Your ref: MP05_0199 MOD2-Rosedal Residential Subdivision
Our ref: DOC24/833082-8

Mr Michael Doyle
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By email: michael.doyle@dpie.nsw.gov.au

Dear Mr Doyle

Modification of application MP 05_0199 MOD 2 - Rosedale residential subdivision

Thank you for the opportunity to review the proposed modification of application MP 05_0199 MOD 2 - Rosedale residential subdivision.

BCS have reviewed the information including the Biodiversity Development Assessment Report (BDAR) dated 14 June 2024 and Riparian and Aquatic Assessment Report dated 19 June 2024 by Ecological Australia (ELA), the Acid Sulfate Soil Review by Civille dated 5 July 2024 and the modified plans dated June 2024.

BCS visited the site on 18 October 2024 and undertook a general inspection of the subject land. The inspection involved a traverse of the site with general observations of vegetation types and habitat features in relation to the development footprint.

Biodiversity Values

The site retains significant biodiversity values, including areas of Swamp Sclerophyll Forest Threatened Ecological Community (TEC) and Swamp Oak Floodplain Forest TEC. These areas, particularly those low-lying and potentially affected by acid sulfate soils, are vital to the ecological health of the adjacent Bevian Wetland. Additionally, the presence of *Persicaria elatior* on the north-east fringes of the wetland, highlights the need for careful consideration of hydrological impacts from the development.

Impact Mitigation Recommendations

The proposed development does not adequately address the Biodiversity Conservation Act 2016 (BC Act) principles of avoid and minimise, particularly due to hydrological alterations and sedimentation risks to the wetland and surrounding ecosystems.

Clear specifications for minimum 100m buffer zones around the wetland and measures to ensure rehabilitation of TEC within this buffer must be provided.

Proposed open space areas of Village Park and Pocket Park should be managed to ensure maintenance of surface water flows for the protection of the wetland and regeneration of TEC values.

The proposed flood mitigation measures, particularly the sediment basins, will need to be sufficiently sized to prevent overtopping in a PMF and 1% flood event given the scale of development and proximity to the wetland.

Offsets and Credit Retirement

The BDAR seems to underestimate the extent of threatened ecological communities (TECs) on-site, particularly in areas misclassified as PCT 3274. This misclassification may lead to inadequate offset provisions. It is crucial that the BDAR clarifies the process of credit retirement, including specific timelines and proportions assigned to each development stage.

Water Floodplains and Coasts comments

The proposal will need to be considered in accordance with and demonstrate consistency with the Secretary's Environmental Assessment Requirements and the NSW Government's Flood Prone Land Policy as set out in the Flood Risk Management Manual, 2023 (FRMM). The FIRA should undertake an isolation risk assessment including confirmation on the accessibility to the site for emergency services. Part of the proposal is located within the coastal zone and will need to be considered in accordance with the requirements of the *State Environmental Planning Policy (Resilience and Hazards) 2021*. It is recommended that stringent neutral or beneficial pollution reduction targets be applied to protect all sensitive receiving waters including Bevian Wetland and Saltwater Creek estuary. Council's LEP requirements for vegetated riparian buffer areas is not being applied to all the watercourses mapped within the LEP. This should be reviewed or establish if this inconsistency can be justified. The Natural Resources Access Regulator (NRAR) and DPI-Fisheries should be consulted to ensure that the planned stream modifications, riparian corridor widths and offsets meet with their requirements.

BCS recommend a comprehensive review of the development plans to incorporate these recommendations. Further detailed review is provided as Attachment 1

If you have any further questions about this issue, please contact Angela Jenkins Senior Conservation Planner SE Regional Delivery, on 62997075 or at angela.jenkins@environment.nsw.gov.au

Yours sincerely

Allison Treweek 1/11/2024
Senior Team Leader
South East Regional Delivery, Biodiversity Conservation and Science

Enclosure
1. Attachment 1

Attachment 1

Floodplain Risk Management

As the proposal will involve the development of flood prone land, it will need to be considered in accordance with and demonstrate consistency with the Secretary's Environmental Assessment Requirements and the NSW Government's Flood Prone Land Policy as set out in the Flood Risk Management Manual, 2023 (FRMM).

