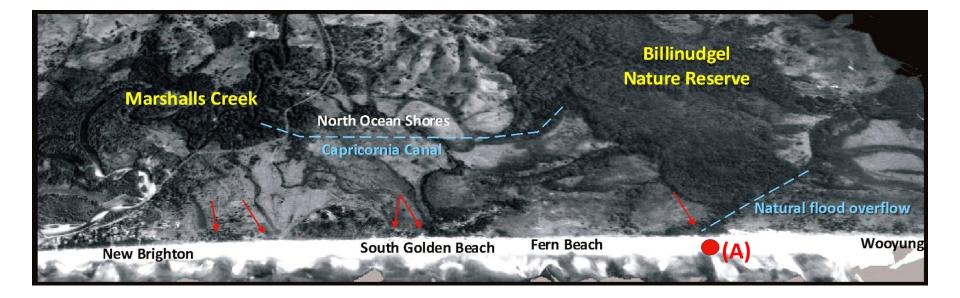


CASE STUDY Facts ... North Byron Shire Flood Mitigation Project for Cr David Warth

Community-based Consultation

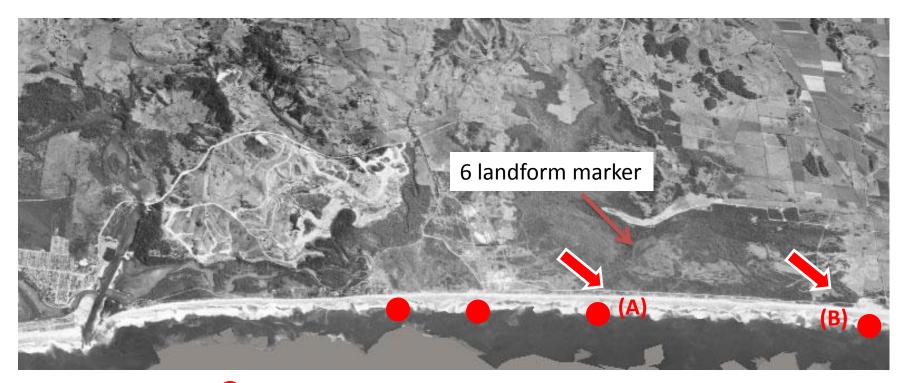
Profile the natural flood outlet at North Ocean Shores.



1. Investigate further the flood history documents and historical timeline facts of the establishment of the Ocean Shores Estate.

2. Identify the natural flood overflow location at North Ocean Shores.

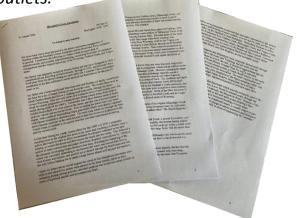
- **3.** Identify the legal obligations of Council to provide a 'duty of care' for those residents living at North Ocean Shores, South Golden Beach and Fern Beach.
- **4.** Identify possible flood mitigation strategies to lower the flood levels on the Marshalls Creek Floodplain at the North Ocean Shores Outlet.



1971 Coastline showing flood overflow outlets identifying North Ocean Shores (A) Wooyung (B). *Note: The dirt road connects South Golden Beach to Wooyung blocking the outlets.*

Background: The Marshalls Creek Floodplain

Ian Fox - An account of the area in the 1960's Southern Cross University Environmental Resource Management https://brunswickvalley.com.au/flood-history/flood_story51.pdf



Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)

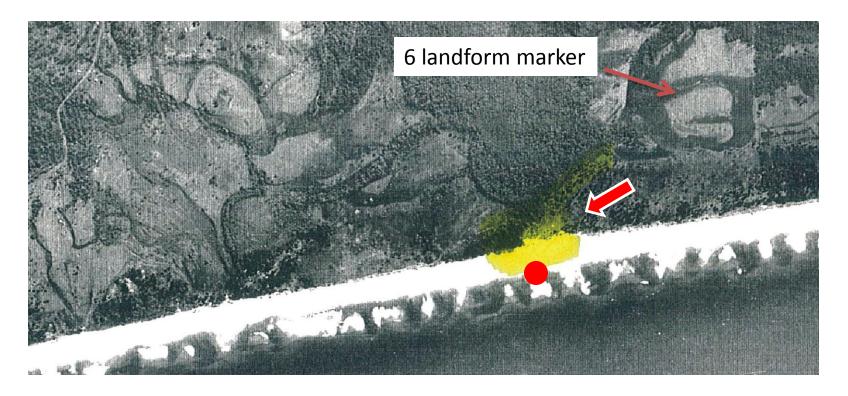
Marshalls Creek Floodplain Review

Dote: 27/5/47 Scale: approx. 1:30,000

Observation 1:

