney. Feedback should be sort from WorkCover NSW as to their requirements in this regards and what is possible in terms of vaccination programs and the like. Any WorkCover NSW recommendations should also address risks to those workers collecting and transporting goats as well as risks to those working in the adjacent Blayney SeaLink Cold Store Complex site and the families of workers who may have a higher risk through secondary exposure because of the occupation of their family member. Additionally, risks to any workers that may be associated with material leaving the site need to be adequately assessed and mitigated e.g. those dealing with skins and those dealing with solid and liquid waste materials (including Cadia Valley Operations).

The risk of community acquired Q fever has not been adequately addressed in the HRA. Past outbreaks of Q fever and notifications to health departments around the country have shown that Q fever is not solely an occupational disease and that steps must be taken to address the risk to the wider community from a high risk operation such as this proposal.

Considering all of the points made above, the WNSWLHD is not convinced that the health risk to the nearby Athol Homestead and Tetlaw residence should be estimated as Very Low. The prevailing winds in spring and summer when people are most likely to be outdoors, is directing aerosols towards these properties. Given that the Athol Homestead is used as a function centre, it is likely that many visitors are likely to have no existing immunity to *C. burnetti* and that the risk of infection to them is above that allocated in the HRA. In fact outbreak investigations (Hackert et al 2012) have shown that there can still be an increased risk of infection greater than 5km from a point source. This must then bring into question the assessment in the HRA that the risk to the Blayney community generally is a negligible health risk.

Keeping all of the above in mind we would ask the following questions regarding the proposal:
What measures are being put in place to assess whether collected animals are infected with *C. burnetti*?

What measures are being put in place to assess what animals are pregnant or lactating and are the animals then excluded from transportation for slaughter?

What measures are being put in place to prevent the release of dust, hair, urine, faeces and birthing products during transportation? How confident are we that the waste control systems on the transport contractor's vehicles will adequately mitigate the risk of spread of infectious material?

Will the transport routes for the trucks from the point of collection to the delivery site in Blayney be established to avoid traversing built up areas of towns and villages wherever possible?

Will the air extracted from the enclosed holding yards be treated in such a way as to eliminate any infectious sources of *C. burnetti* or will the 3 metre high stack exacerbate the potential travel distance for this material?

What measures are to be put in place to control pests on the site that may spread infectious material e.g. birds, rats/mice, flies?

The WNSWLHD recommends that the applicant be required to undertake a much more detailed Health Risk Assessment that quantifies the potential health risks to both the Blayney community and communities along the travel routes. Such an assessment should also explain in detail the systems being put into place to mitigate any risks identified during collection, transportation, holding and processing, and from the generation of solid and liquid wastes.
Should you wish to discuss these matters further please contact me in the Bathurst office on (02) 6330 5880.

Yours faithfully

Gerard van Yzendoorn
Senior Environmental Health Officer

References:

Brooke RJ, Kretzschmar MEE, Mutters NT, Teunis PF. Human dose response relation for airborne exposure to *Coxiella burnetii*. BMC Infectious Diseases 2013, 13:488

Hein WR & Cargill CF. An abattoir survey of diseases of feral goats. Australian Veterinary Journal 1981.

Buckely B. Q fever epidemic in Victorian general practice. Med J Aust 1980 1 593-595.

Hackert VH; van der Hoek W; Dukers-Muijrers N; de Bruin A; Al Dahouk S; Neubauer H; Bruggeman CA; Hoebe CJ. Q fever: single-point source outbreak with high attack rates and massive numbers of undetected infections across an entire region. Clinical Infectious Diseases. 2012; 55(12):1591-9.