

Portfolio Committee No. 7 - Planning and Environment
Hearing at on Monday 17 June 2024
Inquiry into the planning system and the impacts of climate change on the
environment and communities



Opening Statement:

Thank you for the opportunity to provide evidence to the Portfolio Committee. On behalf of Yamba Community Action Network (Yamba CAN Inc.) I will provide an outline of what has been recently occurring in the township. I will also outline concerns with processing of development applications and provide historic information over the past 20 years, leave suggestions.

Evidence to the Portfolio Committee No. 7

About three-quarters of the Yamba township is flood-prone. Yamba has a population of about 6,500 people.

In February 2022 Yamba residents on the floodplain were impacted. Yamba Road closed by stormwater flooding, along with several other roads. From the M1 to Yamba township is 16 kilometres. Homes on the Yamba floodplain were flooded by stormwater and some with sewage. The Clarence River flood crest reached Yamba two days later and inundated and flooded homes and properties on the floodplain.

Last week the Northern Regional Planning Panel (NRPP) met to determine a proposed development, Yamba Gardens, for a 284 small lot subdivision in the West Yamba Urban Release Area (WYURA), requiring more fill. As the Yamba Gardens has a cost estimate of over \$30m it is considered a regionally significant development and the Planning Panel is the determining authority. Submissions objecting totalled 328 and 2 were for the development.

Fourteen days prior to the Panel Meeting on 11 June 2024, Councillors passed a Resolution, voting 5 to 2 in favour of Council making a submission to the Panel to not support the proposed development. The Resolution was based on Council's Assessment Briefing Report that was over a year old and contained some 22 non-compliance, unresolved matters. Then seven days later, on 4 June 2024, Council's up-to-date Assessment Report recommended approval of the subdivision. Councillors were not provided an up-to-date Assessment Report for a very important decision.

People had 2 weeks to review 38 documents, 1,750 pages.
12 people addressed the Panel objecting to the development being approved.

The recording of the Panel Meeting is at the link below, under "Links (2)":
<https://www.planningportal.nsw.gov.au/planning-panel/284-lot-subdivision>

Over the past 9 years, since 2015, there has been a history of changes to this development and these include four Development Applications, five Modifications and also two for a Subdivision. Over the years Council has requested further information a number of times and there has been a number of Panel briefings.

In 2022 this proposed development was withdrawn prior to a Panel Meeting as Council's Assessment showed some 41 non-complying, unresolved matters.

The current development's documents and Council's Assessment Report provide that the proposed development complies with the required planning acts, regulations, policies and plans.

However, closer scrutiny of the documents found anomalies, errors and contradictions, and totally overlooked stormwater flooding, which flooded homes and properties in west Yamba in February 2022.

For example, Council requested BMT to address, in its West Yamba Flood Evacuation Plan, Clause 5.21 (2) (c) and (d) of Council's Local Environment Plan. The Clause reads:

Document tendered by
Mrs Lynne Cairns
Received by
Faith Aghuhowa
Date: 17 / 6 / 24
Resolved to publish Yes / No

Point 2. Flood Evacuation

“Development consent **must not** be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development:

(c) **will not** adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and

(d) incorporates appropriate measures to manage risk to life in the event of a flood.

Note: all page references in points 1 to 12 below are provided as screen shots on page 6 to 11.

BMT’s Evacuation Plan does not address 5.21 (2) (c) and (d) because:

1. **The Plan and Memorandum do not consider or address stormwater flooding.** Council did not collect post-flood data in Yamba in 2022. The Flood Risk Management Manual 2023 recommends Councils collect data and review flood behaviour after flood events to capture lessons learnt.
2. The Memorandum states, “*The development proposal will not exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood*”. Yet, in contradiction, the Plan states on page 15, “**the capacity of Yamba Road is the constraining factor during an evacuation.**” This is also in contradiction to Council’s Assessment Report which states on page 20, “**People may need to evacuate in the event of major flooding and it is considered acceptable noting capacity of evacuation routes and warning times**” and page 47, “**Resolution: To this extent, it does meet Clause 5.21.**”

The Plan states on page 15, “**all the evacuation routes eventually utilise Yamba Road.**” Yet doesn’t mention all were closed during the stormwater and river flooding events in 2022.

3. Also, on page 15 it states, “**The flood evacuation centre is the Bowling Club. BMT does not have details of this facility to be able to assess its suitability for the number of people that this facility may be able to support. This report assumes sufficient capacity can be made available.**” This contravenes Clause 5.21 (2) (c), and residents in west Yamba could not reach the Bowling Club as Yamba Road and many internal roads were closed. Yamba Gardens does not have an area to land a helicopter in a medical emergency during a flood and nor do other developments in Carrs Drive. These developments will be isolated mound islands in flood events.
4. **The Plan contains incorrect figures of the number of residents requiring evacuation on the floodplain west of River Street Yamba.** The Plan calculations are incorrect and the number of current and proposed dwellings is incorrect. This is dwellings in approved and proposed developments.

On page 19 of the Plan, **the calculation of people requiring evacuation is incorrect** – the Plan states the number of dwellings to the west of River Street (on the floodplain – excluding Yamba Hill) is 2,775. The current and proposed development is about 570 lots, bringing the total to 3,345. Assuming 2.1 residents per dwelling equates to 6,396 people requiring evacuation. **This calculation is incorrect: 3,345 multiplied by 2.1 equates to 7,025 people.**

The number of inundated dwellings to evacuate west of River Street in Yamba is also incorrect. There are 1,329 current and proposed dwellings not 570 as stated in the Plan. 1,329 and 2775 total 4,104 current and proposed dwellings. 4,104 multiplied by 2.1 equates to 8,618 residents to evacuate (see calculations on page 12).

5. The Plan provides on page 7 that Yamba has an older population: 32% are aged 65 and over. One existing manufactured housing estate, Greivillia Waters has over 200 residents and the average age of the residents is mid-seventies. The estate is not acknowledged in any of the documents for the Yamba Gardens development, yet the estate is next door. The estate has one road in and out and experienced flooding in 2022 and was cut off; that has never previously occurred.

