To whom it may concern,

**SUBMISSION TO THE INQUIRY INTO THE JUNE 2016 TASMANIAN FLOODS**

This submission is made by …………of Weegena. It aims to set out our experience during and subsequent to the flood on 06 June 2016, to contribute to the analysis of and make comment upon the contributing causes of the severity of the flood damage and to make some comment on damage repair, assistance measures and future flood mitigation and river restoration actions. The key conclusions of this submission are that:

The impact of the flood upon ordinary people needs to be understood;

some things were done well and some poorly (and should be acknowledged);

there are key questions that need to be answered;

there are lessons to be learned; and

there is much that needs to be done to repair the damage and minimise the risk of recurrence.

We have been deeply impacted by this event and our lives have been inexorably changed. It has been a challenging 5 months and emotions still remain raw. We make no apology if those emotions are evident in this submission. Similarly, this submission is quite lengthy and is not always constrained to the Inquiry’s terms of reference. We don’t know if our submission will make any difference but we need to have our story told. We would welcome a visit by the Inquiry team to see our property first hand and to improve clarity with these, sometimes inadequate, words.

While this is our individual story, there are certain to be similarities with the circumstances and experience of other people along the Mersey River (and in other valleys) and while many of those people are probably unaware of the invitation to make a submission or they are unable, unwilling or they otherwise will not make a submission to the Inquiry, we hope we might represent many of their views. Similarly, while the impact upon our property has been significant, there are many others that have been affected far worse than us.

At the outset it needs be stated that the communication of this Inquiry has been very poor. We have been awaiting information on its formation and how we may make a submission to it for several months. Only by coincidence did I find a single small article on Page 2 of the Tasmanian Country newspaper of 21 October advising of the closing date for submissions of 11 November (just 3 weeks). We have registered our interest in the Inquiry with the Flood Task Force, with DPIWE and with NRM North. None of these organisations have provided any information on the flood inquiry, nor is any information available on their websites. It is suggested that it would be appropriate for all stakeholders registered with the Flood Taskforce to have been advised of the inquiry and to have been asked to make a submission.

Without a decent public information campaign and with the minimum of public notice, it can only be assumed that the inquiry does not want to gather comprehensive information on the impacts of the flood or to seek comment from impacted parties on future repair and remediation action. This has the sense of a white-wash.

Notwithstanding, we are now aware of the Inquiry and seek to take advantage of the opportunity to make this submission.

**CONTEXT**

We live on a small farm at Weegena on the Mersey River. The farm sits under the eastern end of the Gog Range with the property’s northern boundary being directly opposite where the Lobster Rivulet enters the Mersey. It is the first property downstream of the constrained part of the river in the area known as Allum Cliffs. An aerial photograph with overlayed farm layout is attached for reference.

Access to our property was via a bridge at the end of Kellys Cage Road and approximately 1km along an internal right-of-way access road through our neighbours’ property. These neighbours are non-resident, with their property being share-farmed with a local dairy farming. Other neighbours lived in a house a short distance downstream of the bridge.

It is not known if all of these people have or intend to make a submission to the inquiry. Notwithstanding, their views would be invaluable to better understanding the impacts of this event on people of circumstances varied from ours. We would encourage that the Inquiry team seek their input.

Our property is 40 hectares (ha) in size with approximately 1.5km of river frontage bordering 17ha of river flats planted to improved pasture. There is a further 10ha of cleared land, a small eucalypt plantation and an area of native forest under regeneration. These later areas are on a higher ‘plateau’ approximately 10m vertically above the river flats and rising higher at the back of the property. The river flats are accessed via tracks at the downstream end and about 2/3rds along to the upstream end. We run beef cattle and meat sheep.

We have owned the farm since 2006 and have been in permanent, full-time residence since 2011. We came to the property with no prior farming experience but we have been exposed to several floods at the farm up to the moderate level and, while absent, the 2011 flood caused some damage to the property (limited to fencing). We have also experienced other major weather events in other places, including cyclones. We consider ourselves mature, fit, intelligent and responsible persons, not prone to exaggerated reactions to major events.

We reside in a small shed approximated in the centre of the property, on the upper terrace and about 200m from the river. Normally, the river cannot be seen from the shed because of the density of the riparian vegetation, but when the river is approaching the minor flood level, it can be seen through the trees which grow along the bank.

Our property is served by mains power from across the river at the site of our neighbours’ river pump. We do not have a landline phone but have acceptable mobile phone and internet reception. We do not receive commercial television reception but do receive ABC and SBS. We are competent internet users and monitor 3 separate weather sites and subscribe to text and email alerts from the Early Warning Network (EWN). In subsequent paragraphs I refer to the receipt of alerts from their service as a primary source of weather advice to us and to set the context of our actions being based on that advice. A later section of this submission will make more specific comment on the efficacy and adequacy of the warning systems during this event.

**The Day of the Flood**

As we started our day’s work on the day of Sunday 5 June we knew we would receive some significant rain during the following 24 hours and knew that minor to moderate flooding might develop Sunday night into Monday. A Flood Watch for all northern river basins had been issued on Friday 3 June and a Severe Weather Warning for heavy rain had been issued on the Saturday afternoon. Detail on weather warnings and observations are provided later in this submission.

On the Saturday we had 23 sheep grazing the riparian strip outside our river boundary fence. As a result of the weather information available, we moved those sheep away from the river and up to the top part of the farm.

23.2mm of rain had fallen in the 24 hours prior to 9 am on the Sunday morning and during the day light rain fell with only about 20-30mm experienced by late afternoon. At about 10:30 am we received another ‘Severe Weather Warning’ from EWN for heavy rain and damaging winds across the north of Tasmania. This alert made no reference to the current Flood Watch.

As expected, we experienced a pretty straightforward day for the majority of 5 June, but that was to change dramatically by mid-afternoon.

