

**CERTIFICATE OF FINDINGS**  
**Section 94, Coroners Act 2006**

IN THE MATTER of **Brian James Watts**

**The Secretary**, Ministry of Justice, Wellington

As the Coroner conducting the inquiry into the death of the deceased, after considering all the evidence admitted to date for its purposes, and in the light of the purposes stated in section 57 of the Coroners Act 2006, I make the following findings:

Full Name of deceased: **Brian James Watts**  
Late of: **42 Farnswood Place  
Redwood  
Christchurch 8051**  
Occupation: **Sales rep**  
Sex: **Male**  
Date of Birth: **13 June 1958**  
Place of Death: **Te Awaiti Bay  
Arapawa Island  
Marlborough Sounds**  
Date of Death: **25 December 2011**  
Cause(s) of Death  
(a). Direct cause: **Accidental drowning**  
(b). Antecedent cause (if known):  
(c). Underlying condition (if known):  
(d). Other significant conditions contributing to death, but not related to disease or condition causing it (if known):

Circumstances of death (if known):

Brian James Watts died on 25 December 2011, the cause of his death being accidental drowning while swimming back to shore after a two hour period of solo free diving at Te Awaiti Bay in the Marlborough Sounds.

Immediately prior to commencing his swim back to shore Mr Watts had spent 5 to 10 minutes on the rocks, and for some of that time he was observed by his wife and daughter to have his head in his hands. His wife considers that it is likely he was suffering a migraine headache at that time.

Having considered all the evidence before me I find Mr Watts is most likely to have drowned as a result of inhaling or ingesting water unintentionally, which lead to laryngeal spasm and his subsequent death.

I make, under section 57(3) of the Coroners Act 2006, the following comments that may, in my opinion, if drawn to the public attention, reduce the chances of the occurrence of other deaths in circumstances similar to those in which the death occurred:

- In the Police National Dive Squad investigation report it was noted that 1) Mr Watts had not released his dive belt, and that if he had this would have assisted greatly on the surface, and 2) that Mr Watts was diving alone which meant that there was no one immediately available to provide assistance; it was recommended that free divers consider diving in pairs. I take no issue with those observations. They are entirely relevant to the issue of safe free diving practices, and

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if brought to public attention may help reduce the chances of the occurrence of other deaths in circumstances similar to those in which Mr Watts' death occurred.

I have, under section 74 of the Coroners Act 2006, and on the basis of decency, prohibited the making public of photos taken of Mr Watts in the course of the investigation into his death.

***Those findings, and my reasons for making them, are also set out in my written findings dated 9 December 2013***

Signed at Palmerston North 9 December 2013



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Coroner Carla na Nagara

**IN THE CORONERS COURT**

**AT BLENHEIM**

**CSU-2011-CCH-001177**

UNDER THE CORONERS ACT 2006

AND

IN THE MATTER of an Inquiry into the death of

**BRIAN JAMES WATTS**

Date of Inquest 15 October 2013

Date of Findings: 9 December 2013

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**RESERVED FINDINGS OF CORONER C NA NAGARA**

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## Background

1. On Christmas Eve 2011 Brian and Diane Watts, and their daughter Kylie, travelled to the family bach at Te Awaiti Bay, Arapawa Island, Marlborough Sounds.
2. They slept in on Christmas day, and after having Christmas lunch, Mr Watts had a rest before deciding that he would go for a free dive in the bay. At that time the weather was fine, and the sea was calm.
3. After a couple of hours Mrs Watts and Kylie went down to the beach. Mrs Watts saw that Mr Watts was sitting at the end of a small island about 80 - 100 metres from shore, and when she caught his attention he indicated he would swim in. While still some distance from shore, near an area of heavy strands of bull kelp, Mr Watts started making what Mrs Watts described as "*strange noises, choking or gurgling*", and then he raised his arm and called for help.
4. Mrs Watts swam out to help him, while Kylie ran to get help from the neighbours.
5. When Mrs Watts got to her husband he was not moving, and was face down in the water. Unable to touch the bottom, she could not keep Mr Watts' head above water and release his weight belt at same time. Moments later a neighbour arrived at the scene to help, and he released Mr Watts' weight belt and dragged him to shore.
6. Emergency services were called, and cardiopulmonary resuscitation began. Sadly Mr Watts could not be revived, and he was declared deceased at the scene when paramedics arrived.

## Cause of Death

7. A post mortem examination was directed to confirm the cause of Mr Watts' death. Following a full post mortem examination pathologist Dr Graeme Taylor determined that the cause of Mr Watts' death was drowning. There was no evidence of any underlying medical condition that was considered to have contributed to Mr Watts' death.
8. Toxicological analysis of samples taken from Mr Watts in the course of the post mortem examination was clear.