Further information about the Flood Risk Management Manual and supporting guidance can be found here: Flood Risk Management Manual | NSW Environment and Heritage & Understanding and Managing Flood Risk | NSW Environment and Heritage

Further information on applying flood risk information to planning processes can be found: Planning circular – PS 24-001 Update on addressing flood risk in planning decisions (nsw.gov.au):

The FIRA will need to consider and address the full range of flood related risks associated with public safety. The determining authority should ensure that risks to life and emergency management measures are considered for all proposed residential areas over the full range of floods including those above the flood planning level up to the Probable Maximum Flood (PMF). The FIRA (Torrent Consulting, June 2024) identifies internal and external roads are flood affected from a 1% event with high hazards on some access routes in the PMF event. It is not clear if the site is accessible in extreme flood events. The FIRA should undertake an isolation risk assessment including confirmation on the accessibility to the site for emergency services. The risk assessment should investigate periods of isolation in events longer than the critical duration and should demonstrate how any isolation risks will be addressed. Further flood emergency management advice should be sought from the NSW SES.

Coastal Management and Waterway Health

Section 1.7 of the Modification Report suggests that the proposed development is not located within the coastal zone, however this is incorrect. Part of the site contains a coastal wetland and coastal wetland proximity area, which are considered to be part of the coastal zone as defined by Section 5 of the *Coastal Management Act 2016.* These are both mapped under the *State Environmental Planning Policy (Resilience and Hazards) 2021* (SEPP). The proposal should be assessed against the requirements of this SEPP, in particular Section 2.8 which relates to development within the proximity area for coastal wetlands to ensure the development will not significantly impact on:

- the biophysical, hydrological or ecological integrity of the adjacent coastal wetland, and
- the quantity and quality of surface and ground water flows.

All runoff from the proposed development has the potential to impact directly on either the Bevian Wetland, or alternatively the Saltwater Creek estuary. Mapped widths in relation to the proximity area are unclear, however it appears that some infrastructure such as detention basins as well as the southern road access encroach into the proximity area.

The Draft South East and Tablelands Regional Plan 2041 *Theme 5 Protect important environmental assets* identifies Saltwater Creek as being a sensitive estuary with high environmental value. It describes sensitive estuaries and their catchments as being particularly susceptible to the effect of land use development and therefore not suitable for intense uses such as housing subdivision. Bevian Wetland is considered to be a pollution sink as it is normally a closed system not directly connected to the ocean. Saltwater Creek is an intermittently closed and open lagoon (ICOLL) that only sometimes open to the ocean. The determining authority should apply stringent neutral or beneficial pollution reduction targets to help prevent cumulative impacts from the development to both the wetland and the estuary.

Riparian Buffers and stream modifications

Some watercourses that are mapped in the Eurobodalla LEP as Riparian Category 3 Watercourses (Section 6.7) have been defined by the proponent as "non-rivers" and will instead be developed for housing. The LEP requires these to have a vegetated riparian buffer of at least 10m. This inconsistency with the LEP should be reviewed or further justified.

The second order stream identified as 2D, which drains directly into Bevian wetland is planned to be replaced by an online stormwater detention basin. This encroachment into the required riparian area is intended to be offset elsewhere (Figure 1). Natural Resources Access Regulator (NRAR) and DPI-Fisheries should be consulted to ensure that all of the planned stream modifications, riparian corridor widths and offsets, including for watercourse 2D meet with their requirements. The restoration of riparian corridors, in addition to their protection throughout the development will help to improve waterway health and biodiversity outcomes.

