

<b>A</b>	<b>SUBMISSION FRONT PAGE - Annfield Park Estate Group Submission</b>
<b>B</b>	Contact Details
<b>C</b>	Concent of Submitters
<b>D</b>	Contact Details -All Names and Contact Details to be with held Concerned Residents Register

## **LIST OF CONTENTS**

<b>1</b>	<b>SUBMISSION TO ENQUIRY (GROUP SUBMISSION)</b>
<b>2</b>	<b>INDIVIDUAL SUBMISSIONS</b>

2.1.1	
2.1.2	
2.1.3	
2.1.4	
2.1.5	
2.1.6	
2.1.7	
2.1.8	
2.2.1	
2.2.2	
2.3.1	
2.3.2	



<b>3</b>	<b>MAPS OF THE AREA IN QUESTION</b>
3.1	Burpengary Catchment Area
3.2	Annfield Estate Original Area
3.3	Map of Area with Street Numbers
3.4	Lot Number and Relative Plan Number RP

<b>4</b>	<b>Sequence of Water Inditation</b>
4.1	Executive Summary of main drainage problems
4.2	Drainage Submission 2.1.2
4.3	Drainage Submission 2.3.1
4.4	Drainage Submission causing overflow

<b>5</b>	<b>FLOOD STUDIES</b>
5.1	Caboolture Shire Council Mathew Crescent, Burpengary Flood Mitigation Scenarios

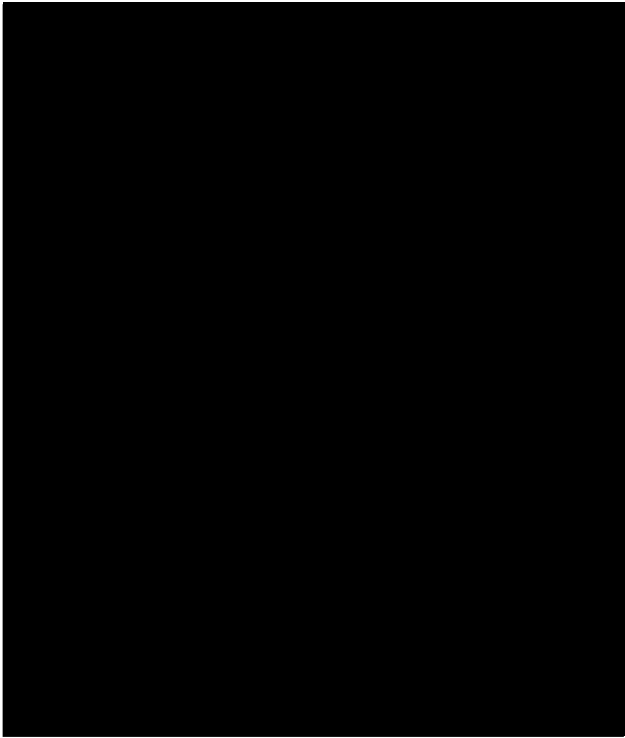
<b>6.1</b>	<b>Conclusion Further Material and Documentation are available if required</b>
6.2	Orthophoto Maps as far back as 1977
6.3	Letters and Responces from Council
6.4	Flood reference maps
6.5	Photo's
6.6	Others

**1 & 2 SUBMISSIONS TO ENQUIRY**

**1 SUBMISSION TO ENQUIRY  
(GROUP SUBMISSION)**

**2 INDIVIDUAL SUBMISSIONS**

- 2.1.1
- 2.1.2
- 2.1.3
- 2.1.4
- 2.1.5
- 2.1.6
- 2.1.7
- 2.1.8
  
- 2.2.1
- 2.2.1
  
- 2.3.1
- 2.3.2



1

SUBMISSION TO

ENQUIRY

(GROUP SUBMISSION)

# **RESIDENTS COVER SUBMISSION**

## **ANNFIELD PARK ESTATE - Mathew Crescent, Annette Court and Rowley Road**

When Annfield Park Estate was developed there was little if any residential development in our surrounding area or upstream in the **Greater Burpengary Creek Catchment Area**. Over the years the **capacity of the catchment area and flood plains to cope increased volumes of water and increased flow rates** caused by **rapid and large development in the Burpengary Creek Catchment Area** has failed residents. This has caused ever increasing drainage & flood issues in the local area

In 30yr old Annfield Park Estate drainage system has not been upgraded to help cope with these increased flows. As demonstrated in individual residents submissions they are increasingly effected by drainage water from adjoining development that has caused water to flow accross our The Annfield Park Estate. Some of the surrounding drains fail regularly and water is rapidly directing itself over properties. Flows as little as 100ml in a day can cause localized flooding. When we had the flood event 11/1/11 it had catashopic effect on residents with drainage systems that are ineffective. The orignal drainage system in our Estate has had no effective upgrades or maintanance to address issues that have arisen by the surronding developments. Resident's have raised their concerns and feel if the Council had addressed them and done necessary upgrades to the drainage system there would have been less water indidation and saved many of the flood effected properties from water inidation. Council at residents meetings suggested that the recent flood event could have been as extreme as a 1 in 1000yr event. The volumes of water directed at increase flow rates our way from drainage systems adjoining our estate by developments developed after ours into our drainage system made the flood event on 11/1/11 more extreme .

Please find **attached Residences Submissions** raising their concerns about the 11/1/11 flood for **review and make recommendations**.

As outlined by Individual Residence Submissions we have been faced with inadequate reports on the flood status of their properties. Resident flood searches with the Council state there was no know record of flood events on thier poroperties or adjacent areas. We need easy to read, accurate flood reports available to residence about their properties, the local area and the larger Burpengary Creek Catchment Area so they understand their water issues. When flood studies are carried out they need to be made advailable to residents to research the effect on their properties.

Our drainage system in the Annfield Estate has a **5 meter fall** from the footbridge on the upstream drain to the Mayers Bridge at the downstream corner of the Estate. We did not experience drainage issues until major and rapid developments and unmaintained easements failed to protect us.

There was **no warning** before the event with many resident receiving warnings after there properties were indated. **Most had no chance of evacuation**. Not only were their houses inidated but they **could not save their cars or some personal possessions**.

Residents have concerns about the impact on our area from **future development in Catchment Area** (ie a 5000 home sights development proposed Cnr Raybaird Road & Oakey Flat Road). Conditions should be placed on new devepments that ensure water does not impact on surrounding properties, on catchment areas or floodplains. In **larger new developments** flood mitigation scenerios should be put in place that could **reduce existing level**. These should not just be proposels but should actually be conditions must be implemented. If the Council is given a contribution it should be manditory that it is implemented by Council. If **residences** in areas that are **downstream** are concerned about the impact of developments they should be able of **submit concerns and have them addressed** .

The Residents proposed that an **Independent Hydrologist** should be engaged to address their issues of **Drainage and Flood Minimisation** that could be carried out as to benefit all parties. **This Study should be paid for by the Council or State Government**. It should address the issues affecting the whole **Burpengary Creek Catchemnt Area** and one of it's priorities should be to **address residents concerns**. I do not believe the Councils response to our concerns has been adequate to date.

# 2.1.1

 Mathew Crescent,

Burpengary

3 April 2011

[REDACTED]  
Burpengary Qld 4505  
[REDACTED]

The Honourable Justice Catherine Holmes  
Commissioner  
Queensland Floods Commission of Inquiry  
GPO Box 1738  
Brisbane Qld 4001

Submission to Queensland Floods Commission of Inquiry

Dear Commissioner

I wish to make a number of comments in relation to the 11 January 2011 events in the Moreton Bay Regional Council area of Burpengary. I am a long term resident of Mathew Crescent Burpengary and have owned my property there since the early 1980s. My property along with the other neighbouring properties is small acreage and is zone rural residential.

I was extremely fortunate that my house and other associated buildings such as the carport, garage and sheds were not inundated in the recent flood event however flood waters did flow across the front corner of my property. This water came from 2 directions, firstly flowing from the western end of Mathew Crescent actually down the road and across the front of the property to my west, and secondly subsequently from Burpengary Creek up a manmade official drainage easement in my property. These waters combined at the front of my property and inundated houses directly across the road from my house.

The flood water then continued not only down Mathew Crescent itself to the east which is the first time I have ever seen this and is certainly not on any flood plan, but also continued through another drainage easement in the property across the road from my house and inundating houses at the end of Annette Court. This water then proceeded further down that easement again flowing into Mathew Crescent at the eastern end and causing further inundation of houses. The water travelling down that drainage easement combined with water from 2 other easements running into this (from the north western end of Mathew Crescent near Hauton Road and secondly from Rowley Road itself.

Burpengary Creek to the back of my property did not break its bank and did not flood the back portion of my property (containing horse paddocks). The flood water from the creek was able to flow up the easement as the creek bank where the easement joins the creek had been lowered (cut out) as part of the original design of this easement prior to me purchasing my block of land. During the January 2011 event, I was unable to drive out of my property as the road in front of my property was impassable.

### Background

The estate in which I reside is the former 'Annfield Park Estate' which I believe was approved for subdivision by the former Caboolture Shire Council (the CSC) (now the Moreton Bay Regional Council (the MBRC)) somewhere around the late 1970s or early 1980s. I understand that I am the second owner of this block and I had a house built there in 1987.

My particular property backs onto Burpengary Creek which is subject to flooding in some parts, principally downstream from my property and towards the Burpengary township proper (e.g. Dale Street and Springfield Drive) and further to the east where it eventually connects to Deception Bay. Along one side of and within the boundary of my property is a council approved 30 year old drainage easement about 10 metres wide which was originally designed to take storm water from Mathew Crescent down to the creek and is now referred by the MBRC as the 'downstream drain'.

The road in front of my house is a typical quiet rural residential road that consists of bitumen wide enough to allow cars to travel both directions. The street does not have curb and channelling nor street lights with the exception of one street light at each end of the street near where it joins onto Rowley Road at both its eastern and western ends.

The area where I live has changed substantially since I originally purchased the land and built my house. This includes council digging a large drain at the western end of Mathew Crescent adjacent to council land when it approved the Burpengary Meadows Estate a decade or so ago and also changing the layout of the western end of the intersection of Mathew Crescent and now Rowley Road. This drain, referred to by council as the 'upstream drain' and a large pipe under an environmental centre (CREEC) are meant to take water from the new development and Rowley Road to Burpengary Creek upstream of my property. However the upstream drain has allowed flood water to flow from Burpengary Creek up into Mathew Crescent itself. It is not clear whether the drainage pipe under CREEC is adequate to take storm water from Rowley Road direct to the creek as this part of the road regularly floods during storm and flood events and is signed as 'subject to flooding' outside the Burpengary Meadows State School.

After the upstream drain was built, flood water from Burpengary Creek flowed up the drain and resulted in flooding of 2 homes in Mathew Crescent and I believe 1 house in a cul-de-sac that runs off Mathew Crescent – Annette Court. Council then dug out deeper the 'gutter' along Mathew Crescent and also the easement in my property to make it deeper to take this water away if it happened again. However Council after its 2007 flood study built one way flap gates where the drain meets the creek to prevent flood water from coming up the drain but did not appear to allow for additional water retention for water still coming from Rowley Road. As a result, this drain fills up as it has nowhere else to go. Unfortunately in the January 2011 event, the water from Burpengary Creek overflowed the flap gates and area around them. It has been suggested that when utility pipes were placed across Burpengary Creek at this site for the Forest Ridge development and a footbridge was built above them using large girders, this impeded the flow of water down the stream and caused flood water to flow around each side of the bridge impacting properties and also again flowing up the upstream drain.

Over the past couple of years, I am aware that twice when the creek has risen, water flowed up the 'downstream drain' (easement) from the creek and across the road into the properties across the road. In the recent flood event, a number of houses in Mathew

Crescent and Annette Court were inundated and as of April, repairs are still being made to these properties.

Submission:

My submission relates to the following areas:

- (A) Response to the 2011 flood event at a regional level, measure taken to inform the community and protect life, private and public property;
- (B) Adequacy of early warning system;
- (C) Land use planning.

The purpose of my submission is that as a resident impacted by the January 2011 flood event, I would like Commission to be advised of the following issues and for the MBRC to fully investigate the January 2011 floods which affected residents on both sides of Burpengary Creek on the western side of the railway line (i.e. the main railway from Brisbane to the north) and to implement all necessary recommendations.

My specific concerns are:

1. The affect of development of subsequent residential estates including but not limited to the following developments which were approved by council subsequent to the development of Annfield Park Estate, and the affect of these developments on flooding of Mathew Crescent and the original drainage easements in Annfield Park Estate:
  - (a) Burpengary Meadows (Burpengary west) –
    - (i) Run off or overland water during storm or flood events, draining from areas up near Facer Road (near Woodpeckers Tavern), Kurrajong Drive, Hutton Road and Rowley Road into Mathew Crescent;
    - (ii) Adequacy of the inlet of the large drainage pipe under CREEC taking water from Rowley Road into Burpengary Creek and the effect of flooding downstream when concentrated water reaches the creek.
  - (b) Forest Ridge (Narangba) –
    - (i) Effect of development, quickness of storm water draining into and impacting Burpengary Creek and the recontouring of land from its original contours and natural drains for this development;
    - (ii) Raising of creek bank on the opposite side of the creek from Mathew Crescent – see approval for the upstream flap gates,
    - (iii) Allowing development right up to the creek bank with a reduction of the corridor required to protect the creek bank which was cleared or thinned out during development.
  - (c) North Shore (Narangba) –
 

In particular the affect of and any subsequent modification (lowering of bank) of the approved retention basin (feature lake) which used to be Young Creek, into Burpengary Creek near Mathew Crescent, including the latest stage of this development that results in more concentrated storm water feeding into this basin;



- (d) Unknown named estate on the northern side of Rowley Road between both intersections of Mathew Crescent and Rowley Road (Burpengary) in Canopy Place –
    - (i) In particular the effect of overland flow from the intersection of this estate and Rowley Road into the drainage easements in Annfield Park Estate;
  - (e) The very recent stage 2 Delaney Road development on the southern side of Burpengary Creek (either Burpengary or Narangba) –
    - (i) Which apparently includes developers being approved by council to build retaining walls up to 2 metres around residential blocks, and
    - (ii) Whether the creek bank was lowered to help mitigate flood events as was referred to by council in their 2007 flood study prior to this estate being approved. I have queried this with council (officers and councillor) but have not been provided with an answer as of the closing date for submissions.
2. The impact of the development and recent expansion of Burpengary Meadows State School including storm water, sewage treatment and concentration of water run off in the school oval area regarding overland flow affecting Mathew Crescent.
  3. The impact of the realignment of the Mathew Crescent, Rowley Road and Hutton Road intersection after the original development of Annfield Park Estate on subsequent drainage issues in Mathew Crescent, including the removal by the MBRC of a drainage easement in the property adjacent to this intersection. A property directly next to this property is being regularly affected by overland water from this intersection and which is not caused by flooding of Burpengary Creek.
  4. The impact of the alleged raising of Rowley Road in the immediate area to the west of Burpengary Creek resulting in a damming effect in the Burpengary Equestrian centre and upstream properties.
    - (a) Note: A suggestion from a local resident is that a culvert or pipes be placed under Rowley Road to allow flood water to flow under Rowley Road and alleviate the pooling affect upstream to bring it back to pre-existing levels.
  5. Investigating and rectifying local drainage issues along the grassed gutters or spoon drains along Mathew Crescent, including minimal lowering of the grassed area that abuts the bitumen to allow water to drain off the road into the grassed 'gutter' and then flow into the drains constructed for this purpose.
  6. The building of flap gates in the downstream drain which was one of the recommendations in the 2007 flood study.
    - (a) Note: I believe that the MBRC is going to approve this for the next financial year.