6. The Plan states on page 7, **Yamba experiences four peak seasons with a potential population increase of more than 100%**. If a peak season coincides with a flood, how will evacuation routes cope during stormwater or river floods? And what if it coincided with a king tide?
7. On page 12 the Plan states, *"in a major flood the township of Yamba will be isolated and will need to be able to **"survive" without outside assistance for 2-3 days and it is large enough that it has sufficient accommodation, medical services and food for this period.**"* In February 2022 Yamba was isolated for 7 days (2 days stormwater flooding and 5 days river flooding); Coles ran out of food and closed; residents are not able to see a doctor for about 7 weeks. Doctors are not taking new patients. Yamba does not have sufficient accommodation off the floodplain. **By the way, this was not a major river flood.** Flooded residents evacuated to neighbour's or friend's homes, toilets wouldn't flush and power was cut.
8. Not all flooded streets are included in the Plan on page 8: Missing is Yamba Road, Treelands Drive, Park Avenue, Susan Street and Angourie/Yamba Road RAB. Also, there is no mention of what streets were closed.
9. The Plan on page 6 states, *"The proposed development should not result in any increased risk to human life."* Council's Assessment on page 20 states, **"there is no substantive risk to life."** **How can this be assumed and guaranteed. The precautionary principle needs to be applied.**
10. **Residents are discovering they are unable to obtain home insurance, or the price of home insurance has become prohibitive.** And still hundreds of homes are being built on the Yamba floodplain as we speak.
11. Continuing to fill the floodplain and increasing the population in Yamba will increase the burden on SES volunteers in flood events. Difficulties will inevitably continue to increase in relation to servicing residents, burdening the availability of goods and services, access to shops and availability of parking spaces, access to support care and medical and health treatment, access to schools and recreation and leisure facilities, risks to water supply, power outages causing health stress and food wastage, internet outages, sewer pumps failing, transport services paused and safe evacuation and potential risk to life.
12. Yamba CAN commend the SES for all they do and so appreciate the discussions Yamba CAN has recently had with SES Officers and they agreed that stormwater flooding is the initial concern in Yamba in heavy rainfall events. At the recent Yamba CAN Flood Awareness and Resilience Meeting, attended by over 250 residents, SES Officers offered to attend a further Meeting to collect data and information from Yamba residents about the 2022 flood events.

Note: The Panel has yet to provide its Determination for Yamba Gardens.

Concerns

- a) Councillors were not provided Council's up-to-date Assessment Report prior to making a very important decision about a controversial proposed development.
- b) The Flood Evacuation Plan neglected to comply with Council's LEP 5.21 (2) (c) and (d) as it could not guarantee the safe occupation and efficient evacuation and guarantee managing risk to life in a flood event.
- c) The anomalies, errors and contradictions in the Flood Evacuation Plan have been overlooked by Council, and Council has accepted the incongruous Plan as complying with Clause 5.21.
- d) It is essential that post-flood data is collected to review flood behaviour after flood events to capture lessons learnt, particularly when existing homes that have never previously flooded are now being flooded by stormwater, followed by river water.

Park Avenue Yamba (Parkside) Development

Parkside is a 136 dwelling manufactured housing estate, with a clubhouse, swimming pool, gym and cinema, requiring more fill – 2,600 truck and dog movements.

As Parkside has a cost estimate of over \$30m it was assessed and determined by the Northern Regional Planning Panel.

The development was deferred by the Panel in March 2022 – voted 3 to 2 in favour. The Council representatives provided that the public interest is best served by refusing this development. Reasons for Deferral: *“Parts of the site are located in the Flood Planning Area of the Clarence River and **the site as a whole will become isolated from escape routes and emergency services in major flood events.** Insufficient consideration has been given to safe evacuation from the site by residents (aged over 50) and visitors.”* A Flood Emergency Management and Evacuation Plan, prepared in consultation with the SES, was absent. The Panel gave the applicant 3 months to provide a Plan. *“The site already causes flooding into adjacent properties.”*

The Panel reconvened in July 2022 and deferred the development again requiring an independent assessment of the Flood Emergency Management Plan managed by the Department of Planning and the Environment.

In October 2022 the Panel reconvened for the third time after an Independent Peer Review of the Flood Emergency Management Plan was provided. The development was approved 3 votes to 2 (the two Council representatives voting against) (see the attached NR Times 19 October 2022, the CV Independent 2 Nov 2022 and NR Times 3 Nov 2022). Fourteen people provided presentations objecting to approval. The Peer Review was provided by Ms Louise Collier (B.E. M Eng Sc FIEAust CPEng) a highly qualified and experienced Master of Engineering Science, the highest level of membership with Engineers Australia, and has the highest technical credential for an engineering professional. Ms Collier’s report stated that the *“Emergency Management Plan is divergent from state guidance and practice.”* It states, *“Based on these findings, the current proposal is unsatisfactory from a flooding and emergency management perspective”*, yet this was virtually dismissed as seen in Council’s Supplementary Report to the peer review.

Concerns

- a) What is occurring in Yamba is not just about the required height of habitable floors, it is about the impact on the existing community and whether there is a robust evacuation plan in place.
- b) Accepting the developer’s Flood Emergency Management Plan (FEMP) containing errors.
- c) overlooking the Independent Peer Review of the FEMP provided by an impeccably qualified and experienced person.
- d) The National Parks and Wildlife Service had not been contacted by Council to inform that stormwater will be funnelled to the Clarence Estuary Nature Reserve.
- e) There is no consideration about the impacts of stormwater flash flooding without warning in the area of this proposed development and for the whole of Yamba.
- f) Parkside had similar non-compliance/unresolved matters as Yamba Gardens and was approved.
- g) Concern that there is no master plan for drainage, sewerage, water and other infrastructure for Yamba.
- h) A Civil Engineer and qualified, experienced flood hydrologist also presented that this proposed development needs to be refused as it will only exacerbate stormwater flooding to adjoining residents to the development site.
- i) The lack of community consultation notifying locals of the changes to the proposed development application. The height of extra fill along the southern boundary, extra drainage along and inside the southern boundary, that pumps will be located in the drain at the back of the adjacent residents along the southern boundary and that adjacent locals will be able to take refuge in the onsite clubhouse during flood events.
- j) There is potential increased burden on local SES during stormwater and flood events.
- k) The development site is accessed via one road in and out. Evacuation of the site is via Park Avenue and Shores Drive. Shores Drive is generally the first to close in Yamba - initially by stormwater and then some days later by riverine floodwaters when the flood crest reaches Yamba.
- l) There is a tide gauge in Yamba, only at the mouth of the Clarence River. River levels up river of this gauge can be very different with the imminent flood crest reaching Yamba.
- m) The stormwater and riverine flooding impacts in Yamba could have been far more catastrophic had it coincided with a high tide or ocean king tide.

Flood modelling needs to include post-flood data collected, to ensure flood behaviour after flood events is captured and included. In a flood event in Yamba, no assurance can be given and people's homes will be flooded, streets will become impassable as flowing streams or rivers, developments will become islands and evacuation will be dangerous or impossible, all causing the Clarence Valley Council area to have the highest social, economic and environmental costs as the State Disaster Mitigation Plan outlines.

Summing up, it appears there is a systemic problem whereby stakeholders in the development application and planning process are predisposed to favouring approval of developments such as outlined in this document. It appears that Council is inclined to accept what a developer provides and presumes in a DA without fully considering and assessing the impacts on existing residents and whether an adequate evacuation plan is in place.