The flood overflow outlet at North Ocean Shores entered the ocean at (A). There was also an outlet at Wooyung that flowed into the ocean (B). (See Parish of Mooball Map 1887)

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)



Observation 2:

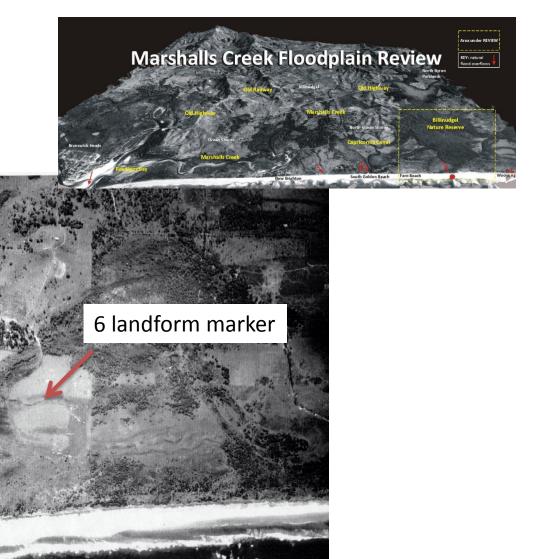
1947 yellow area showing location of the outlet just north of Fern Beach. *Note:* 45 degree angle of the natural channel to the overflow outlet feeding from the 6 landform marker.

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)

Doke :

16/12/4

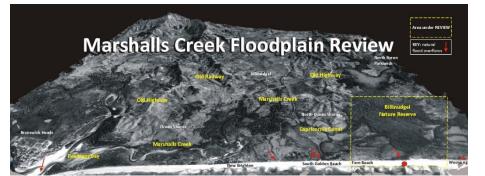
Scale : 1:11,000

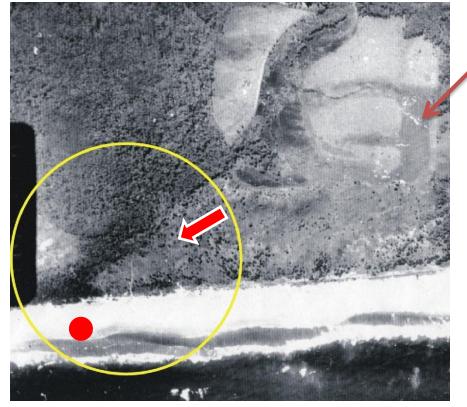


Observation 3:

Additional proof identification of North Ocean Shores flood outlet 1944. *Note:* 45 degree angle of the natural channel to the overflow outlet feeding from the 6 landform marker.

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)



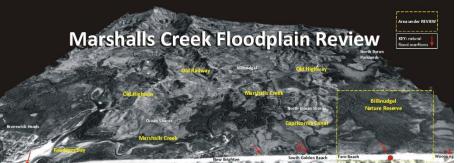


6 landform marker

Observation 4:

Closer inspection of the North Ocean Shores flood outlet 1944. *Note: 45 degree angle of the natural channel to the overflow outlet feeding from the 6 landform marker.*

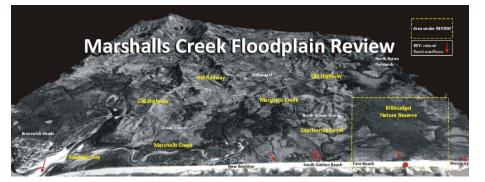
Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)





Observation 5: Circa 1974 Development of Stage 2 North Ocean Shores showing outlet open and flowing.