7. The building of a significant retention basin to work with the existing upstream drain in CREEC. This was one of the recommendations in the 2007 flood study and could be made a feature of CREEC and is to reduce the impact of flood events on the downstream area below CREEC from water from the Forest Ridge estate upstream.
8. The impact of town water pipes and associated large girders on the upstream drain footbridge which connects Mathew Crescent to Forest Ridge Estate and which may be below the Q100 flood levels, and whether this caused water to flood on either side of the footbridge impacting properties and again causing water to flow up the upstream drain into Mathew Crescent.
9. The impact of the new proposed upstream large residential development adjacent to Burpengary Creek on the western side of Oakey Flat Road, on the Mathew Crescent area downstream.
10. The effect of septic and biocycle systems on Annfield Park Estate during flood events, particularly when sewage is available less than a couple of hundred metres away from the Mathew Crescent and on properties backing onto my property on the other side of the creek. Will council make available sewage available to Mathew Crescent, Rowley Road and Annette Court residents? There were problems when flood waters impacted Mathew Crescent causing home septic and treatment systems to fail and thus resulting in contaminated waters inundating houses.
11. The poor (no) response to calls to the MBRC during the flood event when their call centre could not answer phone calls from residents to say that they were flooding. I believe that their communication system failed that morning.

I acknowledge the good response by the local police station and officers in dealing with this flood event. I tried on a number of occasions to contact the council to advise them that the houses across the road were flooding and couldn't even get through. I subsequently contacted the local police station so advise them of what was happening. I was unable to help those people at the time as I could not get out of my property and was concerned that if water kept rising, I too would be affected and was worried about horses and foals on my property.

12. The impact of a large child care centre approved but not yet built for Mathew Crescent adjacent to the western end of Mathew Crescent and Rowley and Hutton Roads on local drainage, effluent, road use on existing Mathew Crescent residents.
13. The changing of official flood levels and flood lines by council within the Annfield Park Estate after when the estate was first approved by council which has impacted residents and property values. Flood levels have been changed after other developments have been approved however it has also been stated that technology has changed as to how these levels are calculated. It is still unclear how much new development has impacted these levels. For example, the western end of Mathew Crescent does not flood according to original data but during the January 2011 event and a previous event, flood water came up the original drainage easements and affected the higher western end more than the lower eastern end of Mathew Crescent.

14. Effect of road improvements and partial gutters along Rowley Road between Mathew Crescent east and Mathew Crescent west, which drain storm water into existing properties within Annfield Park Estate in the vicinity of Belford Drive, Canopy Place and Hanton Roads.
15. The effect of major flooding in the Burpengary Equestrian Centre (BEC) where the only entrance is off Rowley Road adjacent to Burpengary Creek. There is only 1 way into the centre along a gravel road down through a large gully where the flooding seems to be the worst. If a person is caught at the BEC during a flood event, then they would be required to go through fences into private properties to Mathew Crescent to get out to safety. There is concern also about horses which are agisted there as it is impossible during a flood event to drive into the BEC to remove them and people's lives would be put at risk. Suggestions to minimise the risk to persons and livestock are:
  - (a) Build up the existing gravel road across the gully from Rowley Road ensuring that this does not have an additional impact upstream. Pipes and culverts would be required.
  - (b) Council consider having a second access or way out in case of flood emergency such as through existing or proposed new easement/s in adjoining properties through to Mathew Crescent.
16. The failure of the creek flood level measuring device along Burpengary Creek during the January 2011 flood event and council not being able to warn residents along the creek system of the risk of flooding. I did not receive any warning messages despite being at home on the day in question. I understand that the MBRC is going to install an additional device upstream around the Oakey Flat Road bridge where it crosses Burpengary Creek.

#### Conclusion

I feel that there are lessons to be learned from the January 2011 local event which one council officer described at a subsequent residents' meeting as a 1 in a 1000 year flood event. It appears that council is restricted by budgetary issues which do not allow it to fully protect the residents who have been loyally paying rates for decades and who have not seen any significant improvement in their street. These same residents have been apparently caused a detriment by the newer flashier developments around them which developers themselves fund to obtain sales – e.g. street lighting, sewage, street scaping and better roads and drainage, whilst the older estates are being ignored.

I am thankful that this event happened during the morning and not at night as I believe that the effect on residents would have been much more serious, with being unable to see the road at night or where the water was coming from since there is no street lighting as previously mentioned and also as some of the inundated houses lost power as water entered the walls and electrical systems. If the Commission could offer suggestions to council as to ensure the safety of its residents, I would be most appreciative.

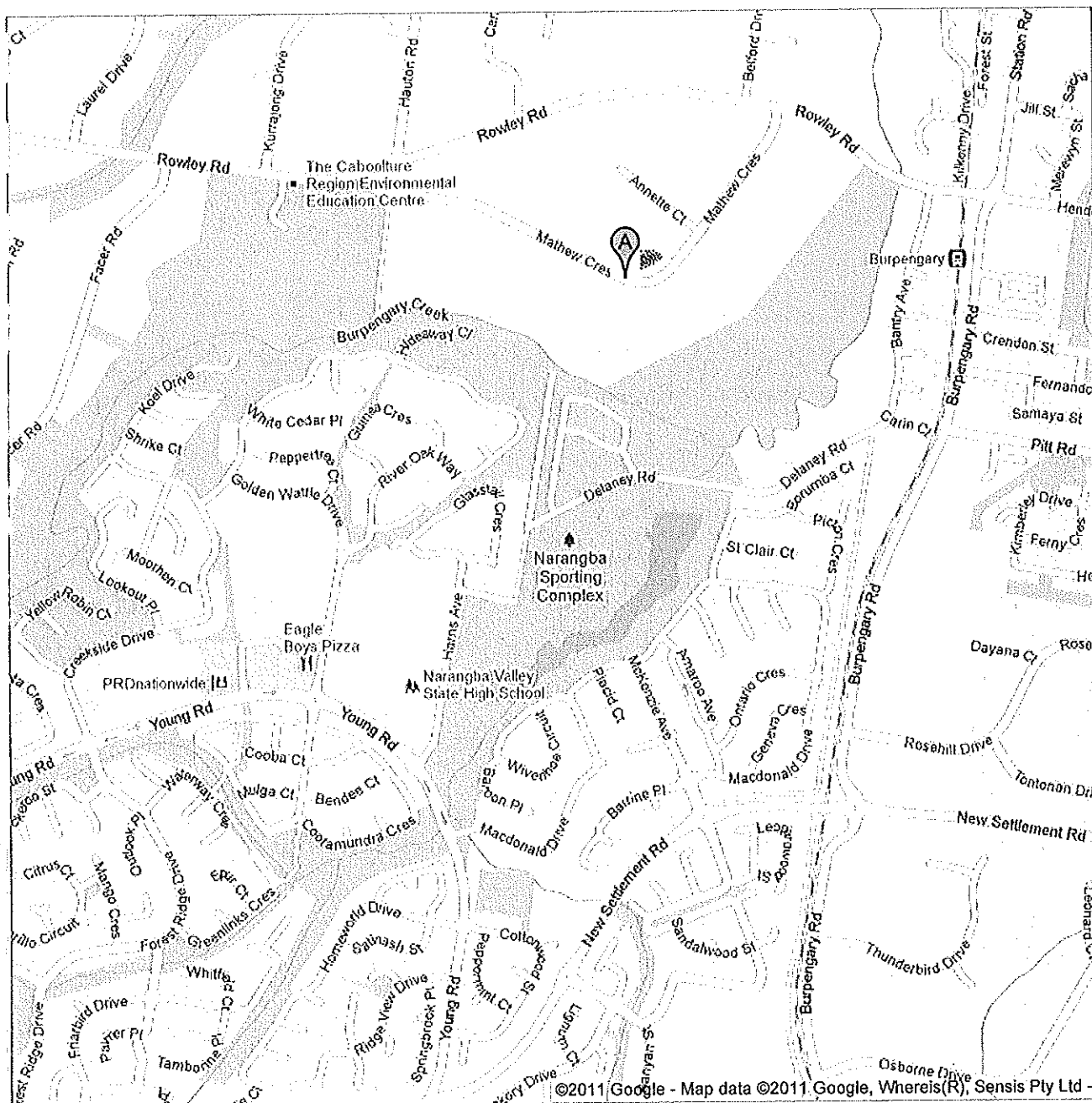
I request that my personal details contained within this submission not be published.

Regards,

[Redacted Signature]

Google maps  
Australia

Address **Mathew Crescent**  
**Burpengary QLD 4505**



# 2.1.2

■ Mathew Crescent,

Burpengary

10<sup>th</sup> February 2011

To whom it may concern,

**Re: Flood water and Drainage issues on Mathew Crescent, Burpengary**

Following the flash flooding in January, I would like to take this opportunity to highlight what I believe are stormwater drainage problems at the west end of Mathew Crescent, Burpengary.

Since we purchased our property (Mathew Crescent, Burpengary) and commenced building in March 2007, our shed / block has been flooded 4 times. Although we live close to the Burpengary Creek, on all occasions but the last (Jan 2011) the majority of properties that back onto the creek (south side) have not flooded, while the north side residents have been inundated, often with water entering homes and causing damage. On these occasions the source of flooding has not come from the creek itself, but from poor storm water drainage near the west entrance of Mathew Crescent, which is feed from both Rowley Road and Hanton Road, as well as little to no street front drainage and no management of the water easement which runs through many properties on the north side of Mathew Crescent.

I provide the following images with comments and references to the mud map attached, to support my opinion.

**Open Drains at the Dog Park, west entrance of Mathew Crescent**

*9<sup>th</sup> February 2011 -North facing image of shallow open drain (1) running parallel with Dog Park foot path.*



This drain is feed stormwater from the eastern side of Hanton Road and the north side of Rowley Road, east of the intersection, via a 450mm pipe passing under Rowley Road (A to B). It runs parallel with the Dog Park footpath until it reaches Mathew Crescent, where it turns west passing under the footpath via a 300mm pipe (C). It continues west until it empties into a 1200mm deep grated pit (D) with a 400mm pipe connected to carry it under Mathew Crescent and join up with the large stormwater gully (E) on route to Burpengary Creek.

**ISSUES:**

1) The feeding pipe is 450mm but the pipe passing under the foot path is only 300mm and restricts the flow. During most rains, the drain quickly becomes congested and spills over the south bank (F) of the drain as it turns west to pass under the footpath. Over time, I believe this has eroded the bank and now the drain predominately flows out onto Mathew Crescent, with very little passing under the footpath.

2) The pipe passing under Mathew Crescent from the pit is only 400mm. While larger than the 300mm pipe that passes under the footpath, this pit is also feed from the west drain which circles around the west end of the Dog Park and collects run off and storm water from the south side of Rowley Road (east of Mathew Crescent).

SUPPORTING IMAGES:



10:39am 12<sup>th</sup> January 2011 – South bend of open drain (F) and footpath at Dog Park, west entrance of Mathew Crescent.

- Shows water flowing out of open drain onto Mathew Crescent.



10:39am 12<sup>th</sup> January 2011 – West entrance of Mathew Crescent.

- The grated pit drain (D) flooding, unable to cope with the quantity of water, while the large deep drains on the opposite side of the road (closest to the creek) were doing their job, even during these unusual storms.
- Note that the water was only flowing over the road at the area closest to the west bend (F) in the drain before the footpath.



## OBSERVATIONS:

During my investigations into the depths and capacity of the drains around the west entrance of Mathew Crescent and Rowley Road / Haulton Road intersection, I noticed that west side of Haulton Road, Burpengary Meadows State School oval and the north side of Rowley Road in front of the school, feed into open drains on the C.R.E.E.K side of Mathew Crescent via two 450mm+ drains under Rowley Road (G to H). This open drain is significantly deeper than those on the opposite side of the road, and as noted above did not overflow during the January flooding.

### Street front drainage.

The stormwater drainage along both sides of Mathew Crescent is poor. In many places it has become so shallow it's almost non-existent. In my opinion, this causes storm water which should be travelling down Mathew Crescent to spill out over the front of properties.



9:54am 12<sup>th</sup> January 2011 – Initial flooding at front of ■ Mathew Crescent.

This photo shows flood water flowing down the sides of Mathew Crescent (centre of road not covered) and overflowing onto properties. Note that the driveway of ■ Mathew Crescent (creek side) is not flooded, while the driveway of ■ Mathew Crescent is inundated. I use this photo as further support for my opinion that the open drain (1) near the Dog Park plays a significant role in our flood events, and by addressing the problems with it, the frequency of flooding would reduce to almost nothing, excluding 100yr flood events.



