Coroners Act 1996
[Section 26(1)]

Western *Australia*

RECORD OF INVESTIGATION INTO DEATH

Ref: 28/17

I, Sarah Helen Linton, Coroner, having investigated the death of ***Murray Allan TURNER*** *and the suspected deaths of* ***Mason Laurence CARTER*** *and* ***Chad Alan FAIRLEY*** *with an inquest held at the* ***Perth Coroner's Court, Court 51, CLC Building, 501 Hay Street, Perth****, on* ***24 to 28 July 2017*** *find that:*

1. *the identity of the deceased person was* ***Murray Allan TURNER*** *and that death occurred on or about* ***11 July 2015*** *in* ***sea off Nickol Bay, Dampier****, as a result of* ***immersion****; and*
2. *the death of* ***Mason Laurence CARTER*** *has been established beyond all reasonable doubt and that the identity of the deceased person was* ***Mason Laurence CARTER*** *and that death occurred on or about* ***11 July 2015*** *in* ***sea off Nickol Bay****,* ***Dampier*** *as a result of an* ***unascertained cause****; and*
3. *the death of* ***Chad Alan FAIRLEY*** *has been established beyond all reasonable doubt and that the identity of the deceased person was* ***Chad Alan FAIRLEY*** *and that death occurred on or about* ***11 July 2015*** *in* ***sea off Nickol Bay****,* ***Dampier*** *as a result of an* ***unascertained cause****;*

in the following circumstances -

Counsel Appearing:

Sgt L. Housiaux assisting the Coroner.
Mr D Anderson (State Solicitor's Office) with Ms M Jones and Mr J Carroll appearing on behalf of the Department of Fisheries and the Department of Transport.
Ms K Scott (Clifford Chance) and Ms Gotti appearing on behalf of the families of Chad Fairley and Mason Carter.
Mr P Hopwood (Cocks Macnish) appearing on behalf of Macqueline Pty Ltd, the company that owned the vessel.
Mr J Wyatt (with Trent O'Neil, Clyde & Co) appearing on behalf of Kent Sellar and Murray Riley.
Mr R Cywicki (Australian Government Solicitor) appearing on behalf of the Australian Maritime Safety Authority (AMSA) and Mr Douglas Matchett and Mr Brian Hemming.

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INTRODUCTION

1. In October 2014 Murray Turner purchased a fishing boat. He intended to refurbish the boat for the purpose of fishing for prawns in the Nickol Bay Prawn Fishery off the coast of Dampier, Western Australia. After arranging for various works to be completed on the boat in Geraldton, Murray Turner had the boat surveyed in April 2014 and renamed the boat the '*Returner*'. Murray Turner took Chad Fairley on board as a deckhand and together they steamed the boat up the coast of Western Australia and eventually berthed in Point Samson on 24 May 2015. They put the boat through some sea trials over the next few weeks. Then, on 6 July 2015, the *Returner* left Point Samson with Murray Turner, Chad Fairley and another deckhand, Mason Carter, on board. The three men were intending to head to Nickol Bay for a trawling trip and were scheduled to arrive back in Point Samson on 15 July 2015.

2. The last contact with the vessel and its crew was shortly before 2.00 am on 11 July 2015. On Wednesday 15 July 2015, when the *Returner* did not arrive to the boat harbour as scheduled, Water Police were advised and an extensive air, land and sea search was commenced. Debris was located from the *Returner* over the following days and on Wednesday, 29 July 2015 the *Returner* was located submerged in water approximately 20 km from Nickol Bay. Police divers boarded the vessel underwater the following day and located Murray Turner, deceased, inside. Chad Fairley and Mason Carter were not located on the boat and they have not been seen or heard from since. A police investigation concluded Chad Fairley and Mason Carter most likely died at sea in the period after the *Returner* sank.

3. Pursuant to s 19(1) of the *Coroners Act 1996* (WA) (the Act) a coroner has jurisdiction to investigate a death if it appears that the death is, or may be, a reportable death (as defined in s 3 of the Act). A death is defined in s 3 of the Act to include a "suspected death". A direction was made by the State Coroner that an inquest should be held into the suspected deaths of Mason Carter and Chad Fairley, pursuant to s 21(2) and s 22(1)(e) of the Act. The death of Murray Turner was also a reportable death under the Act and the State Coroner directed that all three cases should be investigated at the one inquest.[1]

4. I held an inquest into the death of Murray Turner and the suspected deaths of Mason Carter and Chad Fairley at the Perth Coroner's Court on 24 to 28 July 2017, just less than two years after the discovery of the wreck of the *Returner* on the ocean floor.

5. The inquest focussed primarily on determining whether the deaths of Mason Carter and Chad Fairley could be established to my satisfaction beyond reasonable doubt. The inquest also canvassed the reason or reasons why the *Returner* sank, which focussed upon the refurbishment of the *Returner* by Mr Turner, as well as the possible contributing environmental factors.

[1] Pursuant to s 40 of the Act.

6. Concerns were also raised by the families of Chad Fairley and Mason Carter about whether the *Returner* was stable and seaworthy after its refurbishment. They indicated their belief that it did not meet minimum stability and safety requirements despite having been surveyed by a Department of Transport surveyor. These concerns were addressed as part of the inquiry into why the *Returner* sank.

7. In addition, the families of Chad Fairley and Mason Carter queried why the Department of Fisheries had not raised the alarm when they lost contact with the *Returner* through their vessel monitoring system. This issue was also explored at the inquest, as well as other related safety issues, with a view to considering whether any recommendations were required to improve public safety for those at sea.

8. The documentary evidence included a comprehensive report into the search for the three missing men and the recovery of the *Returner* with the body of Mr Turner on board prepared by the Western Australia Police, in total comprising four volumes.[2] Oral evidence was heard from a large number of witnesses, including witnesses of fact and those involved in the investigation after the event, as well as from some of the agencies involved. Written submissions were provided on behalf of a number of parties after the conclusion of the inquest.[3]

BACKGROUND

9. Before turning to the events surrounding the death of Murray Turner and the suspected deaths of Mason Carter and Chad Fairley, it is important to give some consideration to who they were in life and what brought them to be on the *Returner* in July 2015.

10. Given the respective age differences of Murray Turner and the two younger men, and the way in which they were referred to by witnesses and family during the inquest, I propose to generally refer to Murray Turner as Mr Turner throughout this finding and I will refer to Mason Carter and Chad Fairley by their first names. I mean no disrespect to any party by taking this varied approach, rather I hope that it reflects the wishes of the relevant families.

Murray Turner

11. Murray Turner was born on 5 September 1957 in Mt Barker. He later moved with his family to Carnarvon. He finished school at 16 years of age and started a career in commercial fishing, which continued throughout his life.[4]

[2] Exhibits 1 – 4.
[3] Submissions by AMSA dated 30 August 2017; Submissions on behalf of the Families of Mason Carter and Chad Fairley dated 31 August 2017; Submissions on behalf of Macqueline Pty Ltd dated 31 August 2017; Submissions on behalf of the Department of Fisheries and Department of Transport dated 31 August 2017.
[4] Exhibit 1, Tab 2, pp. 6 – 7.

12. When he was 18 years old, Mr Turner was injured in a motorcycle accident that led to his right leg being amputated below the knee. He wore an artificial leg from that time and initially stopped fishing for a period, although he returned to commercial fishing in 1977. At that time he was the youngest skipper for the Northwest Seafood Company. He obtained a Skipper Grade 2 marine qualification in 1978. This permitted him to command a fishing vessel up to 24 metres in length.[5]

13. Mr Turner had owned and operated several fishing vessels of various size during his life. Mr Turner was described as a very experienced, capable and competent fisherman and skipper of fishing vessels. He was also described by another fisherman as a very proud man who would not be likely to admit any shortcomings.[6]

14. Mr Turner married in 1978 and he and his wife had three children together: a son and two daughters. He later divorced and remarried in 2002. This second marriage ended in 2011.[7] Mr Turner's son, Morgan Turner, had been estranged from his father for some years but after his second marriage ended they had become close again and by 2015 they spent considerable time together.

15. Morgan Turner was with his father when Mr Turner purchased the *Freda Jess*, that later became the *Returner*. Morgan thought that at that time Mr Turner appeared the happiest that he had seen him in a long time.[8]

16. Morgan had worked with his father often over the years and was planning to start working with him again at the start of the fishing year in 2016. He described Mr Turner as a hard but fair man and he had taught Morgan to do everything by the book with regards to safety. His evidence was that Mr Turner ran his boat very precisely, maintaining a spotless engine and a 'spick and span' deck. In his experience Mr Turner was always serious on the boat, always drug and alcohol free, and he ensured that everything was done correctly.[9]

17. Mr Turner's ex-partner, Cynthia McPherson, had told Water Police that Mr Turner had been fishing all around Australia for more than 15 years and in her experience Mr Turner was not bothered by weather and would stay out in any conditions. He did not always keep the marine radio switched on and would not activate an EPIRB unless there was no alternative, as he preferred to fix problems by himself.[10]

[5] Exhibit 1, Tab 2, p. 7 and Tab 11, p. 12.
[6] Exhibit 1, Tab 2, p. 7; Exhibit 2, Tab 9 [69]).
[7] Exhibit 1, Tab 2, p. 7.
[8] Exhibit 1, Tab 2, p. 10.
[9] Exhibit 1, Tab 2, p. 12.
[10] Exhibit 1, Tab 7, 15.

Chad Fairley

18. Chad Fairley was born on 5 June 1985 in Geraldton. He completed his schooling in Geraldton and was still living with his parents in Geraldton at the time of his disappearance. He was described by his family as an infectious personality with a big heart. As an example, even as a busy young man he would take time to see his grandmother, taking her on drives and having lunch with her. To his parents he was not only their son, but also "a mate."[11] To his brothers Kane and Thomas, Chad was a best friend.[12] He was described by one family member as "the glue of the family."[13]

19. Chad was a talented footballer and won several best and fairest medals. He was so much a part of his local club that a football jumper was retired in his honour after his death.[14] He was also a strong swimmer and had no known medical conditions or mental health issues.[15]

20. After finishing school Chad completed an apprenticeship and became a qualified plumber. He had also grown up around boats and held a deck hand certificate, a scuba diving certificate and recreational skipper's ticket. He had worked at various times helping retrieve cray pots for fishermen in Geraldton and wet-line fishing.[16]

21. Chad was good friends with Mason Carter. They had known each other since they were children. He also knew Mr Turner, having worked for him in the past. They had a good relationship, to the point that Chad was described as 'almost like a son' to Mr Turner.[17]

22. It is apparent from the description of Chad by his family that he was a person who had big plans for the things he wanted to achieve in his life and yet he also had the ability to find joy in the mundane, everyday tasks in life.[18] He enjoyed working, which he balanced with his love of travelling.

23. After travelling overseas to Europe in 2014, Chad worked as a plumber at the Blackstone Aboriginal Community for a time before he began working again with Mr Turner in May 2015. It was only a short-term arrangement as Chad was booked to fly to Europe again for a holiday on 24 July 2015.[19]

Mason Carter

24. Mason Carter was born on 9 September 1988 in Perth. Growing up he was a standout student and talented sportsman who played football and cricket and was also a strong swimmer and passionate surfer. He excelled in

[11] T 514.
[12] T 514 – 515.
[13] T 515.
[14] T 516.
[15] Exhibit 1, Tab 2, p. 8.
[16] Exhibit 1, Tab 2, p. 9.
[17] Exhibit 1, Tab 2, pp. 8 - 9.
[18] T 515.
[19] Exhibit 1, Tab 2, p. 9.

anything he turned his hand to and he loved spending time in the outdoors and camping in the bush with his brothers and grandfather.

25. Mason was described by his family as an intelligent, kind, generous, funny and hard-working person who had a close bond with his family. His father spoke of how Mason had grown from being a son to his "best friend and confidante."[20] He took his role as the eldest son and brother very seriously and was jokingly referred to as the "master mariner of the Carter ship."[21] Mason was also looking forward to being an uncle, as his brother was anticipating the birth of his son. Mason's nephew was later given his middle name, Mason, in honour of his uncle's memory.

26. Mason grew up around fishing vessels and spent a lot of time fishing or working on boats with his father and brothers. He lived his life on the ocean: surfing, diving, fishing and swimming.[22] Mason became a very experienced and well-rounded seafarer who was spoken of highly in the fishing industry. He had a Master IV qualification and Master of Yachts certification and had completed qualifications in AMSA Safety Training and Global Marine Distress Signal Systems training.[23] Mason had also partially completed his studies for a Master III certificate in shipping and had plans to travel to Sydney to complete the course soon.[24]

27. As noted above, Mason and Chad had been close friends for many years. They met because their parents were friends and they had grown up together.[25] Mason came to be working with Mr Turner in July 2015 through his friendship with Chad. Mason told his father it was an opportunity to make a bit of money while he had some time on his hands, but more importantly, it would help out Chad as he had been unable to find a person to replace him while he went overseas. Mason was reportedly only planning to work for Mr Turner for a few weeks.[26]

THE *RETURNER*

28. Mr Turner purchased a 13 metre fishing boat called the *Freda Jess* in October 2014. The *Freda Jess* was built in 1984 and surveyed in June 1985.[27] It had been in continuous operation, and passed through a number of owners, before being purchased by Mr Turner. The last owner prior to Mr Turner was Wayne Butler. Mr Butler and Mr Turner were childhood friends.[28] Mr Butler knew Mr Turner to be a highly experienced mariner who had been a fisherman all his life.[29]
29. Mr Butler holds a Skipper Grade 1 Marine qualification and a Marine Engine Grade 2 certificate and has worked in the trawling industry since 1971. He

[20] T 511.
[21] T 512.
[22] T 512.
[23] Exhibit 1, Tab 2, pp. 9 – 10.
[24] Exhibit 1, Tab 2, p. 10.
[25] Exhibit 1, Tab 2, p. 10.
[26] Exhibit 1, Tab 15 [16] – [18].
[27] Exhibit 3, Tab 21 [15].
[28] T 172; Exhibit 1, Tab 2, p. 12.
[29] T 172; Exhibit 1, Tab 2, p. 12.

had owned the *Freda Jess* since 2000 and used it for prawn and scallop fishing in the South West Fishery, with the boat based in Mandurah. The vessel had been regularly surveyed while Mr Butler owned it, and he had not been required to undertake any major works on the vessel as a result of the survey process. Mr Butler had taken the vessel out in various weather and sea conditions and he had never had any concerns that the vessel might capsize.[30]

30. Mr Turner's son Morgan was with Mr Turner when he bought the *Freda Jess*. The *Freda Jess* was described by Morgan as being in poor condition and in need of repair at the time of purchase. However, Mr Turner purchased it for what he considered to be a cheap price and he appeared happy about the purchase.[31]

31. Mr Butler was aware from discussions prior to the purchase that Mr Turner intended to extensively refit the *Freda Jess* by installing new freezers, brine tank, fuel and water tanks, a Kort nozzle, bigger windows and converting the booms from 'lift up' to 'swing backs'.[32]

32. The *Freda Jess* was located in Mandurah when purchased by Mr Turner. Prior to the boat being moved Morgan Turner and a friend dived on the boat to scrape algae from the hull with paint scrapers. After they cleaned the hull Mr Turner steamed the *Freda Jess* up to Geraldton, between October 2014 and January 2015. Mr Turner then berthed the boat at the Geraldton Fishing Boat Harbour.[33] Over the next four months Mr Turner refurbished the vessel to suit his requirements to fish for prawns, as he intended to use it as a prawn trawler along the northern coast line from Dampier to Port Hedland.[34]

THE REFURBISHMENT

The *Freda Jess*

33. Between the vessel's initial construction and her purchase by Mr Turner the following modifications are reflected in the Department of Transport (DoT) survey documents:

- 1987 a rear extension of the hull by one metre, adding approximately one tonne to the vessel displacement. Evidence was given at the inquest that the rear extension in 1987 made the vessel more seaworthy as it lowered the centre of gravity, but invalidated the data in the stability book;[35]
- The steering hatch was moved from the starboard aft deck to the vessel centreline;

[30] T 173 – 174.
[31] T 30, 35; Exhibit 1, Tab 2, p. 10.
[32] Exhibit 1, Tab 2, p. 10.
[33] Exhibit 1, Tab 2, p. 10.
[34] T 30.
[35] T 89, 93.

- An 800mm non-buoyant extension was added to the transom at the main deck level at an unknown time, although the evidence suggested it was perhaps done by Mr Butler;[36] and
- In October 2005 the main propulsion engine was changed, which added between 0.47 and 0.57 tonnes to the vessel displacement.[37]

34. In addition, the following modifications were believed to have been made, although they were not reported and not reflected in the vessel documentation:
    - Addition of a larger steel exhaust stack exiting through the top of the wheelhouse;
    - Aluminium Bimini top over rear deck;
    - Addition of radar mast above wheelhouse (previously a radar was situated on rear trawl superstructure);
    - Removal of the original brine tank by Mr Butler;
    - Addition of approximately 2200 kg of extra ballast by Mr Butler, which was not declared to the DoT but was apparently added to compensate for the removal of the brine tank and the fact that Mr Butler was running the vessel with minimal fuel on board;[38] and
    - Alteration of the original freeing port arrangement by Mr Butler, which Mr Butler stated was done in consultation with DoT staff but there is no record on the vessel's file.[39]

Modifications between December 2014 and April 2015

35. Commencing December 2014 the *Freda Jess* underwent major modifications overseen by Mr Turner. It is believed these modifications were intended to extend the vessel's period of operation at sea and maximise the trawl catch potential.[40]

36. These modifications included:

    - Addition of two 2000 litre fuel tanks port and starboard respectively, situated aft of the existing fuel tanks;
    - Removal of approximately 1800 kg of the original lead ballast (as was noted in the vessel's stability book) from the keel. In addition, the additional ballast added by Mr Butler, but not noted in the stability book, was also removed;
    - Removal of a small day freezer and addition of a large freezer and associated equipment, including insulating and lining the freezer with 1125kg of material and refrigeration compressor units and fan with a total combined weight of approximately 350 kg;
    - Removal of a 375 litre fresh water tank and the addition of four tanks that each had a capacity of approximately 330 litres;

[36] T 173.
[37] Exhibit 1, Tab 11, p. 12.
[38] T 94.
[39] Exhibit 1, Tab 11, p. 13.
[40] Exhibit 1, Tab 11, p. 13.

