

This report is a layman's review of a complicated document and contains local observations from a neighbouring property on the southern boundary. The address for these observations is 12 Heatherfield Close Catherine Field.

The Southern Boundary of 268 Catherine Fields Rd. (Lot 11) is subject to overland flow (flooding) as AEP 1% which in the Definitions refer to as:

"AEP Annual exceedance probability: the probability of a flood event occurring within a year. A 1% AEP flood has a 1% chance of occurring in any given year".

I must take issue with this categorisation against what actually occurs in this overland flow watercourse. It is many times more frequent than that. Over my 12 years of living here, I cannot remember any one year passing without at least one event occurring, given that the last few years have been unusually wet, more than 3 events have occurred in each and every year during this period.

### 3.5 Discussion

Point 3: Claims the flood levels across the site as: The 1% AEP flood depth across the site varies from 100 to 500 mm. Local observations vary from this as depths have well exceeded 500mm in intense rainstorms I would estimate at least 750mm at times adjacent to the western boundary of my property.

This particular photo was taken on 10<sup>th</sup> Dec 2021 and was taken near the northern boundary of my property and not where the flows are fast or deep.



4 Flood velocities along the southern boundary of the site and Catharine Fields Road are up to 1.5 m/s in the 1% AEP flood event

I consider this statement inaccurate and believe the flow rates well exceed this level.

*“Hydraulic hazard is generally H1 across the site and increased to H2 along the Catharine Fields Road in the 1% AEP flood event. The highest hazard of H4 is observed at the inlet of the culvert crossing on Catharine Fields Road”.*

I suspect that the H1 category is easily exceeded along the southern boundary of Lot 11, adjacent to my western boundary where there is a depression in the ground where the overland flood flows between the trees and would easily sweep a child or elderly person off their feet and away so H3 is much closer to reality. Even adjacent to my eastern boundary a H2 rating is more realistic.

The statement above is incorrect as the risk in Catherine Field Rd is stated to be H2 then also states it goes to H4 at the inlet of the culvert crossing on Catherine Field Rd. It is hard to take any report seriously where the details are so sloppy that they cannot even spell the location correctly.

### **3.3.2 Proposed Conditions**

*“The existing conditions model was modified as follows to simulate proposed conditions”:*... As stated in previous sections, observations suggest that the existing conditions model does not accurately reflect correct current flows so, any modelling of future occurrences using this as a base cannot produce an accurate picture of how the water is likely to behave in the future.

Whilst I am unable to make specific comments on the claims in this section it is very apparent that the large increase to the pipe flow capacity under Catherine Field Rd. will create significant flooding issues for the neighbours on the western side of the road. A common sense view would suggest that the size of the buildings and huge roof areas will increase the runoff significantly in terms of volume and peak flooding and the velocity of the water will also increase dramatically due to the proposed drainage works as distinct from the current heavily grassed terrain shown below



NB: Mown section is maintained by the writer to help with land drying out, vermin control and reduction of fire hazard. To date the proponents have made little to no attempt at maintenance on either of the properties or reducing the fuel load for fire prevention.

I note that there is a proposal to include a bus zone on the eastern side of Catherine Field Rd. which must continue to flood as there is currently data suggesting over 1m of water in this area. It is proposed to increase the drainage size under the road but the increased volume and velocity of water coming in as a direct result of the development will likely counteract this measure. IT SHOULD ALSO BE NOTED THAT THE LOCAL RESIDENTS WILL OBJECT STRONGLY TO PUBLIC LAND BEING GIVEN OVER TO PRIVATE ENTERPRISE FOR THEIR OWN PRIVATE USE, SPECIFICALLY A BUS STOP.