### Natural water easements / causeways.

When we purchase our block we were alerted to the fact that a natural water easement runs through many properties on the north side of Mathew Crescent and Annette Court. I was quite surprised to note that the official easement started suddenly on Lot 2 SP179574 (202 Rowley Road) and there was no corresponding easement on Lot 3 [redacted] Mathew Crescent), even though water often courses over the back corner of that block.

Since we purchased our block (which does not have a water easement), [redacted] Mathew Crescent has also been developed and swimming pools installed at 17 and 23 Mathew Crescent, very close to the easements. This has led to natural shallowing on the water way and hence exacerbated localised flooding on these properties as the water spreads out much further.



11:45am 12<sup>th</sup> January 2011 – Natural water way easement on [redacted] Mathew Crescent.

I use this photo to emphasise the water spreads out over the land when the water way becomes shallower, but note at the time of this photo the creek had broken its bank and we were at the peak of the flood.

In my opinion, re-establishing this waterway to its original depth would help reduce the frequency of flood events, especially if combined with changes to the street front drainage and improvements to the Dog Park drain (1).

## Conclusion

As one of the newer residents of Mathew Crescent, my battles with storm water have only just begun, while I believe other residents have been raising concerns regarding these and other storm water problems for nearly 30 years. As a rural-residential community, Mathew Crescent and Annette Court have been left behind while new residential developments have taken priority. Stormwater drainage in these new developments have been directed toward Burpengary Creek, often via drains which run near and through our properties with little regard to how it impacts on us. Embankments on the Narangba side of Burpengary Creek have been established to reduce flood risks to the new developments without consultation or even information regarding the risks and consequences given to establish properties this side of the creek.

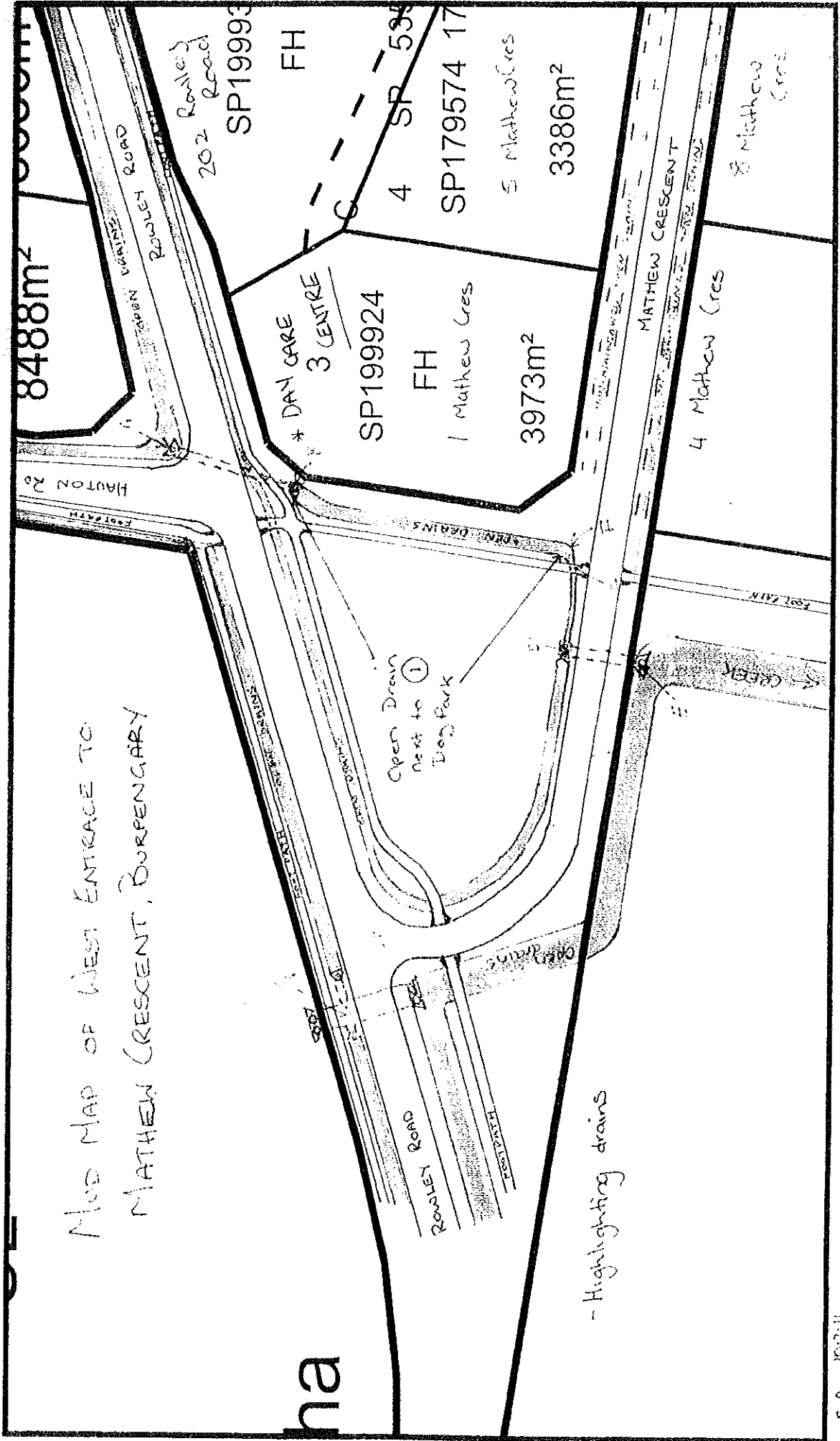
In light of the events on the 12<sup>th</sup> of January this year, I believe an Independent Hydrologist should be consulted, at the council's expense, to address issues of drainage and flood minimisation and make recommendations that benefit all parties.

[REDACTED]

[REDACTED] Mathew Crescent

Burpengary, QLD

PLAN MAP OF WEST ENTRANCE TO  
MATHEW CRESCENT, BURRENGARY



## 2.1.3

 Mathew Crescent,

Burpengary

Mathew Cres  
Burpengary 4505  
19/03/2011

I am writing this to add to the others with concerns about drainage and flood episodes caused by the failure of drains in my area to handle volumes of water. This is not new and has been a growing concern for almost 20 years.

I have lived at this address since about 1984. When I bought I was shown a map indicating that the lots which now back on to the equestrian centre in Rowley road were the only lots prone to flood and inundated about half of the lots. At that time there was little or no residential development the end of the street being pine forest and Rowley Road still unsealed dirt. Development has since I settled here been rapid and major since then.

In 2007 I received a copy of the ordinary Shire Council minutes which I have attached as doc flood mitigation 1 where in the paragraph headed background it stated "it became evident that a large drain constructed along the eastern boundary of the property that was later developed as the CREEC Centre has contributed to the flooding of the properties in the vicinity of Mathew Crescent. BSM (Brisbane Stormwater Management P/L) were engaged to conduct an investigation. I attach flood mitigation documents 2 and 3.

Numerous scenarios were presented to council. That report concluded that installation of 2 flapgated pipes in what was called the downstream drain together with some minor works would reduce water inundation to the homes in Mathew Cres. Mine included. This I understand was the cheapest option and Council voted and passed the work to be done. The events of 11/11/2011 highlights either the flawed conclusions of the report or Council has continued with other development approvals and drainage work or construction of works that have negated the findings of the report or by going for the cheapest option have not addressed the problem.

The water rose steadily the morning of 11<sup>th</sup> and was clean water which started to inundate the house. Evidently a drainage problem. Then it arose very sharply with dirty water and a rush of it which looked like creek water yet the neighbours opposite say that the creek at their back had not burst its bank and was well down from the top of the bank yet it evidently overflowed further upstream. This would not have been assisted with the water coming from Norfolk Lakes retention basin at Macdonald Avenue meeting with the Delaneys subdivision and meeting at the bend of the creek where Youngs Creek used to be at the top end of the equestrian centre.

I had about half a metre of water through my home which is about 7 household bricks high. I live in a 2 storey home so it meant the loss of most of our belongings with beds and bedding and clothes upstairs. It was a frightening experience!!

I wish to ask for an independent investigation into the drainage problem in and around the Mathew Cres and Rowley Road intersection. Houses in the Narangba Creekside Estate (new houses) are now also being affected and this needs addressed not by Councillors who, because the boundary of their division is the Burpengary Creek express the opinion that each will look after their own division which may not solve the distress of all aggrieved parties hence there is a need for an independent enquiry.

[Redacted signature]

### 3.2 ENGINEERING PLANNING

#### 3.2.1 MATHEW CRESCENT, BURPENGARY - FLOOD INVESTIGATION

Responsible Officer: **MANAGER - ENGINEERING PLANNING**

Attachments: Commencing Page 345

File Name: 2AMATCRE.doc Item Author: [REDACTED]

File Reference: 794/2/7

#### Executive Summary

This report considers the results of the Mathew Crescent, Burpengary Flood Investigation which has been undertaken by Consultants, Brisbane Stormwater Management Pty Ltd, on behalf of Council. The investigation identifies the impacts of existing flood levels on properties in the vicinity and considers various flood mitigation scenarios to reduce the impact of flooding on existing dwellings.

This report seeks approval to reallocate funding to enable flood mitigation work to commence this financial year.

#### Purpose of Report

The purpose of this report is to consider the results of the Mathew Crescent Flood Investigation and to obtain Council's approval to reallocate funding to allow flood mitigation work to commence this financial year.

#### Background

During the assessment of a Development Application over several properties in Mathew Crescent, it became evident that a large drain constructed along the eastern boundary of the property that was later developed as the CREEC Centre has contributed to the flooding of properties in the vicinity of Mathew Crescent. This situation only arises during major flood events in Burpengary Creek when flood waters from the Creek overflow up the drain. The location of this drain, referred to as the upstream drain, is indicated on Figure 4 included in r~5 attachment folder.

2-: \_"; has commissioned Brisbane Stormwater Management Pty Ltd to assess the extent ~e instruction of this drain has affected the flood immunity of properties in the area and to .astgate measures to mitigate those impacts. A full copy of the Consultants detailed \*~cct s aval-able for Councillors perusal in the Engineering Planning Unit, upon request.

~e assessment, which is based on an Extran computer model of the floodway system, has " \_" trat the increased overflow from the creek to the Mathew Crescent area, via the -csrea-T. drain, has had the following impacts on the 100 year flood profile:

Tr.s 100 year flood levels along the overflow path through the Mathew Crescent cropeties have risen by as much as 0.35 metre.

T~5 100 year flood level in the creek at the drain junction has dropped by 0.33 metre. f \_-r;er down the creek channel, the flood profile returns to its pre-existing level just ic.vnstream of Young's Creek junction and then rises fractionally (0.01 metre) above the fe-existing profile for the Rowley Road crossing down to the Bruce Highway crossing.

## 1.0 EXECUTIVE SUMMARY

The Caboolture Shire Council has commissioned Brisbane Stormwater Management Pty Ltd to assess the extent to which the construction of a drain across the Burpengary Creek floodplain has affected the flood immunity of properties in the Mathew Crescent area, and to investigate and recommend measures to mitigate those impacts. The location of the subject drain, which is described hereafter as the "upstream" drain, is shown in Figure 2 of this report.

The assessment, which is based on an Extran computer model of the floodway system, has found that the increased overflow from the creek to the Mathew Crescent area, via the upstream drain, has had the following impacts on the 100 year flood profile:

- The 100 year flood levels along the overflow path through the Mathew Crescent properties have risen by as much as 0.35 metre.
- The 100 year flood level in the creek at the drain junction has dropped by 0.33 metre. Further down the creek channel, the flood profile returns to its pre-existing level just downstream of the Youngs Creek junction and then rises fractionally (0.01 metre) above the pre-existing profile from the Rowley Road crossing down to the Bruce Highway crossing.
- Whereas two house floors (at 25 Annette Court and 136 Mathew Crescent) could have been inundated by a 100 year flood prior to the upstream drain's construction, three further house floors (at 27-29, 33 and 41 Mathew Crescent) could be inundated by the same event following the drain's construction.
- The 100 year inundation widths through the Mathew Crescent area have increased, as seen by the difference between the pre-existing and existing scenarios in Figure 9 of this report. In some areas, the increase is quite substantial - for example, at 49 Mathew Crescent, where the widening of the inundation could affect almost half of the lot.

A range of possible mitigation measures has been tested in the Extran model, including flapgating of the subject upstream drain and a downstream drain, excavation of the creek's floodway, topping-up of low spots in the creek banks, levees and a decanting basin.

After considering costs and effectiveness, the most favourable strategy is recommended to be the installation of three 1500 mm diameter flapgates in the upstream drain, together with any topping-up of the banks and minor drainage redirection that might be required alongside the Hideaway Close and River Oak Way properties to prevent any consequent adverse impacts in this area. That strategy, which is expected to cost \$ 107000, is shown in Figure 11 of this report. Although this strategy could be expected to return the situation to the pre-existing situation, the Extran model predicts that there could still be affluxes of 0.01 metre to 0.02 metre at a few nodes along the Mathew Crescent overflow path. Significantly, though, the three house floors that could have been affected by the increased flood levels could regain their pre-existing flood-free status in a 100 year flood.

Additionally installing two 1050 mm diameter flapgates in the downstream drain, thereby taking the total cost to about \$ 140000, could ensure that the 100 year flood levels through the Mathew Crescent

properties are depressed below their pre-existing levels and only one house floor (at 136 Mathew

\*

Crescent) might then remain susceptible to a 100 year flood. However, adding this component to the strategy could result in affluxes of 0.01 metre to 0.02 metre on the pre-existing 100 year flood profile along the creek channel, between the nodes BP50.4 and BP52.6 identified in Figures 3 and 9 of this report.

Alternative strategies involving a decanting basin could go close to achieving 100 year flood immunity for the remaining flood-prone house floor in the Mathew Crescent area, but at considerable extra cost (\$480000 extra). More significantly, a decanting basin could achieve a notable reduction in flood levels along the creek channel downstream of the basin and it could therefore have some future potential as a regional detention facility to offset further catchment development.

A recent development application (IMP-84) for 60 - 106 Delaney Road included a proposal to excavate the overbank area along the creek frontage of that property. That excavation could have a substantial beneficial impact on flood profiles through the area and could, for example, enable the achievement of the mitigation objective without the additional installation of the flapgates on the downstream drain. Although that application is now in limbo, any similar future proposals for this property could offer the opportunity for similar benefits.