- Removal of a 1.7 tonne capacity brine tank and addition of a 3 tonne brine tank, approximately 3 metres aft of the original tank;
- Addition of rear trawl rigging for the try-net and an associated winch on the wheelhouse roof;
- Removal of an old air conditioning unit on the wheelhouse aft bulkhead and the addition of a new unit on the top of the wheelhouse approximately one metre higher than the original installation;
- Addition of a steel, oil filled Kort nozzle around the propeller weighing approximately 100 kg;
- Addition of rubber flaps over the freeing ports;
- Removal of the existing sorting tray and the addition of a larger one;
- Replacement of the wheelhouse windows with windows made of thicker glass;
- The removal of the steel port and starboard trawl booms and replacement with equivalent aluminium booms; and
- Replacement of otter boards with four larger otter boards totalling approximately 1050 kg (those recorded in the original stability book weighed a total of 160 kg).[41]

37. The modifications were completed by a number of different tradespeople, with Mr Turner responsible for overseeing the works in their entirety.[42]

38. In addition to the above modifications, investigators later noted the wheelhouse roof was used as storage space, with items stored including spare nets and associated gear, packing supplies such as cardboard boxes, wheelie bins and a washing machine. Some of these items are visible in the photograph below taken after the vessel was modified.

39. Mr Turner also repainted the vessel in a yellow colour and changed the name from *Freda Jess* to *Returner*.[43]

40. The photos below show pictorially some of the differences in the configuration of the vessel from the time it was the *Freda Jess* to after it became the *Returner*.

[41] Exhibit 1, Tab 11, pp. 13 – 14.
[42] T 113 - 114.
[43] T 36.

Photo 1 -Historical photograph of vessel

Photo 2 –Vessel after modifications in April 2015

41. The police investigation found no evidence to suggest the modifications or work undertaken on the *Returner* was inferior or of poor quality.[44] However, there was evidence that the overall effect of these extensive modifications

[44] Exhibit 1, Tab 2, p. 78.

was to make the vessel less stable in the water.[45] There was also evidence that the vessel was small for its purpose and cluttered, making it difficult to move about on the deck.[46]

42. The AMSA investigation observed the overarching responsibility for ensuring that the vessel was stable fell to the person overseeing all the works in their entirety, together with the assessment and approval of these works through the survey process.[47] Mr Turner commenced the works without notifying the DoT, contrary to the DoT procedure, and did not, on the evidence, engage a naval architect or consult a shipwright in regard to the works he was undertaking. Rather, he appears to have relied upon his own judgment as to what was required and engaged individual tradespersons to carry out his instructions, albeit with an understanding that the vessel would also undergo some form of survey through the DoT when the works were completed.

Removal of Ballast

43. As noted above, as part of the refurbishment, changes were made to the ballast on the boat. The evidence indicates that at the time Mr Butler sold the *Freda Jess* to Mr Turner it had about 4 tonnes of ballast, which was located in the keel and steering flap. When Mr Butler had originally purchased the vessel it had only 2 tonnes of ballast. He had added another 2 tonnes. Mr Butler's evidence was that he was using the vessel for day trawling and never filled his fuel tanks and he had also removed a refrigerated brine tank. The loss of weight caused the vessel to lift at the stern and the propeller to cavitate, so he had added the extra ballast. Mr Butler indicated that if he had filled his fuel tanks he would not have had to place extra ballast in the vessel, but he required the extra weight in certain sea conditions.[48]

44. Mr Butler kept in contact with Mr Turner after he purchased the vessel and was aware that Mr Turner had renamed the vessel the *Returner*. Mr Butler discussed with Mr Turner the added weight he was putting into the *Returner* and Mr Turner told him he was removing the ballast from the vessel to compensate for the weight he was adding with new equipment. Mr Turner told Mr Butler that he was weighing everything that he removed and added.[49]

45. Mr Butler had a discussion with Mr Turner about putting the vessel through an incline test due to the changes he was making. Mr Turner had been involved in incline testing on vessels in the past, so he was aware of the process.[50] Mr Butler believed that the DoT would require Mr Turner to do such a test before they allowed the vessel to pass survey and was aware that

[45] T 96.
[46] Exhibit 2, Tab 9 [62] – [63], [65].
[47] Exhibit 1, Tab 11, p. 81.
[48] T 175; Exhibit 1, Tab 2, p. 13.
[49] Exhibit 1, Tab 2, p. 13.
[50] T 175.

it was an expensive exercise, so he wanted to give Mr Turner some warning that he would need to keep back some funds to pay for it.[51]

46. Mr Turner advised Mr Butler that he had discussed this issue with the surveyor in Geraldton who advised him, "As long as he didn't alter the waterline he wouldn't need to do a stability test."[52] Mr Butler didn't think this was correct, but he took the information at face value and didn't dispute it.[53]

47. I note at this stage that the sole surveyor in Geraldton at the time, Mr Wren, was asked about this conversation in his evidence and he denied that this conversation with Mr Turner took place.[54]

48. Mr Turner was in constant contact with Mr Butler while he was refitting the *Returner* and when he put it back in the water he contacted Mr Butler and told him "things were good."[55] Mr Turner told Mr Butler the waterline was 'a little high' but he had more gear to add and this should be okay. Mr Butler actually saw the vessel in the water at Carnarvon and noticed that it was a bit "cluttered"[56] but otherwise saw nothing that caused him concern.[57]

49. Mr John Lannaway had a vessel on the hard stand next to the *Returner* while it was being refitted in Geraldton. During this time Mr Lannaway spoke to Mr Turner about buying some of the ballast Mr Turner had removed from the *Returner*, which was lying underneath the vessel. Ultimately Mr Lannaway purchased about one tonne of ballast from Mr Turner, which was in the form of lead bars.[58]

50. Prior to the *Returner* leaving Geraldton Mr Turner approached the owner of Cogman Scrap Metals, Maxwell Patterson, several times to ask him if he wanted to purchase lead. The offers were initially declined as the price was thought to be too high. Eventually a value was agreed and Mr Patterson purchased a total of 2610 kg of lead from Mr Turner. Mr Patterson did not discuss with Mr Turner where the lead had come from and he only realised later that it may have been lead ballast from the *Returner*.[59]

51. According to Morgan Turner, the refurbishment of the *Returner* ultimately cost Mr Turner more money than he had anticipated, and he had to access his superannuation money to finish it off.[60] The sale of the ballast would have provided Mr Turner with some additional funds, but it is clear that a requirement to pay for a stability test would have caused him additional financial strain.

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[51] T 175 – 176.
[52] T 175; Exhibit 1, Tab 2, p. 13.
[53] T 175 – 176.
[54] T 385.
[55] Exhibit 2, Tab 2, p. 3 [10].
[56] T 176.
[57] T 176.
[58] Exhibit 1, Tab 2, p. 15 and Tab 11, p. 60.
[59] Exhibit 1, Tab 2, p. 16.
[60] T 35; Exhibit 1, Tab 2, p. 11.

TWO SURVEY PROCESSES

52. After completing the modifications on the *Returner* it underwent two survey processes while still in Geraldton. One was conducted for insurance purposes by a private company. The other was conducted via the DoT, on behalf of AMSA, as I will explain further below.

The Insurance Survey

53. Mr John Cathro is a shipwright by trade and works in the marine industry in Geraldton. As part of his employment he conducts insurance inspections on vessels for Griffith WA Services.[61] On 16 March 2015 Mr Cathro inspected the *Returner* on the hard stand at the Geraldton Fisherman's Co-operative for insurance purposes. At no stage did Mr Cathro see the vessel in the water. A photograph on the front of his report shows the vessel on the hardstand and it looks quite different to later photographs in the water, when the vessel is 'fully loaded'.

54. Mr Cathro recalled the vessel had just gone through a major refit, which included fitting of a Kort nozzle, new freezer, paint and rigging. Mr Cathro described the changes he saw as "bringing the vessel up to a clean condition" and most of the changes he saw were cosmetic or involved the adding of new equipment like sorting tables and the working gear on the vessel. The only change in the structure of the vessel that he considered to be a major change was the addition of the Kort nozzle. As to the nature of the changes generally, Mr Cathro appears to have relied upon the information provided by Mr Turner for the details of those changes and he formed the impression from what he was told by Mr Turner that the changes were generally 'like for like'.[62] Having said that, Mr Cathro did agree in evidence that he independently verified some information, such as the size of the new fuel tanks.[63]

55. Mr Cathro did not identify any safety issues during his inspection of the vessel and it appeared to him that everything was satisfactory.[64] Mr Cathro indicated he did not look at the stability book nor test the stability of the vessel during his inspection, He stated that he did not give it much thought as his evidence was that this is something that is done by the DoT surveyors. However, he also gave evidence that he did not see anything during his survey that caused him to be concerned about the vessel's stability. In part, Mr Cathro appears to have taken reassurance from the fact that the vessel had been operating in the industry for many years, which suggested that it was seaworthy, without giving much thought to whether the recent changes affected that stability at all.[65]

[61] Exhibit 1, Tab 2, p. 14.
[62] T 318, 320 – 323, 324.
[63] T 320.
[64] T 315 - 316.
[65] T 316.

56. Mr Turner did not discuss with Mr Cathro any changes to the ballast on the vessel and he did not recall inspecting any ballast. Mr Cathro gave evidence that if Mr Turner had told him that he had removed ballast then it would have caused him concern and he would have needed to know why and how it was done as it can affect the centre of the gravity of the vessel and its stability.[66]

57. Based upon what he saw and was told, Mr Cathro considered the vessel passed survey. He prepared a report for Griffith WA Services based upon his inspection and forwarded it to George Fossey.[67]

58. Mr Fossey is a qualified marine surveyor of longstanding and operates two berths at the Geraldton Port. He previously worked as a surveyor for DoT, during which time he met Mr Turner. Mr Fossey was familiar with the *Returner*, back when it was known as the *Freda Jess* and was operating out of Port Samson and Onslow, and had surveyed it when it was still known as the *Freda Jess*.[68]

59. Mr Fossey had discussions with Mr Turner after he purchased the *Returner* about Mr Turner's plans to do "the vessel up."[69] Mr Fossey was aware Mr Turner had undertaken an enormous amount of work on the engineering of the vessel; however, he was not aware of any structural changes he may have made.[70] Mr Fossey took an interest in what Mr Turner was doing to the *Returner* and he was "very impressed with the lovely job he had done on the refit."[71]

60. As a part of his duties with the insurance company Mr Fossey provides valuations for the purpose of insuring a vessel. The *Returner* was required to be surveyed for this purpose and Mr Fossey had tasked Mr Cathro with surveying the vessel and providing an insurance report. The report provided by Mr Cathro was vetted and signed off by Mr Fossey. Based upon what he knew, Mr Fossey did not observe anything that he thought constituted a major change.[72] Given the size of the vessel, Mr Fossey had not considered there was a lot of scope for major structural changes to be made.[73]

61. As an experienced surveyor, Mr Fossey expressed the view in his statement that all older vessels such as the *Returner* should be subject to a stability test as these were not done when the vessels were built.[74] However, it would seem that, like Mr Cathro, it was not seen by Mr Fossey as falling within the domain of the insurance survey to suggest that a stability test be done on the *Returner*.

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[66] T 316 – 317.
[67] T 318; Exhibit 1, Tab 2, p. 14.
[68] T 37; Exhibit 1, Tab 2, p. 14; Exhibit 2, Tab 3 [4].
[69] Exhibit 2, Tab 3 [6].
[70] Exhibit 2, Tab 3 [8].
[71] Exhibit 2, Tab 3 [10].
[72] T 37 – 38; Exhibit 1, Tab 2, pp. 14 - 15.
[73] Exhibit 2, Tab 3 [11].
[74] Exhibit 1, Tab 2, p. 14.

DoT Survey

62. In July 2013 the regulation of domestic commercial vessels changed from a state and territory regulated system to a national system with the introduction of the *Marine Safety (Domestic Commercial Vessel) National Law 2012* (the National Law). From that time, there have been a series of transitional arrangements in place between the various state and territory jurisdictions and AMSA, as the National Regulator of the National Law, to continue to provide services while moving towards AMSA taking over full responsibility for providing all services under the National Law.

63. Relevantly to this inquest, the transitional arrangements involved the staff of some state bodies conducting surveys of domestic commercial vessels as delegates of the National Regulator.[75] In late 2014 and early to mid-2015, when the relevant events took place with the *Returner*, the Western Australian DoT retained a delegation from AMSA to conduct the survey work for domestic commercial vessels in this state.

64. All domestic commercial vessels in Australia are subject to a system of periodic surveys, the timing of which varies. Due to changes in the legislation, there is a difference between how older vessels, that existed before the National Law came into effect in July 2013, are treated compared to the processes for new vessels under the National Law.

65. It was explained at the inquest that the grandfathering provided a politically expedient way to ensure that all the jurisdictions would adopt the National scheme, by reassuring existing operators that they wouldn't be any worse off. There was a large variation between regulations in different jurisdictions, so any other approach would have made it exceptionally difficult for operators in some of the regions to have their vessels meet standards.[76]

66. Because of the age of the *Returner*, having been originally constructed in 1984, it was classed as an 'existing vessel' under clause 7 of Marine Order 503, and as a result became a 'grandfathered vessel'. This meant that it was required to comply with the relevant standards that applied prior to the introduction of the National Law on 1 July 2013, known as the Uniform Shipping Laws (USL) Code. New vessels, in comparison, are generally required to be surveyed in relation to their compliance with the National Standard for Commercial Vessels, which is a far more stringent standard.[77]

67. Mr Barry Wren has been employed by the DoT as a marine surveyor for approximately ten years, and was based in Geraldton in 2015. Mr Wren is a qualified boat builder and shipwright, having qualified in London in 1971. He is a long-standing boat builder by trade and prior to working for the DoT he ran a boat building/repair business in Western Australia and, before that, in the United Kingdom.[78] Mr Wren was the sole DoT surveyor working

[75] T 392; Exhibit 3, Tab 22.
[76] T 410.
[77] T 328 – 329; Exhibit 3, Tab 20 [23], [27] and Tab 21.
[78] T 261, 264; Exhibit 3, Tab 20.

in Geraldton in 2015 and he described his job as busy at that time.[79] In the course of his working day Mr Wren would often come across people doing work on their vessels in the Geraldton yard, so he sometimes knew informally about works being done on vessels prior to being required to formally survey a vessel.[80]

68. Mr Wren reported to superiors based in Fremantle, including Simon Anderson, the Manager of Survey Functions (New Constructions). Mr Wren explained that at the relevant time of 2014 to 2015, the DoT had two sections for vessel surveys, the 'Periodical' section and the 'New Construction' section, although later in 2015 they were merged into one 'Survey Functions' team. The New Construction section dealt with new vessels (and old vessels coming back into survey, which were effectively treated as new vessels under the National Law) and was mainly staffed by naval architect qualified surveyors, who are more qualified in engineering and technical mathematics and are conversant with procedures for checking vessel structure and proving stability.[81] Mr Wren's role, on the other hand, was to undertake periodical surveys of commercial vessels as part of the Periodical section.[82] Although the surveys are periodical, and there are time limits set for when they must be done, it is the responsibility of the vessel's owner to initiate the process.[83]

69. The survey for the *Returner* was characterised as a 'renewal survey,' which is a periodic survey undertaken in the fifth and final year of the five year survey cycle to confirm that the various safety systems and safety characteristics of the vessel comply with the applicable standards (in this case the USL Code as it was treated as an existing vessel).[84] It is significant to note that if the vessel had been treated as a 'new vessel', then one part of the requirements of a renewal survey is for a lightship verification (stability test) to be undertaken via draft or weight check, re-incline or roll period test, as appropriate for the vessel. However, the standard for a grandfathered vessel does not require lightship verification to be performed.[85]

70. In addition to the renewal survey process that was being undertaken, there was also a tandem process underway related to the recent modifications to the vessel. This was required to be initiated by the owner of the vessel, in this case Mr Turner, lodging notification of the modifications with the DoT. Mr Wren's evidence was that he ultimately combined the two processes together and conducted them simultaneously.[86]

71. It is relevant to note that an existing vessel can be considered a new vessel under Marine Order 503 if AMSA, or its delegate, considers that the vessel has been altered to an extent that it must be reassessed against the applicable standards, or its operations have changed so that there is an

[79] T 262.
[80] T 262 - 263.
[81] T 267 – 268.
[82] T 268; Exhibit 3, Tab 20 [28].
[83] T 270.
[84] Exhibit 3, Tab 21 [49].
[85] Exhibit 1, Tab 11, 76 – 77; Exhibit 3, Tab 21 [51].
[86] T 344.

increased level of risk or its operational area has changed.[87] Put another way, in the AMSA Surveyors Accreditation Manual it states that grandfathering arrangements apply to existing vessels provided the vessel "does not change its operations, is not significantly modified and does not seek to move its geographic area of operation."[88] The process of considering the modifications made to the *Returner* could have triggered this result, depending upon their extent.