Suggested considerations/reforms in the planning process:

- a) A Statewide moratorium on developments on floodplains.
- b) The State Disaster Mitigation Plan 2024- 2026 – hasten the building of a new local government toolkit and the development of local Disaster Adaptation Plans.
- c) Climate Valuation: Going Under: The imperative to act in Australia's high flood risk suburbs – June 2024. The report identifies suburbs where the majority of homes are highly vulnerable to becoming uninsurable due to climate-exacerbated riverine flooding risk. Yamba had 5,428 properties analysed and 56.63% (3,056) are seen as high risk.
- d) Review of the Sydney and regional planning panels' operational procedures as outlined below.
- e) Ensuring all DAs adequately consider and address Council's Local Environment Plan, particularly in relation to Flooding Planning.
- f) Concern is that Councils and developers currently use the same outsourced companies to research, assess and formulate documents in relation to development applications, flood modelling and evacuation plans.
- g) Councils need to ensure accurate modelling and mapping to include stormwater flooding.
- h) Councils need to ensure post-flood data is collected and residents surveyed in relation to flooding on their properties.
- i) Council's community consultation and engagement is inadequate. A requirement that Councils advertise all development applications and approved developments in local newspapers.

Sydney and Regional Planning Panels – Northern Regional Planning Panel (NRPP)

Suggested considerations to ensure transparency and accountability:

- Point 8. *"Monitoring, review and reporting; The Secretariat monitors the progress of DAs referred to the Panels. It is expected that council **will** complete its assessment report within 60 days after the close of the public exhibition period."* Council's Assessment Report was about 160 days after the close of the public exhibition period. **Amend "will" to "must"**.
- Point 11.13. *"Council representation to the Planning Panel: After the assessment report is sent to the Secretariat, it **may** be given to the elected council (**in sufficient time to hold a Council Meeting**) to assist in its decision as to whether it will be making a submission to the Panel."* Council provided Councillors an assessment report that was over a year out of date to then make a very important decision about whether to pass a resolution to make a submission to a Panel. **Amend "may" to "must"** and include **"in sufficient time to hold a Council Meeting."**
- Councillors who have attended a Council Meeting about a DA to be assessed and determined by the Planning Panel are required to declare a conflict of duty and are unable to sit on the Panel for that DA. Councillors serve their local community, are aware of the complexities of the DA and are the best advocate for the community to serve on the Panel.
- Only those residents who provided a submission to the NRPP are informed of the Panel Meeting. The advertisements for the Panel Meetings are in the major newspapers. Advertisements need to be provided in local newspapers relevant to the area of the DA to ensure all residents are informed and provide an opportunity for all residents to participate.

Lynne Cairns
Secretary, Yamba CAN Inc.



Memorandum

Project	003044		
From:	BMT		
Date:	31/10/2023	To:	West Yamba Landowners Consortium
Doc Ref:	M.003044.001.00		
Subject:	West Yamba Flood Evacuation Plan Addendum		

Introduction

This memorandum has been prepared in response to Clarence Valley Council's (Council) request for further information in relation to the 'West Yamba Flood Evacuation Plan' prepared by BMT for the West Yamba Landowners Consortium (report ref. 002855.01.02). The assessment was prepared for development proposal application number SUB2023/0001. The request for information in relation to flood evacuation is listed in Item 2 of Council's letter and is repeated below:

2. Flood Evacuation

Submit an addendum to the current West Yamba Evacuation Plan to assess the impacts on the 2022 Flood Model on evacuation and ensuring Council is satisfied that the proposal development will not conflict with Clause 5.21 (2) (c) and (d) of the LEP extracted below:

(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and

(d) incorporates appropriate measures to manage risk to life in the event of a flood

To enable Council to be satisfied the proposal 'will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood'.

Note – The response to Flooding and Flood Evacuation must consider and make recommendations to reduce flood affectation and comply with the requirements of Clause 5.21 of the LEP and the DCP to not result in detrimental increases to flood behaviour and affectation on other properties.

This memo primarily addresses Item 2(c) and the subsequent notes.

BMT Response

The Lower Clarence Flood Model was recently updated for Council by BMT and the assessment was completed in 2023. BMT understands that the flood model was recently adopted for use by Council. The model updates the baseline conditions to those present in the year 2022 and includes recent

significant developments such as the Pacific Highway Upgrade. The model also revisited a number of modelling assumptions and updated these to accord with current guidelines and best practice. Full details are contained within the accompanying Lower Clarence Flood Model Update 2022 report.

The West Yamba Flood Evacuation Plan does not rely on flood model results to determine areas for evacuation. It conservatively assumed that all dwellings, excluding those on Yamba Hill, would require evacuation. As such, the calculated 'total time needed for evacuation' is unchanged due to the model update.

The West Yamba Flood Evacuation Plan also does not rely on model results to determine the 'actual available time (for riverine flooding)'. The actual available time is informed by the Bureau of Meteorology's *Service Level Specification for Flood Forecasting and Warning Services* which states a 'Target warning lead time' of 24 hours at the Maclean Gauge for a gauge level of 3.3m or greater. Therefore the actual available time for evacuation is unchanged as a result of the updated flood model.

Overall therefore, the original conclusions of the West Yamba Flood Evacuation Plan are unchanged and **the plan demonstrates that the development proposal will not exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood.**

Following the adoption of the updated Lower Clarence Flood Model by Council, BMT was requested to update the Flood Impact Assessment prepared for the West Yamba Landowners Consortium using the updated Council model. This has been undertaken and has been reported on separately. Overall it was found that the development proposal resulted in no significant changes in flow velocity, flood hazard category, duration and frequency of inundation within the area surrounding the proposed development. Minor instances of localised increases in flood levels were observed but these did not affect any residential properties and are not considered to affect the safe evacuation of the area.



3 Flood Evacuation Plan

It should be noted that for the timeline assessment in Section 3.5, only one route was considered. The reasoning for using only one route in the timeline assessment, is that **all the proposed evacuation routes eventually utilise Yamba Road. Therefore, the capacity of Yamba Road is the constraining factor during an evacuation.**

3.3 Evacuation centre capacity

The SES local flood plan directs people to **the Yamba Bowling & Recreation Club as a suitable location for an evacuation centre. BMT does not have details of this facility to be able to assess its suitability for the number of people that this facility may be able to support. This report assumes sufficient capacity can be made available.**

Information from the Census and the expected increase in population as a result of the proposed development indicates that there would be 6,396 people (see Section 3.4) that would be required to evacuate during an extreme flood event in this area. It is acknowledged that not all of the people evacuated will make use of the evacuation centre, as some people may choose to stay with family and friends outside of the flooded area.