## 2.1.4

■ Mathew Crescent,

Burpengary

## **ENQUIRY CONCERNS**

When our estate was developed there was little if any residential development in our surrounding area or upstream in the Greater Burpengary Creek Catchment Area. Over the years the capacity of the catchment area and flood plains to cope increased volumes of water and increased flow rates caused by rapid and large development in the Burpengary Creek Catchment Area has failed residents. This has caused ever increasing drainage & flood issues in the local residence.

The 30yr old Annefield Park Estate drainage systems have not been upgraded to help cope with these increased flows. As demonstrated in other residents submissions they are increasingly effected by drainage water from adjoining development that is not adequately drained back to the creek. Some of the surrounding drains fail regularly and water is rapidly directing itself over properties in the Annefield Park Development. Flows as little as 100ml in a day can cause localized flooding. When we had the flood event 11/1/11 it had catashopic effect on resident. The drainage system in our Estate has had no effective upgrades or suficiant maintanance to address issues that have arisen in the surronding developments.

When we raise concerns with the council we have not received adequate and timely responses and there has not been adequate resolutions to address our concerns that equated into action taken to reduce flooding.

We were advised our property was flood free on doing searches on purchasing the property in 1984. We did a further search in 2003 and were told there was no record of flooding by the Caboolture Shire Council.

I propose that an Independent Hydrologist should be engaged to address issues of Drainage and Flood Minimisation that could be carried out as to benefit all parties. This Study should be paid for by the Council. I do not believe the Councils response to our concerns to date have been adequate.

## **BACKGROUND INFORMATION**

### **INFLUENCES AND CHANGES AROUND ANNFIELD ESTATE THAT MAY HAVE RESULTED IN LOCALIZED FLOODING.**

*(most of my observation area at the Mathew Crescent, Roley Road, Haunton End of the Estate were I live.)*

When Rowley Road was extended to Oakey Flat Road and Residential Blocks Developed the Upstream Drain in Mathew Crescent was installed with the intention of taking the drainage water arising from this development away from Mathew Crescent so as not to impact on the pre-existing development in Mathew Crescent as required in the Development Procedures.

2B

When this drain was being surveyed and installed I expressed my concerns to the person surveying the area that the bank at the back of the proposed drain was higher than the land at the front. I was afraid that, in extreme events, this could act as a channel and divert the flow of water down Mathew Crescent. I was advised that this would not be the case.

Originally it proposed that Mathew Crescent was made into a cul-de-sac when Rowley Road was being extended. Residents in the Street expressed their concerns that this would restrict our ability to enter and exit our properties as at this time they had experienced no water problems at the Mathew Crescent, Haunton Road end of the Street. The Bridge on Rowley at the Burpengary Station end of the Road had often gone under in weather events and we wanted to be able to freely exit the estate in Mathew Crescent via the other end of the street or via the Bridge on Rowley Road. We need the Upstream Drain end of Mathew Crescent have further upgrades to drainage and roads to bring allow flood free exit for residents.

3B

A Weir - Dam has been built since the early 1980's on the across the easment in Mathew Crescent on Plan PR175396 near the footpath. It has been built up over the years. This has had a damming effect and instead of a narrow low flow when the water dams and overflow there is a much wider storage area overflowing. This seems to have increase flows over Mathew Crescent and often cuts the Road. It seems to have increased water inidations of properties in the flow path before and after it.

4B

With in the first 18mths of the Upstream Drain being installed in the 1990'2 the Drain failed. The drain did not take the drainage water from the New Rowley Road Extention and other local Developement on the Rowley Road side of the Creek back down the Upstream Drain. Properties down Mathew Crescent were flooded by drainage water upable to go down the upstream drain. The Property owned by Joy and Gavin Curry and adjoining properties were flooded. This included water through their homes (Clear Drainage Water) not creek water. I believe that the Curry's Insurance Company took the Council to Court and the Council paid out on the Claim. (over 15yrs ago. Council could check their records to get time frame). Although this drain has been upgraded it still does bit adequately take away local drainage water. Please see submission from 5 Mathew Crescent outlining these issues.

5B

After this I believe the Council tried to remedy the situation by making the downstream drain wider and deeper. This may have been done in the belief that this would help any overflow that would come from the Upstream Drain to be directed back to the Creek. Unfortunately in later events the lowering and widening of this drain became counter productive. When the creek levels raised above the new lower level produced, after work was done, directed the creek water from the Creek down the drain further inundating the properties on the Road on the other side of the Mathew Crescent Road from the drain. Now they not only flooded with drainage from the Dog Park on the Corner of Mathew Crescent and Rowley Road but also with the water back flowing from the Creek in the downstream drain.

6B

Work was done on the upstream drain to improve it and at the time we believed this would help with the drainage that the drain was installed to cope with.

7B

Improvements were made to the Road at the Mathew Crescent, Haunton Road end of the Street. I believe it was raised the road to assist access. The pipe under the Road connecting the dog park with the upstream drain to small causing overflow into the park direct the water down Mathew Crescent instead of the Upstream Drain.

8B

Over the years properties continued to be inundated with water from drainage issues at the end of Mathew Crescent, the upstream drain and the downstream drain in Mathew Crescent Burpengary. Before the upstream drain was built and the downstream drain was altered and further development done the original residents did not experience any water events and at no time had water inundating their residence.

But if you check the photo's of the recent flood event available today you will see that the drainage water from the corner of Mathew Crescent and Rowley at the Dog Path is unable to go under Mathew Crescent to access the upstream drain, overflowing into Mathew Crescent and flowing over and into properties down the Street. This has been a frequent experience for the Residents. Over the past 18mths the property next to the proposed Child Care has been inundated by the overflow from this drain on at least 4 occasions by Clear Drainage Water, Not Creek Flood Water that is Muddy), The drainage system designed to take the water away from the dog park area cannot deal with rain falls above 100mls of rain in a 24hr period. Anything over this causes the overflows down the Mathew Crescent and over adjoining properties.

9B

Before Rowley Road was extended to Oakey Flat Road there was an easement running from the Corner of Mathew Crescent and Rowley between Mathew Crescent (please attachment dated 12/3/02 of Lots 3 & 4 Mathew Crescent) and RP17396 exiting on the road into Mathew Crescent. Very occasionally water flowed over the Mathew Crescent Road in front of the property on plan RP17596 and that is why we did not want a cul-de-sac proposed many years ago.

10B

The drain in front of the Environment Centre should carry the water back to the Upstream Drain. I believe When the drain is full, the Drain on going under Mathew Crescent backflows as it seems to be lower. This causes even higher flows down Mathew Street and through properties. Can you please check.

11B

When the property in Reference <sup>RP</sup>170158 was sub-divided into 5 allotments this easement no longer extended fully to the corner. This may have been to reduce the chance of the new faster flows from the new developments and the extension of Rowley Road done since the early 1980's to impact on properties further down the easement. But it could relieve very localized flooding and not direct it down Mathew Crescent which was it's original intention. It has been allowed to be filled causing back up on other properties. It can no longer take away the localized water that used to flow into it from the properties between Mathew Crescent and Rowley Road. This water seems to make the issue of the overflows for drainage in the vicinity of the Dog Park on the corner of Mathew Crescent even greater adding more flows down Mathew Crescent adding to flows and inundated properties from the front instead of the back were is used to flow. Add this water to the drain to flood water and is just gets higher and higher.

12B

The cause way between Mathew Crescent and Rowley used to carry local water away effectively when first developed. Over the years the council has not cleared or maintained this cause way. Properties have been fenced and this has also allowed debris to build up and back up the water. Can the council restore the system to its original levels and reinstate the flow patterns that were there when we bought back in the early 1980's?

13B

With further developments on Rowley between the Haunton Road and the Bridge near the Burpengary Station the Drainage water has been directed into dog park area. I believe the intention was for these water go back through drains under Mathew Crescent and down the Upstream Drain. Please refer to the photos of 11/1/11 and a earlier event which demonstrate that this does not happen impacting on properties down Mathew Crescent. Also the a drain pipe from Haunton Road is directed to this area is compounding the problems. Residents near the Dog park have tried to have this issue addressed by the Council but have been told to contact their Neighbours. If the neighbour don't address the issues it left the residents request futile.

14B

In recent years 5 Development or Allotment divisions have been made and approved by the in the vicinity of this drain. The concerns I have are. ???????

\*Before the extension of Rowley Road to go through to Oakey Flat Road there was an easement running from the Corner of Rowley Road and Mathew Crescent right between Mathew Crescent and Rowley Road exit down the other end of Mathew Crescent taking drainage water away for this area. Development Application for the Blocks 5 next to the Dog Park were approved there was a easement running all the way through to the Dog Park. That easement now only goes through 4 of the 5 new allotment.

\*Work was done on the block the easement does not seem to have the same flow. I back up

15B

When the block were the Burpengary East State School was approved for Subdivision and later acquired by the State Government for a school site extensive work was done on the now oval area. Was this flood plain? This was a low area that used to have dams and cattle. The area has had extensive drainage work. Drainage has been dramatically improved and a school hall built on the site. Has this drainage also been directed under Rowley Road and into the open drain in front of the Environment Park. In rain events the drainage system cannot cope and the water from this drain seems to back flow under Mathew Crescent and into the drainage system around the dog park then flowing down Mathew Crescent adding to the water problems resident experience. Please see the photo's supplied. Will there be any extra measures taken to compensate adverse effect that may be experienced by residents in Mathew Crescent as a result of this drainage water inundating the Area were the dog park is and the flow on effect to the Mathew Crescent Residents as a result if this water cannot be directed back to the Upstream Drain in Mathew Crescent.

16B

It was also indicated at the meeting dated 12/2/11 that is also drainage water flowing over Rowley Road into the properties between Rowley Road and Annette Court. I seems the development on the other side of Rowley Road between the 2 Mathew Crescent entries is inidating the original Annfield Estate (Mathew Crescent, Rowley Road Estate) from all directions. I would hope that the Council will remendy this situation caused this area being developed. Mathew Crescent, Annette Court and the Mathew Crescent side of Rowley Residents should not be a dumping ground for the drainage of these surrounding areas seems to have happened over the past 3 decades. Drainage solutions to these development need to be addressed to as our area does not get this continual local drainage flooding. Add the 11/1/11 event on top of this and the flooding issue became even greater.

**FLASH FLOODING CAUSED BY THE 100YR AND ABOVE FLOWS FROM BURPENGARY CREEK**

*(most of my observation area at the Mathew Crescent, Roley Road, Haunton End of the Etate were I live.)*

1C

Meeting with the then Mayor Leichman, 2 Senior Council Officers and [REDACTED] 13/12/07. This meeting was ask with Joy Leishman for because of issues with vandalism at the front of my property, possibly as a result of a comment made by a council employee when the 2007 flood study was being done. Also to raise my concerns about the above drainage issues that were effecting myself and other residents in the Mathew Crescent Area. Fortunately, Joy had arranged for two senior council officers to be at this meeting which gave me the opportunity to ask questions about my concerns about drainage issues in Mathew Crescent as well as my concerns about how the Hideaway Close Development impacted on the Residents on the Mathew Crescent side of the Creek.

2C

My fellow residents in Mathew Crescent had asked for the Hideaway Close Area be included in the study. In was indicated in a letter addressed to resident in Mathew Crescent area before this study was carried out that it would be included. An attachment to a letter to the residents in Mathew Crescent dated 22/8/10 was received by residents along with the letter. This attachment shows the Councils Pre-Existing 100yr Flood Line where many properties in Mathew Crescent were not affected by Flood Water. This previous Flood level seems to be in line with information given to residents prior other residents in the Mathew Crescent to the 2004 Mathew Crescent Flood study and before the development of the other side of the Creek in the Narangba Development. Prior to the Narangba this land was Forestry

3C

With the development of the Estate over the Back of the Creek adjacent to Mathew Crescent a foot bridge was installed that I believe carries the surge and maybe the water supply to the estate over the back. On the 13/12/07 I spoke to arranged a Meeting with to the then Mayor Leichman to bring up my concerns that the Girders under the bridge were lower than the 100yr flood levels and could direct further water down Mathew Crescent increasing an already inadequate drainage system not coping. Also I addressed many of the above issues at a meeting attended by herself, me and to of Two Senior Council Officers. I checked visually after the meeting and emailed the Mayor in February 2008 that I had check and those girders visually the girders were appeared lower than the creek bank either side. In the flood study done by council dated 4/12/07 it is clearly outlined in the report that the council study believed that the water broke the bank of the property adjacent to the Upstream Drain on the downstream side in Mathew Crescent. ( On speaking to the resident he took up to 300mm of the bank away to level his land back in the 1980's not knowing the impact this would have later years. If that back was still at the same level it would not have been identified by Council as a problem now).

4C

In the 4 December 2007 Caboolture Shire Council, Mathew Crescent, Burpengary, Flood Mitigation Scenarios' it clearly identified what the council believed to be the new 100yr flood levels along Burpengary. I bought up my concerns with the Mayor that I believed that the levels of the Developed Blocks in Hideaway Close were lower than the flood levels indicated in this report. I had as an amateur and with a friend who had more experience than myself shot levels on these blocks prior to this meeting, which indicated to us that these levels of these blocks were possibly well below the flood levels indicated in this report.

5C

I also told to the then Mayor Leichman that I believed that when developing the Hideaway Close estate that there were natural drains and or lower creek bank on the Narangba side. I believed that the water used to flow through and down these areas into what is now residential blocks. When I ask Joy Leishman about this, she ask the Council officers to supply me with this information before Xmas 2007. They indicated that this would not be a problem. This information about the surveyed levels before development. These was never forthcoming. My email dated Feb 2007 confirmed that I had not received this information.

6C

I also was also concerned that the report identified that the creek bank over the Narangba side of the Creek be raised if flood gates were installed at the End of the Upstream Drain in Mathew Crescent. This drain was built to take drainage water from the development of Rowley Road and other developments in the area. This drain was built after the original Mathew Crescent development was done and we purchased our block.

7C

I suggested to the then Mayor Leichman that all of the recommendation 2004 Flood Report be implement to protect the properties.