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)

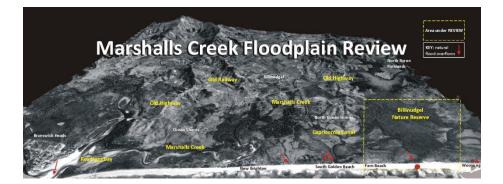




Observation 6:

1974 Development of Stage 2 North Ocean Shores showing outlet open and flowing.

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)





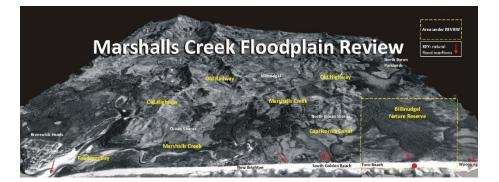


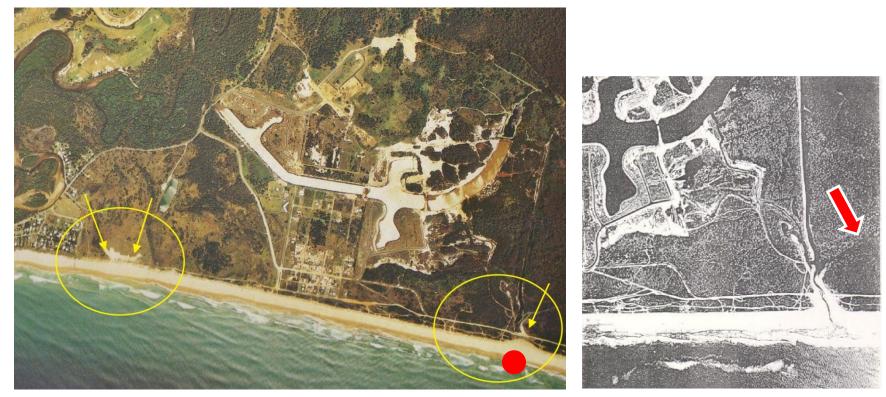
Observation 7:

1976 North Ocean Shores **outlet closed** and **dune stabilisation** undertaken at the outlet mouth. (see slide 14 - Deputy Premier's letter to Council 1982)

Flood Introduction Talk 8/4/2025

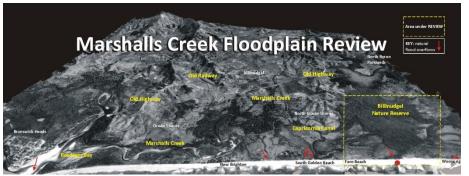
Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)





Observation 8: 1980 North Ocean Shores Outlet closed. Note: red arrow identifying 45 degree channel.

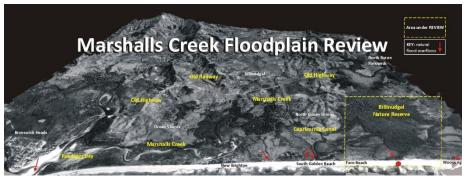
Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)

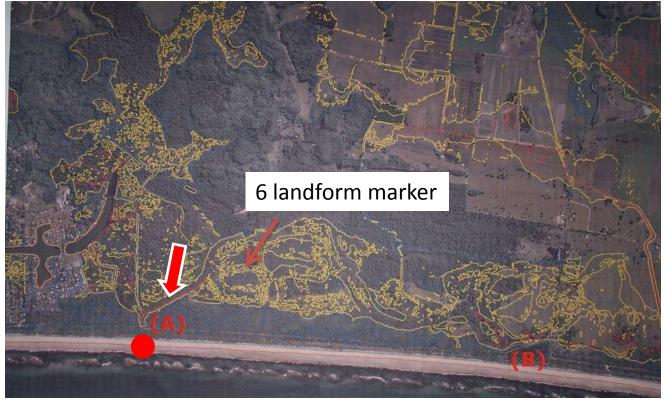




Observation 9: 1987 Outlet still closed.

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)





(The coloured markings on the map outline the old creek banks that allowed the water to flow out into the ocean) Yellow Markings - below 2m AHD

Red Markings - below 1m AHD

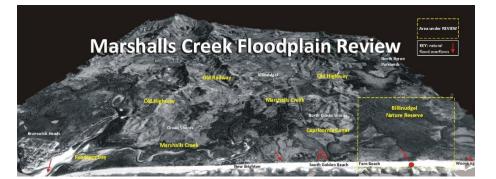
Blue Markings - above 3m AHD

13

Observation 10:

2007 Topographic map of land showing AHD levels around the outlet (A) at North Ocean Shores. *Note: red arrow identifying 45 degree angle of the natural channel feeding from the 6 landform marker.* Flood Introduction Talk 8/4/2025

Identify the natural flood overflow location at North Ocean Shores. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)





Observation 11:

Photos showing the location of the outlet blocked by dunes and road. Note red arrow: 45 degree natural channel still present in 2015.