At around 3:30 pm I became aware that the river was rising as it could just be seen through the trees and across from the shed. I went down to check our pump shed and noted the water level to be rising and running hard. I assessed that, just as we had expected, we may be heading for a minor or moderate flood, so I isolated power at the meter box attached to that shed. At the time, most of our cattle (23 cows and calves) were in a paddock on the river flats near the pump shed. Noting the rising water and again based on the experience of several minor to moderate level flood events in the past, I thought that the river might back up into the bottom (downstream) corner of the river flat paddock and, as a precaution, I blocked off the area with a fixed electric fence tape to prevent the cattle from going near the flood water. This left the cattle on the highest part of that end of the river flats; an area that has never flooded since we have owned the property. I expected the cattle to be safe here.

I then went to check on the Elmer’s cattle which were in the next paddock downstream from our property. These, approximately 70 young dairy heifers, were congregated around a hay-feeder trailer in what we refer to as the ‘Ayer’s Rock’ paddock. The trailer was at about the lowest point in the paddock and adjacent to a small permanent creek which flows into the river. I thought it prudent to move these cattle to higher ground on the upper tier in a connected paddock at the southern (upstream) end of this river flat. This was achieved without incident.

By this stage I believed that I had taken sufficient precautions for a moderate flood level event.

By around 4:30 pm I was attending to other routine duties with daily feeding of other stock. Sunset was at about 4:50 pm (although it was still light at this stage) and at about that time Linda drew my attention to the continuing rising river level, now close to breaching its banks opposite the shed. Consequently, we assessed that the flood may be higher than expected and decided that we should move the cattle off the river flat as a precaution.

At 4:27 pm a further email alert was sent from the EWN which contained a single reference to a Major Flood warning for the Mersey River. I believe a summarised SMS was also received at that time but my recollection is that I saw neither the SMS or the email until much later that evening; far too late to be of any use to us. Even if I had read the SMS or email at 4:30 pm, there would have been no change to the events that followed. Further comment will be made on this in a later section of this submission.

The two of us went down to move the cows up off the river flat, traveling in our Polaris All-Terrain Vehicle (ATV) to the northern (downstream) access point. Here there is a small crossing over a culvert. This culvert empties water from a drainage ditch which runs below the bank to the western side of the river flats and is normally large enough to cope with high-rainfall. Water was now completely covering the culvert to about knee deep and starting to run quite strongly. At this stage we believed that this water was coming from run-off from the upper paddocks and from the furthest upstream ends of the drainage ditch. We had seen the ditch overflow in the past but had not seen the same level of water as experienced on 5 June. We were beginning to realise that we were headed for a serious flood event.

Judging that the water level was too high and already running too swiftly for me to cross safely or to bring the cows and calves back through, we scooted up to the upstream access point to the flats. There was much more water coming onto the flats further upstream (from the Lobster Rivulet area) and the drainage ditch here was also overflowing and was running along the track below the bank at about mid-shin depth. I was able to climb a fence and head out across the river flats, walking through water at about ankle to mid-shin depth, to get to the cattle, now some 500m away. By the time I got to them (at about 5:15-5:30), it became clear to me that I would not be able to move them the 500m across the paddock and through rising water off the flats to higher ground. While I still did not expect that the river would ever flood to the level it did reach, I cut as many of the temporary electrical tape fences I could get access to, thinking that the cattle would find their own way off the flats or find the highest point and stay there for the duration of the event. I then began to make my way back the way I had come. By this time, it was becoming quite dark (Evening Civil Twilight ending at about 5:45 pm).

As I made my way to the southern end of the river flat paddock, I began to walk through some much deeper water (to mid-thigh in parts). I reached the permanent 1.1m high fence on the north side of the shelterbelt below the shed. Trying to climb this fence, my boot became caught; twisted between the top 2 wires. It took some contortion and effort and some time for me to extract myself from the fence. I then had to climb a second fence and cross the next paddock to reach the access gate to the flats a further 100m on. The water level increased as I progressed and I was eventually swept off my feet just as I approached the final fence. I managed to grasp a star picket on this fence which was just 100mm above water and to slide over it, swimming and scrambling the final 20m to reach dry ground on the bank. I was then able to walk back to the shed, getting there around 6:00 to 6:15 pm.

While I was out on the bottom paddock, ……. had returned to the shed for a short period before driving from one access point to the other trying to see me and calling out for me. I could hear the ATV and was aware that she was driving back and forth but we had no communications between us. …. was quite frantic for my welfare at this stage. …….. had no idea where I was or what I was doing or how she could assist. The power had failed and she was concerned that I could not get orientation without the shed lights and, at one stage, positioned the ATV with the headlights directed out onto the paddock from the shed. ……. was on the cusp of ringing emergency services when we were reunited. The impact of the stress of this circumstance is significant.

We have only a few photographs of the river during the afternoon of 5 June, taken from the shed. The best of these photographs are attached as Photos #1, #2 and #3. The first two photographs were taken at 5:16 pm and show the river having climbed up to near breaking its banks (about 4-7 meters above low river level and above the moderate flood level). The third photograph taken at 5:55 pm (just 39 minutes later) shows the water right across the entire paddock. At this stage I was making my way towards the cattle. We estimate that the water would have been about 5-10 cm deep on the river-side of the flats and the lower parts of the paddock (such as towards the drainage ditch on the western side) were in excess of 2 meters deep by about 6pm. I contend that the water level across the flats rose over 1m in about 1 hour and that while the height of the water definitely climbed during the night of 5 June and early on 6 June, the water level at about 4 pm on 6 June was about the same as at 6:00 pm the night before. Photograph #4 shows the water in the final paddock through which I had to wade. The final fence that I had to swim over is evident in the centre of the photograph.

It may be understatement to suggest that I was very lucky to survive the experience of the afternoon of 5 June and without doubt, this could be considered a ‘near-miss’ event with potential fatal consequences. Certainly, some risky (if not blatantly foolhardy) decisions were made. I am very risk aware (by virtue of a previous military career of 30+ years) and I do not generally make rash decisions. I would contend that, had I been better aware of the impending severe and rapid rate of rise and the force of the water in this major catastrophic flood event, I would have made different decisions. Further comment will be made later in this submission on what might have been done with better advice on the flood risk.

