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STORMWATER STRATEGY

Poultry (Broiler) Farm Comprising 18 Sheds and Associated Infrastructure

AAM "Bective South" 2432 Oxley Highway, Bective NSW (Lot 161 on DP755319)

AAM has engaged Bath Stewarts Associates for preliminary civil and stormwater designs as part of a Development Application for an 18 shed broiler poultry farm at "Bective South", 2432 Oxley Highway, Bective NSW. Bath Stewart Associates have prepared a preliminary civil and stormwater design for the proposed development. This Stormwater Strategy is to be read in conjunction with the preliminary drawings Ref.No.24290PR Rev.F.

The site is identified as Lot 161 on DP755319 and forms part of a larger agricultural holding known as Bective Station. Primary access to the site is proposed via a new entrance off Soldiers Settlement Road and internal access driveway through Lots 5 and 147 on DP755319 and Lot 1 on DP127958. The site is currently utilised as cultivated dryland farming land. Current overland waterflow rates are controlled through the use of contour banks.

The proposed development is for 18 new broiler poultry sheds including internal roadways, drainage infrastructure, a 160ML storage dam, staff amenities with parking and two new dwellings.

In 2024 a detailed survey of the site was conducted by Bath Stewart Associates Sheet No.01, Ref.No.24290PR Rev.F. The survey located all existing features including existing road, services, table drains, contour banks, vegetation and built structures.

The proposed development footprint is provided in Sheet No.02 Ref.No.24290PR Rev.F. The stormwater flow detail is provided in the drawing titled DRAINAGE LAYOUT PLAN Sheet No.17 Ref.No.24290PR Rev.F. The site was modelled for the 1 EY, 0.2EY, 10%AEP, 5%AEP & 1%AEP in line with TRC's *Engineering Design Minimum Standards for Subdivisions and Developments*. Both predeveloped and developed scenarios were run. The incorporation of the proposed drainage structures will reduce developed flowrates to no more than predeveloped flowrates for all storm events up to and including the 1%AEP event. With the provision of the proposed inter-shed drains the developed peak flow discharging from the site will be below predeveloped flows. The inter-shed drains function as individual detention structures and result in an overall reduction of the developed flows before discharging into the side drains and then the proposed dam.

Inter-shed drains design features:

- Trapezoidal cross section;
- 0.5m wide base;
- 1:6 maximum batters;
- Longitudinal grade of 0.5% to 1%;
- Grass lined (2.0m wide minimum);
- Discharge to the external collector drain via 375mm diameter pipe culvert and headwall.

External drains design features:

- Trapezoidal cross section;
- 2.0m wide base;
- 1:4 maximum batters;
- Grass lined base and 0.5m up batters with suitable rock armouring;
- Discharge to the proposed onsite dam.

The dam functions as a further detention structure further reducing developed flows before discharging via the spillway. The proposed stormwater strategy can adequately collect and convey the developed flows generated from the site. The final configuration of the proposed stormwater management system is subject to detailed design where some adjustments to the design are expected. The design objectives and performance will however remain the same.

The water storage basin/dam is located on the lower northern side of the farm site on a rise that runs north-south through the development approximately 850m south of the Oxley Highway. The southern side of the dam is a minimum of 0.5m above ground level with the highest part of the dam embankments reaching 5.0m above ground level. The dam is a small dam and does not meet the requirements to be declared as per the Dams Safety Act 2015.

Typically, the water storage basin/dam shall be constructed in accordance with the design plans and specifications provided on the Construction Drawings. The dam is to be constructed in a "Turkey Nest" fashion to ensure that no surface water enters the dams with all upstream surface water directed away from the farm site.

At completion the dam shall have a spillway 8.0m wide. Water overflowing from the spillway shall be directed towards the existing overland water flow to the North along the existing surface profile with a 0.5m high deflection bank and the existing contour banks. The flow shall not be concentrated but rather sheet flow up to 10m wide.

During construction the applicant must maintain the water pollution, erosion and sedimentation controls in accordance with the "Managing Urban Stormwater - Soils and Construction" published by the NSW Department of Housing ("The Blue Book") as detailed in the drawings and as required throughout the relevant stages of construction.

The stormwater design and strategy has been generally completed in accordance with Part 3 of Council's current version of Engineering Design Minimum Standards for Subdivisions and Developments and current design standards for this type of development. The stormwater strategy should be read in conjunction with the preliminary drawings marked Ref.No.24290PR Rev.F.

On behalf of Bath Stewart Associates

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