Flood Introduction Talk 8/4/2025

Identify the legal obligations of Council to provide a 'duty of care' for those residents living on the Marshalls Creek Floodplain.



22/6/76

Allachment

10

2. OCEAN SHORES - DIVISION 17 (03.6)

Shive Engineurs Report.

Pursuant to Minute 423 of Council's May meeting, I have discussed the closure of the temporary flood overflow with Princess properties Pty. Ltd., The company has agreed to close the flood opening and to restore the ground to its original condition in accordance with its agreement with the Department of Lands. Associated with this work, the Company will arrange to clear the waterway from the existing New Brighton Road bridge upstream to the bend in Yelgun Swamp. An exchange of correspondence will confirm this arrangement.

I also discussed the possible effect of flooding in the New Brighton/South Golden Beach area as a result of closing this temproary flood by-pass. Mr. Corben expressed the opinion that the Company would not be liable for any claims in the future that works Company would not be theore by the Company have resulted in an increase in flood height in these areas. I agree with Mr. Corben in this as the area of the flood plain which the Company has developed is only a relatively small proportion of the total flood-plain area. If the Company's works did have an effect on the helpitos any particular flood, this would only be marginal, sand in the preer of 1 to 3 inches, and virtually impossible to gatablish with a

For Information.

2. OCELN SHORTS - DIVISION 17 (03.6 Cr. Donoghue, Resolved that the information be rectived 539 Cr. Farrell.

	HIRE COUNCIL. 5
ORDINARY MEETING.	27TH JULY, 1976.
SHIRE ENGINEERS REPORT CONT.	
7. OCEAN SHORES BOIDING	107.63
T. OCEAN SHORES BOIDING	, (05.6).
the vicinity of the temporary f has been received from the Comp proposed. Send fill will be pl	equest to restore the old mining track in flood outlet north of New Brighton, a let eary indicating the method of construction laced in the opening in the duno, this op planted and fenced and the road gravel
will then be mulched, vegetatio The works will be joined to the with minimum disturbance of eris	Axisting land forms in easy ourves and

As discussed at the June meeting, closure of this temporary outfall could have an effect on the flood levels in New Brighton, although, in my opinion, the effect would be very small end impossible to determine accurately. There is also the distinct possibility that the temporary outfall would be blocked when the flood occurred anyway, and, in that case, would have no effect whatsoever.

The company secks Councils endorsement of its proposal and, there-by, effectively transferring the responsibility of whatever increased flooding may result from the works, from the Company to Council.

Recommendation :- That the Company's proposal to block the temporary outfall from the Yelgun catchment be approved by Council.

7. OCEAN SHORES BONDING (03.6).

631 Cr. Knuckey, Resolved that the recommendation be adopted. Cr. Donoghue.

COUNCIL RECORDS PROVIDED BY OMBUDSMAN SHOWING COUNCIL RESOLUTION TO ACCEPT LIABILITY FOR FLOODING CAUSED BY COMPANY COMPLYING WITH REQUEST TO CLOSE OUTLET

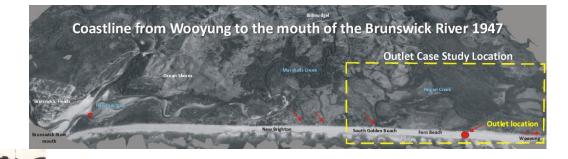
Document 1:

1976 BSC Engineer's Report and Minutes of Council Meeting.

10 JUL 1939

DEFICE OF THE

Identify the **legal obligations of Council** to provide a 'duty of care' for those residents living on the Marshalls Creek Floodplain.



