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1 September 2025

Andrew Newman
Department of Planning, Housing & Infrastructure
Locked Bag 5022
Parramatta NSW 2124

Via Major Portal

email: andrew.newman@dpie.nsw.gov.au
CC: lisa.ignatavicius1@ses.nsw.gov.au

Dear Andrew,

State Significant Development Application for New Eileen O'Connor School

Thank you for the opportunity to provide comment on the State Significant Development Application (SSDA) for the proposed new Eileen O'Connor School at 84 Gavenlock Road, Mardi, the existing St Peters Catholic College site. It is understood that the proposal is for the construction and operation of a new school that will provide education and allied health facilities,¹ with **71 full-time equivalent (FTE) staff** and **200 students, children with special needs from kindergarten to Year 12**. It includes:²

- Subdivision of one (1) lot into two (2) to create a new allotment to accommodate the new school and one to maintain the existing St Peters Catholic College.
- Construction of one building (predominately two-storey, with two sections that are three storeys) comprising teaching spaces, administration and staff facilities, library, hall, amenities, landscaping, outdoor learning and play areas.
- Vehicle access and 65 car parking spaces.
- Civil works to widen the road corridor along a section of Keefers Glen and install a footpath.
- Demolition of existing structures, tree removal, and site preparation works.
- Dewatering of dam and site preparation works including cut and fill.
- Relocation of existing demountable classrooms within the St Peter's Catholic College allotment.

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunamis in NSW. This role includes, planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety

¹ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, page 3

² EPM Projects. 2025. Environmental Impact Statement – Version E, page 29 & 48

aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

The NSW SES recommends that consideration of flooding issues is undertaken in accordance with the requirements of NSW Government's Flood Prone Land Policy as set out in the [Flood Risk Management Manual](#) 2023 (the Manual) and supporting guidelines, including the [Support for Emergency Management Planning](#) and relevant planning directions and circulars relating to the *Environmental Planning and Assessment Act, 1979*. Some of the issues which are of concern to the NSW SES are detailed in Attachment A.

Note that the broader St Peters Catholic College site becomes impacted by flooding and access gets cut as frequently as 20% Annual Exceedance Probability (AEP) mainstream flooding events,³ with the eastern part of the site inundated by flood depths of up to 3 metres in a Probable Maximum Flood (PMF) event.⁴ The proposed *new* Eileen O'Connor School site is in the northwestern area of the broader site⁵ and appears to be outside the mainstream PMF flooding extent, with some minor flooding along part of the northern boundary.⁶ While immediate site access is via Keefers Glen which appears to not be impacted by mainstream flooding, the broader Mardi urban area loses access when Woodbury Park Drive is cut, which can last between **21 - 38.5 hours**.⁷ The identified flood risk at the *site is isolation for long periods* during flood events when roads are cut by high hazard floodwater,^{8,9} with the site being a **high flood island**. NSW SES has responded to multiple flood rescue requests for people trapped in their vehicles by floodwater in this area, including at the southern and northern ends of Woodbury Park Drive i.e. at its intersection with Wyong Road (south of the site), and along Johnson Road (north of the site), as well as on Gavenlock Road, Mildon Road and the Pacific Highway (east of the site).

In summary, we:

- **Recommend careful consideration** of intensifying the number of vulnerable people at this site against the flood and isolation risks, and the resultant burden on emergency services, particularly noting the intended sensitive uses for children with special needs, the young children of kindergarten age, the risk of *long isolation times*¹⁰ and the flash flooding impacts on the road network, which may impede evacuation.

³ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 1, page 33

⁴ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, Figure 5

⁵ Ibid.

⁶ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 2, Map Set A, Figure A4.26

⁷ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 1, page 71 & 76

⁸ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, page 4

⁹ Tooker + Associates. 2025. Flood Emergency Response Plan, Figure 7, page 5 & Attachment A – PMF flood hazard behaviour