## Circumstances of the Death

9. The circumstances of Mr Watts' drowning were investigated by Constable Ben Filiata of the Police National Dive Squad. The objective of his investigation was to determine any causative factors present in the death, and to identify any recommendations relating to safe diving practices. Constable Filiata's investigation included reference to statements given by witnesses in the period immediately after Mr Watts' death, and an examination of Mr Watts' dive gear.
10. Constable Filiata concluded that Mr Watts' dive equipment did not contribute to his death. He found no issues with the equipment Mr Watts was using on that day. He considered it to have been in good condition, and noted Mr Watts had been observed swimming and diving freely prior to the incident.
11. Environmental conditions such as the weather and sea state and conditions were not considered contributory. It was noted that the weather was sunny and warm, and the sea and conditions around the bay were calm.

12. Constable Filiata concluded it was likely Mr Watts drowned after becoming entangled with kelp. It was noted he was wearing long fins, which may have exacerbated the problem.
13. Constable Filiata noted that Mr Watts had not released his dive belt, and that if he had this would have assisted greatly on the surface. Constable Filiata also commented on the fact that Mr Watts was diving alone. He expressed the view that failing to have a buddy diver or observer whilst diving may have been a contributing factor to this death, and noted that having a buddy is an accepted safe practice for free diving in that they are immediately available to provide assistance.

### Issues

14. Two issues emerged with respect to the circumstances of Mr Watts' death: 1) whether in fact he was caught in kelp prior to getting into difficulties, and 2) whether his death was the result of a phenomenon known as shallow water blackout.

#### Was Mr Watts Caught in Kelp?

15. The information given to police who attended the scene suggested that when Mr Watts got into difficulty he was in an area of heavy kelp. The police officer who attended the scene made notes of his conversation with Mrs Watts about the circumstances of the drowning, and wrote in his notebook that there was "*kelp all around [Mr Watts]*".
16. The following day, Mrs Watts gave a formal written statement in which she said "*as I kept walking down toward the water's edge I could see Brian swimming back to shore. As he got to about 20 metres from shore, which is where the heavy strands of bull kelp start, I could hear him making a strange noise, like a choking or gurgling noise and he was throwing his arms and legs around. I yelled out "what made you doing??" as I thought he was playing a joke on me, but then Brian raised his arm and called out for help.*"
17. The neighbour who went to help Mrs Watts also referred to them being in an area "*which is heavy kelp.*" He further noted "*the tide was pretty slack so the kelp was floating on the top of the water.*"
18. At the inquest Mrs Watts was adamant she had never said that her husband was in the area of bull kelp or entangled in bull kelp, prior to his getting into trouble. She maintained that she never even mentioned bull kelp to the Police, and that her husband was in an area of clear water when she found him. She noted that both at the time of Mr Watts' death when police were in attendance, and the next day when the written statement was taken, she was significantly distressed. I have no difficulty accepting that she would have been, and note that in light of her distress what she meant to say regarding seaweed may not have been accurately conveyed.
19. Kylie Watts, in a statement given approximately a month after her father died, stated that he was not in the kelp, having swum through it prior to getting into difficulties: "*Dad had made his way over some kelp and was in relatively clear water.*" She confirmed that evidence in person at the inquest.
20. It is thus not clear that Mr Watts was caught in kelp as he swam. Certainly he got into difficulties in an area that was close to an area that was heavy with bull kelp, but the evidence as to whether he was actually in the area and amongst the kelp is conflicting. Evidence taken from Mrs Watts the day after her husband's drowning can be interpreted as suggesting he was in the kelp, but at the inquest she was adamant that Mr Watts had not been in the kelp when he began to struggle.

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21. I am not satisfied that it has been established with the requisite level of certainty that kelp, or getting caught in kelp, contributed to Mr Watts' death. I stress that this finding is not at odds with the conclusion of Constable Filiata, as his conclusion that Mr Watts "was likely" to have been caught in kelp was entirely reasonable on the basis of the evidence he had. He did acknowledge in his report that Mrs Watts subsequently contacted police to stress she did not believe Mr Watts was tangled in weed, and he noted police could not discount that possibility. I also note that at the time he completed his report Constable Filiata did not have the benefit of Mrs Watts' evidence on oath at the inquest that Mr Watts was not in the kelp.