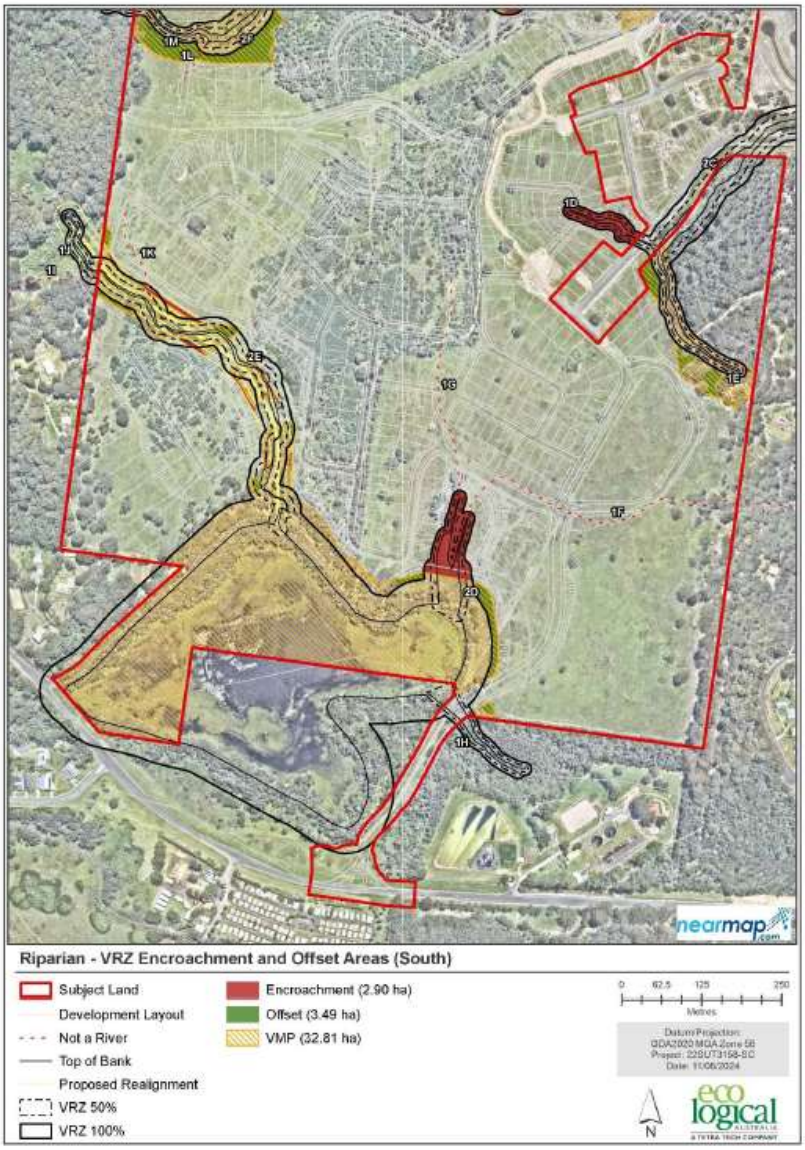

Figure 13: Southern half, proposed riparian corridor and averaging rule to meet the DCCEEW riparian guidelines

Figure 1: Showing Watercourse 2D encroachment area which is planned to be replaced by a detention basin instead of retaining a vegetated buffer around this watercourse

Biodiversity Comments

The BDAR (ELA June 2024) has been reviewed against the site plans, flood assessment (Torrens consulting June 2024), acid sulfate soil assessment (Civille June 2024) and Riparian and aquatic assessment (ELA June 2024) and the requirements of the BAM and BC Act 2016.

BCS visited the site on 18 October 2024 and undertook a general inspection of the subject land. The inspection involved a traverse of the site with general observations of vegetation types and habitat features in relation to the development footprint.

BCS make the following general comments about the development following review of the BDAR and site inspection.

Biodiversity values

Although the site has been historically cleared and regularly slashed, it was observed that there remains good diversity and recovery potential for a larger extent of Swamp Sclerophyll Forest TEC and Swamp oak Floodplain Forest TEC than is acknowledged in the BDAR (Figure 3 – Figure 4 & 5). These areas are generally low lying, correspond with predicted acid sulfate soils (Civille 2024) (<10mAHD) and drain directly into the Bevian Wetland. The acid sulfate soil report (Civille 2024) indicates that ASS occur on the site at BH 20 (Figure 2) and are likely to occur under 10m elevations where there is a sizeable proportion of the proposed development footprint.

Persicaria elatior (tall knotweed) Threatened under BC Act is known to occur on the NE edge of the Bevian Wetland (Figure). This species is highly sensitive to loss caused by altered hydrological regimes, sedimentation and eutrophication. Although the specimens will not be directly impacted by clearing works, given the extent of proposed development on low lying areas that drain into the wetland where the species are located, landfill and treatment of ASS, they are likely to be subject to increased threats caused by the impacts of this development. Assessment of these impacts needs to be addressed.

Avoid and minimise impacts to Biodiversity Values

Avoiding, minimising and offsetting the impact of proposed development, activity or clearing on biodiversity values is the key principle underpinning the framework of the NSW Biodiversity Offset Scheme. The proposed development is not considered to achieve avoidance or minimisation of impacts on biodiversity values.