COUNCIL ASSESSMENT REPORT
NORTHERN REGIONAL PLANNING PANEL

	<p>(d) incorporates appropriate measures to manage risk to life in the event of a flood, and</p> <p>(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.</p>	<p>and consultation undertaken by the applicant with SES, there is no substantive risk to life. People may need to evacuate in the event of major flooding and is considered acceptable noting capacity of evacuation routes and available warning times.</p> <p>Refer to detailed discussion under Key Issues - Section 5.1 and 5.3 below.</p>	
Urban release areas (Part 6)	Satisfactory requirements are to be made for provision of infrastructure and preparation of a DCP	Infrastructure is proposed to service the subdivision and detailed requirements are able to be addressed by way of conditions of consent. Part X of the	Yes

Overall therefore, the original conclusions of the West Yamba Flood Evacuation Plan are unchanged and the plan demonstrates that the development proposal will not exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood.

The applicant has consulted with SES regarding the West Yamba Flood Evacuation Plan prepared by BMT. Subsequently, SES responded to the plan, advising that the flood evacuation triggers on page 8 of the BMT West Yamba Flood Evacuation Plan are consistent with the current 2024 Local Flood Emergency Sub Plan Yamba Sector which has been endorsed by the Local Emergency Management Committee.

Resolution: To this extent, it does meet Clause 5.21 of the LEP and Part D and Part X Schedule 1 Flood Management Controls – Evacuation, 3 within the DCP. The development is to be consistent with any relevant flood evacuation strategy, Flood Plan adopted by Council or similar plan. The controls under Part X of the DCP require evidence from the applicant of consultation with the SES regarding any necessary updating to the Local Flood Plan and this has been provided by the applicant.

5.4 Filling

The development proposes fill over the subdivision footprint to enable future dwellings to meet the specific West Yamba controls of Part X of the DCP which requires filling to 3.01m AHD, with fill supplementing previous developments over the site to provide an additional 0.9m – 2.7m (average fill height over the development is stated at 1.40m).

Existing fill material lawfully placed on-site has been through truck and dog vehicle movements hauling material on Yamba Road to the development site. The impact of construction traffic, and especially the volume of trucks that will be required for the site filling will significantly differ from the existing traffic in Carrs Drive. Unless alternative filling options such as dredging become available, the traffic impact is an inevitable consequence of developing this and other

Table 3.1 Travel Safety Factors

Base Time (hours)	Traffic Safety Factor (hours)	Total Travel Time (hours)
1 to 3	1	2 to 4
4 to 6	1.5	5.5 to 7.5
7 to 9	2	9 to 11
10 to 12	2.5	12.5 to 14.5
13 to 15	3	16 to 18
16	3.5	19.5

3.5.3 Properties to evacuate

According to the Australian Bureau of Statistics census data (2021) for Yamba (excluding Yamba Hill – properties to the west of River Street), there are currently 2,775 dwellings. There are approximately 5,199 people currently located in this area. The SES Local Flood Plan states 2,400 existing properties would be inundated above floor in an extreme event although this is based on older census data. For the purposes of this assessment a precautionary approach has been undertaken whereby all 2,775 existing dwellings will be factored into the evacuation assessment.

The current and proposed development includes approximately 570 lots, bringing the total number of dwellings in the area that may require evacuation to 3,345. This equates to an estimated 6,396 people, assuming that there will be 2.1 residents per dwelling in the new development (ABS, 2021).

2.2 Clarence Valley Local Flood Plan (NSW SES, 2017)

The Clarence Valley Local Flood Plan was prepared by the NSW SES and covers issues relating to the preparedness, response and recovery from flooding within the Clarence Valley LGA. The current version of the plan was prepared in 2017 and it is scheduled for review. The following key relevant points are noted from the plan:

- Yamba is located at the mouth of the Clarence River on the coast, on the southern bank. It is considered an aged community, with 32% of people over 65 (refer Figure 2.1). It has 4.8% indigenous population.

- **Yamba has four peak seasons with a potential population increase of more than 100%:**
 - School holiday tourist influx late December/January.
 - School holiday tourist influx April.
 - School holiday tourist influx July.
 - School holiday tourist influx September/October.

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- It is accepted that **in a major flood the township of Yamba (and many other urban centres in the region) will be isolated and will need to be able to “survive” without outside assistance for 2-3 days. Yamba is large enough that it has sufficient accommodation, medical services and food for this period.** The only exception would be a major medical disaster. The aim of evacuation planning for Yamba is to ensure that the community is “together” on “dry” ground and can obtain the use of the facilities in Yamba. It is not proposed that the population be moved elsewhere during a flood.
- It is difficult to identify the critical point or stage in a flood where access along Yamba Road will be cut, as it is likely to depend upon a combination of ponding of local runoff, Clarence River floodwaters and ocean inundation. The importance of each contributor will vary for each event. Based on the available survey the lowest points (1.5 m AHD) on Yamba Road are between Goldings and Freeburn Streets in the east and near Treelands Drive in the west. Yamba Road has a maximum height variation of approximately 0.5m west of Angourie Road. To the east of Angourie Road, Yamba Road rises to high ground.

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West Yamba Flood Evacuation Plan

BMT (OFFICIAL)

- **Inundation can occur from 2.4m (1.5m AHD) on the Yamba gauge dependant on the tides. Streets affected include the Halyard, Telopea Street, Melaluca Drive, Woolli Street, Carrs Drive, Yamba Plaza, Endeavour Street, Deering Street, Golding Street, Cook Street and Shores Drive.**

2 Document review

A review of existing relevant documentation relating to flood evacuation considerations has been undertaken. Key documents and key relevant points from within those documents are summarised below.

2.1 Clarence Valley Council Development Control Plan 2011

Part D of Clarence Valley Council's Residential Zones Development Control Plan (2011) sets out floodplain management controls and performance criteria. Performance Criteria relevant to evacuation include the following:

- The proposed development should not result in any increased risk to human life (D3.1a).