¹⁰ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, page 4

- **Recommend** that the Flood Impact and Risk Assessment (FIRA), is prepared in accordance with the [Flood Risk Management Guideline LU01](#), and considers flooding from any source, including investigating *overland flooding impacts* at the site and its access/egress roads, for the full range of flood events. This should include identifying the frequency and duration of isolation, time to onset, duration of inundation, depth, velocity and hydraulic hazard of any flooding, along with climate change impacts.
- **Support** the strategy of closing the school early, prior to the start of the school day to manage the flood risk of the *existing* school site, however, this should not be used to justify increasing the number of people exposed to the flood risk. School operators will need to act early on publicly broadcast severe weather and flood warnings, such as monitoring Severe Weather Warnings which would be the most appropriate form of advice to take protective action in a flash flooding event. Neither the NSW SES nor the Bureau of Meteorology can undertake to provide special individual flood warning services for each site, as suggested in the Flood Emergency Response Plan (FERP), for school staff to have a *direct line* to the BOM and the NSW SES Commander.¹¹
- **Recommend** sound land use planning, rather than the reliance on a private FERP and complex human behaviour to manage flood risks. The FERP would be relying on school staff to interpret and act on complex information, including gauge watching on the BOM website,¹² while caring for special needs children during a flood emergency with limited warning time. As most plans are dependent on human application and often rely on technical support systems, these conditions are difficult to implement and are unlikely to be achieved in a private ownership context where there is no external audit or monitoring.
- **Recommend** the assessment demonstrates the ability for the students to be collected by carers to return home or other safe location. The emergency management strategy should not rely on staff evacuating the students to the Westfield Shopping Centre. NSW SES advise this not a suitable strategy for the needs of up to 200 children with a *range of physical, intellectual and emotional needs*¹³ for the entire duration of isolation. The location of appropriate evacuation centres in a flood event is determined by a risk-based assessment, in consultation with the Welfare Services Functional Area and other stakeholders.
- **Emphasise** that the '*shelter in place*' strategy is not an endorsed flood management strategy by the NSW SES for *future development*. We **recommend** ensuring consideration of the suitable criteria identified in the [Shelter in Place Guideline](#).
- **Recommend** seeking advice from the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding the impact of the proposed development on flood behaviour at the site and neighbouring areas, particularly noting the proposed de-watering and infill of the farm dam within the site and the proposed earthworks.¹⁴

¹¹ Tooker + Associates. 2025. Flood Emergency Response Plan, page 6

¹² Tooker + Associates. 2025. Flood Emergency Response Plan, page 4

¹³ EPM Projects. 2025. Environmental Impact Statement – Version E, page 48

¹⁴ EPM Projects. 2025. Environmental Impact Statement – Version E, page 22 & 33

You may also find the following Guidelines available on the NSW SES website useful:

- [Reducing Vulnerability of Buildings to Flood Damage](#)
- [Designing Safer Subdivisions](#)
- [Managing Flood Risk Through Planning Opportunities](#)

Please feel free to contact Ana Chitu via email at rra@ses.nsw.gov.au should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'P. Cinque'.

Peter Cinque
Senior Manager Emergency Risk Management
NSW State Emergency Service

ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline¹⁵

Principle 1 Any proposed Emergency Management strategy should be compatible with any existing community Emergency Management strategy.

Any proposed Emergency Management strategy for an area should be compatible with the strategies identified in the NSW State Flood Plan¹⁶ and the Central Coast Council Flood Emergency Sub Plan,¹⁷ where evacuation is the preferred emergency management strategy for people impacted by flooding.

Emergency management

It is understood that the school is designed to accommodate 200 students from Kindergarten to Year 12 with a range of physical, intellectual and emotional needs,¹⁸ along with around 71 staff. The proposed Flood Emergency Response Plan (FERP) recommends the following approaches to managing the flood risk for the people at the site:

- “shelter in place at the school site for short duration flooding where there is limited flood warning time (..)”, which will be recognised by the Bureau of Meteorology (BOM) “because the rainfall will be intense and the response at Wyong Bridge will be quick and within 2 hours.”¹⁹ and
- for “longer duration floods (with no rise in water level at the Wyong Bridge within 4 hours)”, cancelling the school day and keeping children at home (before school hours) or, if during school hours, evacuation either by organising for parents to collect their children or transfer by bus to the Westfield Shopping Centre.²⁰

We note that the proposed route to Westfield Shopping Centre is impacted by H5 flood hazard level in a PMF event,²¹ however, noting that more frequent events were not modelled. In addition, the flood risk assessment notes that flash flooding is not the only risk present in this area, and longer duration flooding and isolation may impact the site. We emphasise that the ‘shelter in place’ strategy is not an endorsed flood management strategy by the NSW SES for *future development*. We recommend referring to the considerations in the [Shelter in Place Guideline](#) (DPHI, 2024) and considering the nature

¹⁵ NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline

¹⁶ NSW Government. 2024. NSW State Flood Plan. Section 5.1.7, page 34

¹⁷ NSW SES. 2021. Central Coast Council Flood Emergency Sub Plan. Section 1.6.2, page 7

¹⁸ EPM Projects. 2025. Environmental Impact Statement – Version E, page 48

¹⁹ Tooker + Associates. 2025. Flood Emergency Response Plan, page 6

²⁰ Ibid.