72. The *Returner* was categorised as a Class 3B vessel at the time of the relevant survey conducted by Mr Wren, as it fit the criteria that it was undertaking fishing or aquaculture operations within 100 miles offshore of the WA coastline.[89] The operations were not limited to a particular region off the WA coastline, so there was no change in its geographic operations as such, even though it moved significantly north from Mandurah.[90] It is, however, debatable whether the modifications had increased its level of risk and/or the vessel had been altered to such an extent that it should be reassessed against the applicable standards (particularly for reasons of stability), so that it should have been treated as a 'new vessel'.

73. Mr Wren treated the *Returner* as an existing vessel and did not form the view the modifications triggered the requirement to treat it as a 'new vessel' for the purpose of the process he was undertaking.[91] Mr Wren maintained in his evidence at the inquest that this was the correct decision, despite what the additional information now available revealed about the extent of the modifications.[92]

74. I am not entirely convinced that the categorisation was correct. There is evidence before me from other experts indicating that a different conclusion should have been reached. However, for the purposes of this inquest I do not propose to make a finding either way. What I consider relevant is that, in any event, Mr Wren accepted that, even when treating the *Returner* as an existing vessel, there was always an option for him to order the vessel to undergo stability testing if he had considered it was required for safety purposes. Therefore, the stability of the vessel was something that it was necessary for him to consider as part of the process he undertook, even while treating the *Returner* as an existing vessel, and he accepts that he did.[93] As seen below, I find that even treating the vessel as an existing vessel' but with notification of a significant combination of modifications as noted on the miscellaneous form, there was sufficient information before him such that Mr Wren should have concluded that a stability test was required.

[87] Exhibit 3, Tab 21.
[88] Exhibit 3, Tab 21 [29].
[89] T 409.
[90] T 409.
[91] T 332.
[92] T 363.
[93] T 333.

SURVEY CONDUCTED BY MR WREN

75. I note at the start that counsel on behalf of Macqueline Pty Ltd submitted at the conclusion of the inquest that I should treat Mr Wren's account with a high degree of caution given his personal interest in the outcome. In response to that submission, I note that Mr Wren provided a detailed written statement to the court and gave lengthy oral evidence, which was tested in cross-examination. Having seen and heard Mr Wren in court, I formed the opinion that Mr Wren was a truthful witness who was prepared to acknowledge areas where his recollection was poor and also acknowledged areas where in hindsight he agreed he may have fallen into error. I have approached his evidence in this finding from that starting position.

76. Mr Wren had not seen the vessel, either when it was known as the *Freda Jess* or the *Returner*, before it was brought to Geraldton by Mr Turner.

77. Mr Wren had observed the *Returner* being fitted out by Mr Turner while undertaking other surveys at the hard stand yard but he was not made aware of any particular work being done to it at these times and did not make any note of what he observed. However, Mr Wren was prompted by what he saw to look up the vessel on the DoT's internal database and he saw that the vessel was likely to require a survey in due course.[94]

78. Sometime later, Mr Turner approached Mr Wren and spoke to him about what Mr Turner described as 'refurbishment' and 'minor changes' to the boat. Mr Turner had a specific query regarding the vessel's propeller shaft and the fabrication of an extended fuel tank. Mr Wren commented to Mr Turner at the time that if the fuel tanks were modified they would likely need pressure testing.[95]

79. Mr Wren explained that the periodic survey process is divided into a number of parts, being the shaft inspection, the hull (internal and external) and the final gear and equipment survey. The process is also normally commenced with hard copy file of the relevant documentation relating to the vessel in hand. The unusual thing about the *Returner* was that the various parts of the survey process were spread over a period of time, which Mr Wren explained was unusual as surveys are often completed in a single day. Mr Wren indicated the survey process for the *Returner* began in December 2014 and concluded in April 2015, which was a longer time than normal but was a result of the works being undertaken.[96]

80. Another unusual feature was that, because the *Returner* had not been surveyed in Geraldton before, there was no hard copy vessel file for the vessel.[97] However, Mr Wren did have the previous survey form as a reference.[98]

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[94] T 290 – 291.
[95] T 290.
[96] T 290.
[97] T 271.
[98] T 290.

81. Mr Wren conducted an initial shaft inspection on the *Returner* on 5 December 2014. He was concerned about some pitting that might affect the longevity of the shaft, so Mr Wren shortened the timing of the next shaft survey.[99] After this inspection Mr Wren requested the previous hull and shaft reports from the Fremantle office. He indicated that he already had copies of the previous gear and equipment survey report.

82. At this time Mr Wren explained to Mr Turner the process of notifying the DoT of any changes or modifications to the vessel (generally requiring an application on the AMSA 758 'Miscellaneous Form' at that time) and suggested Mr Turner should provide a full list of all changes, however minor, and include a drawing of the same. Mr Wren also explained that 'like for like' or similar replacements would not necessarily be considered changes particularly affecting characteristics of the vessel, but said they would still be looked at in relation to any compliance matters. Mr Wren stated it is his practice to make clear his preference that the application should be made at an early stage, preferably prior to any work being started, so that the proposed works can be discussed and the extent of any necessary inspection ascertained. However, in this case that clearly was not done by Mr Turner.[100]

83. The timing of the inspection where modifications have been disclosed is not necessarily linked to an annual inspection, although Mr Wren noted that it often eventually ends up coinciding.[101] That was what ultimately occurred with the *Returner*. As a result, Mr Turner paid an apportionment of fees for the annual survey and for the inspection and approval of modifications, as well as a fee for issuing a new Certificate of Survey.[102]

84. After doing the shaft inspection in early December, and after advising Mr Turner of the need to file the application on the miscellaneous form for the modifications he was doing, Mr Wren of his own volition conducted numerous *ad-hoc* short visits to the *Returner* over the next two months to check on the ongoing refurbishment work. Mr Turner had still not submitted the required form at this stage. During some of these visits Mr Turner raised some queries about particular works with Mr Wren and Mr Wren had some discussions with the various tradespersons working on the vessel, many of whom he already knew.

85. As the works were nearing completion Mr Wren reminded Mr Turner of his instructions regarding notifying the DoT about modifications to the vessel. On 20 February 2015, Mr Wren forwarded an email to Mr Turner requesting Mr Turner complete and return to him a miscellaneous form for changes as soon as possible.[103] In the meantime, on 10 March 2015 Mr Wren completed the hull inspection, both internally and externally. Mr Wren found the hull to be in good order and generally satisfactory. It was obvious to Mr Wren during this inspection that the refurbishment works that Mr Turner had

[99] T 291 – 292.
[100] T 293 - 294.
[101] T 293 - 294.
[102] Exhibit 3, Tab 20 [63], [65].
[103] T 294; Exhibit 1, Tab 11,76.

spoken to him about were already well advanced. During this inspection he also observed the extended fuel tanks, but they were not yet complete.[104]

86. Sometime later on 10 March 2015 Mr Wren sent another email to Mr Turner, following up his request of 20 February 2015 and reminding Mr Turner of the need to complete and return the miscellaneous form. Mr Wren attached another copy of the relevant form to this email.[105]

87. The miscellaneous form was subsequently submitted by Mr Turner the following day, being 11 March 2015. It included modifications already completed and others that were planned.[106] Specifically, the changes described by Mr Turner in the form were:

- New prop and nozzle;
- Extra fuel tanks;
- Change galvanized water tanks to plastic
- Replace booms from steel swing up to aluminium swing in;
- Replace windows thicker;
- Replace winches;
- Replace freezer and brine compressor/condenser;
- Change brine tank from fibre glass to aluminium;
- Freezer below instead of half above and below.[107]

Accompanying the form was the Fuel Tank Inspection Report, indicating the modified fuel tanks had been completed and pressure tested, as per their earlier discussion.[108]

88. During his earlier intermittent visits Mr Wren had specifically noted the modified fuel tanks, the attachment of the replacement propeller nozzle; the windows and the newly re-lined fish hold and its hatch cover, which were all items noted on the submitted form.[109] Similarly to Mr Cathro, Mr Wren gave evidence that the information provided by Mr Turner verbally to him was that the modifications were generally 'like for like' and Mr Wren presumed them to be generally of similar weight.[110]

89. Mr Wren accepted that he had been aware that there was a proposed difference in weight given the new extended fuel tanks. However, Mr Wren's evidence was that he had asked Mr Turner about the volume of the new extended fuel tanks and recalled that Mr Turner told him their capacity would be in the vicinity of 1000 litres. Mr Wren denied ever being told that their total capacity, taking into account the existing fuel tanks, would be 8000 litres. Mr Wren gave evidence he only found this information out during the later investigation into the capsizing of the *Returner*, which was based upon the fuel purchase information.[111] Interestingly, I note that Mr

[104] T 337.
[105] T 294 – 295.
[106] T 294; Exhibit 1, Tab 11, 76.
[107] T 297; Exhibit 3, Tab 20 [59].
[108] T 297.
[109] T 297.
[110] T 356 – 357, 381.
[111] T 351 – 352, 381; Exhibit 1, Tab 11, p. 62.

Cathro had accurate information about the 8000 litre capacity in his survey report. He gave evidence he was told that information by Mr Turner and also independently verified their size during the survey.[112] I will come back to this issue later.

90. The AMSA investigation into the capsizing of the *Returner* explained what the changes identified on the miscellaneous form involved in detail, together with the extent of those changes as known now. The information is set out as follows:[113]

- New propeller and (Kort) nozzle;
- The fitting of extra fuel tanks (did not indicate the extra fuel tanks doubled the maximum fuel capacity from 4000 litres to 8000 litres);
- Changing galvanised water tanks to plastic ones (but did not indicate the increase in total capacity from 375 litres in the original stability book to 1200 litres);
- Replacing the booms from steel swing-up to aluminium swing-in type;
- Replacing windows with thicker ones;
- Replacing winches;
- Replacing freezer and compressor (did not reveal new freezer was considerably larger than the freezer it replaced, adding approximately 350 kg weight);
- Replacing fibreglass brine tank with an aluminium one (did not mention increase in size from 1.7 tonne to 3 tonnes capacity and installed aft of the original installation; also there was no brine tank on the vessel at the time Mr Turner purchased it, as Mr Butler had removed it);
- Installation of a new freezer below deck in place of the existing one, which was half above and half below deck.

91. It is apparent from that list that, contrary to what Mr Wren has said he understood from Mr Turner, the weight of many of the new items was not equivalent to what they replaced. It is also relevant to note that Mr Turner did not include the removal of ballast in the list of modifications he had done.

92. Based upon what he had seen, and through his discussions with Mr Turner, Mr Wren's evidence was that he was generally satisfied at the time that all the items of work they had discussed were included on the miscellaneous form.[114] Obviously, if Mr Wren did not see some of the modifications himself, and Mr Turner did not inform him of them, then he would not be aware of them.

93. The removal of ballast potentially falls into this category. Removal of the ballast was described in the AMSA investigation report as "critical" information. The AMSA investigation also found it is not something Mr Wren would have been expected to know or identify unless he was told about it.[115] As I noted above, Mr Turner had claimed to his friend, Mr Butler, that he

[112] T 320; Exhibit 2, Tab 4A.
[113] Exhibit 1, Tab 11, pp. 62, 77 - 80.
[114] T 310.
[115] T 347 – 348; Exhibit 3, Tab 11, p. 80.

had discussed the removal of ballast with Mr Wren, but Mr Wren denied this conversation took place.[116] It is interesting, as Mr Turner's statement to Mr Butler that he was told that so long as he didn't alter the waterline, it wouldn't matter, fits to some degree with what actually happened with Mr Wren checking the freeboard. Mr Wren, on the other hand, denies that this conversation took place. I return to this issue below, and explain in more detail what the process of checking the freeboard entailed.

94. On 14 April 2015 Mr Wren completed a 'Gear and Equipment' inspection after the vessel had launched and had been made ready for operations. Mr Wren had tried to allow himself a free morning, starting at 8.00 am that day, to give himself time to refresh his memory of the events of the past few months so that he could then finalise the survey report and get the process of the issue of the certificate of survey underway.[117] Mr Wren indicated that he had "pretty well surveyed the vessel by that time anyway"[118] and he was largely there to tidy up the paperwork and look at the safety equipment and get things finished up at the end of the extended process. During his inspection on 14 April 2015 Mr Wren noticed that most of the electronics were replaced new, as was most of the safety gear and equipment on board. All were complete and in good order. There were some minor deficiencies to attend to, which Mr Wren listed on the Survey Activity Report. The items outstanding at that point were:

- To fit and label a remote shutdown to the engine room fan;
- To replace stainless steel chain and shackles on the main anchor with galvanised anchor chain;
- Advise service of the carbon dioxide fire system and extinguishers; and
- Advise on details of the new EPIRB within the life raft.[119]

95. Mr Wren had gone on board the *Returner* to do this final inspection, while he understood it to be full of fuel and water (based upon answers provided by Mr Turner) and the vessel was sitting in the water. Mr Wren's evidence was that from what he saw at that time he did not have any suspicion that the vessel was unstable and had no concern about its safety. Generally, all-round the vessel presented to Mr Wren to be as complete and what he considered to be in very good order.[120] Mr Wren was asked whether he thought the vessel was sitting too low in the water, and he denied this was the case from what he saw at that time.[121]

96. Nevertheless, Mr Wren made a point of asking Mr Turner for the *Returner's* stability book. Mr Wren explained in his evidence that his reason for doing so was so he could satisfy himself that "the displacement of the vessel hadn't changed too much"[122] as a result of the modifications.

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[116] T 385.
[117] T 268 - 270.
[118] T 269.
[119] T 299 – 300; Exhibit 3, Tab 20 [69] – [71].
[120] Exhibit 3, Tab 20 [87].
[121] T 298 – 299.
[122] T 345.

97. Mr Turner was not sure if he had seen a stability book on board, so both men then spent some time looking for it before it was found in a locker on the vessel, together with some other paperwork. Mr Wren acknowledged that the stability book found was "extremely old."[123] Mr Wren took note of the freeboard measurements from a simple sketch in the book and then discussed with Mr Turner the state of the tanks and equipment on board. Mr Wren explained that the state of the tanks was critical in his assessment of the measurement of the freeboards when comparing the displacements. Mr Turner confirmed that the fuel tanks and water tanks were full and all the expected gear and equipment were on board.[124] Mr Wren did not take any steps to verify this information himself, despite the fact he believed it to be critical to the process he was about to undertake, and instead relied solely upon the information provided by Mr Turner.

98. Mr Wren measured the current freeboard from the waterline to the deck on both sides at the stern and mid-vessel. The freeboard is the measurement from the waterline up to the weather deck, or described as the volume of buoyancy above the water line.[125] Measurements were taken viewing from both over the bulwark, and through the freeing ports at deck level, to confirm a more accurate line of sight. The freeboard measurements did not give Mr Wren any cause for concern. According to his measurements, the vessel was showing to be very slightly deeper in the water over the measurement shown in the stability book, with the difference being within 'an inch or so,' which was within the range of accuracy for this type of test.[126] Based on his calculations, Mr Wren believed the vessel was perhaps one to two tonnes heavier than recorded in the stability book.[127]

99. Mr Wren had discussed the probable positive and negative effect of the work on the displacement of the vessel overall, which he believed to be modest, and based upon what he knew, Mr Wren believed the centre of gravity was likely similar, or more likely lower, than before.[128] Evidence will show later that his conclusion was incorrect.

100. It is worth noting at this time that the AMSA investigation noted that when Mr Turner removed ballast from the vessel and added extra weight through modifications, the weight difference between when he purchased the vessel and after completion of the modifications may not have altered significantly. What altered significantly as a result of the modifications was the distribution of weight throughout the vessel and the corresponding rise in the vertical centre of gravity.[129] Without knowing about the removal of ballast, this would not have been apparent to Mr Wren at the time, although a stability test would have revealed it.

101. A stability test is designed to ascertain the lightship displacement, position of the vertical centre of gravity and the longitudinal centre of gravity for the

[123] T 345.
[124] T 301 – 302, 345, 347, 351, 382.
[125] T 153.
[126] T 301.
[127] T 302.
[128] T 302 – 303.
[129] Exhibit 1, Tab 11, p. 79.

vessel. It can be done as a theoretical model based on drawing and a physical incline test that involves putting weights on the vessel and determining how far the vessel inclines under different weights. It tests the vessel in its lightship measurement as well as how it would be in fishing condition, etc., to establish the buoyancy of the vessel. A stability test is undertaken by a naval architect or consultant, with an accredited surveyor present to witness the test. The hiring of the naval architect or consultant is done by the owner of the vessel and is not a service offered by the DoT.[130]

102. The results of a stability test are written in the stability book, which is kept with the vessel.[131] There was an issue in this place as the stability book kept with the vessel was not accurate as there had been modifications made to the vessel that invalidated the information contained within the stability book, even before Mr Turner made his modifications.[132] This increased the likelihood that any testing Mr Wren did based on that information would be flawed, although it would not have necessarily been apparent to him. While this might not have been apparent to Mr Wren, it was apparent to him that the stability book was "extremely old"[133] and it would not accurately reflect the details of the vessel, as it currently presented, given the modifications that were known to have been made.[134]

103. The AMSA/DoT investigators concluded that if the vessel's weight (checked through the freeboard) was the sole or deciding factor used to determine whether further testing of stability was required, a false conclusion may have been reached.[135] It appears that this is what did occur.