Power had gone out for about 3 hours during the day on 5 June and from about 6pm onwards. We have an emergency generator which we connected through the main switch board so we had power when required but shut the generator down overnight to conserve fuel. During the evening we were able to get a telephone call to inform family that we were OK, but we had no internet or television reception. That was a very stressful and sleepless night, with heavy rain raising our concern for our cattle and increasing our feelings of overwhelming helplessness.

**The Immediate Aftermath**

Attached to this submission are photographs showing the flood event and the damage that occurred. Other photos compare the farm before and after the event. Some video footage is also available if desired. Other visual evidence, including aerial photography and video is also available from DPIWE (Peter Voller) and Cradle Coast NRM (Mark Wisniewski).

At first light, the extent of the flood was clear, devastation and damage was evident and, worst of all, all of the cattle on the river flat had been washed away. The entire bottom paddocks were awash with deep, fast-flowing, debris strewn brown water and the tree-line along the river had been cleared along a distance of about 750m. My diary entry for that morning says (in part): “*I cannot possibly explain the heartache, anguish, guilt and horror this morning*”.

Mains power remained out across much of our local area until 5:45pm and mobile telephone coverage was very intermittent early and failed completely from about 9 am to 4:30pm. Before 9, we managed to get a call to our neighbour to let him know that his cows were OK and at about 10am we relayed a message via CB radio to a family member that we were not in any danger and did not require any assistance.

The flood level remained high throughout 6 June and began receding by later that day. As the water level fell, the damage became clearer. At our property, the flood destroyed over 3km of fencing (all less than 10 years old), sheep yards and pump shed and other water reticulation infrastructure. Approximately 3-4ha of land along the river has been completely eroded and a further 2ha is now covered with river stone to a depth of up to 1m. NRM North have estimated the erosion in one part of the paddocks at approximately 30,000 cubic meters of soil, but we believe this to be a very conservative figure. The following link provides aerial imagery of our property before and after the flood which was used by NRM to make their erosion calculations.

<http://ccnrm.maps.arcgis.com/apps/StorytellingSwipe/index.html?appid=5031a7f3c0fa4c0f8ea8b0a1f6cba2dd>

There is also light to moderate tree, vegetation, stone and sand debris across 2/3 of the rest of the pasture which is also badly pot-holed and furrowed. The productive capacity of our property has been reduced by over 50% and we have no clear plan for restoring it to near the previous level. It is very likely that full capacity cannot be achieved and that much of the damage is permanent.

The flood changed the route of the river with a new path being pushed through our paddocks and further downstream, through our neighbours’ paddocks. Further comment on this is made later in this submission.

Our immediate neighbours suffered similar, significant damage to infrastructure (buildings, fences and irrigation) and machinery and while they were fortunate not to lose any stock, over 200 bales of silage were lost. This has had very serious consequences for the local farmer’s dairy operations (the extent of which is not explained out of respect to their privacy).

The neighbours downstream of the bridge had to be evacuated by emergency services helicopter on 6 June (during the flood) and their home and property were extensively damaged. They have not been able to reinhabit their property since the flood and have been very seriously limited in their ability to progress repairs due to access difficulties.

**IN THE WEEKS AND MONTHS TO FOLLOW**

**Assistance Received**

In the days following the flood, we had inquiries into our safety and situation from family, community members and from Kentish Shire Council (KSC) staff; who also provided information on access to emergency financial assistance and other support. At no time were we contacted by any emergency services organisation but were overflown by a helicopter on 9 June.

Within a few weeks, members of the Lions Club of Sheffield had been in touch and visited with a care package and a cash donation for fodder (which we used for fodder, agistment and stock transport costs). The Lions Club have continued to maintain contact and have provided emotional and practical support to us, but more particularly to the Haywards. Similarly, a representative of Aussie Helpers also visited providing information on how to access support. Blaze Aid have provided support for fencing and we have also had a donation from Drought Angels in Queensland; which was coordinated through Roberts Ltd. Roberts also offered to sell supplies required for flood repairs at cost price. We have benefited from and are very grateful for all this support.

We have had visits from KSC (Mr J Magor), Cradle Coast NRM (Mr Mark Wisniewski) and DPIWE (Mr Peter Voller). They have been understanding and helpful. However, we remain without any idea on what the State Government intends to do in regards to river restoration work or how we can progress with internal work to return our property to its previous condition.

On 12 June, I wrote to our local Federal Member (Eric Hutchinson MHR) seeking assistance in addressing our need for improved access and other assistance. A response was not forthcoming. We have had no contact from any political representative at any level of Government or any official contact with any Government department. We do not believe that this is due to their lack of knowledge of our circumstances.

I registered our request for external assistance with the Flood Recovery Task Force with a number of associated questions. Other than completing a questionnaire and being referred to other, known, source of information on Government assistance and deflecting my questions on intended actions etc, the Task Force has provided no further practical assistance to us. It remains unclear to us as to the value of the Task Force at all.

It is hoped that the Inquiry team will be able to inform the appropriate person, persons or organisation that do have the capacity to make the necessary decisions to initiate the essential action to address our situation.

**Stock**

As previously stated, 23 head of cattle were washed away during the flood. Miraculously, from 7 June onwards for the next two weeks, all but 7 were located and eventually returned to the farm. 12 were found in bush and tree plantation blocks on our neighbours’ property or had found their way to join their herd of heifers. Two were found on the eastern side of the river about 3 km downstream, another cow a further 5 km downstream and one young steer calf turned up (unhurt) two weeks later at Kimberley; a distance of approximately 27 km from our property. A single cow turned up on our southern river flat on the morning of 6 June, having survived being washed downriver from a Mole Creek property (The Den) and through the Allum Cliffs area. With the generous help of neighbours in the Weegena community and a team from Roberts Ltd (most capably and enthusiastically led by Ms Ebony Bannister) all of these animals were returned to their points of origin. We cannot overstate the impact of the loss and return of our cattle has had on us emotionally; a rollercoaster of sorrow and delight.