The development of low-lying areas (Figure 6), filling of land and treatment of acid sulfate soils recorded on the site (Figure 2) has significant potential to alter the current hydrological regimes, increase sedimentation to the Bevian wetland and negatively impact *Persicaria elatior*. The current development does not demonstrate avoidance or minimisation of impacts to these values. The exact dimensions of the buffer to the wetland and *Persicaria* from the development are not detailed in the BDAR or site plans nor are there sufficient measures to ensure that surface water flows into the wetland will be maintained. The proposed flood mitigation measures (sediment basins) as shown on the site plans (Figure 7) will be impacted by increased 1-2m flood depths in a PMF and 1% flood event and are in close proximity to the wetland and *Persicaria* locations. Given the scale of the development, flooding potential under a 1% flood event has potential to increase impacts to these values if sediment basins are not appropriately sized (Figure 9)

The site plans (Figure 7) also indicate that the proposed corridors will be maintained as cleared open space for recreation and facilities. This does not demonstrate avoided or minimised impacts to the biodiversity values of the site. BCS support the rehabilitation of TEC's within the open space areas to assist in mitigating the risk of increased sedimentation and eutrophication of the wetland.

Offsets

Based on BCS site inspection, the BDAR appears to have underestimated the extent of TEC on the site. Some areas mapped as PCT 3274 Spotted Gum Forest were observed to be more closely aligned to Swamp Sclerophyll Forest TEC in a degraded and non-degraded state (ELA assigned to be PCT 4056). This means that the offsets are likely to be underestimated.

The BDAR is unclear about when credit retirement will occur. If staged retirement of biodiversity credits is proposed, then this needs to be outlined clearly in the BDAR with the proportion of credits assigned to each stage.

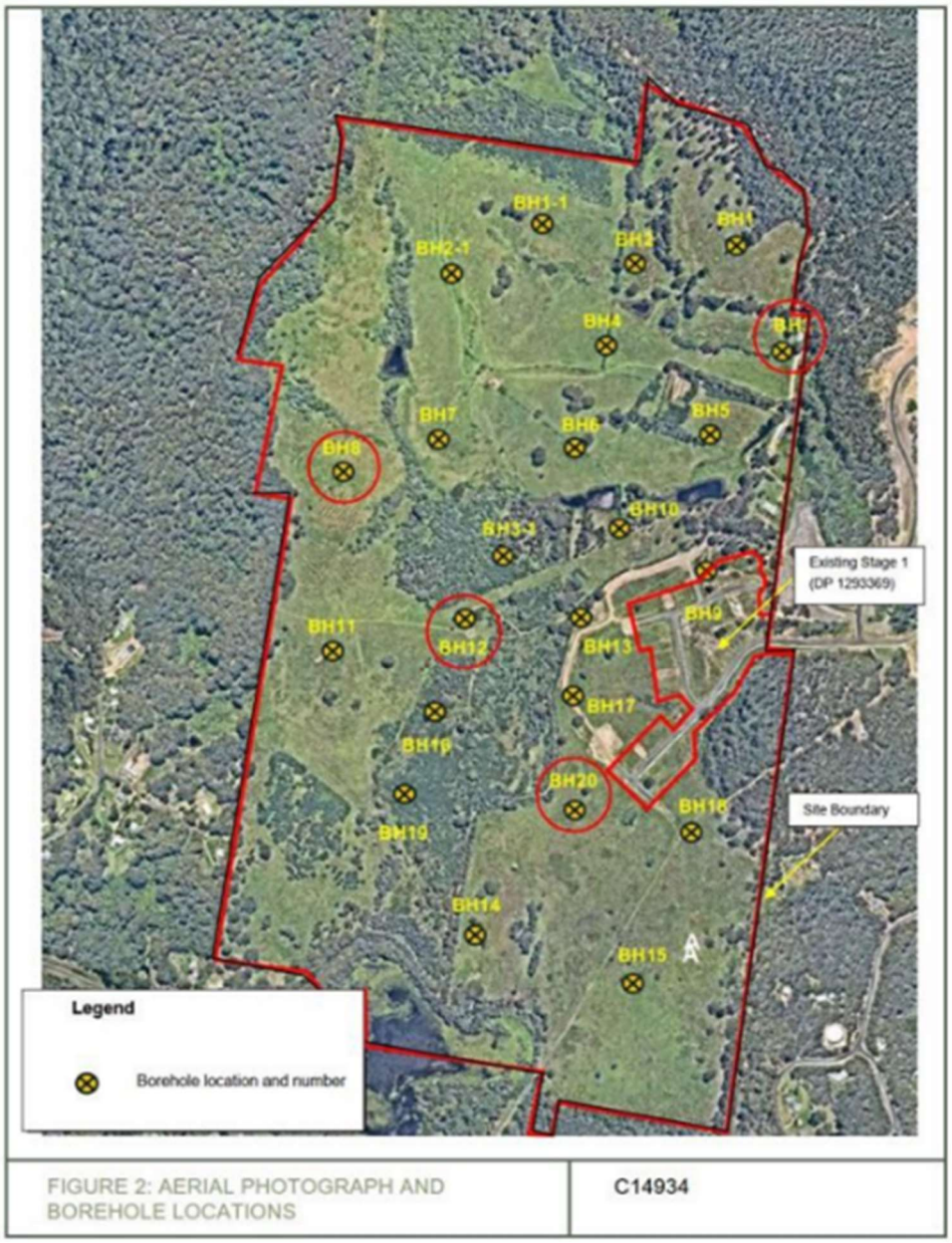

Figure 6: Location of boreholes with borehole locations tested for acid sulphate soils in red (modified Fortify, 2024)