	<p>(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and</p> <p>(d) incorporates appropriate measures to manage risk to life in the event of a flood, and</p> <p>(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.</p>	<p>showed no impact on residential properties in the new development or in areas surrounding the development.</p> <p>Based on the WYURA Flood Impact Assessment and West Yamba Evacuation Plan prepared by BMT and submitted in support of the application and consultation undertaken by the applicant with SES, there is no substantive risk to life. People may need to evacuate in the event of major flooding and is considered acceptable noting capacity of evacuation routes and available warning times.</p> <p>Refer to detailed discussion under Key Issues - Section 5.1 and 5.3 below.</p>	
Urban release areas (Part 6)	Satisfactory requirements are to be made for provision of infrastructure and preparation of a DCP	Infrastructure is proposed to service the subdivision and detailed requirements are able to be addressed by way of conditions of consent. Part X of the	Yes

Current and proposed lots - dwellings requiring evacuation in west Yamba	
BMT's Attachment Q. West yamba Evacuation Plan is inaccurate (page 19)	
3.5.3 Properties to evacuate: dwellings to the west of River Street Yamba	2,775
Current and proposed development (this is incorrect - see below there are 1,329 dwellings)	570
Total number of dwellings requiring evacuation	3,345
Assuming 2.1 residents per dwelling (3,345 x 2.1 = 7,025) NOT 6,396 as seen on page 19 in the Plan	7,025
Correct number of dwellings and people to the west of River Street Yamba requiring evacuation	
Yamba Gardens (Kahuna) - proposed	284
Clifton - approved and being constructed	193
Clifton - proposed	216
Senior living - approved	52
Parklands - approved and being constructed	161
Golding Street - proposed	16
Park Avenue - approved	136
Orion Drive - approved and being constructed	78
Quays estate - approved and being constructed	72
Sullivans Road - approved	6
Caroona aged care - approved and being constructed	84
Habitat - approved	17
Mulgi Street - proposed	14
A. Total number of dwellings, apartments, townhouses west of River Street	1,329
B. Precautionary approach in BMT's Plan	2,775
C. Total number of dwellings, apartments, townhouses requiring evacuation west of River Street (A + B)	4,104
2.1 residents per dwelling (2.1 x 4,104) Total requiring evacuation to the west of River Street	8,618
Pink numbers = current and proposed dwellings in Carrs Drive - not including existing residents - at least 912 vehicles trying to exit Carrs Drive to Yamba Road in an evacuation	912

PROJECT NAME
YAMBA GARDENS
 PRELIMINARY

PROJECT DESCRIPTION
 LOT 46 & 47 on DP25595
 1485 ST. YAMBA NSW 2444
 LOCALITY OF CLARENDON VALLEY
 LOCAL AUTHORITY - CLARENDON VALLEY COUNCIL

CLIENT
KAHUNA NO. 1 PTY LTD



Scale 1:2000 - A1 (700mm x 1000mm) - A3

ISSUES	DATE
CONCEPT	14-08-2015
CONSTRUCTION	14-08-2015

DATE: 14-08-2015
 ASSOCIATED CONSULTANTS:

BIOME
 Environmental & Planning Consultants

DRAWING TITLE
 STORMWATER
 NATURAL FLOW PATHS
 @ RL 0.90

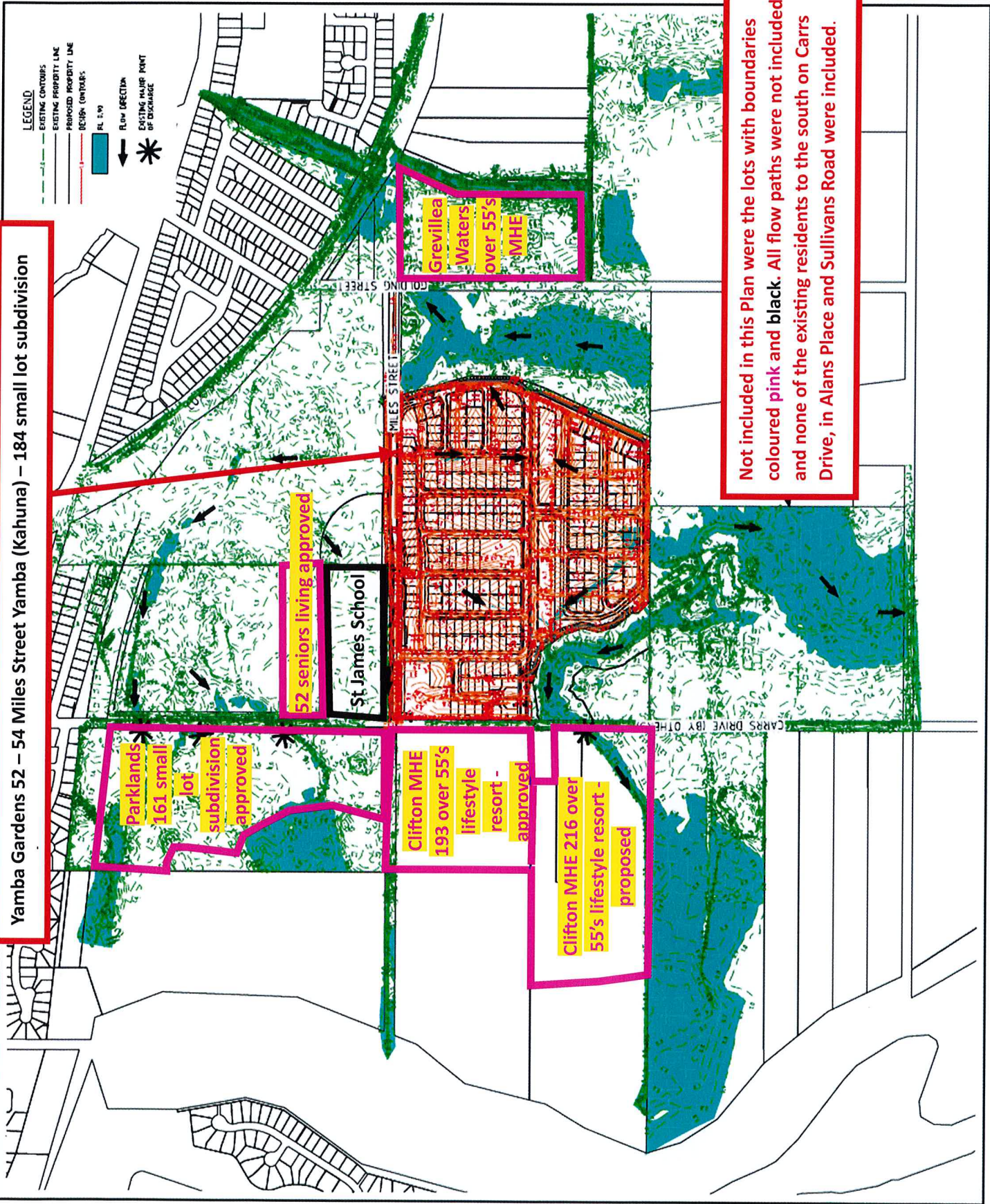
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DATE: 14-08-2015
 SHEET: 3 OF 4

33801-PR2-678
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Yamba Gardens 52 – 54 Miles Street Yamba (Kahuna) – 184 small lot subdivision

Parklands 161 small lot subdivision approved

52 seniors living approved

St James School

Clifton MHE 193 over 55's lifestyle resort - approved

Clifton MHE 216 over 55's lifestyle resort - proposed

Grevillea Waters over 55's MHE

Not included in this Plan were the lots with boundaries coloured pink and black. All flow paths were not included and none of the existing residents to the south on Carrs Drive, in Alans Place and Sullivans Road were included.