**Access**

The main route into our property via Kelly’s Bridge and the neighbours’ road is now impassable with the bridge being destroyed and much of the access road washed away or very badly eroded. Kentish Shire Council (KSC) has contracted for a replacement bridge but work has yet to commence. It is understood that this work will not be complete until mid-January 2017 (over 7 months after the flood).

The route from our property to and from the bridge is via Right of Way through our Neighbours’ property. As such we are very much reliant on their good will to restore the track. The ….. have already made this track passable to 4WD, part of which runs through the paddocks (which is not ideal) but has allowed minimal access to the Haywards’ property. The KSC also did some repairs to this track following further damage by a secondary flood on 3 October. Notwithstanding, this track will require significantly more effort and expense to be fully restored to its previous condition. The …. have purchased an excavator and …….. is using it to remove debris and shingle from their property and to repair the road, but this will take several months of work. We expect to make some contribution to assisting with this work and are grateful for the efforts of our neighbours and KSC. Hopefully, access will be fully restored to coincide with the opening of the new bridge.

In the meantime, a temporary, alternative, short-term access route for us and our neighbours has been established through the southern boundary of our property and forestry roads. This route is 14km to the nearest sealed road and has added over 30km in distance to the nearest town of Deloraine. These roads vary in quality and level of maintenance, deteriorating towards the river end. The main formed forestry road terminates approximately 500m from our boundary access point. From this point eastwards the road becomes a track intended only for pedestrians and horse riders using the Tasmanian Trail. One of the huts on that trail is situated just outside our southern boundary. Over the years, the track to the hut (and beyond) has been used by 4WDs and this has made it more accessible (weather dependant) to vehicles. Beyond the hut, the track continues onto an open paddock adjacent to the Mersey River where the Lobster Rivulet joins the River. This has become a popular camping and picnic spot for visitors and several hundred people have used the area in past years.

Since the flood, the consequent increase in traffic through the forestry roads and particularly the last few hundred meters has resulted in significant deterioration of the track. KSC paid for some minor contractor work to improve this area and to push a more ‘all weather access’ route to a point on our southern boundary and connecting to a track on our property. This access has been essential for us and our neighbours and we are very appreciative of the support of the KSC. However, this route remains challenging.

I will make further comment on the access issue further on in this submission.

**Power**

As mentioned previously, mains power was interrupted during the flood. This was not caused by damage to infrastructure on our property. It was amazing that the power pole on the river bank was still standing (but in the water and awash with debris), whilst most of the trees upstream of it were gone. The pump shed near to and taking power from a transformer on the pole was completely covered by debris. Fearing that the power connection to the shed may still be live I contacted TasNetworks. After some confusion (and subsequent incorrect advice from them) as to whose responsibility it was to isolate power at the pole, a team arrived and isolated power on 16 June. Several weeks later, after having restored the power line into the ……..property, another TasNetworks crew with a heavy excavator cleared most of the debris from around the pole and the pump shed. This allowed us to recover the pump and have it sent for repairs. Due to a number of factors; most notably contractor availability and access issues, it has not yet been possible to replace the pump shed or restore stock water reticulation across the farm. It is expected that this will take several days of work and cost an estimated $6,000.

**Repairs**

We have begun the task of repairing damage and have cleared up much of the old fence debris and have established new temporary fencing to allow the cattle to return to grazing on the lower flats while keeping them away from the river banks (which remain unstable); to protect the banks and for the cattles’ safety. We have been fortunate to have had the invaluable support of Blaze Aid (5-7 September) in assisting us to restore a boundary fence on the southern (upstream) end of the river flat (adjacent to the picnic/camping area) and another small section of internal fencing that was destroyed. There remain kilometres of fencing to be replaced.

The flood came right across our bottom paddocks, eroding the banks badly and starting to form a new channel through the paddocks. Since the main flood of 6 June, we have experienced 3 further flood events:

12-13 July - a moderate level flood;

30 September - a minor level flood; and

2-3 October - a moderate to major level flood.

On each occasion, flood water has run through the paddocks again; most notably during the latest event with up to 2 m of raging water again running through the river flat paddock and further erosion of the river bank and our paddocks was evident on each occasion. River bank decay is still occurring. Temporary fencing to constrain stock was also damaged by these subsequent floods. The attached photographs depict these events. Video footage can also be provided.

Further comment is made about the change in the path of the river in a later section of this submission. At this point it is only necessary to point out that we cannot get on with work in our paddocks until the river’s path is restored and the banks secured. Action to clear the flood debris and repair infrastructure has also been limited by ongoing on-ground limitations, such as the wet weather and the lack of appropriate machinery but most significantly due to access restrictions. It has also been limited by a lack of knowledge. We simply do not know the best way to go about doing the work required and have been unable to access specific advice or support in this regard. Once the debris (logs, rock and sand) is removed, we will still have to fully renovate the pasture. This will have to be done in sections (to try and maintain some productivity) and will take several seasons, significant contracted work and high cost. None of this can proceed without some reassurance that the river won’t flood to the same height or with the same force for at least another generation.

**The Damage Bill**

We have tabulated the total estimated financial cost to our property to be in the vicinity of $120,000 but this does not include any earthworks or associated effort in restoring the river or riparian zone. We have also lost significant production capacity which will have a significant impact on farm costs and income over the next several years. For example, we will be unable to cut fodder from the river flats until debris is cleared and the ground made safe for machinery. We have had to reduce stock numbers and expect calf numbers for sale in 2017 to drop from 25 to 5. We doubt that we will ever be fully able to return the property to the previous state and are forced to re-examine our activities here.

**Financial Assistance Measures**

We are aware of the government financial assistance for flood recovery. We have been given a Primary Producer Clean-up Grant and intend to access the Rural Relief Fund and the Transport Subsidy as we have to make payments for the associated expenses. We accessed a similar grant scheme following the floods of 2011. Such funding is critical for us to start on recovering from the event.