8C

It was after the meeting 13/12/07 that the Flood Gate at the end of the Upstream Drain in Mathew Crescent was installed. I believe that if this had not happened that the recent events of the 12/1/11 would not have been as catastrophic to the residents in Mathew Crescent. Leaving a man made opening in the creek bank when the drain was originally installed to direct the creek water down Mathew Crescent has made the flows even greater with even further destruction of property. This would have been a catastrophic for the Residents effected by the 11/1/11 1000yr Flood Event.

9C

## References to Mathew Crescent Flood Study 2004

9C-1

\*I do not believe one side should top up creek bank (on the Hideaway Close side) levels when they were not pre-existing. With my conversation with the Mayor & 2 Senior Councillors dated 4/12/07 it was my opinion that they had already had drains filled and the bank higher than original. The council officers indicated to the then Mayor Leishman and myself at that meeting they would give me estate original level before Xmas. They were not forthcoming.

9C-2

I believe that floodgates on the downstream drain would balance the build up of the bank along Hideaway Close if it is established that these banks were possibly built up. Were are the original plans of this estate that the then Mayor Leishman ask the council officers at the meeting with pass onto me before Xmas 2006. Meeting date was 13/12/07. Also I do not believe that it is warranted directing extra flows down into Mathew Crescent and flooding properties in extreme events. Originally these flow broke out into the Flood Plain on the other side of the Property on the downstream side of the downstream drain only having to flow less than 100meters before spreading over the wide area of Parkland (and Pony Club). I do not consider that if this flood gate is put in that the bank on one side of the creek or the other should be built up. Mathew Crescent was never designed to be a tributary of the creek through the installation and alteration of drains.

9C-3

I think the decanter basin and all other strategies in the report should be developed. I expressed this to the then Mayor Leishman at the Meeting. I feel that all the recommendation in the 2004 Flood Report into Mathew Crescent should be done to give us back our original levels.

10c

The Creek adjacent to Hideaway Close on one side, and the Upstream Drain and the Property next to the downstream drain property at No 40 Mathew Crescent needs to be looked at in detail as it seems to now bottleneck the flow of water (when I 1st moved here when the creek rose it appeared to break the bank on the Hideaway place side of the creek and flow behind No 40 Mathew Crescent. Once passed this area the creek breaks out in to a large wide area flowing over the Pony Club quickly dispersing and flowing downstream.

I have heard there is a development proposal of 5000 house block in the area near The Raynbird Road and Oakey Float. Does it exit. At what stage is it at. Has Council considered the impact properties downstream. Approximately 30 properties that flood on the opposite side of the Creek How in Narangba and Many downstream in the Dale Street Area were inundated in the 11/1/11 event. Our properties need to be protected from Development that had extensive flooding of this Burpengary Creek Catchment on the catchment area. I feel that steps should be taken to reduce

**CONCLUSION**

1D



Will there be a new 100yr flood level established somewhere between the old 100yr flood level and the level of the event in 11/1/11? On the Scale for 100yr event to 1500yr event what would you call this event? It was indicated at the Meetings on the 29/1/11 and 12/2/11 attended by Steve Russo that it may be identified as a 1000yr event. Will the residents be informed of the difference between the old and new 100yr level so as they can establish the impact on them?

2D

Will the 100yr Flood Levels in the Mathew Crescent Area be calculated less the Drainage Flooding which we believe has significantly raised the flood indication levels on the experienced on the 11/1/11 Flood Event. Surrounding developments and extended Road systems since the development of the Annfield Estate in the early 1980's have caused huge drainage flood issues in in Annfield Estate. There has been no effective upgrade to the old drainage system in the Estate to cope with the increase flows directed at this estate.

2D

SURVEY PLAN

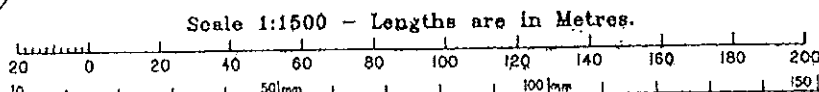
TRAVERSES ETC

LINE	BEARING	DISTANCE
2-3	359°59'	20.0
6-1	189°27'30"	20.28
10-14	333°18'20"	20.131
15-16	61°08'40"	15.807

REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
2	OIP (0.3 deep)	RP170158	47°08'	1.269
4	Spike		182°11'	0.56
5	OIP Cone		179°54'	1.0
8	Sc in Kb		312°42'	4.39
9	OIP	RP194425	33°09'	1.0
10	OIP	RP170158	89°04'	2.563
11	Sc in Chnrl		48°40'40"	14.822
12	OIP (Not Rd)	RP170158		
12	0.4 deep		301°15'25"	22.483
13	Sc in Footpath		334°42'30"	1.32
14	OIP	SP123681	159°05'30"	0.834
15	OIP Cone	RP222601	64°10'	2.641
16	Sc in Kb	SP114666	243°38'05"	1.95
17	Sc in Kb		89°54'	1.0

Peg placed at all new corners, unless otherwise stated



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I, James Herman COX (Licensed Surveyor) hereby certify that I have surveyed the land comprised in this plan personally, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 4/03/2002.

Date 12/3/2002

Licensed Surveyor

Cancelling Lots 2 & 4 on RP194425

PARISH: BURPENGARY COUNTY: Stanley

Meridion: RP194425

F/N's: No

Scale: 1:1500

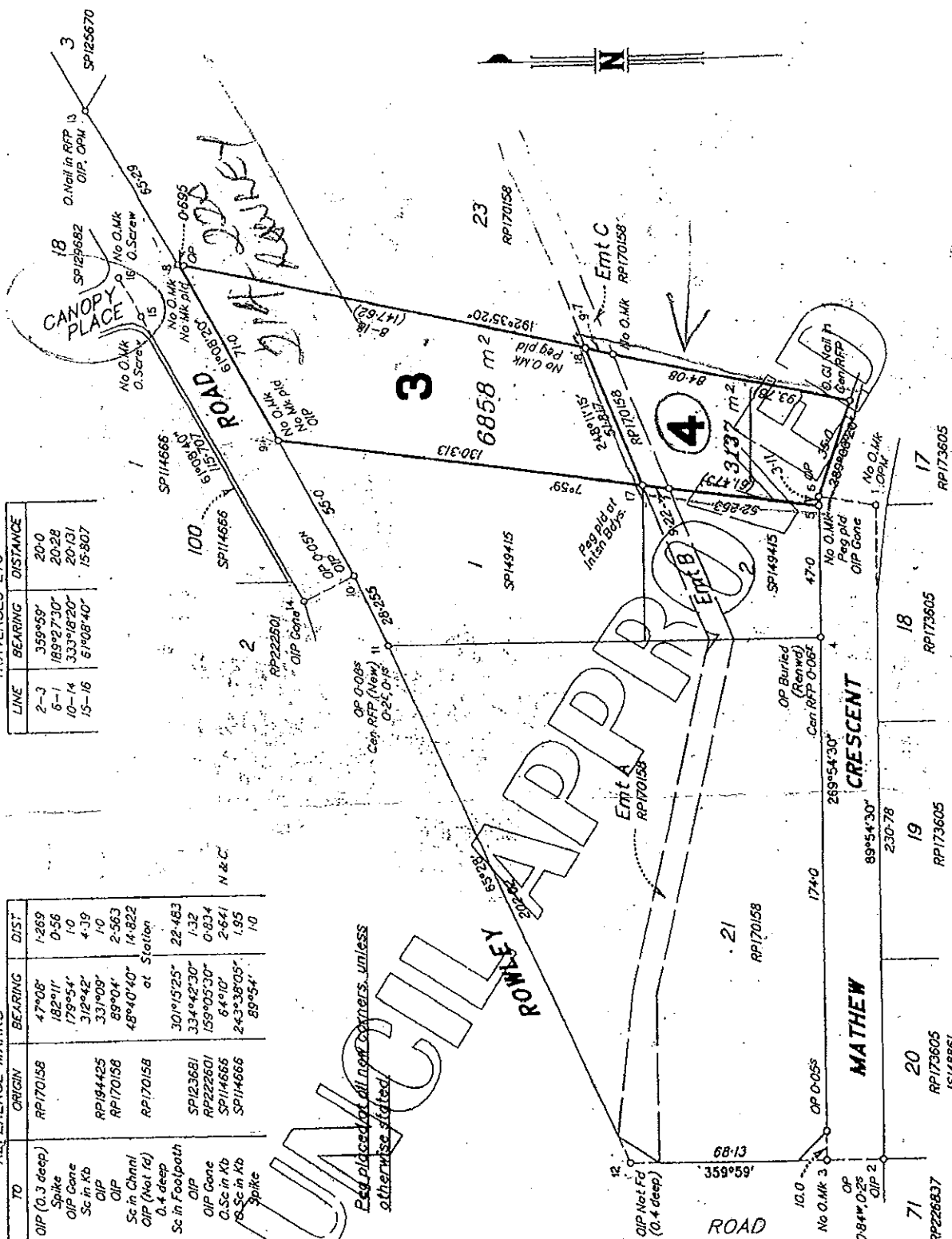
Format: STANDARD



Plan Status:

PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO
1-OPM	RP173605	109°0'	310	56480
13-OPM	SP125670	260°51'20"	65-665	123466



# 2.1.5

 Mathew Crescent,

Burpengary

Mathew Crescent  
Burpengary QLD 4505

13<sup>th</sup> March 2011

To whom it may concern

On January 11<sup>th</sup> when the floods hit our area we were unable to leave our property because Mathew crescent was completely flooded. Burpengary creek at the back of our property did not inundate our property, but the front of our property was completely flooded by the water in Mathew crescent.

This water is always flooding our property because the drainage pipes at the corner of Annette court and Mathew crescent which carry water under the road, are far too small to allow adequate drainage of the water which flows down Mathew crescent toward Annette court and Rowley road.

I would like Council to replace the underground pipes with pipes of a larger diameter, to allow for faster drainage and thus, stop the buildup of water which then results in the front of our property being flooded.


Yours sincerely,

[Redacted Signature]

2.1.6


 Mathew Crescent,

Burpengary

 *Mathew Crescent*

Re: flooding at Mathew Crescent, Burpengary

Dear Mr/Mrs

We own a property ( Mathew Crescent) and have observed several "minor" and "major" floods as classified on the river height station 540245 (Burpengary ck at Rowley Road). In these cases the water came up from the creek as the Rowley road bridge limits the flow and water backs up. However over the last 30 years the house has never been flooded (as per information from our neighbour who have lived there all this time).

In recent years even light rainfall leads to minor flooding of the access road to Burpengary Equestrian Centre (BEC) and part of our property nearly every time. We believe that the main reason this happens is the inadequate passage under the Rowley Road bridge which creates backing up of the water combined with an increased run-off caused by extensive building development upstream. An assessment of Google historic maps clearly shows the increased 'hard surface' where previously the ground and vegetation would absorb water and slow water release into the creek. We understand that even levies were built upstream to protect new developments, resulting in even less surface capacity and faster flow down Burpengary Creek.

On 11/1/11 the situation was unusual as additionally to the backing up of water from the Rowley Road bridge (not reaching our house), suddenly a large flow was coming over the culvert in Mathew Crescent from the other direction (from the direction Annette Court/ Rowley road).

This water then runs into the stormwater easement on our property and the neighbouring properties. Low level inundation of our house was the result. A situation that has not occurred since Mathew Crescent was developed 30 years ago.

The reasons for this letter are the following:

- 1) Firstly we are concerned about the amount of development happening upstream of Mathew Crescent in recent years. The increased development and stormwater levies create more runoff in a shorter timeframe creating increased flows towards the flow limiting Rowley Road Bridge as well as disturbance of the natural water flow directions.

We ask council no longer to allow further developments that may affect the water run off and velocities and thus create havoc unless proper flood mitigation measures are in place.

- 2) For a clearer understanding of what has changed in ever increasing levels of water backing up at the Rowley road bridge, one should understand the changes made over the past decades and need to know

- How much was built upstream and how did the exact numbers of 'hard surface' over the last decades increase. As pre-requisite to assess approvals for developments these numbers should be readily available at the council.
- How were previous developments assessed in relation to the impact on water flow and what were the conclusions of these assessments?
- Which mitigation works were done to ensure that **downstream** properties were not impacted by developments upstream?

## 2) Freedom of information

We would like the various flood studies of the Burpengary creek (mostly by external organisations) made better available for the public. Unfortunately the council has removed several of said flood studies from the council information centre.

When requested they have to be read at the council and making copies of maps or content is not allowed. Also we would like to understand who has hand-drawn new Q100 boundaries on the maps of the external flood report, and on which additional insight this pencilled Q100 line was based.

Also we would like to suggest some options that would help to reduce impact of flooding in the near future:

- a. The largest mitigating solution would be to increase the passage for water under Rowley Road bridge eg by widening or deepening the passage under the bridge. In addition the bridge area is currently obstructed by too many trees, branches and other debris that has built up over the years and needs a good clean out.
- b. Fix the improperly designed stormwater pipes in the easement at the back of our property (adjacent BEC). The stormwater pipes that were installed in the easement are too small and thus restrict flow, resulting in water backing up. In addition we believe that the small lower pipe is likely blocked by built up of debris over the years. Further more the pipes are not installed in the bottom of the easement resulting in a permanent swamp lake. The high placement of the pipes does not allow drainage to occur from the moment the rains fall.

We would suggest removing the current pipes, clearing out to the bottom level of the stormwater easement and then installing sufficient box or pipe culverts to allow maximum passage of the water into Burpengary Creek. The BEC access road can then be reinstated on top of the culverts. These types of concrete culvert are precast and readily available eg Rocla. With these measures, the easement would completely drain allowing for more water storage during rainfall events as well as easier access to the culverts for the removal of debris.

Added advantages would be that these areas would no longer overgrow with undesirable weeds (type@@@) as well as being mozzie breeding grounds.

An alternative option, albeit more expensive, would be to install a bridge as part of the BEC access road and dig a channel underneath it to allow uninterrupted drainage between the stormwater easement on our property and Burpengary creek.