104. Mr Wren had done some rough calculations in his head, based upon what he knew, to conclude that the centre of gravity of the vessel was unlikely to have changed significantly. His evidence at the inquest was that if he had known that ballast had been removed from the bottom of the vessel, it would have completely affected his opinion about it.[136] At the time, knowing what he knew, according to Mr Wren the trim of the vessel seemed to indicate she was sitting in the water fairly true to form. Based upon all of the information before him, Mr Wren did not think it necessary at that time to check the lightship or displacement extensively further. He acknowledged that he might have opted for further assessment, but on that day with the evidence as it was presented, he did not consider it necessary.[137]

105. On 20 April 2015 Mr Turner signed a self-declaration certifying that the items that had been noted as outstanding by Mr Wren on 14 April 2015 (as set out above) had been rectified and completed.[138]

[130] Exhibit 3, Tab 21.
[131] T 90 – 91.
[132] Exhibit 1, Tab 11, p. 81.
[133] T 345.
[134] T 363.
[135] Exhibit 1, Tab 11, p. 79.
[136] T 378.
[137] T 302 – 303.
[138] T 301.

106. Mr Wren's survey report was forwarded to the Commercial Vessel Safety Branch of WA DoT for review in relation to renewal of the Certificate of Survey (after the deficiencies on the survey report had been cleared). Mr Wren's report was reviewed by Simon Anderson. Mr Anderson approved the report based on the information provided and approved the renewal of the *Returner's* Certificate of Survey. It appears that Mr Anderson did not have the miscellaneous form at that time, but Mr Wren had sent Mr Anderson an email dated 21 January 2015 in which he stated that the *Returner* was undertaking refurbishment, minor modifications and preparation for survey, and Mr Wren's evidence was that he had disclosed the information sufficiently on the survey form. Mr Anderson signed the Certificate of Survey, which was issued on 6 May 2015.[139]

Mr Wren's evidence re non-disclosure of information

107. After the *Returner* was recovered, Mr Wren was shown photographs of the *Returner* that were taken after his survey was completed but before it left for its last fateful journey in July 2015. Mr Wren's evidence was that one of the photographs, which is depicted in this finding as -

Photo 3 –Vessel after modifications in April 2015

shows the vessel to be marginally deeper in the water than she was at the time of Mr Wren's final inspection on 14 April 2015 in Geraldton.[140]

108. A further photograph, which is depicted below, caused Mr Wren greater concern. Mr Wren's evidence was that the vessel depicted in that photograph "is very different to the vessel that [he] observed at survey" and in his opinion that photograph shows the vessel "to be grossly overloaded." This is

[139] T 422 - 423; Exhibit 3, Tab 22.
[140] T 304; Exhibit 3, Tab 20 [80].

despite the fact that at the time Mr Wren saw the vessel in April 2015, he had been led to believe that the vessel at that time was fully loaded and fitted out and ready for fishing, with nothing more to be added.[141]

109. Mr Wren's evidence was the vessel he saw in the later photograph was "drastically lower"[142] than what he had seen in April 2015. Mr Wren's evidence was that if he had seen the vessel sitting in the water that way he wouldn't even have had to measure it as it would have been obvious to him that there was something drastically wrong and it would have totally changed what he did at the time.[143]

110. Mr Wren went on to state that,[144]

> *With or without reference to any stability book, the vessel in the photograph shows to be clearly unsafe and should not be operating in this way, with almost zero freeboard and the freeing ports covered. If presented to me in any way to this extreme, I would have had no hesitation in refusing completion of the survey until further extensive investigation into the displacement and stability of the vessel was satisfactorily completed. At the very least, this would include a full, new stability assessment and approval process. Being so extreme, the vessel would not in any way have been authorised to operate.*

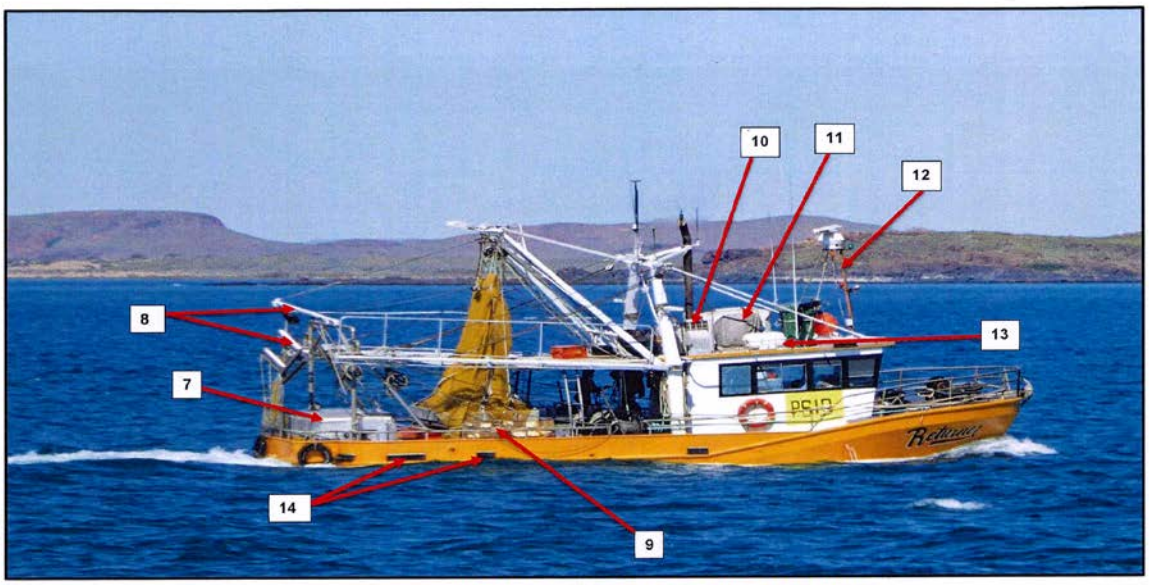

Photo 4 - Returner on Voyage Post 2014/2015 Modifications

KEY OF MODIFICATIONS & ITEMS OF NOTE

1. Try net winch situated on aft of wheelhouse roof aft on centreline
2. Large box thought to be containing nets and chain situated on port side on wheelhouse roof (not found at time of salvage)
3. Two wheelie bins thought to be for garbage (not found at time of salvage)
4. Steel exhaust stack thought to be increased in height between 2014 and 2015
5. 30 horsepower outboard motor tied in rigging
6. Large nets increased in size from original vessel
7. 3000 litre brine tank, double the capacity of the original brine tank
8. Try-net rigging thought to be installed between 2014 and 2015
9. Four Otter boards, each weighing approximately 265 kilograms
10. Split system air-conditioning outdoor unit.
11. Washing machine (not found at time of salvage)
12. Radar mast moved forward from original 1985 configuration.
13. Liferaft weighing approximately 30 kilograms
14. Covered freeing ports

[141] T 306; Exhibit 3, Tab 20 [81].
[142] T 375.
[143] T 376 – 377.
[144] T 306 – 307.

111. Mr Wren accepted that the evidence at the inquest supported the conclusion that the *Returner* was unstable and unseaworthy because of the extent of the modifications done by Mr Turner to the vessel, but maintained that at the time he did the survey the full extent of those modifications was not apparent and he was relying on Mr Turner's explanation that the modifications were 'like for like'. Looking back, Mr Wren was most concerned about the disparity in the volume of the fuel tank as opposed to what he maintains he was told by Mr Turner.[145] Mr Wren thought that looking back, the extra volume of fuel was far greater than he had been informed by Mr Turner, and would have caused him to be concerned if it had been made known to him.[146]

112. As to other information Mr Wren maintained was not disclosed to him, Mr Wren's evidence was that he was not told of the ballast changes at any stage; neither the addition of ballast by the previous owner nor the removal of that ballast and more by Mr Turner. Mr Wren gave evidence that any ballast installed in a vessel is of critical importance to its operational stability and as such it should never be relocated, reduced, increased or permanently removed other than within a total reassessment of the vessel's overall stability characteristics.[147] His evidence was that if he had been told that ballast was an issue in this case, he would have made a note of it, but it was not brought to his attention as an issue.[148]

113. Also, Mr Wren's evidence was that at no stage during inspection of the vessel did he see the freeing ports covered, which he would definitely have noted when he was when looking at the freeboard through the apertures. Mr Wren's evidence was that if he had seen the freeing ports covered in that way, he would have added it as a deficiency to be rectified as he would be concerned that water on deck would be severely restricted from freeing itself overboard.[149]

114. Looking at the issue of the difference in size of the fuel tanks, I have already noted that Mr Cathro was told the correct information by Mr Turner. Mr Wren's evidence was vague as to his discussion with Mr Turner about their additional size, and he acknowledged the discussions with Mr Turner about the fuel tanks were "early on"[150] in the process and the fuel tanks were not complete.[151] I am not satisfied on the evidence before me that Mr Turner lied to Mr Wren about the total fuel capacity, particularly as Mr Cathro and Mr Wren both acknowledged it was something that could be easily checked. It is equally possible that Mr Wren misunderstood what he was told by Mr Turner as to the additional fuel capacity. It does, however, appear more likely than not that Mr Turner was not truthful about the tanks being full at the time Mr Wren conducted his freeboard check.[152]

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[145] T 381.
[146] T 308.
[147] T 308 – 309.
[148] T 295 - 296.
[149] T 309.
[150] T 381.
[151] T 381.
[152] T 320.

115. As to the removal of ballast, Mr Wren was adamant that he was not informed by Mr Turner of its removal, contrary to Mr Butler's recollection of what he was told secondhand by Mr Turner. I note that Mr Butler was sceptical of the likelihood that what Mr Turner was telling him was correct, given his knowledge about such matters. In contrast, all of the witnesses agreed that the removal of ballast was unusual and would be a critical issue that would require serious consideration of its effect upon the stability of a vessel. Further, Mr Turner did not include the removal of the ballast on the list of modifications and he did not advise Mr Cathro of its removal during the insurance survey.

116. Mr Wren gave evidence that in his experience owners and operators often show reluctance towards the survey process and it is plainly obvious to him on many occasions that they are not forthcoming when it comes to modifications to their vessels. Mr Wren stated that many owners and operators "have the attitude at survey: if the surveyor doesn't spot it and completes survey, then those changes are approved."[153] Mr Wren described it as "a constant battle the surveyor has to contend with on a regular basis."[154]

117. Mr Wren was asked why he thought there was such resistance to the survey process, and he suggested that it was probably due to two things: cost and time, as there can be a cost involved in complying with a deficiency notice and it can also restrict operations while it is being completed.[155]

118. In this case, Mr Turner knew from Mr Butler that altering the ballast would likely prompt stability testing and Mr Wren confirmed in his evidence that if he had been told by Mr Turner about the removal of ballast the ordering of a stability test was likely to be the natural course of things. The cost of an incline test was estimated to be in the vicinity of at least $8,000 - $10,000 for a vessel like the *Returner*, and if it failed the test there would likely be costs incurred to rectify the deficiencies. It was, therefore, acknowledged to be an expensive process.[156] There was evidence from Mr Turner's son, Morgan that the refurbishment had cost Mr Turner more than expected and forced him to withdraw some of his super[157] and Mr Turner's friend, Michael Tozer, confirmed Mr Turner had made some jokes about having to access his super, referring to the *Returner* as his "super trawler"[158] as a result. If ordered to do stability testing Mr Turner presumably would have had to fund this further from his super.[159] The process could also be time-consuming,[160] which would delay the vessel becoming operational and able to earn money. While there was evidence from Mr Tozer that Mr Turner "had money to do what needed to be done,"[161] I am satisfied he would want to avoid having to pay for a costly stability test if he did not believe it was required.

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[153] T 310.
[154] T 310.
[155] T 324.
[156] T 117.
[157] Exhibit 2, Tab 1 [58]
[158] T 180
[159] T 311 - 312.
[160] T 118.
[161] T 180.

119. Based upon all of the evidence before me I am satisfied that Mr Turner did not disclose the critical information to Mr Wren about the removal of ballast. The evidence supports the conclusion Mr Turner had convinced himself that a process of weighing items and trying to replace 'like weight for like weight', was sufficient, which he believed included ballast. He did not understand that the location of the weight on the vessel and the type of weight (for example freeflowing liquid as opposed to lead ballast) had a potentially significant effect upon the vessel's centre of gravity.

120. As to the freeing ports flaps, Mr Wren's evidence was that he would not have approved them if he had seen them for safety reasons, and it is likely Mr Turner, with his considerable experience in the industry, would have been aware that this would be the case as the evidence was that the flaps were not standard. It might also not have been necessary until Mr Turner fully loaded the vessel, which the evidence indicates he did not do until after the survey was completed, which I discuss further later in the finding. I am satisfied that the changes were made to the freeing ports by Mr Turner after Mr Wren conducted his survey.

121. Having accepted that there was a failure on the part of Mr Turner to disclose the key information about the removal of ballast, that is not the end of the matter as far as Mr Wren's responsibility is concerned. Questions were put as to whether or not, even on the information that was disclosed to Mr Wren about the modifications undertaken, he should have ordered a stability test, which would have revealed the extent of misinformation. Further, it was put that Mr Wren could, and should, have verified some of the information for himself, rather than accepting the truth of the information provided to him by Mr Turner.

The 'trust and verify' approach

122. Mr Wren agreed with the proposition that, given vessel owners and operators are on many occasions not forthcoming about the kinds of modifications that they have made to their vessel, it is important for a surveyor to consider very carefully anything that a surveyor might be told by an owner. However, Mr Wren also expressed the view that it is acceptable for the surveyor to be guided by the information given by the owner unless there is something that raises doubt about the accuracy of that information.[162]

123. Mr Wren also accepted that he could have done more to verify the works that had been disclosed, but there was nothing that raised his suspicions at the time to suggest he was not being truthfully told the full extent of works being done.[163] Instead, Mr Wren trusted Mr Turner to provide full disclosure, and primarily relied upon that information in conducting the survey.[164]

124. Mr Wren's evidence was that he believed that he could usually tell when owners and operators were prevaricating or not being honest with him and he had formed the impression that Mr Turner was giving him honest

[162] T 325.
[163] T 382.
[164] T 383.

answers to the questions he posed during the survey process.[165] However, Mr Wren did acknowledge that he had to continuously prompt Mr Turner to disclose information about what work, and the extent of the work, that was being done. This could be seen as a sign that he was not being completely forthcoming with all the information but this did not appear to have occurred to Mr Wren at the time.[166]

125. Mr Wren accepted that he took some reassurance from the fact that Mr Turner had obviously put a lot of money into the refurbishment of the vessel, the workmanship appeared to be satisfactory, and it looked a well-founded, smart vessel when he saw it.[167] Mr Wren also agreed that his decision-making may have been affected by the fact that the survey process was extended over a long period, involving prolonged contact with Mr Turner and multiple viewing of the vessel in its various stages of modification.[168]

126. Mr Wren acknowledged that, even though he treated the *Returner* as an 'existing vessel' for the purposes of the survey process he undertook, he understood that ordering a stability test was an option if he thought it necessary for the safety of the vessel, and he turned his mind to this.[169]

127. Mr Wren described the modifications as minor, but he accepted that knowing now the full extent of the modifications, he would agree that they would more properly fit within the category of major modifications.[170] He agreed that this description would apply to the vessel as he saw it at the time, ignoring the changes Mr Turner appears to have made after the survey process was finished and the information he was not told.[171]

128. Even while considering them minor modifications, Mr Wren was aware at the time of the survey of the potential of some of the changes in combination to affect the vessel's weight and stability, and he turned his mind to this potential issue and tested it to some extent via checking the freeboard. Based upon what he was told, and the limited testing he did of the freeboard, he did not believe it was necessary at the time to order a stability test.

129. Mr Wren accepted in his evidence at the inquest that there was information available to him at the time he conducted the survey process that, in hindsight, should have suggested to him that he should have requested that the vessel undergo an inclining experiment.[172] Mr Wren's evidence was that it was a "line call"[173] or "margin call"[174] on the day, based on the information presented to him, and agreed it would have been open to him to have made a different decision just based on what he knew at the time.

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[165] T 379, 382.
[166] T 380.
[167] T 373.
[168] T 373 – 374.
[169] T 333.
[170] T 375.
[171] T 375.
[172] T 364, 373.
[173] T 386.
[174] T 386.

130. As to what he knew at the time, assuming he had wanted to verify any of the information, Mr Wren acknowledged that he could have taken simple steps to check matters such as the size of the water tanks and brine tanks, which would have involved the use of a tape measure and a very easy calculation. If he had done so, he agreed he may very well have insisted on a stability test.[175]

131. Further, if he had ascertained the possible extra volume of fuel, Mr Wren believed that he definitely would have made a different call that day.[176]

132. Mr Wren's evidence was also that if he had been aware of ballast removal being an issue, he would have discussed it with Mr Turner and it may very well have changed his decision.[177]

133. Mr Raymond Buccholz is the General Manager of the Marine Safety Division of the DoT in Western Australia. He has occupied this role since December 2013, but with a long history of prior employment with the DoT. The Commercial Vessel Safety Directorate comes within the Marine Safety Division, and their work includes commercial vessel surveys on behalf of AMSA. This was the division within which Mr Wren was working when he performed the survey on the *Returner*, and where he still works.[178] It is also still the case that the DoT provides that surveying service on behalf of AMSA, but Mr Buccholz advised that this arrangement will end on 1 July 2018.[179]

134. Mr Buccholz informed the court that there are 3400 domestic commercial vessels in operation in Western Australia Approximately 1800 of these vessels require annual surveys, and in the last financial year DoT surveyors conducted 1100 of those surveys, with the remainder carried out by private accredited surveyors.[180] With many of these surveys, a survey activity report will identify deficiencies, and the vessel is then required to be brought up to the DoT's satisfaction before the certificate of survey will be issued.[181]

135. According to Mr Buccholz, it is the responsibility of the owner of a vessel to notify AMSA of any alterations, as surveyors may not be able to identify the alterations during a vessel survey. Unless disclosed by the vessel owner, it is not possible for surveyors to identify every alteration to a vessel during a survey.[182] Mr Buccholz stated that the "function of a survey is to ensure that the vessel is continuing to comply with the relevant standards and legislation, rather than check for undeclared alterations."[183] Mr Buccholz gave the removal of ballast as an example of the type of modification that would be difficult for a surveyor to identify just by looking at the vessel.[184]

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[175] T 357 – 358.
[176] T 386.
[177] T 311 -312.
[178] Exhibit 3, Tab 21 [6].
[179] T 407.
[180] T 408.
[181] T 409.
[182] Exhibit 3, Tab 21 [80] – [82].
[183] Exhibit 3, Tab 21 [83].
[184] T 420.