### **3.4 Results**

*Flood mapping results (flood levels, depths, velocities, provisional hazard categories and water level afflux / impacts) for the critical duration 1% AEP flood event in existing and proposed conditions are provided in Attachment C, with map references summarised in Table 3*

The claimed results cannot be relied upon as they are likely false and misleading as the baseline data is disputed (100mm to 500mm across the block) I contend from actual observations that it is more likely to be 200mm to 750mm. That said, the conclusions reached lead to significant concerns:

3. "The 1% AEP flood depth across the site varies from 100 to 500 mm and the maximum flood depth of 1.1m is observed at the inlet of the culvert crossing on Catharine Fields Road".

The depth claimed across the site is disputed. The current flood depth of 1.1m on Catherine Field Rd. is not disputed but, given the increased volume and velocity of water resulting from the development, even if the flooding level is reduced by the increased drainage capacity under the road, the velocity must increase further as there will not be all of the current grasses or earth to absorb and /or reduce the velocity and any bus stop that is proposed in this flood area poses significantly increased risk to life in that area. I contend that the risk will therefor remain at H3 to H4 and not reduce to H1 as suggested.

4. "Flood velocities along the southern boundary of the site and Catharine Fields Road are up to 1.5 m/s in the 1% AEP flood event".

The report suggests that the velocity will remain around 1.5 m/s. If you increase the volume via the development and also increase the velocity on site by replacement of heavily grassed virgin land with buildings, concrete play areas, lawn areas and a gravel access road right up the centre of the current floodway then the flooding will be much worse for a shorter duration.

5. "Hydraulic hazard is generally H1 across the site and increased to H2 along the Catharine Fields Road in the 1% AEP flood event. The highest hazard of H4 is observed at the inlet of the culvert crossing on Catharine Fields Road".

Whilst much of this claim is disputed, given that the report acknowledges a H4 risk already exists on part of Catherine Field Rd. near the Northern boundary of Lot 12. Even if the height of the flooding is reduced, the velocity of the water must also increase based on the increased outflow capacity under Catherine Field Rd.

### **3.5.3 Offsite Flood Impacts**

1. There are minor offsite impacts in the 1% AEP flood event as a result of the proposed development.

The writer cannot understand how the impacts of above can be categorised as minor. Given that there are already significant flooding issues associated with the site and Catherine Field Rd, even a minor increase is still an increase so is unacceptable. Any description using minor is therefor misleading and deceptive.

2. Flood impacts on Catharine Fields Road would be considered acceptable as the proposed road upgrade work has lowered the flood hazard category from H2 to H1, which has a beneficial effect on the existing trafficability of the road.

How can they suggest that any flood impacts are acceptable. Claiming that the development will lower the flood level from H2 to H1 is clearly incorrect as they admit in point 5 above that the report that a flood level of H4 currently exists on Catherine Field Rd associated with the runoff from 268/278 Catherine Field Rd. One of these statements is therefor untrue.

3. The proposed development and road upgrade works provide a net benefit to flood affectation of the residential properties downstream of Catharine Fields Road. The minor localised impacts of above 20 mm on these properties are considered acceptable and insignificant in the context of flooding in this locality .

This statement is both conflicting and confusing. How is a claimed 20mm plus increase in flooding, a net benefit to the downstream residential properties? Given that they are increasing the flow under the road by approximately 13 times the claimed 20mm+ increase in flooding is ridiculous Whilst the writer has no training and is unable to test the claim physically, The 20mm seems to be a massive understatement given the volume increase.

4. There is a small area of offsite impact above 20 mm near the south western corner of the site on the neighbouring property. This impact is likely to be associated with accuracy of the modelling result and is expected to be resolved by running a higher resolution model (ie. finer grid cell size) and incorporating with a more detailed grading design at CC stage

Again this statement is conflicting and confusing. I conclude that the "neighbouring property" is actually across the other side of the road and if the flooding here is above 20mm how will rerunning the modelling actually change anything? The term "above 20mm" appears in both points 3 and 4 but, there is no attempt to quantify exactly how far above 20mm will flooding actually occur. It is reasonable to conclude that this whole section is really designed using weasel words to try to minimise the concern around this serious flooding issue.