A number of comments are proffered on this aspect.

The application process for the Grant was straight forward and the administration staff at AgriGrowth Tasmania (within DPIWE) have provided excellent assistance.

The $10,000 limit for the grant is ridiculous given the total damage cost sustained to properties across the state. This limit is less than that provided in 2011, yet the damage has been much more severe this year. Noting that the State should accept that the action or inaction of their agencies or business entities have contributed to the extent of the flood in (at least) the Mersey, Meander and Forth valleys, they should provide exceptional reparations to match the circumstances.

The eligibility criteria linked to income derived from the impacted land is similarly ridiculous. The flood did not discriminate by income and therefore assistance for recovery should also not discriminate. None of our neighbours have qualified for the Primary Producer Grant, notwithstanding the very substantial impact upon their livelihoods and the value of their properties. The Inquiry should recommend the abolition of the income test.

**Insurance (a Possible New Approach)**

Despite attempts to do so we have been unable to secure insurance for flood for our property and would suggest that if it were available it would probably be cost prohibitive. As such, we cannot comment upon the effectiveness of the insurance industry in response to this event.

However, we do have a proposal for consideration. We would suggest that the Inquiry consider the formulation of a Government backed disaster recovery scheme with some contribution to be made by rate-payers in areas assessed as having a disaster risk (flood or bushfire). The landowner contribution could be based upon factors such as land area and risk factor with these levies being collected via council rates. This would spread the cost of the scheme across a wider base with the benefit to landowners being able to claim against damage sustained.

**Other Impacts**

We have previously alluded to the emotional and psychological impacts that the flood has and is having on us but there have been other effects. We have had to direct considerable effort and energy and effort towards flood damage repair; meaning other work in improving our property has not progressed. Access issues have also meant delays and complications in routine living. There have been financial consequences beyond the initial damage bill and the long road to funding repairs. The land value of our property has literally been eroded and the future viability of our farming enterprise comes into question. We will need to review our options and intentions. While we have plans to build a house at the farm and to further develop its potential as a diversified organic farm and as a eco-farm tourism destination, the changed environment may impact our decisions for the future.

**THE KEY ISSUES**

The following section addresses specific issues relating to this flood event. They are:

The timing and effectiveness of flood preparedness advice warnings for this and future events;

Factors contributing to the severity of the impact of this event; and

Temporary access.

**Flood Advice and Preparations**

An explanation of our awareness of the developing flood risk leading to the unprecedented impacts of the 6 June flood is important to this submission and the following provides commentary on the timeline of our knowledge and how that knowledge effected our decisions immediately prior to the flood. I repeat some of the chronology of events cited earlier in this submission to aid clarity in the discussion in this section.

From television news we were aware of the ‘East Coast Low’ as it moved down the Australian east coast and knew that rain was likely in our region. While the weather phenomenon was unseasonal, it was winter and heavy rain in June was not unexpected. On 5 June we knew we would receive some significant rain during the following 24 hours and knew that minor to moderate flooding might develop Sunday night into Monday. A Flood Watch for all northern river basins had been issued on Friday 3 June and a Severe Weather Warnings for heavy rain had been issued on the Saturday afternoon.

We watched the evenings’ ABC state news and weather on 4 June and ABC News 24 early the following morning. During the day light rain fell. At about 10:30 am we received a ‘Severe Weather Warning’ from The Early Warning Network (EWN) for heavy rain and damaging winds across the north of Tasmania. I do not normally carry the phone with me and I do not check emails continuously. However, I was checking my phone during the day and it is likely that I saw this Alert during the morning. However, it is significant that there is no update of the Flood Watch or any upgrade to a Flood Warning in this advice. I did not check the Bureau of Meteorology website that day or listen to ABC radio.

I record daily weather observations in a diary and take rainfall from an electronic automatic weather station. At 09:00 on 5 June I recorded that 23.2mm of rain had fallen in the previous 24 hours and this was the first rain for 9 days. It continued to shower lightly during the day (5 June) but only about a further 20-30mm had fallen by late afternoon. At 09:00 on 6 June I recorded 141.1 mm for the previous 24 hours and a further 7.4 would be recorded for the subsequent period. It has been our experience that heavy rain of over 50mm may lead to a minor flood risk with significantly more rain required to increase the flood risk beyond that. With a relatively dry period during the second half of May and with the rain on 4 and 5 June we only expected a possible minor to moderate flood event. This correlates with the advice received prior to the late afternoon of 5 June. Dependent upon the actual flood height and based upon our previous experience with several flood events, we expected that there would only be a minor impact on our property.

At 4:27 pm a further email alert was sent from the EWN which contained a single reference to a Major Flood warning for the Mersey River. I believe a summarised SMS was also received at that time but my recollection is that I saw neither the SMS or the email until much later that evening when the flood was well past the major flood level.

I have referred to the receipt of Alerts or Warnings from the Early Warning Network as a primary source of weather advice to us. These notices are derived from Bureau of Meteorology (BOM) information and mostly mirror BOM notices. The EWN Alerts are received by both email and SMS; the latter usually being a much abbreviated summation of the former. While I do not have the SMS records any longer, it is likely that I received an SMS at each time an email alert was received. For the period from 3 to 6 June, only four alerts were received from them:

Friday 3 June @ 12:11 pm - Flood Watch - All Northern and Eastern River Basins;

Saturday 4 June @ 2:09 pm - Severe Weather Warning - Heavy Rain;

Sunday 5 June @ 10:38 am - Severe Weather Warning - Damaging Winds and Heavy Rain; and

Sunday 5 June @ 4:26 pm – Flood Watch – All Tasmanian River Basins

Several observations are relevant on these alerts. Firstly, for context, about fifty alerts are received in any six-month period. For the four alerts received in the period of interest, none include the word ‘Warning’ in the subject. Indeed, as shown below, the mention of a Flood warning appears in only one of these alerts (the final one). The alerts also use a colour-coded threat level system of yellow, amber and red. For the four alerts above the threat level remained at yellow.