The Yamba floodplain – photo on 16 September 1969

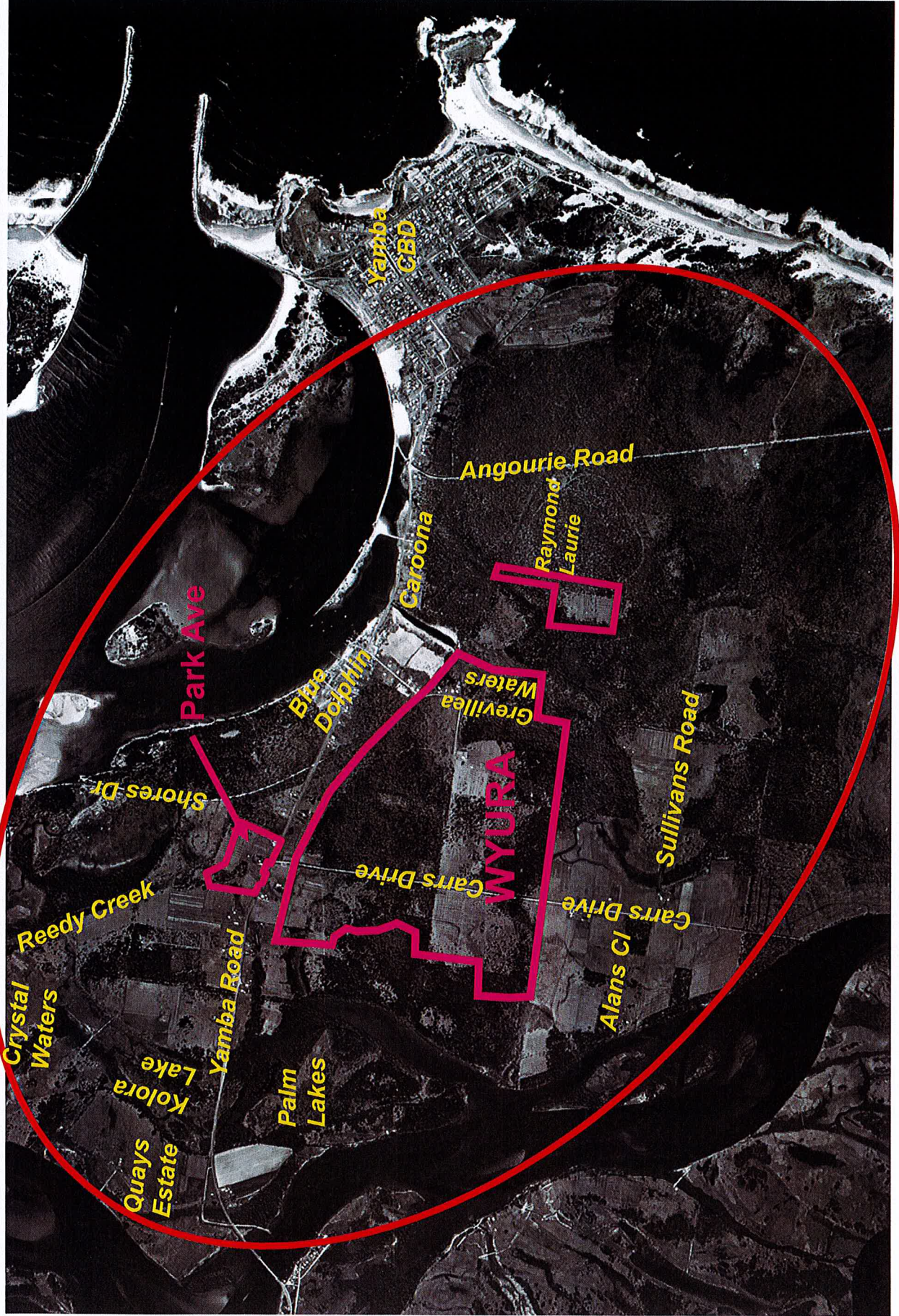
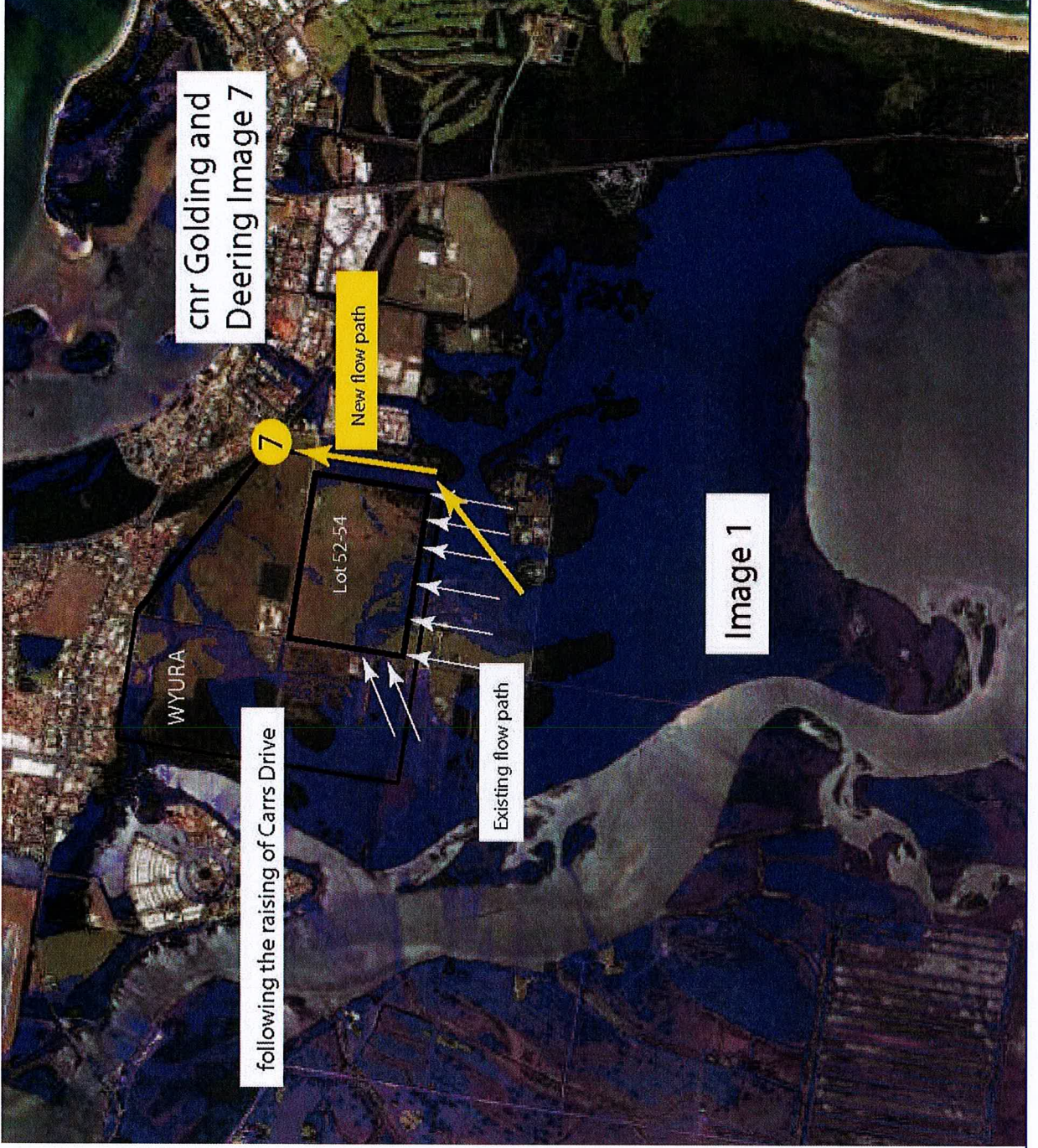