136. Mr Buccholz accepted that "the system places a great deal of emphasis on trust"[185] in that arrangement, but indicated there is the option for the surveyor to take steps to verify the information provided, where it is felt necessary. Mr Buccholz gave evidence it is not uncommon for the DoT to dig down deeper if staff believe that information hasn't been forthcoming or there is a suspicion that not everything has been disclosed. It is also not unknown for the DoT to make a determination that an existing vessel has had modifications to such an extent that it is now believed to be a new vessel.[186] However, Mr Buccholz said it was a matter of having "to rely on the judgment of the individuals."[187] Mr Buccholz rejected the suggestion that the approach was taken due to under resourcing, and indicated that there "has always been that trust and verify component in there."[188]

137. Mr Buccholz's evidence was that if it wasn't a 'trust and verify' approach then every survey would take much longer, because it would effectively require a complete inspection of the vessel every time. Currently a standard survey takes approximately an hour and a half, and the fees set are effectively linked to the timeframe, so the more lengthy the time it takes to complete a survey, the greater will be the costs for that service.[189] This is compared to the process with a new vessel being approved, which requires multiple visits by a surveyor, and the costs involved reflect that lengthier process.[190]

138. In the case of the survey of the *Returner* and assessment of the modifications done by Mr Turner, Mr Buccholz accepted that, in hindsight, there is no doubt that the vessel would not have passed a stability test at the time Mr Wren conducted his survey.[191] However, after reviewing what occurred the DoT maintained the position that Mr Wren acted reasonably given the circumstances. Mr Buccholz emphasised that the "modification process is such that the surveyor has to make a judgment as to what level of verification they apply and the level of comfort that they need to have prior to making a recommendation."[192]

139. In this instance, Mr Wren thought there may be an issue that needed to be answered, which prompted him to conduct a freeboard check to satisfy himself that the cumulative effect of the changes was not significant. Having satisfied himself to the degree that he felt comfortable, he then proceeded to complete the survey. From the DoT's perspective, Mr Wren followed the appropriate process and completed his job to the level expected by the DoT and the National Regulator.[193] The position of the DoT was that Mr Wren "acted reasonably given the information presented to him."[194]Hence, there

[185] T 445.
[186] T 422.
[187] T 422.
[188] T 434.
[189] T 421.
[190] T 421.
[191] T 434.
[192] T 434 – 435.
[193] T 435.
[194] T 447.

was no action taken against him by the Department, such as requiring him to undergo further training or be subject to supervision or the like.[195]

140. Mr Buccholz was questioned as to whether, going forward, there should be some curtailing of the 'trust and verify' approach, for matters such as whether the fuel tanks were full, which was of vital importance in this case and can be easily checked. His response was that, ultimately, it is a matter for AMSA as it moves into the new system as to how much detail they provide to their accredited surveyors.[196]

141. I will return to the question of the reasonableness of Mr Wren's decision-making when I consider the AMSA investigation conducted after the recovery of the *Returner*.

SEA TRIALS

142. On 8 May 2015 Mr Turner and Chad steamed the *Returner* from Geraldton to Carnarvon. Chad remained in Carnarvon with the boat while Mr Turner returned to Perth to have a part fitted to his artificial leg. When Mr Turner returned to Carnarvon, they steamed the boat to Point Samson, where the *Returner* was berthed at Johns Creek Boat Harbour on 24 May 2015. They had reportedly travelled through some heavy winds to get to Carnarvon, and there had been problems with the autopilot, but the vessel arrived there without incident.[197]

143. Mr Turner and Chad were joined in Point Samson by Mr Turner's close friend Michael Tozer and Mr Tozer's young son. Mr Tozer holds a Master V (Fishing) and a Master V (Trading) and Marine Engine Driver Grade 2 certificate and he is very familiar with the waters off Point Samson. More importantly, he is also familiar with the weather conditions in the Point Samson area, which can be very hazardous.[198] Mr Tozer knew Mr Turner and Chad to be experienced professional fisherman but they were not familiar with the Point Samson area. It was intended that Mr Tozer would show Mr Turner the best fishing grounds in the area for banana prawn trawling.[199]

144. In relation to the weather conditions peculiar to the area, Mr Tozer explained that Nickol Bay is known for high tidal chop (waves) that can reach about five metres in height, close together. In June the area has heavy windstorms, with winds up to 60 knots.[200] While it is largely protected from ocean swells, Nickol Bay is subject to strong tidal currents and heavy seas generated by strong winds. In particular, when conditions are favourable, tall steep waves form in the bay with a short wave period between crests.[201] Mr Tozer elaborated further in his evidence to describe squalls that come in to the

[195] T 424.
[196] T 437.
[197] T 30, 186.
[198] Exhibit 1, Tab 2, p. 17.
[199] T 30; Exhibit 1, Tab 2, pp. 16 - 17.
[200] Exhibit 1, Tab 2, p. 17.
[201] T 187; Exhibit 1, Tab 11, p. 7.

bay, which he described as "pretty phenomenal."[202] An unusual feature of these squalls is that they can miss one boat and hit another boat only a few hundred metres away, coming in at speed then leaving as quickly as they came.[203]

145. Mr Tozer was aware Mr Turner had recently done an extensive re-fit of the *Returner* in the previous months while in Carnarvon. Mr Tozer listed a number of the modifications he was aware had been done, including installation of a new refrigeration system, brine tank, freezer, propeller and Kort nozzle, as well as secondhand aluminium trawl booms. Mr Tozer regarded the refit "as being quite significant."[204] Mr Tozer did not discuss the survey process with Mr Turner, but had made an assumption that he had been required to undergo stability tests and inclination tests, which he believed were necessary for safety reasons. He also thought Mr Turner would have been willing to undergo necessary testing for those safety reasons. However, Mr Tozer also acknowledged that the refurbishment had cost Mr Turner in the vicinity of $200,000 and his funds were pretty well exhausted at that stage.[205]

146. It was intended that Mr Tozer would help Mr Turner and Chad put the vessel through a sea trial and ensure the trawling gear and the vessel were working correctly.[206]

147. The men worked together on the *Returner* for a few days, preparing the *Returner* for trawling. On 26 May 2015 Mr Turner, Chad, Mr Tozer and his son steamed the *Returner* to Depuch Island, where they put the *Returner* through sea trials. They tested the fishing vessel for prawn trawling in depths from 2 metres and up to 6 metres in water. They caught a couple of tonnes of prawns.[207]

148. Mr Tozer was generally happy with the way the *Returner* performed. Mr Tozer formed the view the vessel tracked well and sat true in the water. While they were out the wind, speed and sea conditions were estimated to have been around two to three metres and although the vessel sat close to the water line, Mr Tozer described it as a dry boat with minimal water coming onto the deck. Mr Tozer also described the vessel as being very stable with a gentle roll.[208]

149. Mr Tozer had seen the *Returner* trawling in shallow water from two to six metres in depth. He noted that when the vessel turned while trawling it would lift to one side, which he expected to occur. Mr Tozer believed the vessel healed to an acceptable and safe standard.[209]

[202] T 204.
[203] T 204.
[204] T 186.
[205] T 196.
[206] T 187.
[207] T 30 – 31.
[208] T 189; Exhibit 1, Tab 2, p. 17.
[209] Exhibit 1, Tab 2, p. 18.

150. However, Mr Tozer did note a couple of issues with the stability of the boat. One was in relation to the fuel tanks. Mr Tozer understood the *Returner* held about 8000 litres of diesel and used about 250 litres of fuel per day. There were four fuel tanks on the *Returner*, which were located on the bottom of the boat. The fuel supply was changed from one tank to the other by a manually operated gate valve and the fuel return lines would circulate between the fuel tanks. This would cause the vessel to list intermittently between both sides, which Mr Turner rectified by turning one fuel line off.[210]

151. The other issue was with the booms. Mr Tozer was aware that Mr Turner had replaced the old steel booms on the vessel with new aluminium booms, which were smaller. Mr Tozer raised his concern with the trawling booms being supported by soft stays (wire ropes). Mr Tozer believed because the trawling booms were aluminium, it would have been better to have the booms supported by hard stays (solid steel pipes) to ensure the stability of the booms. Mr Tozer noted that if the booms are not stabilised in place they can become very dangerous and can cause the vessel to capsize, particularly in shallow waters (like Nickol Bay) and rough conditions. Mr Tozer had seen the booms under load on the *Returner* appeared to actually shimmer and vibrate.[211] Mr Tozer said he did raise this issue with Mr Turner when talking about the performance of the vessel, as Mr Turner had less experience trawling in shallow waters, but he did not make a big issue of it and Mr Turner did not seem overly concerned.[212] In hindsight, Mr Tozer believed the stays on the booms may have played a role in the later events.[213]

152. They returned to the boat harbour at 9.30 pm on 3 June 2015. Mr Tozer understood that Mr Turner decided to take the stabilisers off the vessel at that time. The stabilisers were located at the rear of the *Returner* and were fitted to reduce the roll of the vessel, but it was decided that the vessel didn't need them and they were a hindrance at times as they hit the trawl boards and kept getting stuck in the mud when they were trawling.[214] Mr Tozer and his son left Point Samson the following day and returned home.

153. The *Returner* left the boat harbour in Point Samson just before midnight on Saturday, 6 June 2015 with the intention of going trawling. On board were Mr Turner and Chad. They arrived back in the harbour two weeks later at midnight on Sunday, 21 June 2015. There is little detail known about what occurred during this two week period, although it appears to have passed without major incident.[215]

154. On 25 June 2015 they were joined by Mr Turner's son Morgan and his friend Hayden Crabb. The four men left the harbour on board the *Returner* at 4.00 pm on Friday, 26 June 2015 to trawl for prawns off the coast of Dampier. Morgan Turner gained the impression Chad knew the boat "like the back of

[210] T 187 – 188; Exhibit 1, Tab 2, p. 17.
[211] T 203.
[212] T 31, 190 - 191; Exhibit 1, Tab 2, p. 16.
[213] T 204.
[214] T 192; Exhibit 1, Tab 2, p. 18.
[215] T 31.

his hand" and he spent time showing Morgan how to do things on the boat for his Masters Log Book for an under 24 metre vessel.[216]

155. They would fish for prawns all day. Morgan, Mr Crabb and Chad would work on the deck area while Mr Turner ran winches, lifted and dropped the nets and drove the vessel. At the end of the day the catch in the brine tank would be placed into the freezer and the anchor would be dropped. Morgan recalls the fishing trip went well.[217] They arrived back in the harbour at 11.45 am on Thursday, 2 July 2015. No significant issues had been experienced during the period at sea. Morgan and Mr Crabb then left Point Samson and returned home.[218]

156. On Monday, 6 July 2015, Mr Turner and Chad were joined by Mason Carter. It was intended that he would assist them on another trawling trip.

LAST KNOWN CONTACT

Personal Communications

157. The *Returner* left the boat harbour in Point Samson for the last time at 3.30 pm on Monday, 6 July 2015. Mr Turner, Chad and Mason were on board. They were scheduled to arrive back in the harbour on Wednesday, 15 July 2015. Mr Turner spoke to his son Morgan when he was steaming out of Port Samson.

158. While they were at sea Chad and Mason maintained contact with family members via mobile telephone. Mr Turner called Morgan once prior to 11 July 2015 but Morgan was busy and couldn't take the call. He then tried to telephone Mr Turner's mobile several times on Saturday, 11 July 2015, but his father did not answer the phone. He later sent Mr Turner a text message on Monday, 13 July 2015, but he did not receive a reply.[219]

159. Between 12.50 am and 1.32 am on Saturday, 11 July 2015 Chad was having a text message conversation with his brother Kane about the Ashes cricket game. Chad sent his last text at 1.32 am. Kane immediately sent a reply, but Chad did not respond. This was the last known contact with any of the crew.[220] Kane has since expressed regret at not notifying anyone at that time,[221] but there was no reason why he should have suspected that anything was wrong as there were many other more likely reasons why Chad might not have replied (such as he went to perform some duties or the boat moved out of mobile coverage).

[216] T 31, 36; Exhibit 1, Tab 2, p. 11.
[217] Exhibit 1, Tab 2, p. 11.
[218] Exhibit 1, Tab 2, p. 3.
[219] Exhibit 1, Tab 2, p. 11 - 12.
[220] T 31 - 32; Exhibit 1, Tab 2, p. 4 and Tab 7, p. 10.
[221] T 515.

160. However, what we do know now from the available evidence, is that something catastrophic took place not long after Chad sent his last text to his brother.

Possible Sighting from shore

161. Coleen Beauchamp was camping at the Cleaverville camp site, approximately 45 km south of Port Samson, on the night of 11 July 2015. Ms Beauchamp recalled the weather was bad that day. That evening Ms Beauchamp saw a trawler off the coast of Cleaverville, which she identified as a trawler because of the survey lights and lighting at the back of the vessel. She believed the vessel was only a few kilometres offshore. During the night Ms Beauchamp was woken by bad weather as strong winds rocked her caravan. She checked her mobile telephone and noted the time was 1.38 am. Ms Beauchamp went outside her caravan to check that all of her property was secure and found it difficult to walk due to the strength of the winds.[222]

162. While walking outside Ms Beauchamp again noticed a vessel in the water a few kilometres offshore. The vessel appeared to be moving from side to side in the rough waters and she recalled thinking that the vessel was experiencing rough conditions out on the water. Ms Beauchamp returned to her caravan and went back to sleep, waking again at around 4.00 to 5.00 am. Ms Beauchamp did not see the vessel again when she looked out to sea again that morning.[223]

163. The later police investigation into the disappearance of the *Returner* could not identify any other vessel that might have been in that location that evening, so it is believed that the vessel seen by Ms Beauchamp was the *Returner*.[224]

ALC (Automatic Location Communicator)

164. Many vessels engaged in commercial fisheries in Western Australia are required by the Western Australian Department of Fisheries (Fisheries) to have an Automatic Communication Locator (ALC) on board as part of Fisheries' Vessel Monitoring System (VMS).[225] The ALC is an antenna that sits at the highest point on the vessel and is connected to an interconnection box that transmits via satellite back to land. The signal is eventually diverted to the Fisheries' VMS unit based in Fremantle. The ALC transmits the vessel's position, course and average speed to Fisheries. The purpose of the monitoring was the subject of some debate at the inquest, so I will come back to this later in my finding.[226]

165. The system has been set up to give two hour overdue alerts, then 12 hour overdue alerts, when an ALC does not report. There was evidence that it is

[222] T 39 – 40.
[223] T 39 – 40.
[224] T 40.
[225] Evidence provided by Fisheries indicated approximately half of the fleet of commercial fishing vessels in WA are required to have an ALC installed – T 490.
[226] Exhibit 1, Tab 11, p. 5.

not uncommon for ALC's to cease to report because of factors affecting their functionality, such as power outages, antennae blockages, GPS blockages, GPS errors triggering false reports of positions, ALC's being operated at sea in sleep mode and intentional interference by people trying to prevent transmission of their location.[227]

166. The VMS unit only monitors the VMS system between 8.30 am and 4.30 pm Monday to Friday. When staff at the VMS unit come in to the office in the morning they check the morning alerts and, if there are any, they will do an automatic update of the position of the vessel via the computer system. It will normally take approximately five minutes for a position report to come back unless they receive a failed notification or no response at all.[228] If a position report is not received then the next step is to attempt to send a test message by email to see if it sends. The VMS unit staff will also check to see if the vessel is in port or at sea. If it is in port, it is often indicative that there is an issue with the power supply to the unit. The VMS unit staff will attempt to contact the vessel via the registered contact numbers to discuss the problem.[229]

167. The VMS on board the *Returner* sent reports back to Fisheries at approximately 47 minutes past each hour.[230] At 1.46 am (WST) on Saturday, 11 July 2015 the ALC on board the *Returner* recorded the fishing vessel location to be 20°32.119'S 117°02.999'E, inside Nickol Bay. The *Returner* was travelling at a speed of 2.02 knots on a course of 292.09. This was the last ALC response received from the *Returner*.[231] There can be a number of reasons why an ALC ceases to respond, other than the vessel sinking. Many examples were given, including faulty installation, battery failure, lightning strike and an antenna blockage if it is operating near a cliff, as well as the ALC being deliberately tampered with.[232]

168. On the morning of Monday, 13 July 2015 Fionna Cosgrove, a Fisheries employee based in the Fremantle VMS unit, identified a 12 hour overdue ALC alert for the *Returner*. Ms Cosgrove noted the ALC on the *Returner* failed to communicate with the VMS after 1.46 am on 11 July 2015. Ms Cosgrove attempted a manual update through the VMS, however the ALC did not respond.[233]

169. Once the manual update had failed, staff in the Fisheries' VMS unit in Fremantle began to take steps to communicate with the crew of the *Returner* in order to ascertain why the ALC had stopped transmitting. It was estimated this type of event would occur once or twice a month and in every other case the vessel had eventually arrived in port, so in this case the failure of the transmitter was not treated as an emergency.[234] An incident report is completed with all the known details and this is disseminated to