#### **Did "Shallow Water Blackout" Occur?**

22. A new aspect of Mrs Watts' evidence related to what she saw her husband doing on the rocks before he began his swim back to shore, and her belief he suffered shallow water blackout.
23. In the statement she gave the day after Mr Watts died Mrs Watts stated that when Mr Watts went out for a dive she went and had a nap, and woke up at about 6.00pm. She says she *"mucked around the bach for a bit and then decided to go down to the beach to see what Brian was up to."* She stated that as she got down to just past the jetty *"I could see Brian sitting on the end of a small island which is about 80-100 metres from the shore. I waved out and Brian waved back and yelled to me that he would swim over and meet me on the rocks."*
24. At the inquest Mrs Watts elaborated on this somewhat, and asserted that when she saw her husband sitting on the rocks he had been there for five or 10 minutes, with his head in his hands. She noted he suffered from migraine headaches, and she believed he had one on the rocks that day. She stated *"now, my husband had a headache on the rocks. He clearly had his head in his hands, like this position, sitting curled up on the rocks. That's why I said to him, 'you okay?' And he's sort of said, 'oh yeah, I'll just swim back and meet you on the beach.' He'd been sitting like that for some five, 10 minutes before I got down to the jetty with a cup of coffee in my hand..."*
25. In a statement given to police on 20 January 2012, Kylie stated that after her father had been out a while she had a look with binoculars to see if he was all right. She stated *"I could see him sitting on the rocks. I waved to him and he waved back. A short time after that Mum and I decided we would go and meet dad at the rocks near the old jetty when he got back. Mum yelled out to dad and he said 'I will meet you, come over to the rocks.' She said 'are you all right', and he said he was."*
26. When questioned at the inquest about what her father was doing when she saw him on the rocks, Kylie stated that he had been sitting for quite a while, so she just waved out to him, and then she and her mother decided to go down to meet him. She said when she first saw him he was walking along the rocks, and when she came back after fetching the binoculars she saw him sitting with his head in his hands, which prompted her to ask her mother whether she thought they should go down to the beach. It was at that stage, she states, that she waved out to him to make sure that he was okay. I note that Kylie clarified that she had no concerns for his well-being at that point, and that *"we just decided to go down the meet him anyway cos he had been a while."*
27. Mrs Watts' view was that as Mr Watts was not fettered by kelp as he swam back to shore and got into difficulties, his drowning must have been due to a phenomenon known as shallow water blackout. She spoke of reading about it in a diving manual, and of thinking this explained her husband's death. Quoting from the book she stated at the inquest:

*"Shallow water blackout occurs as a result of deep breathing in an effort to extend the snorkels diving underwater time. As a result, the body fails to*

*respond to the lowering of its oxygen reserves as its Co2 trigger mechanism is not functioning, is not breathing."*

*Symptoms and sign, Your Honour. "Cyanosis, blueness of the face and blackout underwater, commonly on ascent. Often there's no prior warning, except perhaps for headaches."*

*Now, my husband had a headache on the rocks. He clearly had his head in his hands, like this position, sitting curled up on the rocks. That's why I said to him, "You okay?" And he sort of said, "Oh, yeah, I'll just swim back and meet you on the beach." He'd been sitting like that for some five, 10 minutes before I got down to the jetty with a cup of coffee in my hand and when I got out there he was the most amazing colour blue.*

*He passed out underwater, swallowed gallons of water, came to and he was already dead. He would never have revived. It had nothing to do with seaweed, Your Honour, it's called shallow water death.*

*These days young men are holding their breaths going back and forth in swimming pools to see how long they can hold their breath and suddenly die. Same cause.*

*Brian used to take a very deep breath before he would go under every time he was out and my younger daughter spent a lot of time free diving with him ... My husband would go up and go "Ahhh" and then under and that is one of the reasons your CO2 mechanism just suddenly after two hours in particular when you're diving or snorkelling quite normally you black out. When you come to, you are taking on – breathing in water.*

28. I note the phenomenon of shallow water blackout was considered by Constable Fillata in the course of his investigation into Mr Watts' death. He noted that as Mr Watts was on the surface and calling for help he considered shallow water blackout was unlikely to have occurred, although noted it could not be discounted.
29. In light of Mrs Watts' evidence, I sought an independent expert's opinion as to whether shallow water blackout might have contributed to Mr Watts' death. I sent the above excerpt of Mrs Watts' evidence together with her written statement, and the post mortem report to Joy Keene<sup>1</sup> for her opinion.
30. In a report to me dated 1 November 2013 Ms Keene noted that shallow water blackout usually presents in three different scenarios, but the one that appeared most relevant to this particular case was that "*following a breath hold dive where depth hasn't been a factor, but the diver has depleted oxygen stores which results in an increase in CO2 levels and loses consciousness either under the surface or upon surfacing.*"
31. Having considered Mrs Watts' statement, the evidence she gave at the inquest, and the post-mortem report, Ms Keene was of the view that Mr Watts did not experience shallow water blackout prior to his drowning. She noted:

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<sup>1</sup> Joy Keene is an internationally qualified judge for competitive free diving, and the only specialist trained medic for free diving in New Zealand. She has been the event medic for the majority of competitive free diving events in New Zealand since 2008, and has worked as an event medic at National and world record attempts at top level international competitions. She consults on the training of event medics, and is on the board of the governing body for free diving in New Zealand.