- c. Just before the culvert under Mathew Crescent a dam retains a large body of water between Mathew Crescent and Annette Court. Storing a large body of water in a stormwater easement seems to defy the purpose. If the dam was removed to allow the water to drain and empty this large area, this would allow for more better draining from the moment rainwater falls as well as creating more water storage to mitigate flood events. Again, weed and mozzie management would benefit from this measure too.

- 3) Lastly we would like to get an answer from council regarding the classification of this flood event. We assume that this event will be classified as larger than an Q100 event. We are aware of recently finalised water modelling by WBM and would like to see how this model reflects the actual situation on 11/1. To date, it appears that different surveys and Q100 levels are circulating. As mentioned before, we even saw one map in an external flood modelling study that had a crossed out Q100 level and a new hand drawn one at 0.5m increased level. More clarity would be of benefit to all involved as our homes and potential to have flood insurance are dependent on these.

We look forward to your reply to our questions during the meeting at Mathew Crescent on Saturday 12 February 2011.

With kind regards

A black rectangular box redacting the signature of the sender.

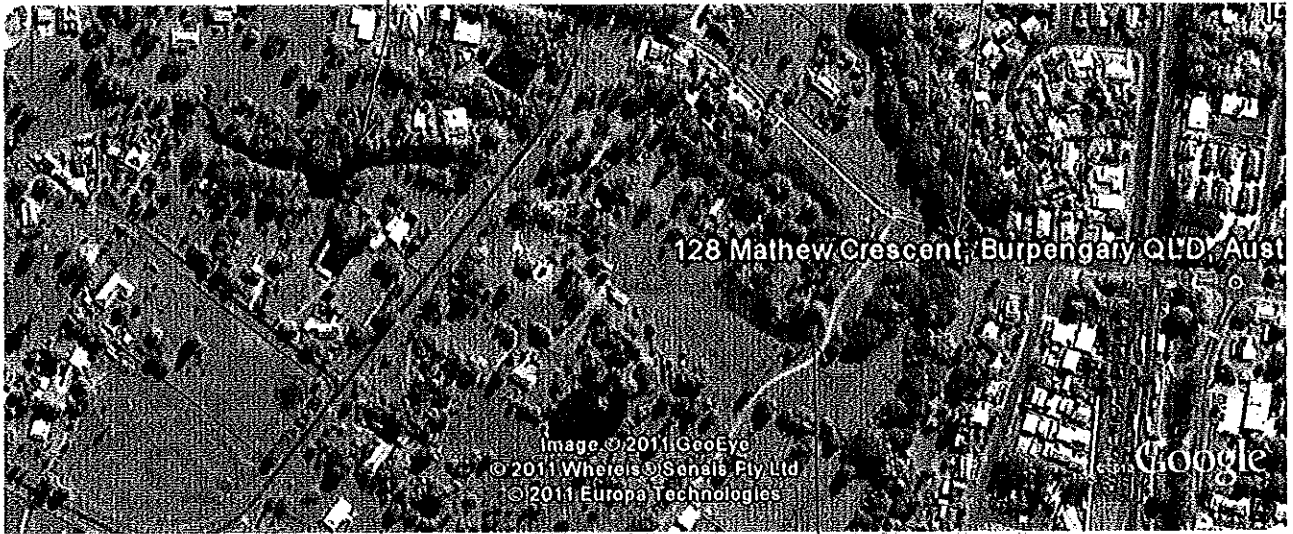
Burpengary, Qld 4505





large body of water  
stored in easement

Rowley Road Bridge



Mathew Crescent, Burpengary QLD, Australia

Stormwater  
easement where  
culverts should be  
installed to improve  
drainage and flow



Mathew Crescent and surrounds in 2002 (source Google Earth)



Mathew Crescent and surrounds in 2009 (source Google Earth)

2.1.7

 Mathew Crescent,

Burpengary

31 March 2011

Submissions to Queensland Commission of Inquiry

Mathew Cr (previously Lot6)  
Burpengary 4505

This submission is additional and in support of others in this catchment area of Burpengary Creek who have been adversely affected by drainage and flooding problem. New residents and residents like myself and the residents of 33 Mathew crescent who have voiced concerns for decades.

The exceptional flood event of January this year brought matters to a head.

It would appear that the local authority has failed to objectively consider the existing problems in the catchment area before allowing more excavation, filling and subdivisions in flood prone areas.

When I purchased Lot 6, the bridge over the creek was a wooden one, lower than the present one. When the new bridge was built it was higher and the road was made higher in Rowley Road.

As Council has stated, the land in my area was very flat. Any structure or filling of any large area would impede the flow of water through natural channels. Council has stated that expert advice is that fill on a flood plain is to be removed.

When I wrote to Council to get the land bordering Burpengary Creek for a pony club, there was a deep and wide drainage easement from developed blocks on Mathew Cr. to Burpengary Creek. A large pipe was placed in the drainage easement so that road could be constructed to allow vehicular access into the pony club ground from Rowley Road near Mahers Bridge on Rowley Road. The pipe was not large enough to cope with the same volume of water that the open drainage easement did.

This is at the back of lots 2, and 3. The drainage situation is made worse by the build up of rubbish and weeds.

When I heard about the proposed development on the other side of Burpengary Creek I spoke to Councillor Devereaux who expressed her concerns based on information available to her. Council records show this Councillor was the only one who voted against the proposal for the Delaney Road Development. Council apparently rezoned the land from Special Rural Zone into Residential A. Thus allowing many smaller blocks of land and more impervious surfaces.

Council dismissed the list of concerns that the subdivision should not go ahead. Three residents of Mathew Crescent, myself included, wrote to council with the valid request that Council give an assurance that engineering work for that subdivision would not impact negatively on our Mathew Crescent Properties. Obviously Council did not feel safe in giving such an assurance. So it did not do so.

At the first flood meeting in Mathew Crescent after the January flood, I heard it said by Council representatives that the Council had not really known the flood levels over there, and it was not known what, if any impact that subdivision had on property this side of Burpengary Creek.

In my opinion, not enough research was done before letting the subdivision to go ahead. As I recall one resident at the flood meeting held in Mathew Crescent after the January floods voiced concerns at the Council allowing about 1,000 new homes to be built on the flood prone land upstream.

The water from upstream development impacts on downstream properties flowing across what council considers very flat land, that sloped down over lots 7,6,5 and 4,3,2, into the drainage easement.

In 1998 I commissioned Storm Water Consulting to do a flood study here.

Council commissioned two flood studies. Scott and Furphy and A.W.E.

The AWE report listed three (3) properties in Mathew Crescent. Phone inquiry to Council only revealed that two of the three properties were lots 2, and 3. When I phoned I got the same response and suggested the logical next one would be lot 4. Council called a public meeting to address a road issue and flooding.

At least one hundred people attended. One man in the audience asked what were the three properties in Mathew Crescent named in the report as potentially having some land resumed. When Council failed to answer, the A.W.E. representative stated that they were Lots 2, 3 and 6. I asked how was it that when lot 6 was under that option and it was higher than lots 4 and 5 that those lots had not been put under that option for land resumption. The owner of lots 4 and 5 agreed with me that lot 6 was higher than lots 4 and 5.

Later Council explained to me that the reason Lots 5 and 4 were not named but lot 6 was named under that option for land resumption was possibly due to filling on lot 4 and 5. Council maps show the water flow from the blocks up creek down to No. 102 that was known as Lot 6, blocks but that flow is impeded by filling on the lots 5 and 4 being between my land and the drainage easement in lots 3 and 2. It has been officially noted that is the reason water lays for longer on lot 6 than it had.

Please note for clarification...that Lots 5 and 4 Mathew Cr. were later subdivided into three new smaller blocks. Between my No. [REDACTED] (previously lot 6) Mathew Cr. and No. [REDACTED] (previously Lot 3) Mathew Cr.

My concerns about the flooding/drainage situation in Mathew Crescent and Council's failure to properly address the concerns of residents goes back decades. It was also dealt with in the first part of my submission.

Due to circumstances beyond my control, it is necessary for me to send copies of relevant evidence later.

I am trying to unstick some documents from plastic covers in folders that went under the flood water.

Respectful regards,

[REDACTED]

[REDACTED]

2.1.8

 Mathew Crescent,

Burpengary

[REDACTED]  
Borpengary 4505  
previously lot 2

When I purchased my property in 1986 it was shown as approx 18% flood prone. Now it is 100% flood prone & I can expect metres of water through my property.

An AWE flood study report named 3 properties 2, 3 & 6 in Mathew Crescent that were under option for land resumption. Lots 4 & 5 were & and I believe this to be because of excessive fill on the property to build up the land.

An easement through Annette Crt & around & through my property requires serious attention as it is a significant drain for the area.

A drain council installed at the CREEC on of Mathew Crescent to drain water into the creek has the opposite effect.

Clearing of forests, & in place there are impervious surfaces eg house pads & roads have also contributed to the increased flood water.

There are many longstanding problems in Mathew Crescent which council have ignored.

Yours Sincerely  
[REDACTED]



2.2.1

 Rowley Road,

Burpengary

School

Dear  
to small.

Draw  
To Sim

Severfords

over onto this block -

This block has a wide surface area & should drain in running through

be marked as a water drop  
Note - water easements don't start in mid air.

210 Rowley Rd. has kept this drain free from obstructions

the block marked with a cross have  
with loads of soil making it flat &

[illegible]

water easements in

can't go away. (I thought  
about obstructing them.)

So if these people wonder why they have a water problem don't be surprised, Water easements are there for a

Good reason (SO WATER CAN GET AWAY EASILY - hence less likely to Flood.) How many other properties have filled these large water easements in. Council should check & make these Property owners dig these out again.

Also council needs to look at ~~where~~ all this water overflow comes from & ~~starts~~ <sup>OR</sup> starts. Hutton Rd - Rowley Rd - Make a bigger storm water drainager system straight into Burpengary creek. This will bypass all these Properties with water easements. Hence less runoff water flowing through this ~~whole~~ whole low lying area.

2.2.2

 Rowley Road,

Burpengary

Date:        /        / 2011

Lot No: [REDACTED] Street/Road: ROWLEY RD        Burpengary

Name of Property Owner: [REDACTED]

Contact Details: \_\_\_\_\_

**Please mark on map your property and areas of concern and comments**

**My experience regarding drainage & flooding:**

WE HAVE LIVED HERE 22YRS AND HAVE NEVER HAD SUCH A PROBLEM  
AS WE DID ON 11<sup>TH</sup> JANUARY. WE KNOW THAT THE PREVIOUS OWNERS  
HAD TO RAISE THE SEAB. WHEN IT HAS FLOODED BEFORE IT BYPASSES THE  
HOUSE AND FLOWS THROUGH FROM ACROSS THE ROAD AND DOWN THE  
BACK. I WAS ASKED BY FIRE & RESCUE ABOUT 10:30AM IF I WAS OK AND  
AS I HADNT HAD A PROBLEM WITH THE HOUSE BEFORE I SAID YES.  
ABOUT 11AM THEY RETURNED AND I WAS TOLD THAT THE WATER HAD CHANGED  
COURSE AND I HAD 10MIN TO PACK A BAG BY THIS TIME THE WATER  
HAS SURGING ACROSS THE ROAD INFRONT OF THE HOUSE I HAD  
NO TIME TO MOVE MY CAR AS THE WATER ROSE SO QUICKLY  
IT WAS LIKE SOMETHING GAVE WAY UPSTREAM. I HAD TO  
BE RESCUED BY ROPE AND DRAGGED OUT TO THE ROAD IN  
WATER OVER MY CHEST. WATER REACHED A LEVEL  
OF ABOUT 300MM HIGHER THAN EVER IN PAST 22 YEARS

**Comments on possible solutions:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please bring this form to meeting, with any photos and relevant documentation



ROWLEY RD BURPENGARY

# 2.3.2

 Annette Court,

Burpengary

Date: 28<sup>th</sup> March 2011-03-28

Address: [REDACTED] Annette Court and [REDACTED] Annette Court Burpengary

Name of Property Owner: [REDACTED]  
[REDACTED]

## My experience regarding draining and flooding.

We have three buildings on our property. The main dwelling is a four bedroom house. The second dwelling approved by council in March 2007 is a two bedroom dependent persons unit. There is also a 6 x 9 m shed.

We have lived here since January 2006 and have experienced flooding four times since 2008. The 6 x 9 metre shed has flooded on each of these occasions, once in 2008, twice in 2009 (Easter and May) and most recently on 11 January 2011. Each flood event seems to be getting worse. In May 2009 the flood water came under the main roof of the 4 bedroom house in the garage. On this occasion we came very close to flooding both dwellings. This flood event apparently had 450mm of rain directly over Burpengary.

On 11<sup>th</sup> January 2011 at approximately 11 am both dwellings were inundated by a flash flood with water levels rising to approximately 20cm in the living areas. The damage was considerable (over \$250k in building and contents) and the inconvenience and heartbreak very painful. We will need to relocate for nine weeks for our home to be repaired. A large volume of fast moving water demolished fencing including a 6 foot high neighbour friendly fence. The water level in the 6x9 metre shed rose to around 1.2m, being the highest of the four flood events we have witnessed. I had to open the roller doors and side door to let the water flow through as the torrent of water was shaking the shed violently. During this time I witnessed a recliner lounge smash through my fence and lodge in my back garden (septic area) and two fridges float through my paddock. At exactly 11.35am I received a text message on my phone to evacuate Burpengary. We left through the front in 1.2m of high flowing water down our driveway. This was extremely dangerous and could have been disastrous for us - given that I had my two sons, elderly sick father and two small dogs. Luckily we managed to fight our way down the driveway. Once out on Annette Court approximately 30 metres from front gate we were standing in rising water (not muddy flash flood water) and had nowhere to evacuate to. On speaking to neighbours who also received the evacuation message, I learned that no one had managed to contact authorities for help as land line phones were not working and mobile phone networks were unable to cope with the volume of traffic. We were trapped and unable to evacuate. On reflection we as a family were much safer in knee deep water in our house rather than attempting to evacuate. In future "I" will make the decision to evacuate and not listen to a very late evacuation order to leave for higher ground. If we had received this message a lot sooner we would not have been placed in this dangerous situation. This evacuation order placed us in greater danger!