Photo provided by Yamba Historical Society

Understand your risk:

West Yamba Urban Release Area (WYURA)



cnr Golding and
Deering Image 7

New flow path

7

Lot 52-54

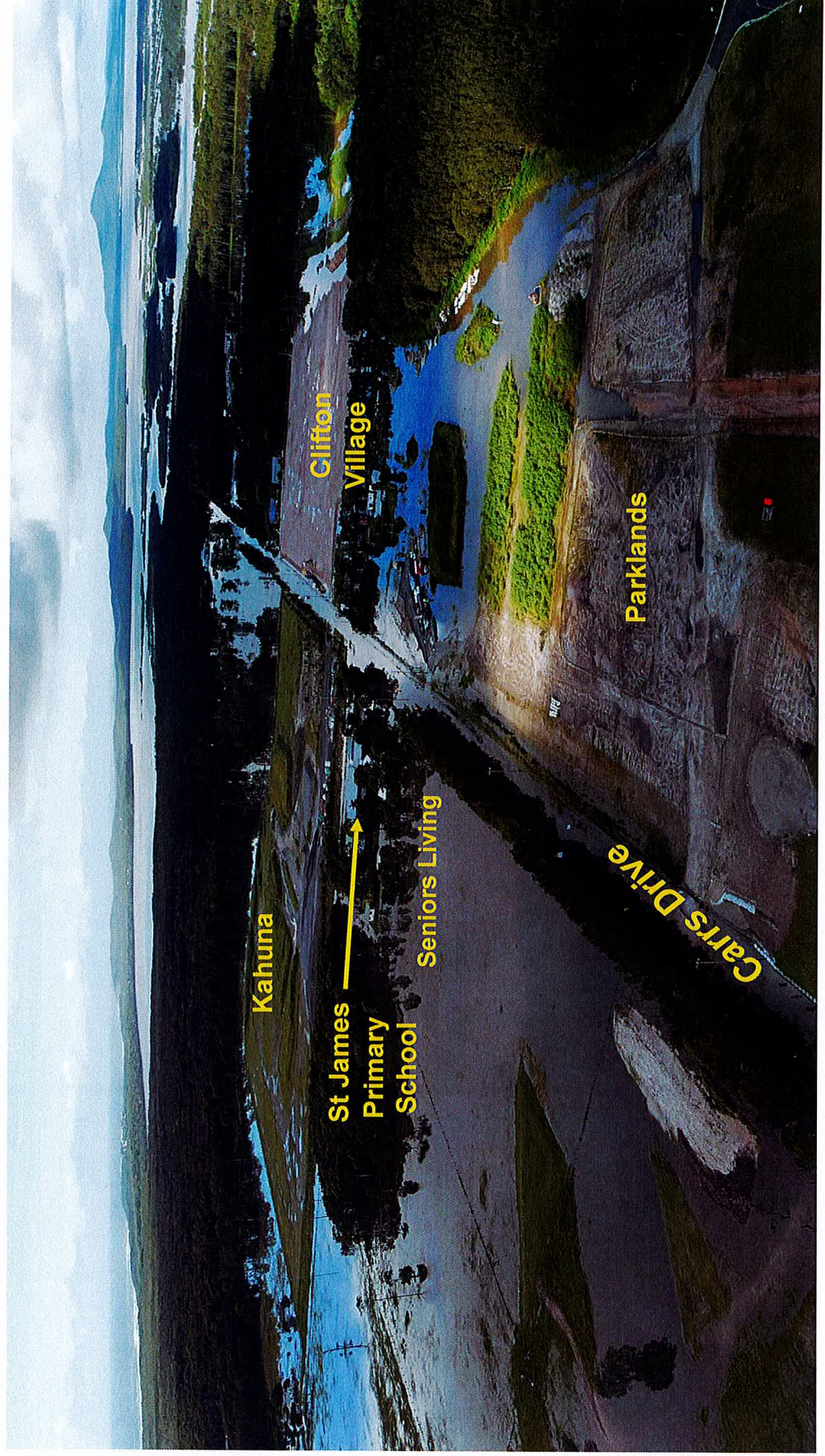
Existing flow path

Image 1

following the raising of Carrs Drive

Understand your risk: The WYURA

Carrs Drive flooded and closed – looking south



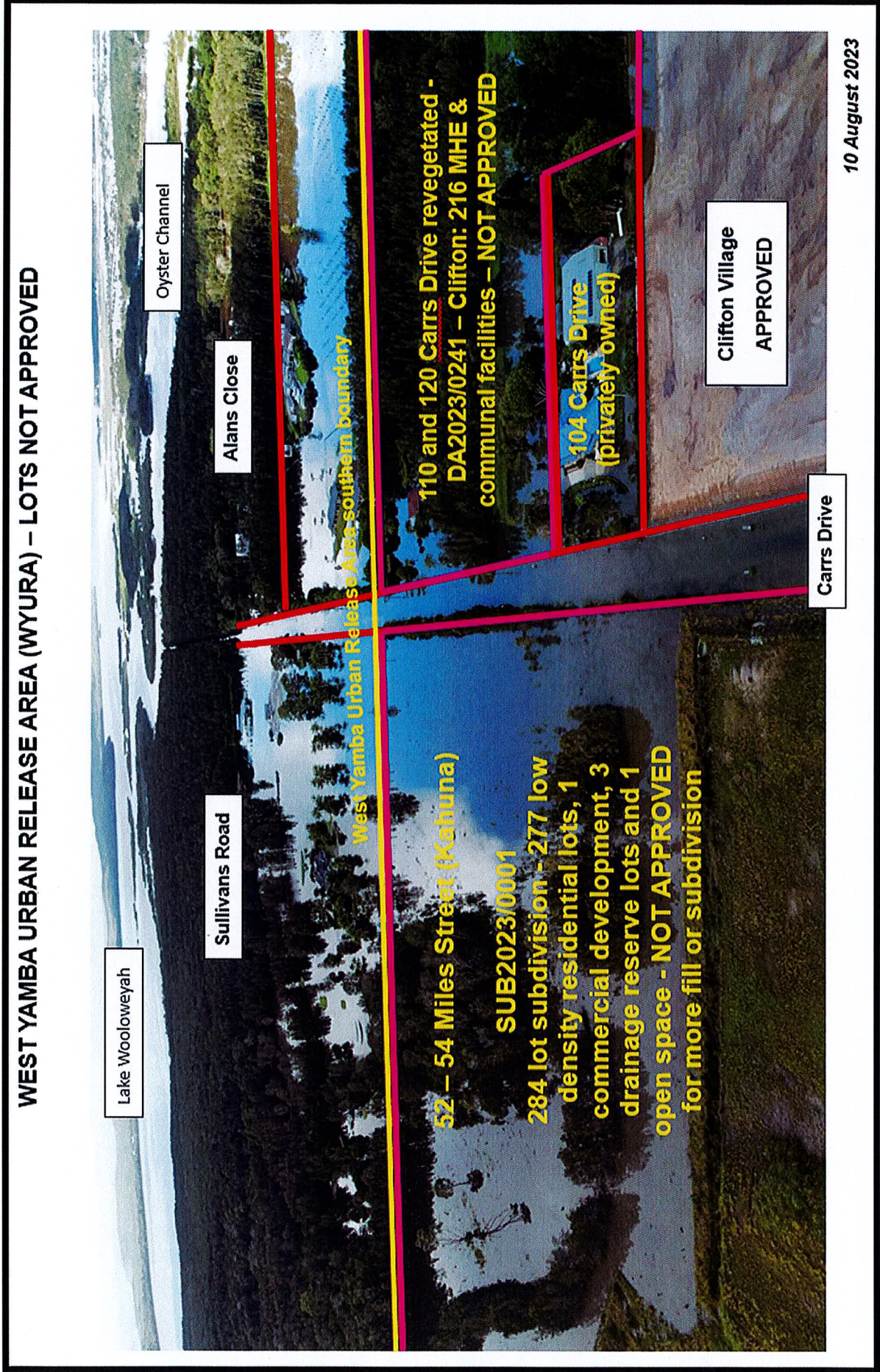
Understand your risk: The WYURA