5. "The changes to the offsite flood conditions are of immaterial significance and are considered acceptable"

Again, more weasel words and to state the flood conditions are “of immaterial significance” would be laughable if it wasn’t so serious. To go on to say they “are considered acceptable” begs the question acceptable to whom? Certainly not to the residents who are already battling serious flooding issues. Any sensible person knows that adding buildings to rural land won’t reduce the flooding but will increase it. The more you improve the flow conditions on and around the site, the more you increase the downstream flooding issues for the adjacent neighbours.

## 5. Summary and Recommendations

1. The proposed upstream overland flow diversion system effectively renders the site development area flood free in the 1% AEP flood event.

Nowhere in this report do the authors state that they will not push the flooding onto the adjoining properties along the southern boundary which is a major concern of all these residents. This report merely states that they will remove the flooding risk from their property and is therefore unacceptable without a guarantee to those residents that they won’t bear the consequences.

2. The proposed development area of the site is flood free in the 1% AEP flood event.

Ok for the proponents but offers nothing to the adjoining residents.

3. The proposed development would have acceptable offsite flood impacts.

Clearly false and misleading.

4. Compliance with Council flood planning level requirements for building levels are achieved.

Good for the proponents but bad for the neighbours.

### We recommend:

1. Structures below the site flood planning level are to be constructed using flood compatible materials in accordance with Council requirements.

I interpret these words to mean that although the site development areas are “flood free” all of the areas below the “development areas” may not be, hence being constructed in “flood compatible materials. All of the adjoining properties are below this level so are now at greater risk where no to little risk existed in the past.

2. An updated TUFLOW hydraulic model with detailed earthworks and should be simulated at detailed design stage.

Should this approval succeed then all of the neighbouring properties need a guarantee from both the proponents and the Consent Authorities that no development shall take place unless protections are enacted so that no one property is worse off than is their current situation.

Given that all of the neighbours are concerned about the modelling and this document provides no comfort in that regard I object most strongly to the application being given consent.

### In appendices: **Preliminary Overland Flow mapset**

Maps 2 to 4 purport to show current overland flows but are not reflective of our lived experience. The flow is in part consistent in these maps which show different characteristics of the water flows being depth, velocity etc. As stated earlier in this response, we take issue with the characteristics on the maps being volume, depth and velocity rather than the path taken for this part of the flow in the overland water course .

Our lived experience is that a significant body of water emanating from around the dam near the top of the hill comes down the unmade roads on the northern end of Lot 19 and House number 16 Heatherfield Close and empties into Heatherfield Close. Some flooding is shown on the maps but not how it got there in the Cul De Sac but, the level shown is well below what we have seen on most occasions.

It should be noted that none of this flow shows on any of the maps and it appears not to go anywhere from there.

This water is actually collected in 2 pits which are connected, flowing into a stormwater drain which flows underground to about halfway down the old easement on the northern boundary of 10 Heatherfield Close where the pipe emerges beside the southern boundary of 260 Catherine Field Rd. The water then spreads and flows overland across this property to join the massive flooding occurring on Catherine Field Rd emanating in large part from the overland watercourse on 268 Catherine field Rd. None of this flow across 260 Catherine Field Rd appears on the maps either.

This body of water has not therefore been considered in the proposed flow maps either and is indicative of the multiple inaccuracies in the data and the report.



**Again It is impossible to support this flooding report and its conclusions and therefor I object to the development proceeding on that basis.**

See photo below for what was a small to moderate storm is like in Heatherfield Close but well below what we have witnessed on many occasions. This was taken on December 10 2021 the Camden Airport weather station recorded 30.4mm on that day

On approx. 10 occasions the top of my driveway has been breached and the overflow has gone through my shed. This flooding is a long way from the top of my driveway and typical of what happened on a moderately wet day.



**I oppose this application SSD-30759158 on the grounds this report contains too many mistakes, inaccuracies, False and misleading statements to be considered a reliable document on which to approve this application**