²¹ Ibid., Figure 7, page 5 & Attachment A – PMF flood hazard behaviour

of the proposed development and flooding at the site from all flood mechanisms impacting the site, including demonstrating the following considerations:

- does shelter in place align with existing emergency management strategies for the area, as determined through the flood risk management process and by the NSW SES. (1)
- has evacuation off-site (the primary emergency management strategy) been investigated and determined to be unachievable (2) *based on a detailed evacuation assessment.*
- does the development include medical centres, emergency service and community facilities, and *sensitive* and hazardous land uses, *some of which may not be suitable for shelter in place.* (3)
- whether there is existing government developed flood warning systems that give advanced detailed forecasts of flash flooding to allow sufficient time to evacuate to the proposed refuge locations. (5)
- flash flooding is the only flood risk present at the site (8a)
- duration of isolation by floodwaters is less than 12 hours from the commencement of rainfall (8b)
- development is not subject to high hazard flooding or surrounding roadways are not subject to high hazard flooding (8c)

The FERP states that the *“current Wyong Local Flood Plan relies heavily on shelter in place as the flood emergency response however there is a potential for roads to remain blocked by flooding for up to 20 hours which would not be a suitable situation for school children.”*²² We are seeking further information in relation to the document referenced here and **emphasise** that according to the NSW SES Central Coast Council Flood Emergency Sub Plan,²³ evacuation is the primary emergency management strategy for people at risk of flooding.

While the BoM provides flood warnings for the broader area based on the readings at the Wyong forecast gauge with 6 hours target warning lead time for water levels exceeding the Minor flood level of 2.7 metres at the gauge,²⁴ there are currently no site-specific formal flash flooding warnings for the site. Neither the NSW SES nor the Bureau of Meteorology can undertake to provide special individual flood warning services for each site, as suggested in the FERP (for school staff to have a *direct line* to the BOM and NSW SES Commander).²⁵ The more specific the warning requirement for individuals and sites becomes, the more difficult it is for the NSW SES to deliver warnings in the short time frames that often apply. We recommend school operators are weather aware and act early on publicly broadcast severe

²² Tooker + Associates. 2025. Flood Emergency Response Plan, page 4

²³ NSW SES. 2021. Central Coast Council Flood Emergency Sub Plan. Section 5.8.1, page 16

²⁴ Bureau of Meteorology. 2024. Service Level Specification for Flood Forecasting and Warning Services for New South Wales and the Australian Capital Territory – Version 3.15, page 21

²⁵ Tooker + Associates. 2025. Flood Emergency Response Plan, page 6

weather and flood warnings, such as monitoring Severe Weather Warnings which would be the most appropriate form of advice to take protective action in a flash flooding event.

While we support the strategy of closing the school early, prior to the start of the school day to manage the flood risk of the *existing* school site, this should not be used to justify increasing the number of people exposed to the flood risk, particularly noting the intended sensitive uses for children with special needs, including very young children of kindergarten age, the risk of long isolation times²⁶ and the flash flooding impacts on the road network which may impede evacuation. As this age group of students are largely unable to self-evacuate, the evacuation time must consider the additional travel time required for caregivers to reach the building prior to access becoming affected and proceed to safety, which can become complicated by flash flooding impacts on the road network cutting access before the onset of longer duration flooding. This can be difficult to manage in a private ownership, understanding the FERP would be relying on school staff to interpret and act on complex information, including gauge watching on the BOM website, while looking after special needs children during a flood emergency with limited warning time.²⁷

As most plans are dependent on human application and often rely on technical support systems, these conditions are difficult to implement and are unlikely to be achieved in a private ownership context where there is no external audit or monitoring. **The NSW SES is opposed to the imposition of development consent conditions requiring private flood evacuation plans rather than the application of sound land use planning and flood risk management.**

We recommend that students are able to be collected by carers rather than relying on evacuation to Westfield Shopping Centre for 200 children with *a range of physical, intellectual and emotional needs*²⁸ for the entire duration of isolation. We emphasise that the location of appropriate evacuation centres in a flood event is determined by a risk-based assessment, in consultation with the Welfare Services Functional Area and other stakeholders. Furthermore, the proposed route to the proposed evacuation location, the Westfield Shopping Centre, is impacted by H5 flood hazard level in a PMF event.