[227] T 59.
[228] T 485.
[229] T 486.
[230] T 79; Exhibit 1, Tab 11, p. 5 and Tab 2, p. 16.
[231] Exhibit 1, Tab 2, p. 4 and Tab 7, pp. 16 - 17.
[232] T 467, 497.
[233] Exhibit 1, Tab 2, p. 4.
[234] T 467, 480.

the compliance manager for the region, the regional manager and the supervising fisheries officer.[235]

170. Mike Dunne, the Officer in Charge of Fisheries in the Pilbara region (Onslow to Eighty Mile Beach), was telephoned by Ms Cosgrove at 10.48 am and notified of the details of when the *Returner* had ceased reporting and asked to assist in trying to contact the master of the vessel to investigate the reason for the power down. This would normally be done by mobile telephone or satellite phone if listed, and enquiries would also be made of the relevant Harbour Master to check whether the vessel was in harbour.[236]

171. Mr Dunne's evidence was that he was not concerned at this stage as he was aware only that the ALC unit on the vessel had lost power, which as noted above can occur for many reasons. Mr Turner had no prior history of tampering with the antenna on his vessel but it was thought he might have lost battery power.[237] The inability to contact the crew by telephone also did not concern him as Mr Dunne noted that it's not unusual for vessels in the Onslow to De Grey area to fall into black spots for mobile phone reception, and the vessel was not due back until Wednesday, so it was not yet overdue.[238]

172. At 10.54 am Mr Dunne contacted Paul Costarella, the Maritime Coordinator (commonly referred to as the Harbour Manager) at Johns Creek Boat Harbour. Mr Costarella had met Mr Turner when he had entered the Johns Creek Boat Harbour on 24 May 2015 on the *Returner*, and he was aware the *Returner* had been in an out of the harbour a few times since that date, departing the harbour for the last time on 5 July 2015 at 3.30 pm.[239] Mr Dunne informed Mr Costarella that the VMS on the *Returner* had ceased transmitting and queried whether the *Returner* was in the harbour. Mr Costarella advised the *Returner* was not and Mr Costarella also advised Mr Dunne that the *Returner* was not due back to Johns Creek until Wednesday, 15 July 2015.[240] Mr Dunne asked for, and was provided with, a contact number for the *Returner*. At this stage Mr Costarella understood it to be simply a communication issue, so he did not take any action to notify search and rescue authorities.[241]

173. After ending the call to Mr Costarella, Mr Dunne tried calling the number for Mr Turner, and he tried again at 1.15 pm. Just after 3.00 pm Mr Dunne received an email from Ms Cosgrove indicating that she had not been able to contact the *Returner* and Mr Dunne replied, indicating that he had similarly been unsuccessful. Mr Dunne asked Ms Cosgrove if there were any other fishing vessels in the Nickol Bay area and she advised that there were none, although she continued to attempt to contact the masters of various fishing vessels thought to be possibly near the same location.[242] Mr Dunne ceased

[235] T 487.
[236] T 467.
[237] Exhibit 1, Tab 7, p. 16.
[238] T 469 – 471.
[239] T 249.
[240] T 249 – 250; Exhibit 1, Tab 11, p. 5.
[241] T 256.
[242] T 471, 487.

duty for the day at 4.00 pm. His evidence was that he still was not concerned about what might have happened to the *Returner* and its crew at that time as the VMS equipment does fail regularly and it is not uncommon to be unable to contact the crew for even a few days at a time.[243]

174. The next morning Mr Dunne returned to duty at 7.30 am. At 8.22 am he received an email from Ms Cosgrove advising that she had left a phone message with another vessel's master who was thought to be nearby.[244] Mr Dunne did not try to contact the *Returner* again himself.

MISSING PERSONS REPORT

175. Chad's parents, Alan and Christine Fairley, had travelled to Karratha intending to collect their son from Point Samson when the boat returned to the harbour. They arrived in Karratha on Sunday, 12 July 2015, three days prior to the intended return date.

176. On Tuesday, 14 July 2015 a local professional fisherman, Mr George Simpson, was out on his fishing vessel anchored in Flying Foam Passage near Dampier. He had been out fishing in waters off Onslow and was making his way back to Point Samson. Mr Simpson woke up from a short sleep during the day to find two missed calls. One was from Chad's parents. Mr Simpson had known Chad's father, Alan Fairley, for many years and was aware that his son Chad was working on the *Returner* with Mr Turner. The other missed call was from Fionna Cosgrove from Fisheries.

177. Mr Simpson rang Ms Cosgrove and she asked him if he had seen or heard from the *Returner* as their ALC had gone off-line on 11 July 2015. Mr Simpson told her that he had not seen or heard from the *Returner*. After some discussion about whether the VMS system was a compliance or safety system, Mr Simpson strongly suggested to Ms Cosgrove that she should report the issue. Ms Cosgrove responded that she had told the Harbour Master at Johns Creek Harbour, Mr Paul Costarella. Mr Simpson asked Ms Cosgrove to provide him with the *Returner's* last known position, but she refused. He was insistent and asked her to get her boss to call him.[245]

178. Mr Simpson next spoke to Mr Fairley and advised that he had tried to speak to the crew of the *Returner* a couple of days before but hadn't been able to get through to them so he had assumed they were out of phone range.[246] Mr Simpson had been keeping in contact with the *Returner* occasionally over the last couple of months as they knew it was a small boat and the crew were new to the area, so they would check to see how they were going. Mr Turner had advised that they were not catching well, but had not mentioned any problems with the vessel. The last time Mr Simpson had seen the *Returner* was on 3 July 2015 in Johns Creek Harbour.[247]

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[243] T 472.
[244] T 471 – 472.
[245] Exhibit 2, Tab 9.
[246] T 275 – 276; Exhibit 2, Tab 9 and Tab 12 [21] – [23].
[247] T 279; Exhibit 2, Tab 9 [70].

179. It seems Mr Simpson had also spoken to Mr Dunne from Fisheries around this time and expressed some concern as he had been through Flying Foam Passage and had not seen the *Returner,* but at this stage Mr Simpson had not been provided with the *Returner's* last known coordinates.[248]

180. Mr Simpson then rang the Harbour Master, Mr Costarella, to see if he had indeed received the call from Fisheries. Mr Costarella advised he had received a call from Fisheries the day before asking for Mr Turner's contact number but not to report the vessel missing. Mr Simpson advised Mr Costarella that Chad's parents were at the harbour and that they had not been able to contact their son. Mr Costarella spoke to Mr Dunne from Fisheries and got some details about the last known location of the *Returner*. At 4.15 pm Mr Costarella contacted the Port Walcott Sea Rescue and Port Hedland Port Authority and requested that they broadcast hourly radio transmissions to the vessel *Returner* in an attempt to gain a response.[249]

181. Shortly after that conversation Mr Simpson spoke to Mr Dunne. Mr Dunne provided Mr Simpson with the last known ALC position of the *Returner* in Nickol Bay and also some information about the previous locations recorded to give some sense of the speed and direction the vessel had been travelling. Mr Dunne told Mr Simpson he thought that the *Returner* may have experienced electrical problems while out of mobile phone range. Mr Simpson expressed concern that no one had been able to get in contact with the *Returner.*[250]

182. Mr Dunne telephoned the Harbour Master in Onslow and asked if there were any sightings of the Returner over the last few days, but there had been none.[251]

183. Mr Simpson was aware of two locations near Nickol Bay where there was no mobile coverage, one near Dolphin Island and one at the northern end of Flying Foam Passage. He went to both of those locations but couldn't see any sign of the *Returner*. Mr Simpson also turned his radar on but couldn't see any vessels matching the *Returner's* size within 25 miles.[252] Mr Simpson also called another fisherman he knew was fishing in the area and confirmed its crew had not seen the *Returner*. After making these enquiries, and a few others, Mr Simpson headed back to Johns Creek Harbour, arriving late that evening.[253]

184. At 9.30 pm Mr Costarella spoke to the master of another fishing vessel who was departing the harbour and asked them to keep a lookout for the *Returner*.

185. On the morning of Wednesday, 15 July 2015 the *Returner* did not arrive at the boat harbour as scheduled. Mr Dunne rang Mr Costarella at 7.53 am and was advised the *Returner* had not come into John's Creek harbour. Mr

[248] T 472.
[249] T 250, 473; Exhibit 1, Tab 11, p. 5.
[250] T 474; Exhibit 2, Tab 9.
[251] T 474.
[252] Exhibit 2, Tab 9.
[253] Exhibit 2, Tab 9.

Dunne's evidence was that he was still not concerned for the *Returner* and its crew's safety at this stage. He telephoned Ms Cosgrove shortly afterwards and obtained some more details about the *Returner's* tracking history. Mr Dunne received a call from Mr Costarella at 9.13 am asking for any new information about the VMS unit's attempts to contact the *Returner*. Mr Dunne appears to have assumed that this information had been requested by the police, although other evidence indicates the police had not yet been informed that there was any concern that the *Returner* might be missing. Mr Dunne made some inquiries with the Fisheries' VMS Unit and forwarded the information on to Mr Costarella, as requested.[254]

186. At 10.00 am Mr Simpson telephoned Mr Costarella, who had travelled to Cape Preston Harbour, and advised a helicopter had seen a fishing vessel near Cleaverville so Mr Simpson was driving there to see if they needed help. Mr Costarella notified Mr Dunne of the plan. At 11.30 am Mr Simpson rang Mr Costarella again and advised the fishing vessel at Cleaverville was not the *Returner*. Mr Costarella was going out of phone range so he asked Mr Simpson to telephone Water Police so that a search for the *Returner* could be commenced.[255]

187. According to Mr Dunne, Mr Costarella notified Mr Dunne just before 1.00pm that the vessel sighted near Dixon Island was not the *Returner* and that the police were likely to commence a search. Mr Simpson also spoke to Mr Dunne at 1.07 pm advising that the *Returner* had not been found.[256] At 2.00 pm Mr Dunne finished office duty for the day and commenced four days leave. He did not make a report to the police before he commenced leave.[257]

188. At around 2.00 pm on Wednesday, 15 July 2015 Karratha Police were contacted by Mr Simpson, who reported that the *Returner* was possibly missing as there had been no contact with the crew or vessel for the past four days.[258] Officers from Karratha Police Station then notified the Water Police and Mr Simpson also contacted the Water Police personally.[259] Mr Simpson also spoke to Chad's parents, who came to the harbour.[260]

189. Sergeant Crawshaw at Water Police received the notification that the *Returner* might be missing at 2.28 pm. This was the first time the Water Police were advised of any concerns about the vessel's whereabouts, despite the fact that it had been known since Monday, 13 July 2015 by Fisheries staff and others that there were problems contacting the vessel.[261]

190. A police officer telephoned Mr Dunne from Fisheries at 2.53 pm requesting the last known coordinates of the *Returner*, which Mr Dunne forwarded to the police at 3.01 pm via email. Mr Dunne spoke to the police on the telephone after sending the email and discussed the tracking details of the

[254] T 474 - 475.
[255] T 252; 277.
[256] T 475.
[257] T 475.
[258] Exhibit 1, Tab 2, p. 2.
[259] T 32.
[260] T 278.
[261] T 208; Exhibit 1, Tab 2, p. 79 – 80.

Returner and the possibility of a police search. Mr Dunne believes he offered the services of local Fisheries staff and their vessel if such a search commenced.[262] At 3.53 pm Mr Dunne contacted the Port Hedland Control Tower, just to see if the *Returner* may have travelled near there for shelter from bad weather, but was advised the vessel had not been sighted.[263]

191. Later in the afternoon Mr Costarella spoke to Water Police to provide what information he could to assist in the search, including the last known location of the vessel that had been provided by Fisheries. Mr Costarella also returned to the Johns Creek harbour that night at 8.00 pm to check if the *Returner* had come in on the next high tide, but there was no sign of the vessel.[264]

SEARCH FOR THE *RETURNER*

192. After receiving notification of the *Returner*'s disappearance on the afternoon of 15 July 2015, officers based at the Water Police immediately coordinated an air and shoreline search around the last known ALC position of the *Returner*.[265] They were able to establish that the vessel had last been contactable on Saturday 11 July 2015 so the officers in the Incident Command Team knew that it was possible that several days had elapsed since the vessel had sunk or capsized, which meant that they needed to take into account the possibility that any persons in the water or in a life raft would have drifted some distance, and possibly to shore, by that time.[266]

193. Information was obtained about the weather over that period, which established that the weather had not been good, with strong local winds and significant seas and swell.[267] This suggested that the *Returner* may well have been in a distress situation, rather than simply trawling and out of mobile phone range or without power, although attempts were still made to contact the *Returner* by radio and to ask other vessel operators to keep a lookout.[268]

194. Mr Fairley went up in a police aircraft and helped with some searching of Nickol Bay and the surrounding islands.[269]

195. There was an extensive air, land, sea surface and underwater sonar search of the area, covering approximately 400 square kilometres. The search followed the Westplan for a search of this kind, which permits utilising public assistance, so as well as officers from Water Police and local police, local Fisheries staff including Mr Dunne assisted and the search parties also included local fishing vessels, family members of the crew and members of the local community.[270]

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[262] T 475.
[263] T 476.
[264] T 252.
[265] T 32; Exhibit 1, Tab 7, p. 11.
[266] Exhibit 1, Tab 7, pp. 13 and 18.
[267] Exhibit 1, Tab 7, p. 13.
[268] Exhibit 2, Tab 7, pp. 17 – 18.
[269] Exhibit 2, Tab 12.
[270] T 32 – 33; 64, 477.

196. Inspector Nicolau acknowledged that initially there was some confusion and difficulty in communication with the family members and other local volunteers who wished to assist in the search, as the police were unaware of the qualifications and experience of individuals so the police were cautious about who they permitted to formally assist due to concerns about the safety of all involved. However, as the search progressed Inspector Nicolau believed the police were able to establish good lines of communication with family members, in particular Kane Fairley and Morgan Turner, and from those lines of communication they were able to establish where the family were searching and what areas they had already searched, which Inspector Nicolau acknowledged provided great assistance to the police-coordinated search.[271]

197. Inspector Nicolau also explained that there was some initial delay in providing information about the last ALC location to the family and other volunteers who were assisting with the search, as that information belonged to the Department of Fisheries and they required permission from them to release that information externally.[272]

198. The search was broadly divided into two significant searches, being the marine search and rescue operation and the land search and rescue operation, with air support provided for both via AMSA. The marine search was undertaken by the WA Water Police and the land search by local police officers, with all of the searches overseen by Inspector Garry Nicolau, who was the Incident Controller with overarching control of the search and rescue operation. It was undertaken under the authority of the *Emergency Management Act 2005* (WA) with the WA Police as the Hazard Management Agency.[273]

199. Water Police concentrated their search for the missing vessel in an 8 nautical mile area from the last known ALC location of the *Returner*. This was identified by use of the SARMAP system, a recognised computer system designed to assist with the prediction of movement of objects through the water using actual wind and sea current information. The system was utilised throughout the course of the search operation to model likely drift for target items including the vessel itself, survivors, life rafts, deceased persons or fishing vessel debris. SARMAP predictions indicated that if the vessel did capsize or sink at the time the VMS signal was lost, it was very likely debris from the vessel would be found along the eastern shorelines of Dolphin Island and the northern part of the Burrup Peninsula.[274] The modelling also suggested that a person wearing a life jacket and drifting (not actively swimming) would be likely to have reached shore in the same general area after 2 to 3 days.[275]

[271] T 63 - 64.
[272] T 64.
[273] T 43 - 44.
[274] T 44; Exhibit 1, Tab 7, pp. 18 - 19.
[275] Exhibit 1, Tab 7, pp. 20.

200. In the early stages of the search operation the highest priority was the search for survivors, so efforts were concentrated on these predicted drift areas.[276]

201. The search was controlled through a computer database, with all resources deployed being managed through that system. Sergeant Paul Crawshaw (who was a Senior Constable at the time of these events), a very experienced officer in marine searches, was involved in this function at Water Police and he gave evidence at the inquest explaining how the search was coordinated.

202. The search area was divided into a grid, with various resources being allocated specific sectors of the grid to search. The resources included vessels from local industry, such as BHP and the fishing industry, who volunteered their services, as well as public vessels including members of the missing men's families and their friends.[277] Underwater sonar equipment was attached to all sea vessels involved and utilised to scan some 185 km^2 of ocean seabed.[278] Air support from Police Air Wing and private aircraft were also utilised.[279]

203. One of the possibilities considered at an early stage was that the vessel had sunk, so aircraft were used to look for debris, which the SARMAP computer modelling suggested would have drifted to Dolphin Island by that time, if the vessel had sunk around the last time the ALC reported. Late on the first day of the search (being the Wednesday), some debris was found in the area that had been predicted, which gave weight to the possibility that the *Returner* had capsized. Sergeant Crawshaw indicated that as a result of that information they re-evaluated the search from the 'alert' stage to the 'distress' stage.[280]

204. Timeframes for survival were considered as part of this operation. Given the search had not commenced until approximately five days after the last known contact, the likelihood of survival was considered low if the men had been in the water since that time. A recognised expert in estimating time frame survival, Dr Paul Luckin, provided advice that it was possible Chad and Mason might survive for 48 hours in the water but would be unlikely to have survived three days in the water. The estimated time of Mr Turner was much less than for the two younger men. At the stage Dr Luckin was consulted on 16 July 2015, there was effectively no possibility of survival for any of the men if they had gone into the water on 11 July 2015 unless they had reached land. Even if they had reached land, they were likely to have succumbed to the physiological effects of hypothermia within a further 24 hours. Dr Luckin also advised that the survival clock in all possibilities started from the last time they consumed water and ran for 6 days.[281]

[276] Exhibit 1, Tab 7, p. 30.
[277] T 45, 211 - 212.
[278] T 33.
[279] T 211 – 212.
[280] T 214.
[281] Exhibit 1, Tab 7, p. 33.