Figure 2: Bore holes from the Acid Sulfate Report Civille June 2024.

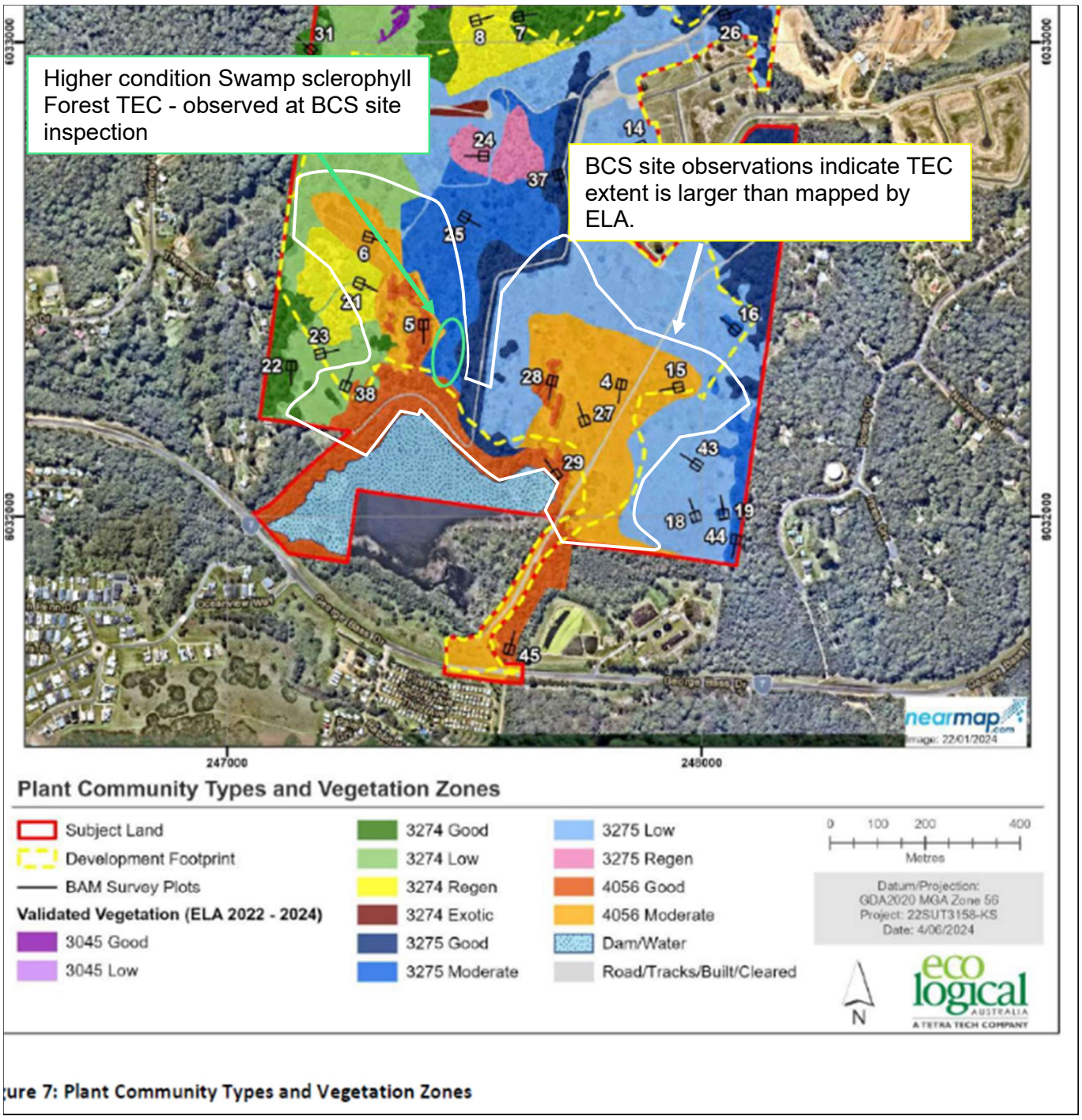

Figure 3: TEC extent on site observed by BCS

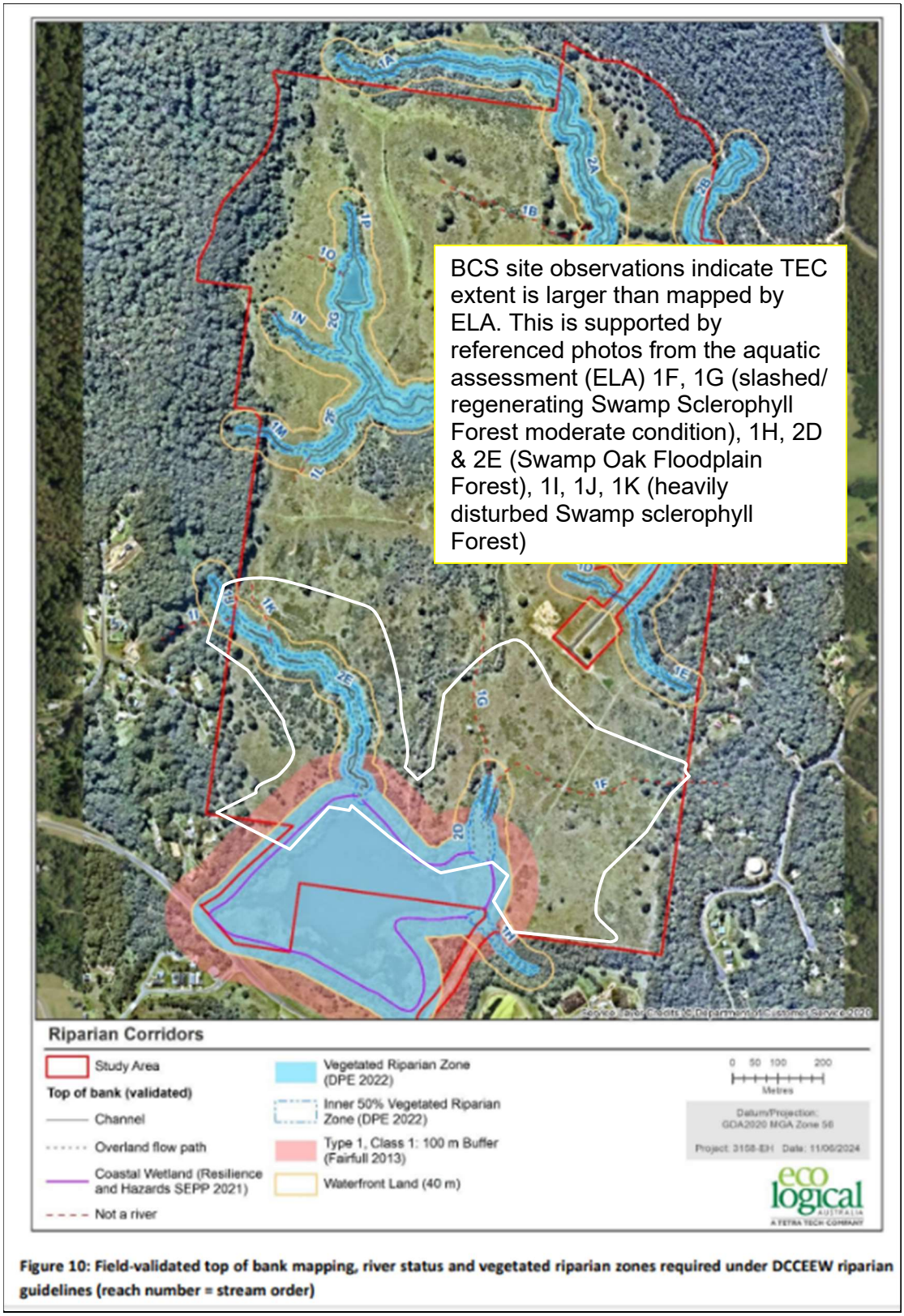

Figure 10: Field-validated top of bank mapping, river status and vegetated riparian zones required under DCCEEW riparian guidelines (reach number = stream order)

Figure 4: TEC's extent observed at BCS site investigation in relation to ELA aquatic assessment (photos below)

Reach 2D: Overland flows downstream of confluence of two 1st order streams – 'river'

Reach 2D: overland flows with pockets of aquatic vegetation close to lake – 'river'