Prior to 11am the rising water appeared to come from the direction of the Rowley Road / Mathew Crescent intersection. All the storm water from surrounding areas appears to be directed into Rowley, Mathew and Annette Court turning our area into a dumping ground for storm water. At around 10.30am the water appeared clear not muddy and the water level reached the lip of the doorways on both dwellings. At this point in time we started to place things up as the rain was not stopping. At the rate the water was rising we would have gone under regardless of the flash flood from Burpengary Creek that happened a short time later. This just quickened the inevitable.

## Comments on Possible Solutions:

The new Narangba developments direct their storm water into the Burpengary Creek. Redirecting all this stormwater into the Burpengary Creek was not appropriate as its capacity has clearly been exceeded – with areas such as ours paying the price for councils greed. Furthermore, higher surrounding areas on the other side of Rowley Rd and up Houghton Rd direct their storm water directly into our area. Both these issues are council made problems –for which we have been made to pay the price.

When we purchased our home in January 2006 we had a clause in our sales contract making it subject to satisfactory flood searches and were given the “all clear”. The only properties that were impacted by flood in our area, were on Mathew crescent backing onto the creek. We have not been notified during the past 5 years regarding changes council have made to their flood reports. These changes have directly impacted us at 29 Annette Court and our entire property has been devalued enormously! The council approved our application for a 2 bedroom dependent persons dwelling in March 2007 and once again we were not notified of the flood risk. If we had known the dependent persons dwelling was in a flood plain we would not have built it. To allow such a dwelling to be built with council knowing of potential flood risks is appalling.

Another concern is the development at the top of Oakey Flat Road, where a further 5000 dwellings are planned. This will once again impact on us as they will direct their storm water to the Burpengary Creek, whose capacity has already been exceeded and will again spill out onto our area. As you can see I do not believe this was a once in 150 year event. It is in fact a 4 in 5 year event for us – and one that is being made more frequent and more severe by council profiting through new subdivisions and diverting the storm water into our area!

A possible solution would be to buy back the entire area (flood plain) and turn it into a park for the suburb. Given councils redirection of storm water into our area to profit from subdivisions, this would seem an equitable strategy.

## 2.3.1

 Annette Court,

Burpengary

Queensland State Government

To whom it may concern

## BURPENGARY

### STORM WATER INUNDATION CAUSING BUILDING & CONTENTS DAMAGE

This document has been prepared to highlight the effects of stormwater inundation to the property [REDACTED] Annette Crt Burpengary during major storm events, in particular the event of January 2011.

Following the event of 2009 we were asked along with other residents to participate in the Moreton Bay Regional Councils ***“Regional Floodplain Database Project”*** prepared by GHD Pty Ltd, without hesitation we volunteered our time, photo's, information and provided unrestricted access to the property for further investigation and data collection of the 2009 event, in the belief that Moreton Bay Regional Council and GHD Pty Ltd would follow through and achieve the objectives of the project.

Unfortunately to date I believe the project remains incomplete therefore Moreton Bay regional Council is unable to achieve its mitigation objectives. Had the project been completed and results published and actioned by Council within the time frame given, the event of 2011 may not have had such a catastrophic impact on our properties buildings and contents.

Whilst this is the first major stormwater inundation experience at this address for us, ( fortunately covered by insurance ) it has become apparent that other residents in the Mathew Cres, Annette Crt and Rowley Rd area have endured similar and in some cases worse experiences several times in recent years as sub division approvals and subsequent development surrounding this area continue to increase greatly impacting on existing stormwater easements and drains tracking through our properties and on into and greatly impacting the Burpengary Creek. Water inundation to our home was and remains a traumatic experience as we commence the re building process however, the surge of stormwater eventually entering our home had tracked across properties bringing with it raw sewage from impacted residential treatment plants and septic tanks as well as animal faeces and debris collected by the rapidly moving water causing potentially serious health concerns.

Consultation with Moreton Bay Regional Council representatives prior to and immediately following the 2011 event have also ended with council providing only very poor excuses without reason sighting “little or no record or data collection by previous council” and “this was a one in one thousand year event” when in fact the community has recorded property and contents damage 3 times in 9 years, leaving residents concerns unanswered and very little if any results moving forward.

Also contained in this document are copies of emails and replies sent to our council representative Adrian Raedel following the 11/1/11 event which express our concerns regarding, 1) the lack of response and communication by Moreton Bay Regional Council during and immediately following the event, because, they said "we were unaware this area had been impacted by the event" just two of the issues contained in the **"Regional Floodplain Database Project"** to be reviewed and, 3) my request to council for ongoing inspections and maintenance of the stormwater easements and drains. At a recent council / residents meeting held 17/3/11 councillor Raedel advised that Moreton Bay Regional Council had assigned \$150,000.00 to, investigate, modify, rectify .....what? How far does \$150,000.00 stretch? again this consultation with residents concluded without positive result.

It is clear Moreton Bay Regional Council remain non-committed on this issue whilst residents continue to receive increased land valuations along with increased rates to match, how is this justified given that these events have surely rendered our properties worthless while the **"Regional Floodplain Database Project"** is not and remains incomplete without mention of conclusive mitigation objectives by Council moving forward for rectification to the stormwater issue in this area.

I together with other residents request assistance from the State Government of Queensland for intervention for improved consultation with positive results on behalf of the Burpengary community towards a resolution between Moreton Bay Regional Council and the residents affected by stormwater and stormwater surges during severe storm events in our area.

Your earliest attention to this is appreciated.

Thank you,

[REDACTED]

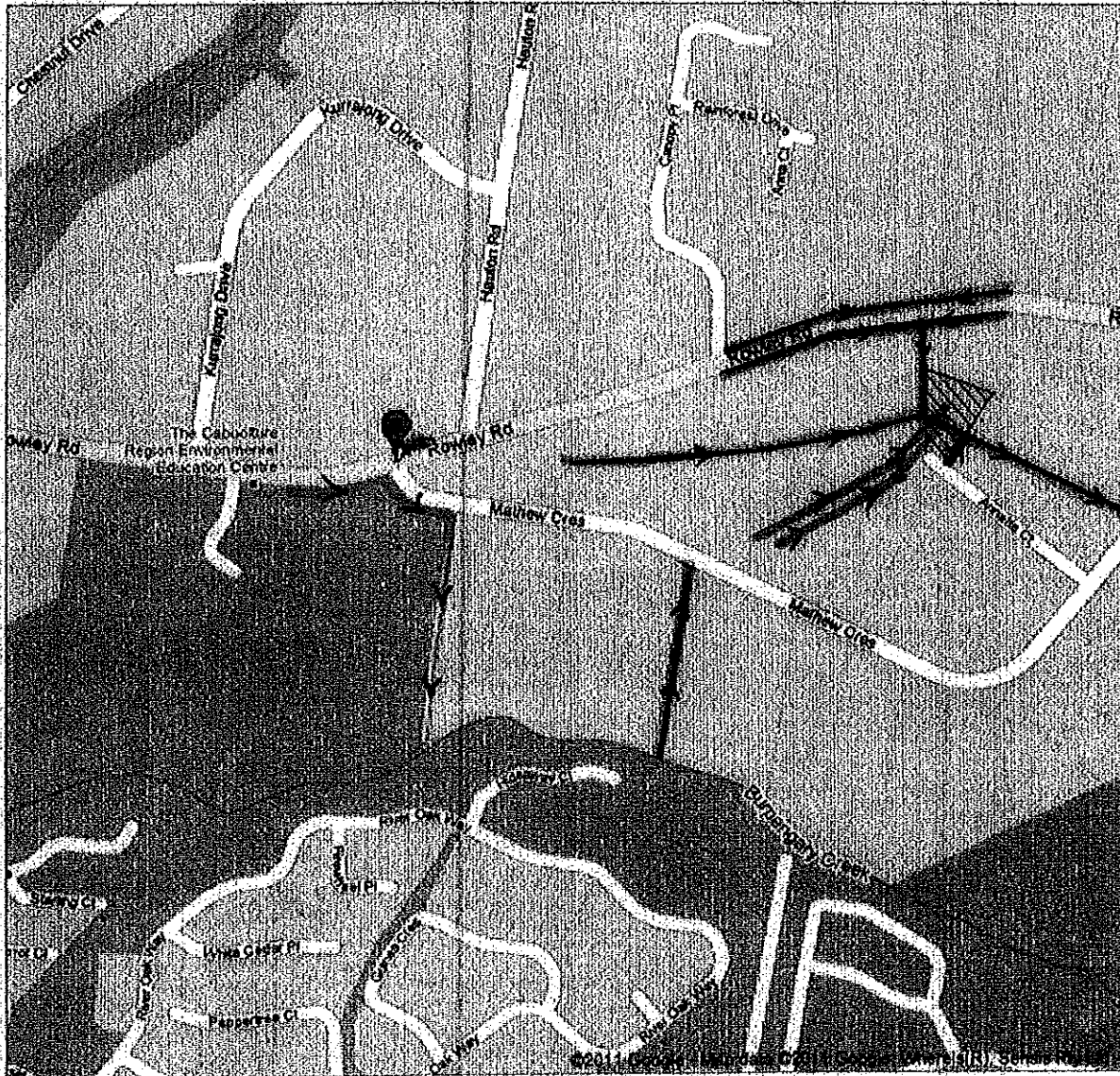
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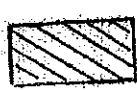

Burpengary

[REDACTED]

Google maps  
Australia

Address Rowley Rd  
Brisbane QLD 4505

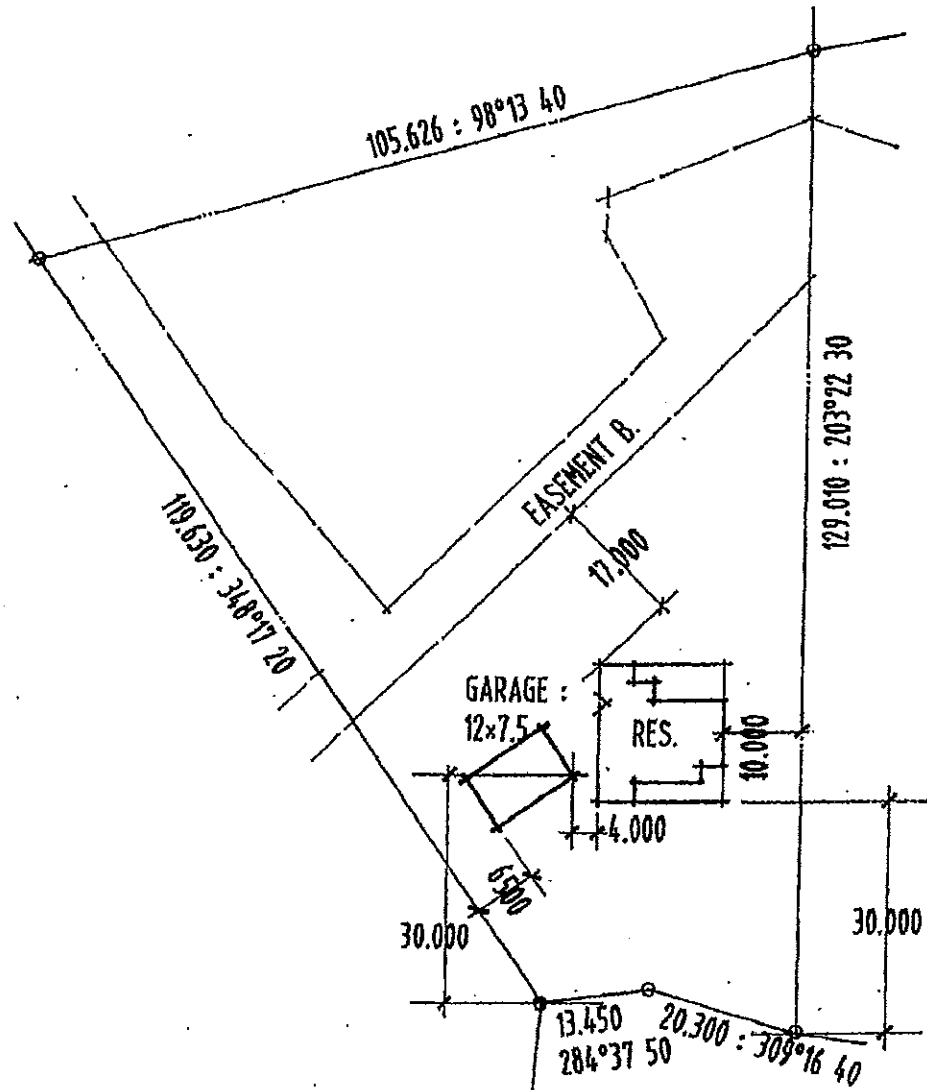


- KEY:
-  BASEMENTS & DRAINS.
  -  ANNETTE COT  
BURPENGARY
  -  MAJOR BENT  
STORMWATER SLOPE.

# NOTES :

FOR DETAILS OF STEEL GARAGE REFER TO ATTACHED  
MANUFACTURERS DRAWING & SPECIFICATION.

NOTE : FOR ADDITIONAL SITE INFORMATION REFER TO  
SITE PLAN ENLARGEMENT : SHEET 2.



ANNETTE COURT

REAL PROPERTY DESC. :

AREA OF LOT : 8000 SQ.M.

**SITE PLAN.**  
**1:1000.**

OWNER \ BUILDER :

PROJECT :

**PROPOSED NEW RESIDENCE**  
**AT ANNETTE COURT.**  
**BURPENGARY.**

26.7.97.