205. Despite the grim prognosis for survival based on Dr Luckin's expert advice, it was decided by the Incident Command Team that the search operation would still be conducted as a search and rescue for the first three days, both in and out of the water, to give the missing men the best possible opportunity of being found alive. So the search focussed primarily on the priority of trying to find survivors at this stage.[282]

206. In the early days of the search the search and rescue operations were hampered by continuing strong easterly winds and corresponding rough seas, meaning that search conditions were difficult and search crews became fatigued as the day progressed.[283]

207. Sergeant Crawshaw calculated a cumulative probability of detection by the end of the third day of the search operation and concluded that a 99% probability of detection was achieved. Based on that calculation, Sergeant Crawshaw was confident to state that if the missing men had been on the surface within the marine search area they would have been located by one of the search assets in that time.[284]

208. After that time (from 18 July 2015), the search operation changed to one of search and recovery, with a focus on attempting to locate the vessel via sonar searching.[285]

209. Numerous articles of debris from the *Returner* were located throughout surrounding islands, in particular Dolphin Island (as predicted by SARMAP modelling). One of these items was a large commercial 'Esky' style cold-storage box believed to be from the *Returner*. It was found on Dolphin Island and was used to do backtrack modelling with SARMAP. The model showed that the Esky box was likely to have drifted along a path very close to the last known position of the *Returner*, which added to the belief of Sergeant Crawshaw, who was the Search and Rescue Mission Controller, that the vessel had capsized or sunk at a position close to the last known position.[286]

210. Other articles of debris found on Dolphin Island included fishing crates, a deflated life raft, an EPIRB confirmed to be registered to the life raft for the *Returner*, fibreglass containers, netting material and personal belongings identified by Chad's brother as belonging to Chad.[287] The EPIRB found on board the life raft had not been activated and other items such as rations on the life raft had not been utilised, which indicated that it was unlikely that any of the crew were on board when the life raft (which automatically detaches via hydrostatic release and floats free when the vessel is submerged) detached from the *Returner*.[288]

[282] T 219.
[283] Exhibit 1, Tab 7, p. 25.
[284] Exhibit 1, Tab 7, p. 38.
[285] T 48, 220; Exhibit 1, Tab 7, pp. 37, 39.
[286] T 218 – 219; Exhibit 1, Tab 7, p. 32.
[287] T 33; Exhibit 1, Tab 7, p. 27, 39.
[288] T 48; Exhibit 1, Tab 2, p. 50 and Exhibit 1, Tab 7, pp. 27 - 28.

211. It was also noted that the EPIRB that was located on the *Returner* was not a water activated EPIRB, so it would not have automatically sent off a signal when the vessel sank. Rather, it would have required someone with the opportunity and presence of mind to locate it and take it out of its cradle in order to activate it. This gave some indication as to the likely timing of events.[289] The evidence indicated it was a normal EPIRB, that required someone to reach it and unlatch it and pull it out of the cradle, and he did not believe any person would have had time to do so as the vessel was going down.[290]

212. No sign of any of the missing men was found on Dolphin Island, despite the presence of the debris. The island itself was uninhabited and described as 'very harsh land,' as were the other islands in the area. The weather conditions were also very harsh at that time, so even if any of the crew had made it to an island, their chances of survival after more than 72 hours was considered to be limited.[291] With that in mind, the land searches were undertaken for one and a half weeks. There were no footprints, clothing, campsites or evidence of bodies found on any of the nearby islands in that time.[292] After that time the organised, coordinated land search was ceased. However, a search party was sent out following any sightings of debris or information from members of the public about strong odours, makeshift camps or possible remains. All reports were followed up and discounted as being related to the crew of the *Returner*.[293]

DISCOVERY OF THE *RETURNER* & MR TURNER

213. A number of vessels were involved in sonar searching, including several commercial vessels, and the vessels had significant differing capabilities. Some of them had a relatively narrow sonar beam and others had a wider beam, so they were able to cover more ground.[294] This meant that the area covered by some vessels was far greater than that covered by others. As a result, some vessels were unable to complete their allocated search areas in a day and, if they were unable to assist the following day, it left some areas only partially searched. Vessel and sonar operators reported back at the end of each day with screen shots and area data describing the search areas they had covered. However, the sonar vessels reported in different formats, which made it difficult to collate the data.[295] As a result, it was not necessarily immediately clear that some groups had not completed their search areas.[296]

214. As all of the information came in, completed areas were manually plotted onto charts and an estimated probability of detection of 70% was applied.[297] Subsequently, at the request of Inspector Nicoloau, Sergeant Crawshaw

[289] T 48.
[290] T 139.
[291] T 48.
[292] T 51.
[293] T 49.
[294] T 222.
[295] T 222, 224; Exhibit 1, Tab 7, p. 44.
[296] T 240.
[297] T 222, 224; Exhibit 1, Tab 7, p. 44.

engaged the assistance of the Department of Transport Geographic Information Management, Spatial Information Branch, who were able to collate all of the data and produce a detailed chart of the search area, showing the areas covered in the first search. This enabled missed areas that had not been searched to be identified. With this information in hand, vessels were re-tasked to search missed portions and areas of highest probability.[298]

215. It was in one such missed portion of a search grid area that the *Returner* was found.[299]

216. On Wednesday, 29 July 2015 the police vessel the Delphinus captured an image two kilometres south of the last known ALC coordinates of the *Returner*. The image was identified as the missing vessel *Returner*. The vessel was submerged in approximately 10 metres of water 20 km from Nickol Bay, Karratha.[300] The vessel was found approximately 1.9 nautical miles, or approximately 3.5 kilometres, from its last known position. When depicted on a chart, it can be seen that the vessel sank very close to its last known position.[301]

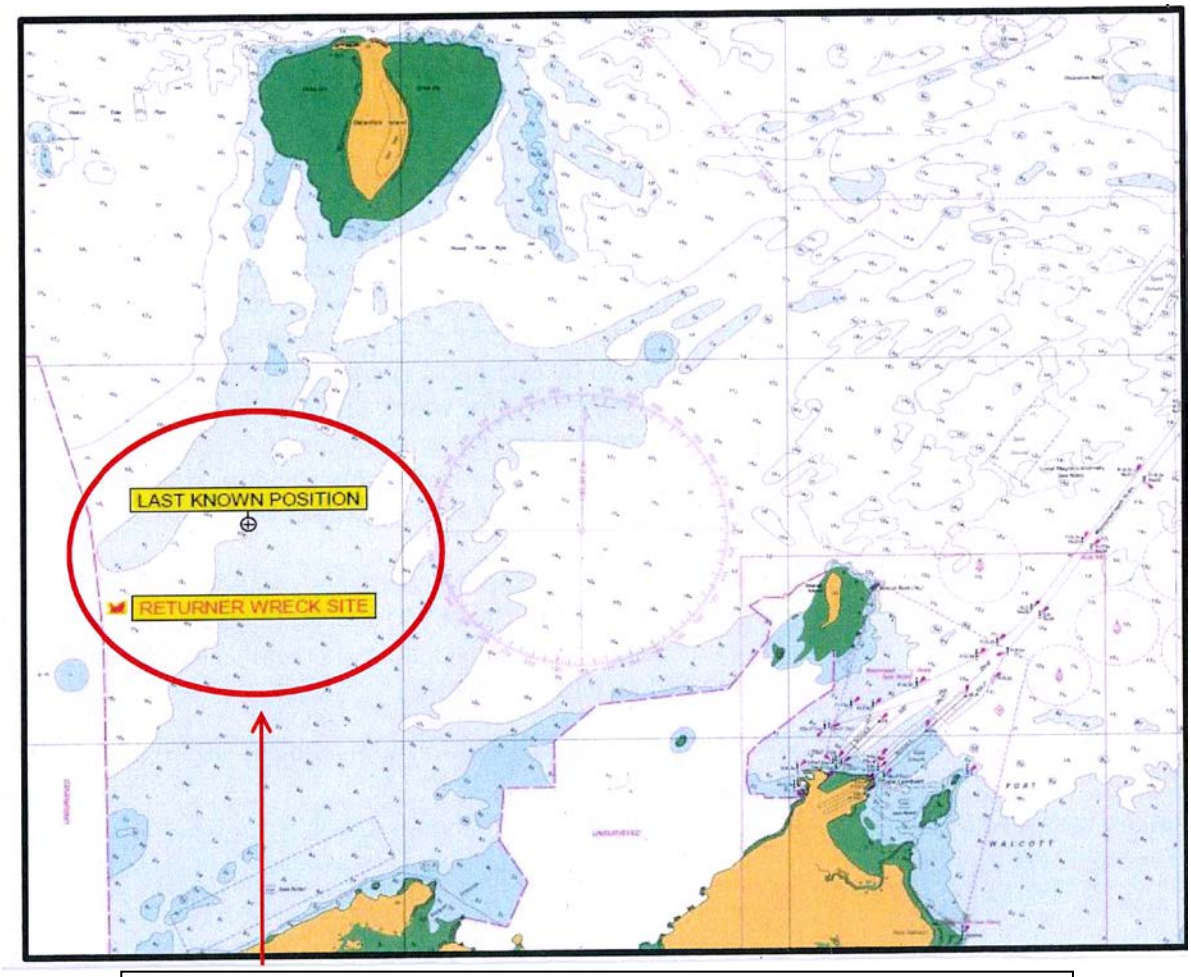

FIGURE 1 FROM REPORT IN Exhibit 1, Tab 11, p. 8

[298] Exhibit 1, Tab 7, p. 45.
[299] T 225.
[300] T 33; Exhibit 1, Tab 2, p. 1.
[301] Exhibit 1, Tab 2, p. 77.

217. Police divers attended Karratha and conducted a preliminary dive on 31 July 2015 during which they conducted an underwater external assessment of the vessel, which confirmed it was the *Returner*. Further dives were undertaken and the interior of the vessel was searched, which identified one deceased person on board. On 1 August 2015 police divers conducted another dive and recovered the body of the deceased male inside the accommodation quarters of the vessel, who was later identified as Mr Turner. No other persons were located on board or in the surrounding debris field.[302]

218. As only one member of the crew was found on board the *Returner*, further consideration was given by Water Police officers to drift modelling of a person on the sea surface.[303] nearest island was 15.9 km in a direct line from where the *Returner* was found, so a considerable distance for any person to swim.[304] No further signs of the missing crewmen, Chad and Mason, were found despite the additional information provided by the *Returner* being recovered.

219. The State Coroner directed the *Returner* be salvaged to assist in determining the cause of the vessel sinking.[305] This was the first time that the WA Police had been involved in the raising of a vessel under these circumstances.

220. The *Returner* was filmed by police divers prior to it being raised from the ocean floor, so that investigators could give consideration to how the vessel had come to rest on the ocean floor.[306] A number of observations were made of some importance. In particular, it was noted that:

- the port and starboard boom had broken free of their attachment points;
- the paravene roll dampening system (stabilisers) was not found attached to the booms as seen on the vessel during voyages;
- both port and starboard boom forward stays were shackled in place confirming that both booms were extended at the time of the incident;
- the nets were trailing approximately 50 metres behind the vessel and attached by cables;
- all trawl nets, chain and otter boards were found to be in good condition with no evidence of tears or damage and there was also no evidence of catch or silting in the nets;
- the cabin door was closed but not locked and debris trapped in the door indicated that it was open at the time of the incident;
- the engine gears were found in reverse with the throttle in idle;
- the vessel's EPIRB was located in its cradle and had not been activated although it was found to be in working order;[307] and
- there is no damage present in the vessel's rigging from interaction with the seabed but the radar tower located on the forward area of the

[302] T 28; Exhibit 1, Tab 2, p. 1 and Tab 7, pp. 48 - 49.
[303] Exhibit 1, Tab 2, p. 52.
[304] Exhibit 1, Tab 7, p. 51.
[305] Exhibit 1, Tab 2, p. 1 and Tab 7, p. 46.
[306] T 29, 33.
[307] Exhibit 1, Tab 11, pp. 22, 73.

wheelhouse roof was extensively damaged, which indicated that the vessel flooded into the forward section and sank by the bow before settling on her port side on the seabed.[308]

221. A commercial salvage operator was contracted to then raise the *Returner* from the bottom and bring it ashore to await examination. This was conducted on 17 August 2015.[309]

SUBSEQUENT INVESTIGATIONS BY AGENCIES

222. The investigation into the circumstances leading to the *Returner* sinking in Nickol Bay was a partnership involving the WA Police, DoT and AMSA.[310]

223. Inspector Nicolau explained that the WA Police were responsible for investigating:

- Fisheries' VMS unit policy and procedures and their response to the ALC on the *Returner* not responding;
- The survey process undertaken by the DoT surveyor in Geraldton (although I note this was also covered in the joint DoT/AMSA investigation referred to below);
- The background history of the crew; and
- The WA Police search for, and recovery of, the *Returner*.[311]

224. The DoT and AMSA were responsible for investigating:

- Compliance with the Marine Safety (Domestic Commercial Vessel) National Law Act 2012 (the National Law);
- Modifications/refurbishments undertaken on the *Returner*;
- Operating practice and qualifications of the crew;
- Structural design/standards and survey history;
- Emergency equipment compliance;
- Factors restricting stability; and
- Contributing factors to the *Returner* sinking (weather and sea conditions).[312]

[308] Exhibit 1, Tab 11, p. 55.
[309] T 228.
[310] T 33.
[311] T 33; Exhibit 1, Tab 2, p. 6.
[312] T 34; Exhibit 1, Tab 2, p. 6.

225. The advantage of bringing the vessel to dry land was that it enabled experts to examine the *Returner* to try to identify whether there was any catastrophic or explosive event had occurred on the vessel that had caused it to sink, whether any other person was involved in the sinking of the vessel and generally how or why the vessel sank.[313]

226. A joint investigation into the capsizing and foundering of the vessel was commenced by the DoT on behalf of AMSA, as the National Regulator, with the assistance of AMSA staff. The focus of the investigation was to determine the factors contributing to the incident, including those related to the vessel's operation, design and survey.[314] The investigation was conducted jointly by Mr Gary Jess, Senior Investigations Officer at the DoT Western Australia and Mr Doug Matchett, a Senior Naval Architect from the Vessel Safety Unit of the Domestic Vessel Division at AMSA. Mr Matchett had joined the investigation at the request of Mr Jess as he had anticipated there would be issues raised that were beyond his expertise and would require the expertise of a naval architect.[315] Mr Matchett had previous experience in maritime incident investigation, including for the purpose of a coronial inquiry.[316] I have referred to Mr Jess and Mr Matchett's joint investigation report earlier in this finding as the AMSA investigation, despite Mr Jess' key role, as he was performing the investigative role as a delegate of AMSA in any event. I refer to the key findings of the investigation report below.

Stability Testing

227. Considering the known modifications made to the *Returner*, a key component of the investigation was firstly, to assess the general stability of the *Returner* against the requirements of the standards and, secondly, to assess the level of static stability in the estimated conditions on the night of the incident.

228. The *Returner* was first raised from the seabed floor and when it was brought to the surface it was found to have no damage to the hull and it remained buoyant after the water was pumped out, which showed it had not sunk due to something happening to the hull causing the vessel to take in water. The *Returner* was then taken back to shore and stored.[317]

229. The investigators arranged for the wreck of the *Returner* to be scanned with a laser scanner so that an accurate model could be made of the vessel. That raw data was converted into a model via a surface modelling program known as Rhino 3D, and then the Rhino 3D model was inputted into a stability software program known as MAXSURF.

[313] T 29.
[314] Exhibit 1, Tab 11, p. 4.
[315] T 78.
[316] T 148.
[317] T 88.

230. In addition, the investigators put the vessel back into the water and recreated its lightship condition (the vessel configured with all essential equipment for operation but not loaded with fuel, water or supplies)[318] as best as possible and did a physical incline test, which assisted with some of the MAXSURF modelling.[319]

231. MAXSURF used the Rhino 3D model and information obtained from physical testing to ascertain the weight of the displacement of the vessel and the hydrostatics of the vessel to test the stability performance of the vessel in certain configurations.[320]

232. The original stability book was also obtained from the DoT (the copy kept on the vessel could not be located, but there was a lot of sodden paperwork recovered from the vessel that was unidentifiable and probably included the stability book, given that Mr Wren had seen it on board)[321] with the original plans.[322]

233. In order to assess the stability of the vessel, 3D modelling was done via MAXSURF on three hull models, based upon:

- Model 1 - the *Returner* in its known configuration and loading at the time of the incident;
- Model 2 - the *Returner* with its one metre transom extension but otherwise configured as per the original stability book; and
- Model 3 - the *Returner* configured as when it was first surveyed, as per the original stability book.

This modelling tested the stability of the vessel in its original form (Model 3), once the first major modification was done (Model 2), and then at the end point when all of the final modifications had been completed by Mr Turner (Model 1).[323]

234. The original stability book was approved on 26 June 1985. Surprisingly, the DoT investigation found that, based on the information recorded in the original stability book, the vessel in its original condition failed the relevant criterion in respect to the 'angle of maximum GZ' (the maximum angle at which the vessel can right itself), which meant that the ability of the vessel to right itself occurred at a lower angle than required by the standards. Nevertheless, it was approved for survey.[324] Mr Jess gave evidence that the failure was very marginal, stating "you're talking less than one per cent type thing," but it still should not have been passed.[325]

[318] T 151.
[319] T 99 - 100.
[320] T 99, 149 - 150.
[321] T 91.
[322] T 99.
[323] Exhibit 1, Tab 11, pp. 23 – 24.
[324] T 151; Exhibit 1, Tab 11, pp. 29 – 30.
[325] T 101.