Principle 2 Decisions should be informed by understanding the full range of risks to the community.

Decisions relating to future development should be risk-based and ensure Emergency Management risks to the community of the full range of floods are effectively understood and managed. Risk assessment should consider the full range of flooding, including events up to the Probable Maximum Flood (PMF), along with climate change impacts in line with NSW Government guidelines.

²⁶ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, page 4

²⁷ Tooker + Associates. 2025. Flood Emergency Response Plan, page 4 - 6

²⁸ EPM Projects. 2025. Environmental Impact Statement – Version E, page 48

Current evidence suggests that flood events will become more frequent due to climate change. A Climate Change Calculator has been developed to address the updated ARR climate change guidelines, recommending the adjustment of the BoM 2016 IFDs to account for the warming that has occurred since the mid-point of the data used for their development (1961-1990).²⁹ This results in a significant increase in existing conditions flood levels.³⁰

The change in flood probabilities with climate change for this catchment area results in the new probability of the 1 in 100 AEP to be approximately 1 in 63 AEP event for the current 2025 scenario,³¹ becoming even more frequent in the future. For the proposed development site, this could result in more frequent isolation than what is currently expected based on previous modelling.

Flood Risk

The site is located within the catchments of Wyong River and Mardi Creek,³² with the flood impact assessment noting that the Mardi Creek catchment area is prone to flash flooding, characterised by a rapid catchment response over a short duration, while also identifying “two very different PMF floods at Wyong Bridge” gauge on the Wyong River, the 2 hours and 24 hours PMF flood – suggesting the potential for both flash flooding and longer duration flooding in the area.³³

The broader St Peters Catholic College (84 Gavenlock Rd, Tuggerah) site becomes impacted by flooding and access gets cut as frequently as 20% Annual Exceedance Probability (AEP) mainstream flooding events,³⁴ with the eastern part of the site inundated by flood depths of up to 3 metres in a PMF event.³⁵ However, we note that the proposed new Eileen O'Connor School site is in the northwestern area of the broader site³⁶ and has frontage to Keefers Glen to the west for both vehicular and pedestrian access/egress.³⁷ According to the modelling, it appears that both the new school site and Keefers Glen may be outside the mainstream PMF flooding extent, with just some minor flooding along part of the northern boundary.³⁸ However, we further note that the study focused on assessing mainstream flooding from

²⁹ Wasko et al. 2024. A systematic review of climate change science relevant to Australian design flood estimation. *Hydrology and Earth System Sciences*. 28: 1251-1285

³⁰ Babister et al. 2024. Climate Change Calculator: Estimating Changes to Flood Probability Under Different Climate Change Scenarios, page 1

³¹ WMAwater. 2024. Climate Change Calculator. Retrieved 08/2025 from <https://ccc.wmawater.com.au/>

³² Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, page 3

³³ Ibid., page 5

³⁴ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 1, page 33

³⁵ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, Figure 5

³⁶ Ibid.

³⁷ Ibid., page 3

³⁸ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 2, Map Set A, Figure A4.26

major rivers and creeks within the Wyong River catchment and the modelling does not include an assessment of local overland flooding.³⁹

Further, we note that the identified flood risk at the *site is isolation for long periods* during flood events when roads are cut by floodwater, with the site being classified as “flood isolated elevated” by the report,⁴⁰ essentially a **high flood island**. The report notes that access to the broader Mardi urban suburb would be lost very early in a PMF event, with the road cut before a prediction/warning may be issued,⁴¹ and would continue for 21 hours at Woodbury Park Drive near Wyong Road and 38.5 hours at Woodbury Park Drive near Gavenlock Road.⁴²

We recommend that as part of a site-specific Flood Impact and Risk Assessment (FIRA), prepared in accordance with the [Flood Risk Management Guideline LU01](#), consideration is given to flooding from any source, including investigating any overland flooding impacts at the site and its access/egress roads, for the full range of flood events (including events more frequent than the 1% AEP and up to the PMF), identifying the frequency and duration of isolation - to include time to onset, duration of inundation, depth, velocity and hydraulic hazard of any flooding, along with climate change impacts.