REFERENCE MARKS				
STN	TO	REMARKS	BEARING	DIST.
1	OIP		234° 41'	4.357
2	Pin		351° 45'	1.36
3	OIP		201° 52'	1.464
3a	Pin		344° 17'	0.5
3b	Pin		0° 40'	0.5
4	Pin		240° 31'	1.52
5	OIP gone		119° 30'	1.0
6	OIP		119° 30'	1.0

LINE	BEARING	DIST.
7 - 8	302° 34'	3.83
8 - 8 <sup>1/2</sup>	246° 11' 40"	14.77
8 - 9	302° 34'	18.05
9 - 12	315° 50' 30"	62.88
10 - 11	"	59.32
11 - 14	338° 36'	52.88
12 - 13	"	54.39
16 - 16 <sup>1/2</sup>	68° 11' 40"	11.2
3 - 3 <sup>1/2</sup>	254° 17' 20"	15.0
3 - 3 <sup>1/2</sup>	90° 40' 20"	15.0

Area of New Road

(3-3a-3b-3) ..... 32 m<sup>2</sup>

Branded Pag. placed at Stns 2<sup>a</sup>, 2<sup>b</sup>, 3<sup>a</sup>, 3<sup>b</sup>,  
8<sup>a</sup>, 9, 10, 12, 15<sup>a</sup>, 16<sup>a</sup>, 17, 17<sup>a</sup>, 18, 19

I, Barry Lynton ANDREWS, hereby certify that Link Company have surveyed the land comprised in this plan faithfully or by Vicki Alma HALDER, Licensed Surveyor, for whose work Link Company accept responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 26.8.1992.  
Barry L. Andrews Licensed Surveyor  
Director

PLAN OF [REDACTED],  
Proposed Easement A in Lot 1 and  
Proposed Easement B in Lot 2  
 Cancelling Lot 28 on RP 17015R

ORIGINAL POR. 86

MERIDIAN  
 OF  
 RA 170158

MAP REF  
9443-12/34

SCALE  
: 1500

**FILE REF**

No. SURVEY RECORDS DEPOSITED	
ENDORSED <i>File</i> 6-10-1992	REGISTERING DIST DT(5)

PARISH **BURPENGARY**  
COUNTY *Stanley*  
TOWN/LOCALITY **BURPENGARY**  
LOCAL AUTHORITY **CABOULTURE S.C.**  
LAND AGENTS/MINING  
DISTRICT

MOVING FIELD

## REGISTERED PLAN

\_\_\_\_\_



# 3

## MAPS OF THE AREA IN QUESTIONS

### 3 MAPS OF THE AREA IN QUESTION

#### 3.1 **Burpengary Catchment Area**

Caboolture Shire Council - Taken from  
Mathew Crescent, Burpengary  
Flood Mitigation Scenarios - Figure 2

#### 3.2 **Annfield Park Estate (Area of Submission)**

Copy of the Map given to Residence by Council when they bought  
back in the 1980's - Includes Flood Levels

#### 3.3 **Annfield Park Estate**

Map with Street Numbers

#### 3.4 **Lot Numbers and Relative Plan Numbers RP**



# 3

## MAPS OF THE AREA IN QUESTIONS

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Caboolture Shire Council - Taken from  
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Copy of the Map given to Residence by Council when they bought  
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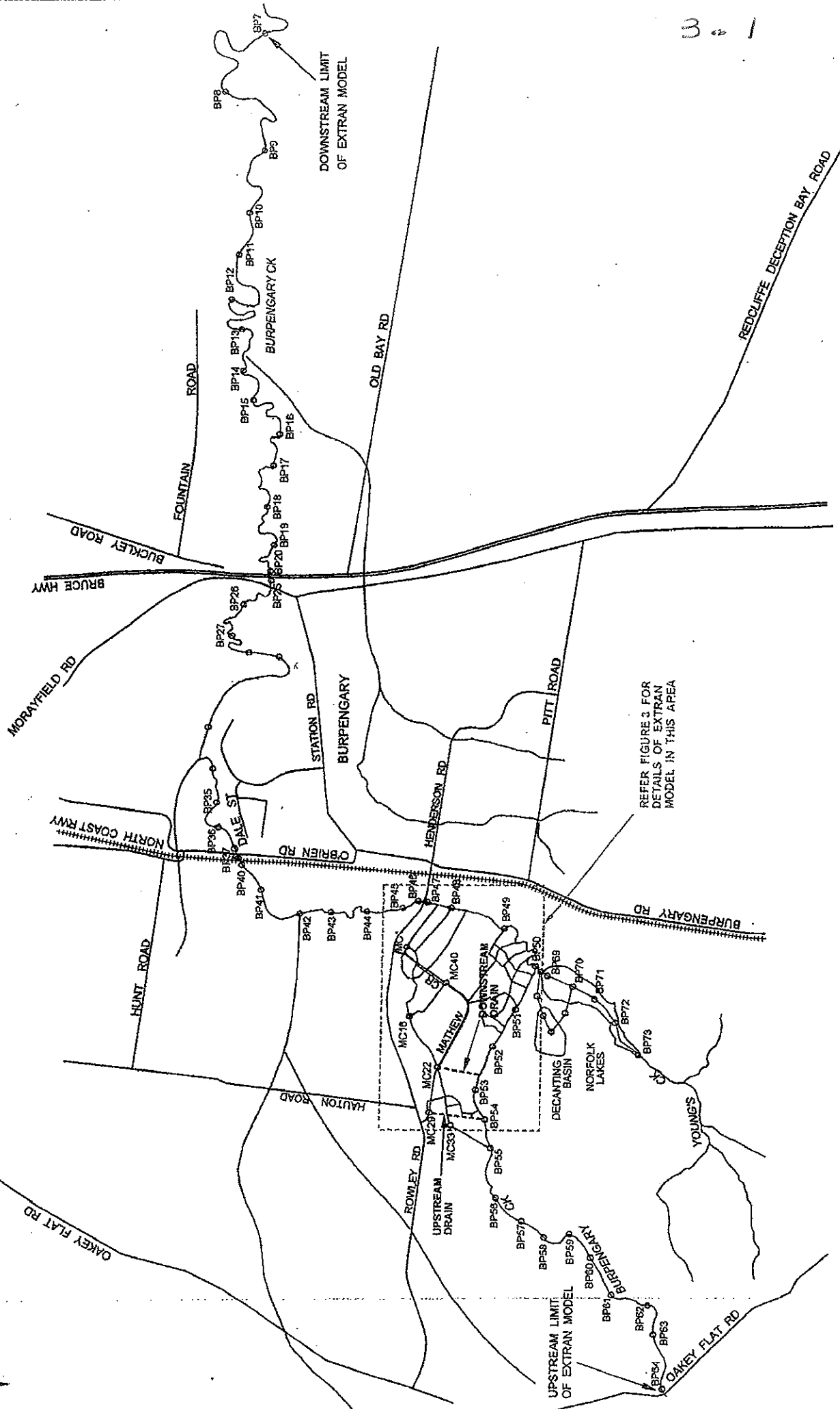
#### 3.3 Annfield Park Estate

Map with Street Numbers

#### 3.4 Lot Numbers and Relative Plan Numbers RP

# 3.1

## Burpengary Catchment Area



REFER FIGURE 3 FOR  
DETAILS OF EXTRAN  
MODEL IN THIS AREA

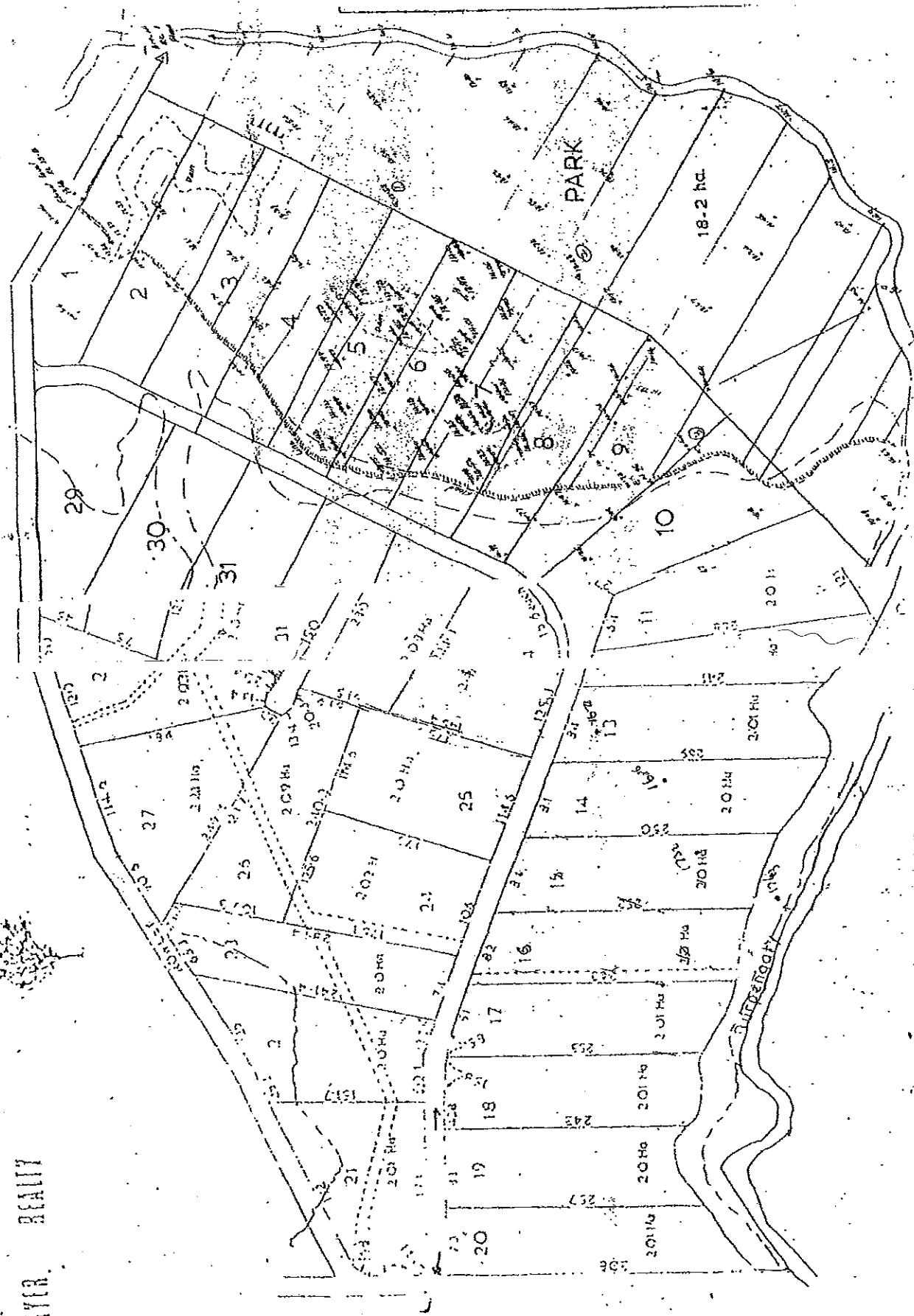
# 3.2

Annfield Estate

Original Area

# ANNEXED

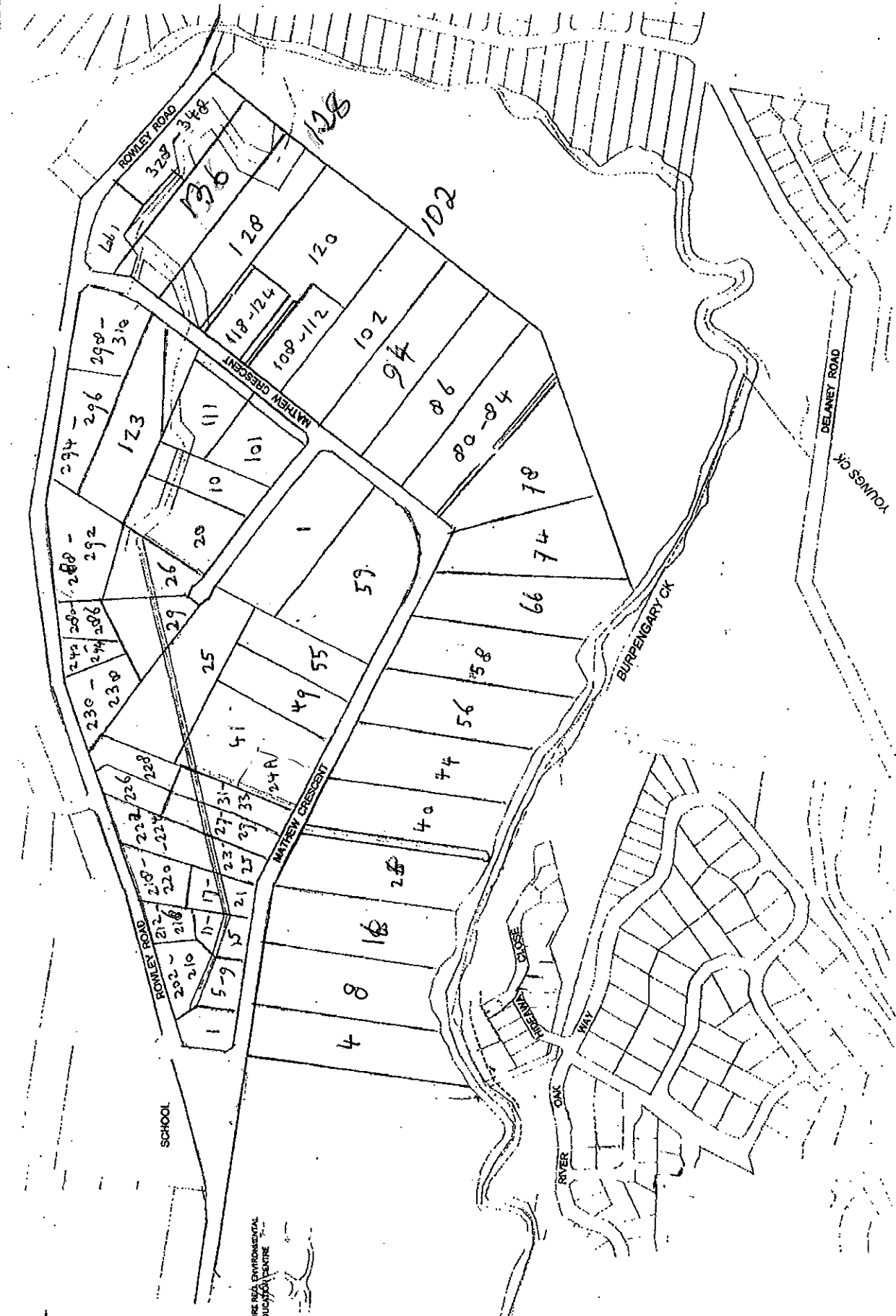
under release by  
NYR. 33417



# 3.3

Map of Area with  
Street Numbers

15M



# 3.4

Lot Number and  
Relative Plan Number

RP