Reach 1F: middle catchment with no defined channel, facing upslope (left) and downslope (right) – not a 'river'

Reach 1G: upper catchment with no defined channel, facing upslope (left) and downslope (right) – not a 'river'

Reach 2E: mix of channel and overland flow, from upstream (top series) to downstream (bottom series) – 'river'

Reach 1G: middle catchment with no defined channel, facing upslope (left) and downslope (right) – not a 'river'

Reach 1G: channel forming within trees – start of 'river'

Reach 1H: swampy channel within trees (left) and dispersion into lake (right) – 'river'

Reach 1K: no bed or banks, facing upslope (left) and downslope (right) – not a 'river'

Figure 5: Photos extracted from 'Eco Logical Australia 2024. Concept Plan Approval Modification - Bevian Road, Rosedale: Riparian and Aquatic Assessment. Prepared for Walker Rosedale Pty Ltd.'

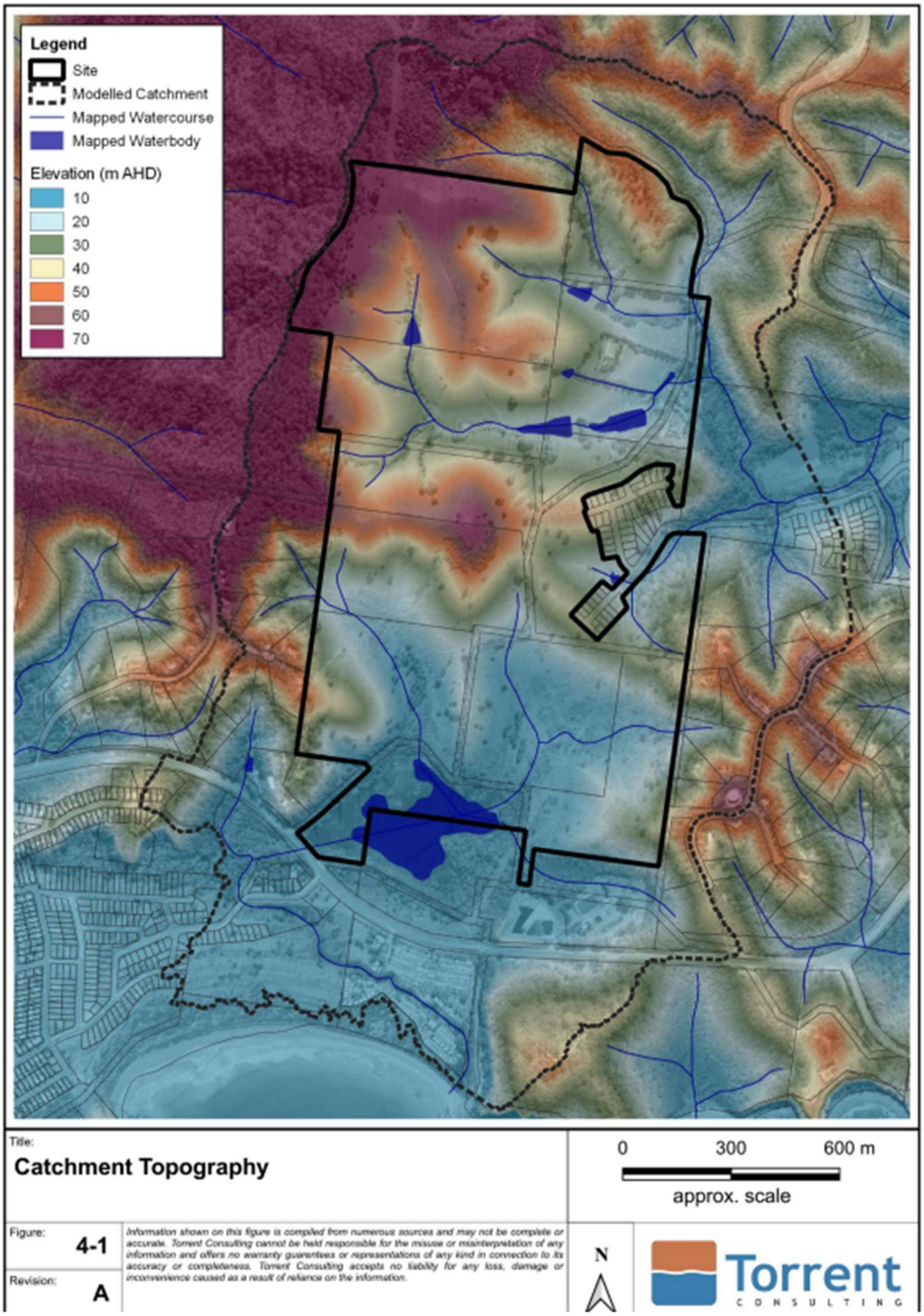

Figure 6: Extract from Torrent Consulting June 2024, Flood Impact and Risk Assessment