Carrs Drive flooded and closed – looking north



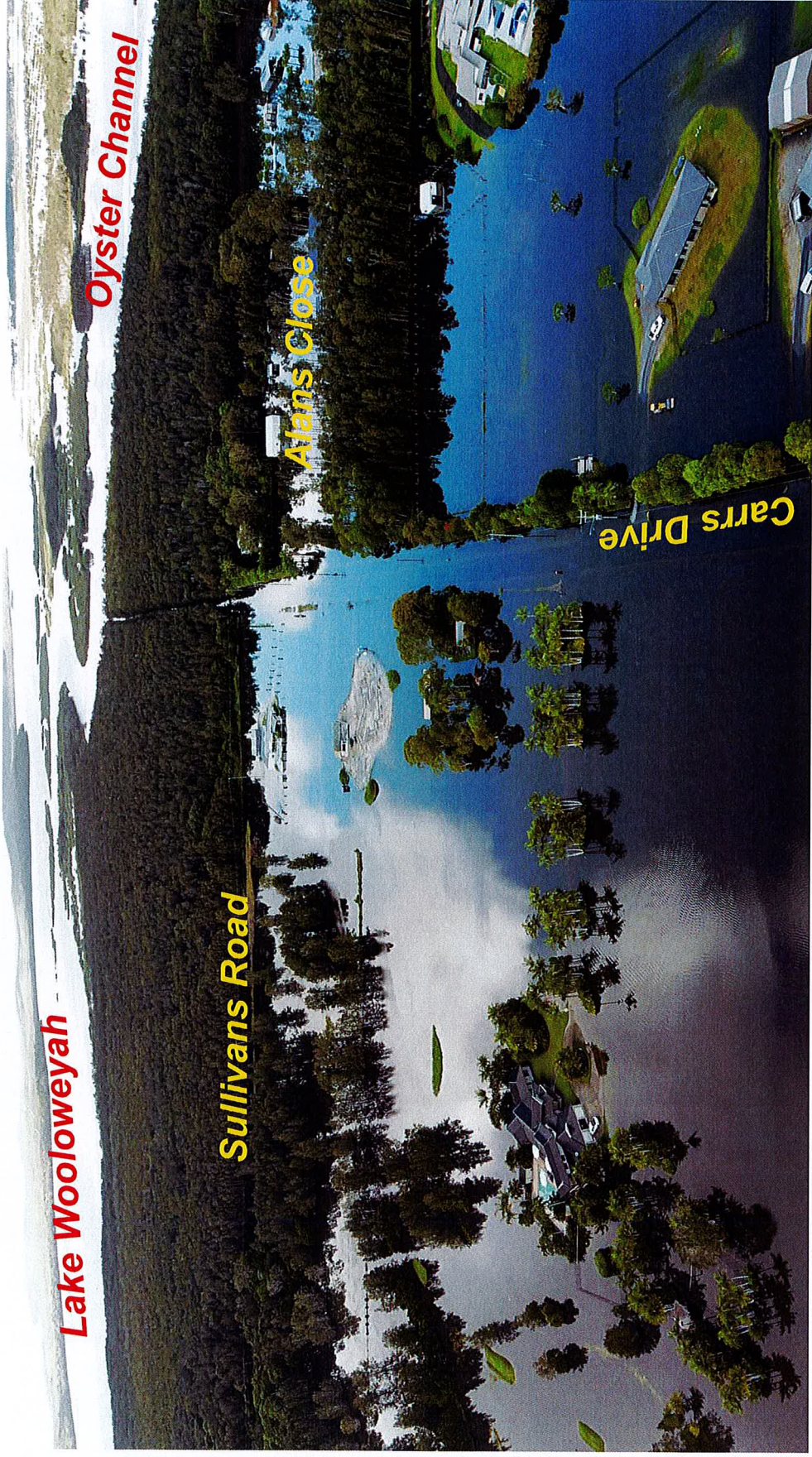
Understand your risk: The WYURA

NOT APPROVED: 52 – 54 Miles Street (Kahuna) and 110/120 Carrs Drive (Clifton)



Understand your risk: South of the WYURA

Carrs Drive, Sullivans Road and Alans Close flooded



Understand your risk: South of the WYURA

Carrs Drive, Sullivans Road and Alans Close flooded



Understand your risk: The WYURA

Grevillea Waters Manufactured Housing Estate