NSW SES has responded to multiple flood rescue requests for people trapped in their vehicles by floodwater in this area, including at the southern and northern ends of Woodbury Park Drive - i.e. at its intersection with Wyong Road (south of the site), and along Johnson Road (north of the site) -, as well as on Gavenlock Road, Mildon Road and the Pacific Highway (east of the site). We therefore recommend careful consideration of intensifying development at this site against the flood and isolation risks, and the resultant burden on emergency services, particularly given the proposed sensitive uses of the site. Any emergency management constraints identified *should addressed before consent is granted*.

Proposed development

“All main learning areas for both Primary and Secondary schools are contained on the Ground Floor and Level 1. Noting the natural topography of the site and fall from the south to the north, this has allowed the opportunity to insert an additional Lower Ground storey for a small portion of the northern extremities of the western and eastern wings”, which will include “maintenance facilities, storage and waste storage areas.”⁴³

The site is mapped as containing two (2) dams, the one in the western portion of the site being within the proposed school site, and is proposed to be de-watered and infilled as part of the

³⁹ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 1, page 111

⁴⁰ Tooker + Associates. 2025. Flood Impact and Risk Management Assessment, page 4

⁴¹ Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 1, page 71 - 72

⁴² Catchment Simulation Solutions. 2020. Wyong River Catchment Floodplain Risk Management Study & Plan – Revision 4. Volume 1, page 71 & 76

⁴³ EPM Projects. 2025. Environmental Impact Statement – Version E, page 48 - 49

development.⁴⁴ *“Bulk earthworks are required to form design levels of the proposed buildings and landscaped areas, which will include a variety of forms of retaining, including retaining walls, battering, landscaped areas and ramped footpaths.”*⁴⁵ We recommend seeking advice from the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding the impact of the proposed development on flood behaviour at the site and adjacent areas.

Principle 3 Development of the floodplain does not impact on the ability of the existing community to safely and effectively respond to a flood.

The ability of the existing community to effectively respond (including self-evacuating) within the available timeframe on available infrastructure is to be maintained. It is not to be impacted on by the cumulative impact of new development.

Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes. Consideration should also be given to the impacts of localised flooding on evacuation routes. **Evacuation must not require people to drive or walk through flood water.**

Development strategies relying on an assumption that mass rescue may be possible where evacuation either fails or is not implemented are not acceptable to the NSW SES.

Principle 4 Decisions on development within the floodplain does not increase risk to life from flooding.

Managing risks associated with high flood islands requires careful consideration of development type, likely users, and their ability respond to minimise their risks. This includes consideration of:

- **Isolation** – There is no known safe period of isolation in a flood, the longer the period of isolation the greater the risk to occupants who are isolated.
- **Secondary risks** – This includes fire and medical emergencies that can impact on the safety of people isolated by floodwater. The potential risk to occupants needs to be considered and managed in decision-making.
- **Consideration of human behaviour** – The behaviour of individuals such as parents/carers with children in a flood affected locations, such as schools or childcare centres, may take risks to travel via flooded roads/dangerous conditions to get to their children.

Principle 5 Risks faced by the itinerant population need to be managed.

Any Emergency Management strategy needs to consider people visiting the area or using a development.

⁴⁴ Ibid., Figure 6, page 22

⁴⁵ Ibid., page 33

Principle 6 Recognise the need for effective flood warning and associated limitations.

An effective flood warning strategy with clear and concise messaging understood by the community is key to providing the community an opportunity to respond to a flood threat in an appropriate and timely manner.

Principle 7 Ongoing community awareness of flooding is critical to assist effective emergency response.

Development in a floodplain will increase the need for NSW SES to undertake continuous community awareness, preparedness, and response requirements.

The flood risk at the site and actions taken to reduce risk to life should be communicated to all site users (includes increasing risk awareness, community connections, preparedness actions, appropriate signage and emergency drills) for the life-span of the development.