Figure 7: the modified development

Figure 8: location of persicaria elatior 21/June 2024, Bevian Wetland

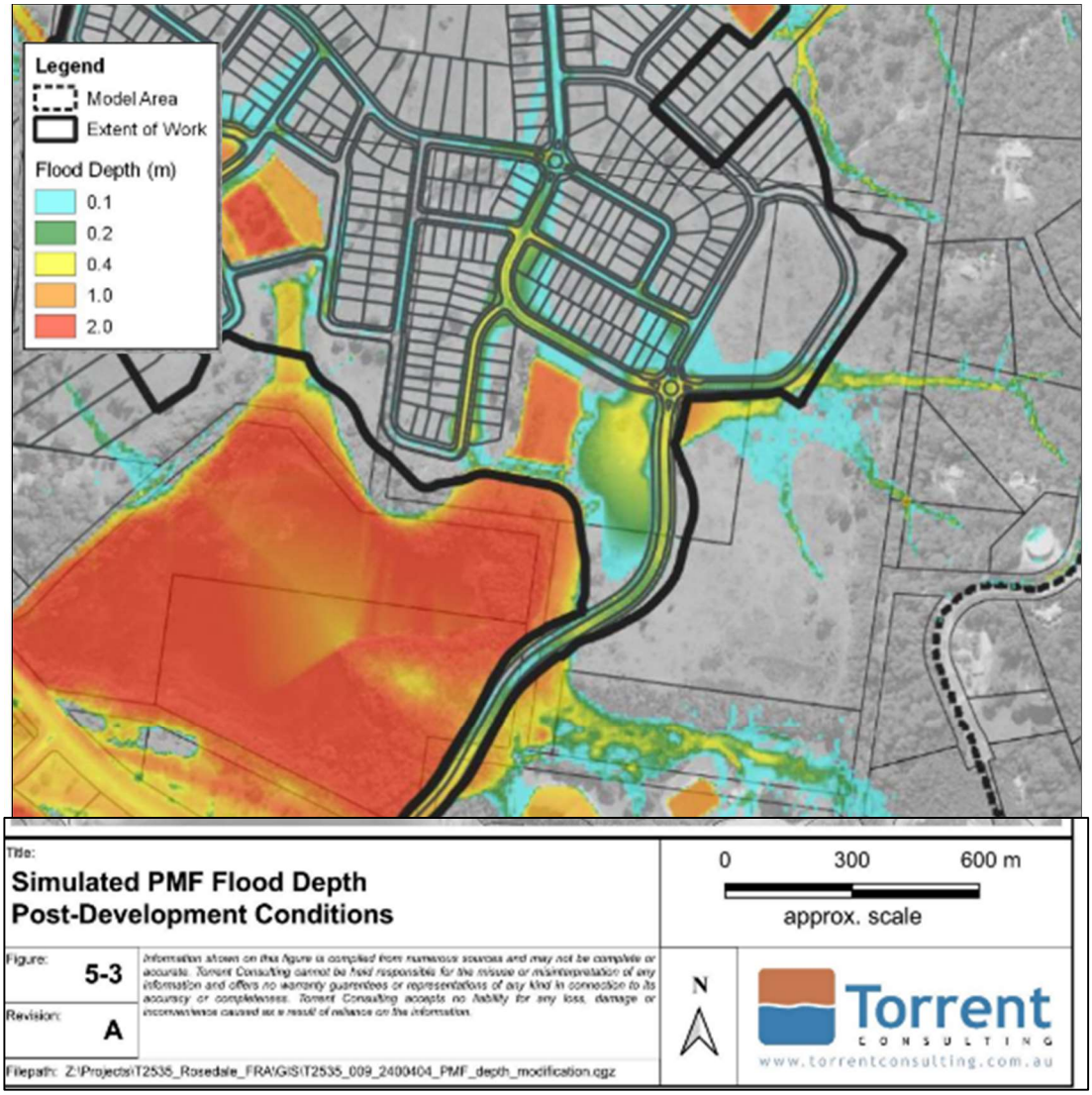

Figure 9: Predicted flooding of 1-2m and limited buffer between sediment basin and wetland