ANNEX SYDNEY 8 DEC 1982 Mr. C. J. Shewellor. Shire Clerk, Hyren Shire Council, Post Office Dox 159, 2481. BYRON BAY NSH Dear Mr Shevellar, I refer to your letter of 15th October, 1982 concerning the siltation of the North Arm of the Brunswick River at New Brighton and proposing a flood study for the Main Arm of the Brunswick River. I am univised that officers of my Department met with your representatives on 11th Novemour, 1952 to inspect and discuss the Brunswick River. My officers were of the opinion that the floce behaviour of the North Arm of the Brunswick River will not be significantly improved by dredging. Dredging will almost certainly accelerate the prosion of the river banks and will further occuplicate an already delicately balanced river and coastal system. Council's roads at New Brighton are currently being threatened by bank erosion, and can best be protected with suitable rockwork. The flooding problem of the North Arm is compounded by Ocean Shores Estate. It is of concern to me that the conditions of my Department's concurrence to the Ocean Shores Project have not seen enforced by Council. The flood assessment for the development was made on the Dasis that an ocean outfall would be provided to reduce flood levels in the area, and the first stages of the development were approved subject to the cutfall being constructed and maintained. The texporary outfail which was constructed is and has been for sometims ineffective due to read construction and dure stabilization acrors the outfall mouth. Consequently, it is likely that existing residential development and ony currently being approved on the lower parts of the estate is flood liable. This is contrary to the principles of sound flood plain management as enundiated in the Government's Flood Prone Lands policy and Council is likely to be in an invidious position in the event of flooding and damage to property. Council would therefore be well advised to undertake immediate remedial measures to alleviate this situation. I have noted your request for financial assistance to carry out a flood study of the Main Arm of the Branswick River. Requests have seen received for similar studies of other river valleys but funds are fully committed. However, my officers will assist in the preparation of a brief for the carrying cut of such a study which can be reconsidered for funding in 1983/84. Yours faithfully, (Sad.) 1. J. Forguson

> Deputy Prealer and Minister for Public Works and Ports

Document 2:

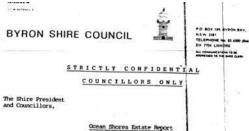
1982 L. J. Ferguson Deputy Premier Minister for Public Works and Ports letter to Council.

Regarding the temporary outfall being ineffective due to road construction and dune stabilisation across the outfall mouth ...

'Council would therefore be well advised to undertake immediate remedial measures to alleviate this situation.'

Identify the **legal obligations of Council** to provide a 'duty of care' for those residents living on the Marshalls Creek Floodplain.





Attached is a copy of the report prepared by Mr. P. Cranston, Civil Engineer, employed by the Council from 13th October, to 24th November, 1986.

The summary should be read in conjunction with the decision of Council on 25th November, to convene a meeting with the peveloper and other representatives.

The Developer contacted me through a representative and later by solicitor seeking an opportunity to respond to the report before it was issued to the public. It is full that the report should not be withheld, however advice is firstly being sought from Sly and Russell regarding any possible causes of action against the Council and/or its employees in regard to the report.

Further advice therefore will be forwarded to you as soon as a report is received from Sly and Russell.

It is necessary under the circumstances that the contents of the report be not released or discussed.

(d) Flood Outlet

The flood level. ent is 3.4 metres on A.H.D. for a recurrence interval of This flood level is subject to a flood relief structure in th flood tructed through the frontal beach dune with outfall to the A temporary device cutting a wide slot through the dane was undertaken in conjunction with the land develops mt works mid 1970's, but for s that wehicular access along the beach road was denied to ordinary vehicles by the destruction of the gravel road and also natural forces were in the process of re-establishing the beach dune, the done and re-established. By approving this action Council has ac the liability for subsequent flooding, not only of the Ocean Shores lots, but also the adjoining South Golden Beach. The concern of the Public regarding this matter has been expressed on a number of occasi with the construction of the permanent outfall structure is the the Lands Department that a surety be lodged for any necessary restorations. It is noted that Council has accepted liability for the mainte structure.