Further comment on the final alert is warranted. It is relevant that this alert is given the heading of Flood Watch with a threat level of Yellow only (the lowest). The text only refers to the Flood Watch being extended to all Tasmanian river basins and it is only evident from well down into the email text that a Major Flood Warning was current for the Mersey River. My recollection is that the SMS did not contain any reference to a flood warning for the Mersey. Summarily, putting aside the semantics of ‘Watch’ or ‘Warning’ and colour coded threat levels, it is our contention is that we did not receive an appropriate flood warning until such time as the major event was occurring. Clearly, this is inadequate.

Given that we only received this advice because we independently initiated and pay for it, it could be suggested that official advice from government authorities in this regard, was not only inadequate but completely absent.

We would further contend that the lack of information by authorities hampered the provision of timely flood warnings. Reference to BOM river height data is a case-in-point. The height of the Mersey is measured at several points along its course and I often check these levels as a flood event is developing. For whatever reason; probably because we were not getting much rain at the farm and the flood status had not been elevated above the ‘Watch’ level, I didn’t check (i.e. I wasn’t prompted to check) the BOM river data on 5 June until it was too late. Had I done so, it would have been clear to me that a major flood was imminent.

Reference to this BOM data (scanned copy attached) shows that the rate of stream rise and the actual river heights being recorded at river gauges at Liena and Kimberley were moving rapidly past moderate and into and beyond major flood levels many hours before flood warnings were issued. For example, the gauge at Miena showed a height of about 1m at about 11 am having risen 0.5m in the past few hours. By midday, the height had gone through 3m (into the moderate flood level range), having risen 2m in less than 1 hour; the gradient on the graph is becoming near vertical at this point in time. There could have been little doubt to any observer that a very major event was unfolding. Notwithstanding this evidence, higher level warnings were not issued; when full emergency measures should have been activated. This is unsatisfactory, if not negligent. By 3 pm, the river height was well above the Major Flood level at Liena and heading in that direction downstream.

Of course it is appropriate to comment upon our decision-making on 5 June. In hindsight, it is easy for us to say we would have made different decisions had we known what was coming. Of course we would. It might be suggested that we had become complacent with flood events and should have been more prudent or taken a lower risk approach when making decisions. We should also have made more regular reference to the BOM web-site and the raw river height data. These are probably true in part and we fully accept our own responsibility in this regard. I deeply regret not having done so on the day, just as I had done for many other previous occasions. However, we were much influenced by the weather actually being experienced on the day and these events (and the advice we had to hand) did not trigger me to break free of this complacency and pay closer attention to the forecasts. Indeed, we had been lulled into downplaying BOM alerts as they very often did not eventuate as they predicted (we will not add to the popular commentary on their poor track-record for accuracy in rainfall prediction).

Notwithstanding, we contend that if better quality and more timely information had been available to us as to the extent of the flood risk, we would have been in a position to make better decisions and to take earlier action to prevent the scope and scale of damage to our property. We would have been able to move our stock to higher ground and we could have relocated portable equipment (such as pump, troughs, temporary electric fencing and sheep-yards) out of the flood’s path.

It follows that if we had been given better, more timely advice, the financial impact upon us could have been reduced. We contend that, because the authorities failed to provide adequate advice to us, they should contribute to a remedy of the damage done.

As a footnote to this point; it has been our observation that, since the events of 5 June, the BOM has been very quick in issuing flood advice, in providing updates of advice status and in upgrading the risk status very early. As one example; a flood Watch was issued on 7 September followed by an upgrade to Warning on 8 September, predicting heavy rain and moderate level flooding. While we took action to bring our cattle up to higher ground, the rain did not eventuate as forecast and the river did not flood. Notwithstanding, we continue to pay much closer attention to the BOM forecasts and raw data and will act early in the future.

Unfortunately, the gauge at Kimberley was destroyed during the flood and has not been replaced. The Liena gauge is limited as it does not reflect the inflow of water further downstream; such as from Lobster Creek; which drains much of the Chudleigh/ Western Creek area. More gauges should be installed along the rivers to improve the quality and timeliness of flood warning advice.

A new system should also be developed and instigated to improve warnings, preparedness and responses by communities and individuals to such events. The use of river gauges to trigger automatic alerts to valley residents should be considered as forming part of this system.

**Factors Contributing to the Scope and Scale of the Flood Damage**

The causes and factors contributing to the severity and extent of the damage caused by the flood event must be examined and fully explained and actions must be identified and implemented to reduce the possibility and consequences and recurrence. It is hoped that this Inquiry will provide answers to those affected by this event.

We fully expect that ‘experts’ will provide information to the Inquiry on this aspect. They will contend that the matter, while complex, was very much a natural event coincident with a number of circumstances beyond the influence of any persons or agency; a ‘Perfect Storm’. We would contend that, while this is certainly a very usual event and there many contributory factors, it is too easy to dismiss it by the use of clichés. We believe that there were factors which made the damage worse and these factors were within the control of two government agencies; Hydro Tasmania (HT)and the Department of Primary Industries and the Environment (DPIWE).

**Hydro Tasmania**

It is appropriate that the Inquiry will review the potential impact of HT’s cloud-seeding activities on the day prior to the 6 June flood. This should examine all river basins and not be limited to the Derwent catchment (irrespective of the planned target area). While extra rain on the central plateau is a natural geographical phenomenon, it is difficult to understand the variance in rainfall recorded at our property (140 mm) to that reported in the upper catchment area (>450 mm); just 50-100km away. I would suggest that the Inquiry should not easily accept the denials of HT, but rather, the circumstances should be examined by an external, independent, competent authority based on all available scientific data. The onus of proof should shift to HT to prove that their actions absolutely had no impact upon the amount of rain that fell on 5 to 6 June. If this cannot be proven, then HT must carry and accept some culpability for having contributed to the damage.