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*the transcript of Mrs Watts evidence states that Mr Watts had been sitting for 5 to 10 minutes prior to entering the water to swim 80-100 metres back towards her. After approximately 2 hours of diving, this period would be sufficient to restore ample oxygen supply to the body to not cause any concern for blackout or incidence. In the witness statement, Mr Watts was described as swimming towards his wife, which I assume means there was no breath hold involved in his effort to come to shore as Mrs Watts was able to see him swim toward her. Mrs Watts describes the circumstances surrounding her alert to Mr Watts situation has being characterised by strange noises such as choking and gurgling while throwing his arms and legs around. This behaviour along with Mr Watts ability to call out to her for help is in complete contradiction to what precedes the shallow water blackout.... One could safely assume that the choking and gurgling noises were the result of Mr Watson ingesting/inhaling water.*

32. Ms Keene also notes with regard to the suggestion that Mr Watts was experiencing a migraine headache while resting on the island that *"as experienced as he was in both scuba and free diving, it would be hard to reason that with a headache, Mr Watts would consider swimming underwater to get back to shore, which further supports the idea that he was not practising breath hold swimming or diving to return to shore."*
33. In her report Ms Keene concludes by noting that the inhalation or ingestion of water can lead to a laryngeal spasm, causing the larynx to form a tight seal to prevent more water or foreign matter entering the airways. She noted this is a common response to the vocal cords or the area of the trachea below the cords detecting the entry of water, and has the unfortunate effect of also preventing air from reaching the lungs unless the spasm is relaxed. She went on: *"A common signal that a patient is in laryngeal spasm is an audible grating noise called stridor, which may be what Mrs Watts describes as the gurgling and choking noise Mr Watts was making."*
34. Ms Keene's report was sent to Mrs Watts for her consideration, and to provide the opportunity for her to obtain her own expert's opinion if she wished to do so. In reply Mrs Watts made some observations about the report, but did not indicate a desire to obtain a further opinion.
35. I accept the view of Ms Keene that shallow water blackout did not occur, and in light of her opinion consider that it is likely Mr Watts ingested or inhaled water as he swam back to shore, resulting in laryngeal spasm that culminated in his drowning.


### **Conclusion**

36. I find that Brian James Watts died on 25 December 2011, the cause of his death being accidental drowning while swimming back to shore after a two hour period of solo free diving at Te Awaiti Bay in the Marlborough Sounds.
37. Immediately prior to commencing his swim back to shore Mr Watts had spent 5 to 10 minutes on the rocks, and for some of that time he was observed by his wife and daughter to have his head in his hands. His wife considers that it is likely he was suffering a migraine headache at that time.
38. Having considered all the evidence before me I find Mr Watts is most likely to have drowned as a result of inhaling or ingesting water unintentionally, which lead to laryngeal spasm and his subsequent death.
39. In my view it has not been established that Mr Watts got caught in kelp immediately prior to getting into difficulties and calling for help.



40. I am satisfied Mr Watts' death was not caused by the phenomenon known as shallow water blackout.
41. With regard to factors that may have contributed to Mr Watts' death, I note the comments in the Police National Dive Squad investigation report that 1) Mr Watts had not released his dive belt, and that if he had this would have assisted greatly on the surface, and 2) that Mr Watts was diving alone which meant that there was no one immediately available to provide assistance; it was recommended that free divers consider diving in pairs. I take no issue with those observations. They are entirely relevant to the issue of safe free diving practices, and if brought to public attention may help reduce the chances of the occurrence of other deaths in circumstances similar to those in which Mr Watts' death occurred.
42. Pursuant to s 74 of the Coroners Act 2006, and on the basis of decency, I prohibit the publication of photos taken of Mr Watts in the course of the investigation into his death.
43. I extend my heartfelt sympathy to Mr Watts' family and friends on their sad loss.

Signed at Palmerston North on 9 December 2013



Coroner Carla na Nagara