Document 3:

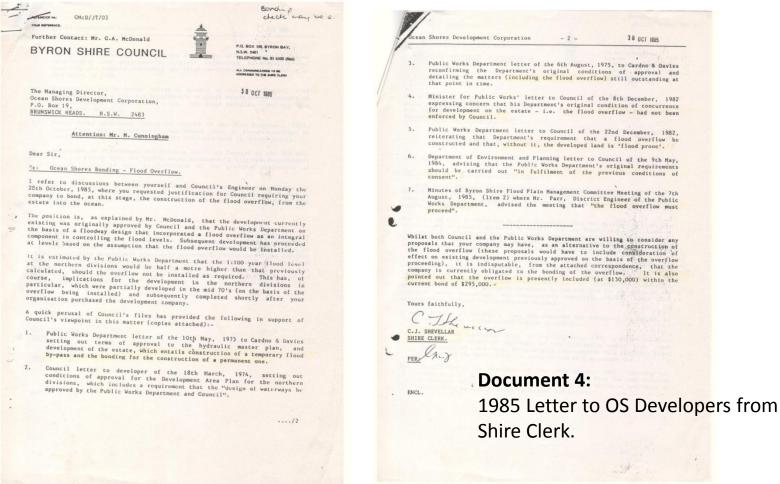
1982 Report to Councillors about the construction of a permanent flood outlet.

'By approving this action Council has accepted the liability for subsequent flooding, not only of the Ocean Shores lots, but also those lots in adjoining South Golden Beach.'

'It is noted that Council has accepted liability for maintenance of this structure.'

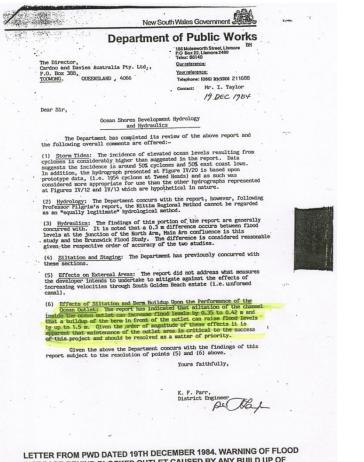
Identify the **legal obligations of Council** to provide a 'duty of care' for those residents living on the Marshalls Creek Floodplain.





Identify the **legal obligations of Council** to provide a 'duty of care' for those residents living on the Marshalls Creek Floodplain.



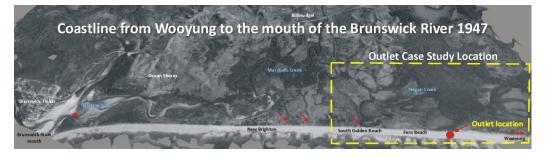


Document 5:

1984 Public Works letter warning of increased flood levels behind blocked outlet caused by a build up of sand.

LETTER FROM PWD DATED 19TH DECEMBER 1984, WARNING OF FLOOD INCREASE BEHIND BLOCKED OUTLET CAUSED BY ANY BUILD UP OF SAND IN FRONT OF OUTLET.

Identify **possible flood mitigation strategies** to lower the flood levels on the Marshalls Creek Floodplain and along the coastline from Wooyung to Brunswick Heads.



Report 1:

Proposal Brief presented to BSC: To identify 3 locations along the coastline from Wooyung to the Brunswick River mouth to position flood pumps to remove excess flood water off the floodplain into the ocean in order to lower the flood levels on the floodplain at critical times during a major flood event.

The location for the pumps were selected on the basis that they are:

1. Low elevation (around 1.2m/ 1.3 AHD), hence will be an area that will be inundated early in a flood event.

2. Still have semi-intact remnant drainage channels that will carry floodwater from overflow from Marshalls Creek or Billinudgel Nature Reserve.

3. Are located on Crown Land.

The 3 locations identified are:

- 1. North of sports field at New Brighton (153.5491, -28.5037)
- 2. South of levee at SGB (154.5499, -28.4984)
- 3. Billinudgel Nature Reserve north of Fern Beach (153.5506, -28.4856)

Identify **possible flood mitigation strategies** to lower the flood levels on the Marshalls Creek Floodplain and along the coastline from Wooyung to Brunswick Heads.





Location 3: Billinudgel Nature Reserve north of Fern Beach (153.5506, - 28.4856) Note: red arrow identifying 45 degree angle natural channel feeding from the 6 landform marker.



Committee members;

Website : https://brunswickvalley.com.au/flood-history/north byron shire.htm

Research Team

Cr David Warth David Brealey Mark Russell Jan Mangleson OAM (OSCA President) Denise Stammers (OSCA Treasurer) Margaret Kelly Jill Spring Heather Rowland Diane Boyd Graeme Boyd Michael James

Photos courtesy of Frank Mills OAM former Byron Shire Councillor and Jim Mangleson former OSCA Flood Committee Member. OSCA Inc. endorses this report as true and accurate.