The second factor contributing to the flood impacts, is the high dam levels prior to the event. While I have no factual data to support the proposition, eye witnesses have reported upstream storages to have been at full capacity on Saturday 4 June. For several days prior to this, HT must have been aware of the weather system that led to this flood and must have been aware that their storages would not be able to constrain any of the expected rainfall. As a consequence, as the high rainfall in the catchment commenced, the dams were unable to perform a ‘buffering’ function to moderate the stream flow and rate of rise. HT should have been lowering dam levels in the days before this event; reacting appropriately to the forecast weather. Reference to the BOM river height data for the Mersey river for the period prior to the flood event shows heights at minimal, environmental levels only. They failed to respond to the forecasts and this subsequently resulted in increased damage downstream.

In my opinion, it is not a coincidence that the flood was so severe just prior to the Bass Link cable connection being restored following a long period of failure. There is no doubt in my mind that HT was filling dams to get ready to maximise power output just as soon as the switch was thrown on the connection to the mainland, in order to start to recover from their losses while the cable was broken. While this might be seen as a reasonable strategy, the failure to adjust to the impending circumstances and to realign priorities to safety over profit reflects poor judgement if not a blatant obfuscation of HT’s community obligations. The recent consideration of HT Executive performance pay being linked to dam levels also warrants investigation by the Inquiry.

HT must accept that they have a responsibility to the community to manage flood mitigation where possible and to be aware of the implications of their management practices. As such, HT must accept some culpability for having contributed to the scope and scale of the flood damage as a consequence of their decisions and actions (or inaction). It follows that HT should therefore make a leading contribution to flood recovery and remediation works.

**DPIWE**

Our third point in regards to this issue relates to how the river changed course during the flood and how this may have been prevented. We have heard and read the suggestion that the height of the water across farm land and the resultant damage caused was just a natural event and that the water simply took the easiest route in straight lines. Some have described this process as being the same as that seen in the formation of ‘Oxbow lakes’ where a river cuts off a corner as it runs directly forward, rather than following its previous meandering course. While we appreciate that our entire property lies within the reach of an ancient river bed; reference to a map or aerial photograph will show that the river has chosen a new course at the mid-point of a straight stretch and not where the banks curve. ‘Experts’ might give several explanations for this but we proffer one simple contributor, based upon on-ground observation of facts, prior to, during and subsequent to the flood.

Some years ago, in the river directly below where our shed is located, a large log had become wedged across the main channel on the eastern side of the river. In this vicinity and further downstream, willows had already taken hold along a narrow stretch running parallel to and within the river plain. These willows allowed for the aggregation of sediment and debris, where other plants have taken hold, leading to the development of a slender island. Over an extended period (several years) of higher stream flows and minor floods, river shingle began to accumulate upstream of the log-jam at the head of this island, such that the river had become very shallow in this area. Consequently, the river began to diverge either side of the island and the main channel began to carry less water flow. When the latest flood began, the water brought with it significant debris including large trees and logs, some of which were held against the log-jam area. This debris was held in place, supported by the willows which seem to have a much greater propensity to withstand the force of the water relative to native species.

This ‘dam’ then backed the water up behind (i.e. upstream of) it, raising the water level until it spilt over the banks to the west of the jam and into our paddocks. This is depicted in Photographs 60 and 61. As the water then ran, unimpeded across our paddocks and as the level increased, river shingle began to deposit more heavily upstream of the log-jam, building a levee which exacerbated the river flow away from its previous straight course. The force of the flood then began to erode the soil banks on the western side and the riparian vegetation was ripped away, further lowering the height of the bank and creating a new pathway across the paddock.

The effect of the log jam could be seen on the evening of 5 June and right through the next few days as the flood levels remained high. It is still obvious now. The shingle upstream of the previous island is quite clear, as can its effect on the direction of the water flow; now diverting from its previous straight course, back towards our paddocks at an angle of about 60 degrees.

Similar circumstances are evident at two other locations on our neighbours’ property; where the river forged a new path into the paddocks. While the river does curve at these two points (being on the inside of the curve this increasing the effect), willow growth and island formation is evident.

We would contend that without the willows, the river would have been able to stay within its previous banks and the damage would not have been as great.

It has been suggested that the worst erosion has occurred where the riparian vegetation was poor; suggesting that landholders are somehow responsible for the erosion. While this may be the case on other farms, it does not apply to our circumstances. The river was obscured from view by native vegetation along its entire length on our property. The banks were well covered with eucalypts, acacias, tea tree and other native species of tree and shrubs. Ground cover was good. Weeds were controlled as best we could. Cattle exclusion fencing was in place, well clear of the river banks. We could have done nothing better to protect the banks from erosion.

Conversely, DPIWE, which has responsibility for the management of our rivers and riparian zones has done nothing to manage flood mitigation (at least in our area). We would contend that a failure by DPIWE to maintain the rivers and banks or to reduce the increased rate of infestation of willows in our rivers, restricting the main channels and leading to the exacerbated accumulation of debris as log jams, particularly around those willow stands in the river. This has contributed (in our case, almost exclusively) to the diversion of main river flows from the previous routes, against and out over the banks and across paddocks. It is no coincidence that the river has been diverted only where these willow stands have been. Rivers and riparian zones are the responsibility of the Crown and as willows are a national weed of significance; they should be managed much more effectively by the state. The consequence of this mismanagement has become clear following this latest flood event.

DPIWE must acknowledge that its inaction contributed to the extent of the damage from this flood. As such they should take full responsibility for resourcing and coordinating flood repair, restoration and remediation work, in all aspects including physical, financial and technical support. The Government has an obligation to fund DPIWE’s river management activities accordingly. This needs to be instigated immediately and remain in place for ongoing maintenance works.

There is significant urgency here. This cannot wait until Government considers the Inquiry’s report in the second half of next year. Without significant engineering work, the river will continue to run through our property and our neighbours’ and many properties along the river, increasing erosion and degrading productivity. As previously stated, the river has flooded through our paddocks three times since June, with the flood starting when the flood level being ascribed as only at the minor level. Noting that the river reaches this level many times in any one year, it is now anticipated that our paddocks will flood frequently in the future unless action is taken to prevent this. Internal work by us cannot commence until such time as the river is restored to its previous course and a levee is built to prevent it from continuing to flow through our paddock. We fully expect that the river work will be undertaken and/or paid for by DPIWE. This work must be completed before next winter (at the latest).

For the longer term, there must be management plans implemented to maintain the rivers and to reduce the risk of recurrence of disasters like this flood event. We fully appreciate that DPIWE is severely financially constrained to effectively manage this issue, but surely the appropriate level of investment required would be minor relative to the scope, scale and financial cost of the failure to do so. Closer liaison, support, cooperation and involvement of landowners to facilitate a coordinated approach to the issue will be required for improved outcomes into the future.

**A New Bridge and Road Access Following the Flood**

KSC will replace Kellys Bridge. It is understood that the new bridge will be of all-concrete construction (the old bridge was a timber top on concrete bases). It will be slightly wider and higher than the previous bridge. These improvements are all appropriate given the history of damage to this the bridge. However, the new bridge will still be subject to risk of flood damage in the future. It is possible to build a bridge with much less risk of flood damage if it were made higher and a short distance downstream to align better with Kellys Cage Road. This would also make the approach to the bridge much easier and safer and facilitate improved options for farming efficiencies on our properties (with better machinery access). This suggestion was put to KSC but rejected on the basis of cost. We suggest that the KSC the sub-optimal solution led on for the bridge represents a mistake and a missed the opportunity to remedy this situation once and for all.

Without access via the bridge, the alternate route previously referred to in this submission has been used to allow us to get on normal life. Apart from routine movements to replenish supplies etc, we have also had to continue with farming. We have had the recovered cattle returned and other cattle (including two bulls) and sheep have had to be sold. These have been moved by stock trailer and light truck. We have also had to have two truck-loads of fodder delivered for our remaining cattle. On the first of these deliveries the truck got bogged; with several detrimental ensuing consequences. Access has also been required by our neighbours to ferry in fodder for their cattle and other farm management tasks. Access has also been vital for the Haywards to get on with repair work. TasNetworks teams have also used to the access route to effect transmission line repairs at the Haywards’ property. Summarily, significant numbers of vehicles and people have been through over the last several months, all related to the impacts of the flood.

This alternative access is thus proving to be essential and has become an issue of magnitude (and associated stress) that it should not have become. Whilst we have been more than agreeable to the use of our property for access, this has impacted our privacy and quiet lifestyle.

Despite the repairs completed by KSC, this track remains passable only to 4WD and high-clearance 2WD vehicles. Continued use is leading to further deterioration. Furthermore, an unintended consequence of an attempt to clear saplings from the track-side on the final steep downhill with a bulldozer as part of the track repair work, is that the part of the road at its steepest point is now bumpier than it was and is now potentially dangerous.

We acknowledge that road repairs in this area may be outside the remit, area of responsibility or jurisdiction for KSC and so we are grateful that they have been sympathetic of our plight and that they have done what they have. Forestry Tasmania has not, however, been so helpful.

It is understood that Forestry Tas owns and/or has responsibility for the roads but to date they have not been prepared to contribute any resources towards any maintenance or repair work where it would have most effect in improving our access. We also noted that on and around 11 October, Forestry sub-contractors were doing road works on the road, extending to within about 6 km of the end of the road. They declined requests, relayed through KSC, to continue the work down to the road terminus. To ‘rub salt into the wound’, without any notice, they erected a 15 tonne road limit sign close to where their road work ended. The purpose of this signage is unclear as is the timing and we are left to ponder why? If this restriction is to be complied with, we will be unable to get contractors in to commence the necessary repair works at our property.

We appreciate that funding for local councils and for Forestry Tasmania is constrained and that there can be some debate over the nature and extent of support that could or should be provided in regards to access and whether there is any obligation for these organisations. It is understood the KSC will spend close to $1 million in replacing the bridge and that they considered providing for a temporary bridge in the interim but that was rejected on the basis of costs. In light of this and the extended timeframe until the bridge is reopened (up to 8 months), we suggest that it would have been reasonable for either the KSC or Forestry Tas to have made more reasonable efforts to upgrade the temporary access route.

With months still to go without a bridge and as we approach the bush-fire season action is required now to address this shortcoming and improve the standard of this access route. A coincident benefit of doing more work now would derive to the broader community who visit the area and for the Tasmanian Trail group and their users with consequences for tourism.

Despite being aware of the issue and having been asked for specific assistance, the Flood Task Force made no contribution to this issue; leaving it to the affected parties to seek resolution on their own. We would suggest that the Inquiry team consider how such matters might be better dealt with for possible future events. While state and local agencies or government businesses are not prepared or resourced to respond to such circumstances, it is worth suggesting that the government department tasked with coordinating flood response (such as the Flood Taskforce) should be given the responsibility, authority and capacity (in terms of resources) to deal with these types of issues. They should be able to make timely decisions to facilitate immediate physical and/or financial support, to direct or coordinate the responses of other agencies and to make available to them immediate access to funding to do on-site work where required in accordance with a prioritised schedule.

Again there remains some urgency in this issue. It is hoped that the Inquiry team or will immediately direct and support this request for assistance to the appropriate person, persons or organisation that do have the capacity to make the necessary decisions to initiate the essential action to address our situation.

**Conclusion**

We welcome the opportunity to have made this submission and congratulate the reader for having the stamina to arrive at this point. There was a lot that had to be said.

We hope we have made a contribution to the work of the Inquiry and, in turn, that the Inquiry can be effective in getting some essential action implemented in the short term as well as setting out a pathway for improvement for future preparedness and response.

We are happy to provide any other assistance that the Inquiry may seek of us.

Note:

Whilst we acknowledge that this submission may become accessible to the general public; it would be our request that our privacy be respected as far as permissible.