235. When Model 3 was tested, which reflected the original construction of the vessel *Freda Jess* in 1985, the same result occurred, in that the vessel failed the "angle of maximum GZ" criteria, although the results were slightly different due to a discrepancy in the lightship displacement that was not able to be explained within the scope of the investigation although it suggested there was a difference in the hull form used.[326] The results of the modelling for Model 3 are set out below.

Table 4 – Summary of loading condition compliance with IMCO criteria using hull model three

IMCO Stability Criteria	Criteria Limit	Lightship	Departure	Fishing	Arrival
Area 0 to 30 (metre degrees)	3.15	6.39	6.1437	5.3115	5.7889
Area 0 to 40 (metre degrees)	5.16	9.1300	8.6593	7.2223	8.0397
Area 30 to 40 (metre degrees)	1.72	2.7379	2.5157	1.9108	2.2509
Max GZ at 30 or greater (metres)	0.200	0.30	0.283	0.23	0.259
Angle of maximum GZ (degrees)	25	25.5	23.6	22.7	23.6
Initial GMt (metres)	0.15	1.017	0.902	0.812	0.882
	Compliance with Criteria	PASS	FAIL	FAIL	FAIL

TABLE 4 from Exhibit 1, Tab 11, p.31

236. In comparison, the modelling in relation to Model 1, which was based on the *Returner* in the configuration estimated at the time of the incident, showed that the *Returner* failed **all** of the relevant stability criteria other than one, as set out in the table below.[327] The modelling demonstrated that the modifications that had been made by Mr Turner to the vessel had dramatically, and detrimentally, altered its stability. It was stated that the *Returner* was, on average, 35% more unstable at the time that it sank than in its original configuration.[328]

[326] Exhibit 1, Tab 11, pp. 29, 33.
[327] Exhibit 1, Tab 11, p. 32.
[328] T 153.

Table 5 – Summary of Loading Conditions and Compliance with IMCO Criteria Using Hull Scan Data with Vessel as Per Incident Condition

IMCO Stability Criteria	Criteria Limit	Vessel In Incident Condition Brine Tank Empty	Vessel In Incident Condition Brine Tank Half Full (Fwd 75%)	Vessel In Incident Condition Full (75%)
Area 0 to 30 (metre degrees)	3.15	3.2529	2.588	1.8813
Area 0 to 40 (metre degrees)	5.16	3.8988	2.874	1.9293
Area 30 to 40 (metre degrees)	1.72	0.6460	0.286	0.0481
Max GZ at 30 or greater (metres_	0.200	0.099	0.066	0.026
Angle of maximum GZ (degrees)	25	20.0	17.3	13.6
Initial GMt (metres)	0.15	0.599	0.548	0.498
	Compliance with Criteria	FAIL	FAIL	FAIL

TABLE 5 from Exhibit 1, Tab 11, p.31

237. This included a further reduction in the "angle of maximum GZ," which even in its original construction was below the relevant standard. The inclusion of liquid in the brine tank increased the level of instability by raising the vertical centre of gravity and introducing free surface effect (the movement of liquid within the tank, which alters the centre of gravity as the liquid moves) as a factor. This had the consequence of reducing further the vessel's ability to right itself at large angles of heel.[329] The low freeboard of the *Returner* also had a direct bearing on the low angle of maximum righting lever (GZ).[330]

238. Comparisons made against the "fishing condition" (considered the worst loading case for stability) contained within the original stability book and the various modelling, found significantly that:

- The metacentric height (GMt) of the *Returner* was up to 40% lower as configured at the time of the incident compared to when she was originally assessed in 1985. The low GMt would have meant that the *Returner* would have felt more comfortable to her crew due to long roll periods compared to 'stiffer' vessels with larger GMt and shorter roll periods. However, stability would have been significantly diminished.
- The *Returner's* angle of vanishing stability (the point at which she can no longer stay upright and would capsize) was reduced by up to 35% from when she was originally assessed in 1985. The threshold of survivability for *Returner* would have been significantly diminished if subjected to any external forces such as wind, waves, or trawling, when compared to her original configuration.[331]

[329] Exhibit 1, Tab 11, p. 32.
[330] Exhibit 1, Tab 11, p. 33.
[331] Exhibit 1, Tab 11, p. 33.

239. The effects of the additional cargo and loose items placed on the wheelhouse roof and within the rigging were also considered. The details of the items were taken from CCTV footage of the vessel departing the harbour on 6 July 2015, but not all items were recovered during the salvage of the *Returner*, so some weights had to be approximated. Modelling showed that the additional items placed on the wheelhouse roof by Mr Turner had a negative effect on the stability by increasing the *Returner's* vertical centre of gravity. This subsequently decreased the metacentric height of the vessel and the angle of maximum righting lever.[332]

240. Mr Jess explained further that they weighed the vessel on a crane, with virtually every extra loose item cut off, and the vessel weighed 42 tonne, as compared with its maximum loading condition specified in the original stability book as 30.8 tonne. With all equipment on it, the estimated weight of the vessel was up to 50 tonnes. The weight of the vessel affects how it sits in the water and how it moves in the water, and where the weight is placed also changes its centre of gravity, making the vessel "a lot more prone to capsize."[333]

241. However, the investigators concluded that although the additional items were a contributing factor to the instability of the *Returner*, their effect was negligible in comparison to the effect of the structural modifications undertaken by Mr Turner between December 2014 and April 2015. Mr Jess emphasised the removal of the ballast and the addition and placement of the fuel tanks, brine tank and water tanks in that regard. These are discussed further below.[334]

Weather Conditions

242. To assist with the analysis of what occurred to cause the vessel to capsize, information was obtained from the Bureau of Meteorology about the weather forecast overnight on 10 to 11 July 2015 in the Nickol Bay area. The information indicated that the weather was forecast to be deteriorating from Friday into Saturday. The winds were predicted to average 25 to 30 knots and the seas were going to be between 1.4 and 1.9 metres, and possibly up to 2.1 metres. The weather conditions recorded overnight matched the forecast.[335]

243. The wind and wave data taken that night, which were likely to be representative of what the *Returner* experienced, showed the conditions were quite benign up to midnight and then there was a rapid increase in wind speed (both average and gust) between 12.30 am and 1.30 am on Saturday, 11 July 2015 and a corresponding spike in wave height recorded at 1.42 am. The maximum wave height was recorded at 1.42 am at 2.7 metres in height and from that time there was a general wind speed decrease but not necessarily in the wave height. Overall the conditions were not said to be particularly extreme, but the rapid deterioration from midnight to 1.30 am

[332] Exhibit 1, Tab 11, p. 39.
[333] T 103, 126.
[334] T 104 – 105; Exhibit 1, Tab 11, p. 39.
[335] T 80; Exhibit 1, Tab 11, p. 9.

was considered noteworthy as these conditions may have generated unpredictable and unstable wave conditions (steep and/or breaking waves).[336]

244. A further factor of significant importance was the information that local conditions within Nickol Bay are affected by the surrounding topography. Specifically, during neap tides and when the wind conditions are variable, wind generated waves within the bay become unpredictable and inconstant in their direction of travel. The wave period becomes short (3 to 5 seconds) resulting in a short wave length with a steep face.[337]

245. As part of the investigation an oceanographer did some modelling and found that the wind on the night in question was veering off in different directions over a period of 25 hours, which created a very diffuse sea state and the shortening of wave length as described above.[338]

246. Nevertheless, the evidence was that it would normally be expected that a vessel of this size that was well-founded would be able to withstand considerably higher winds and cope with the sea conditions.[339]

247. The vessel was modelled in weather conditions that were indicative of the conditions on the night of the incident and analysed as to their effect on the vessel's stability. The three models were analysed using a significant wave height of 1.5 m, which was considered conservative as compared to wave heights recorded on the night, and a wave length of 11.9 m (approximately the ship's length) to be representative of the short wave periods within the bay and to mimic the converging of seas caused by the differential wind direction experienced on the night.[340]

248. The results of the modelling demonstrated a change in the *Returner's* static ability in waves travelling either in the direction of the vessel (following seas) or against the vessel (head seas). The modelling found the *Returner*, in its estimated condition at the time of July 2015, would have had much less freeboard in the modelled sea state compared to the earlier configurations of the vessel. The modelling showed in that configuration, as the wave crest approached midship, the metacentric height and righting ability of the vessel became negative, so at this point any roll motion or external force acting on the vessel (such as the 26 knot gusts of wind recorded on the night) would have placed it in danger of capsize.[341] This was compared to the modelling of the earlier configurations, which demonstrated enough righting ability and angles of vanishing stability to provide "survivability in these conditions."[342]

[336] T 81; Exhibit 1, Tab 7, p. 14 and Tab 11, p. 9.
[337] Exhibit 1, Tab 11, p. 12.
[338] T 81 -82.
[339] T 82 – 83.
[340] Exhibit 1, Tab 11, p. 42.
[341] Exhibit 1, Tab 11, pp. 42 – 43.
[342] Exhibit 1, Tab 11, p. 43.

249. Further, if the *Returner* was subject to seas from the stern quarters, rather than a direct following sea as modelled, the vessel may have been subject to roll induced by the waves, as well as heaving down from the wave crest.[343] Based on the modelling, the DoT investigators concluded that the *Returner* was at risk of being rolled or capsized in quartering or following seas even though there may have been relatively little initial rolling. When the *Returner* rose on a wave crest, she would have been exposed to the full force of the wind, while rolling heavily to one side, just at the time her stability was at its lowest. In those circumstances, a "catastrophic roll, beyond the angle of vanishing stability, may have been reached quickly with little or no warning."[344]

250. The conclusion of the stability testing was that the *Returner*, in its condition just prior to the incident,[345]

> *did not comply with the stability requirements by which it was originally assessed. This made the vessel particularly susceptible to external influences which may have contributed to a rise in the centre of gravity. The positive righting levers of the vessel were found to be very small, especially when the new brine tank was filled.*
>
> *Given that the Returner was likely subject to short and steep waves as recorded on the night of the incident, the intact stability would have been further reduced. This would have been to the extent that she had no reserve stability when on wave crests or operating in following or quartering seas. If there were any further negative influences on righting movement, such as water on deck, a rising boom or tangled nets, then any residual positive righting levers would have been easily overcome.*

251. Mr Jess also gave evidence that the investigators believed the vessel "sank very, very quickly"[346] and went straight down to the seabed floor. In those circumstances, anyone on the deck would have ended up in the water, either thrown clear or rolled over upside down with the vessel and stuck under the vessel unless they could make their way up.[347]

252. The evidence supported the conclusion that someone was in the wheelhouse of the vessel around the time it capsized because the vessel was found in reverse and it was at idle, which suggested to the investigators that somebody had either been at the helm or had run into the wheelhouse to do that. It also suggested a panicked response to something going wrong.[348]

253. Although Mr Turner was found in the accommodation hold, which would *prima facie* suggest that he was sleeping in the hold at the time the boat went down, the investigation found through modelling that if a person had been at the helm at the time the vessel capsized and sank it would have been likely that the person would be washed into the forward compartment.

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[343] Exhibit 1, Tab 11, p. 43.
[344] Exhibit 1, Tab 11, p. 43.
[345] Exhibit 1, Tab 11, p. 54.
[346] T 109.
[347] T 110 - 111.
[348] T 84, 111.

The evidence that Mr Turner's prosthetic leg was found not attached, which might also support a conclusion that he was sleeping at the time of the incident, is also subject to some doubt as, given the length of time that Mr Turner was in the water and subject to post mortem influences, it was believed possible that the leg could have been attached at the time of the incident but then been dislodged either during the incident or after.

254. Therefore, the investigation was unable to determine which of the three men was in the wheelhouse around the time of the incident.[349] However, the investigation did conclude that they were fishing at the time of the incident, as they were trailing the nets and otter boards behind the boat and the stays were locked in. The nets were empty when the vessel was recovered, although given the length of time that had elapsed it could not be said conclusively that there was no catch at the time the vessel sank.[350]

255. The investigators found from the modelling that "the additional modifications conducted in the months prior to the incident were shown to be a major causal factor in the instability of the vessel."[351] That is, the works arranged to be done by Mr Turner. The individual effect of the key items is set out below.

Freeing Port Cut Outs

256. The freeing port cut outs on the *Returner* were found to have been covered by stiff rubber flaps that were not capable of opening to allow the unrestricted flow of water from the weather deck. Mr Butler, the previous owner, stated that at the time of sale there were no rubber flaps covering the freeing ports. The investigation found the rubber flaps may have inhibited the flux of water onto the deck during small angles of heel, but any benefit would have been lost by the risk of water being entrapped, which would further reduce the intact stability of the vessel.[352]

257. I have accepted the evidence of Mr Wren that these rigid flaps were added to the *Returner* after it was surveyed, without Mr Turner informing the DoT.[353] Although it is not unusual to see rubber flaps on vessels, they are usually very soft and move easily when water flows against them, but these were solid and did not move. Mr Jess gave evidence at the inquest that these flaps on the *Returner* would have been unlikely to have been approved by the DoT given their rigidity.[354] Mr Wren gave similar evidence.

258. It was noted that pictures of the *Returner* showed that after the modifications it sat very low in the water, even as compared to when it was configured as the *Freda Jess*, which Mr Jess agreed was basically because it was heavy. It was suggested by Mr Jess that Mr Turner might have fixed the rubber flaps as the vessel had a wet deck because it sat so low.[355]

[349] T 84 – 85.
[350] T 85 – 87.
[351] Exhibit 1, Tab 11, p. 54.
[352] Exhibit 1, Tab 11, p. 57.
[353] T 97 - 98.
[354] T 98.
[355] T 119.

259. The DoT investigation found that the flaps were unlikely to have played a role in the capsizing of the *Returner*, as by the time the vessel had heeled over that far it had already reached its angle of vanishing stability and it was going to capsize, whether or not the flaps had been able to allow proper water drainage.[356] Nevertheless, it was no possible for the investigators to say with confidence that they did not play any role in the vessel's capsizing, as depending upon the amount of water that encroached onto the deck (which is unknown), the freeing ports may have had a minor effect or large effect on the vessel's stability.[357]

Ballast

260. Consistent with the witness accounts of the removal of ballast by Mr Turner, inspection of the void spaces on the *Returner* after it was salvaged confirmed that there was no ballast on board the vessel. The stability book indicated that there should have been 1.8 tonnes installed in the skeg keel area, below what was the freezer space in the vessel at the time of the incident.[358] The witness accounts of Mr Butler and another friend of Mr Turner's was that he had removed the ballast to compensate for the added weight he had placed on the vessel, as well as the extra ballast Mr Butler had put in (that was never recorded in the stability book).[359]

261. Mr Matchett's evidence was that the removal of ballast, or movement of it, can have a critical effect on the vessel. That proved to be the case with the *Returner*.[360] Removal of the ballast would have had the effect of raising the vertical centre of gravity by just over 10 cm from its original configuration after the 1987 extension. This would have meant that the intact stability of the vessel was diminished due to the increase in the vertical centre of gravity.[361]

262. Mr Jess gave evidence that, in particular out of the modifications made by Mr Turner, the removal of the ballast would have usually prompted some assessment of the stability of the vessel (if he had disclosed it to the surveyor).[362] Had the *Returner* been subject to inclining experiment by a surveyor at any time after the ballast had been removed, this would have shown there was a change in the vertical centre of gravity from the original configuration.[363]

263. However, Mr Jess' evidence, as a surveyor and qualified master of a vessel less than 24 metres, was that it was very unusual to interfere with ballast and he did not know anyone who would do that. He stated, "It's very much something that you just don't do."[364] On that basis, Mr Jess indicated that it would not have been expected that Mr Wren would ask, as an automatic

[356] T 98.
[357] T 162 – 163.
[358] Exhibit 1, Tab 11, p. 59.
[359] Exhibit 1, Tab 11, p. 59.
[360] T 166.
[361] Exhibit 1, Tab 11, p. 59.
[362] T 105.
[363] Exhibit 1, Tab 11, p. 59.
[364] T 121.

question, whether anyone had made changes to the vessel's ballast as part of the survey process and to have physically looked for it would have been very difficult as the ballast was located underneath where the freezer had been built and the inspection plate had been glued down.[365] The onus, therefore, was on Mr Turner to disclose this information, which he chose not to do, as I have found above.

Brine Tank, Fuel Tanks and Water Tanks

264. Of the visible modifications to the *Returner*, the investigators noted that the addition of a large capacity brine tank at the vessel's stern had the potential to severely affect the vessel's stability. The severity of this was dependent on how much liquid it was carrying at the time. The investigation could not verify if any brine was carried within the tank at the time of the incident.[366]

265. Two new fuel tanks had also been added to the *Returner*, which would have increased the vessel's fuel load displacement (if full) by around 3.4 tonnes, which would have had the effect of decreasing the freeboard by around 7 cm. The amount of fuel on the vessel at the time of the incident was not known as a considerable amount was lost during the salvage process.[367] At least some of the fuel, however, would have been used up while they were out fishing.[368]

266. At the time of the initial survey in 1985 the vessel had one 380 litre freshwater tank. After salvage, this original tank was found to have been removed and instead the *Returner* had four freshwater tanks with a total capacity of 1460 litres, an increase of 1080 litres. This had the potential to increase the overall vessel displacement by over one tonne, thereby decreasing the freeboard, meaning waves would be more likely to encroach on the deck. The tanks were found to be full on salvage but also noted to be tainted with salt water, which suggests entry of some water after the vessel capsized. All four tanks were also found to be connected with all the cross connection valves open, which would have increased the free surface effect on the stability of the vessel.[369]

Freezer

267. Like the brine tank, fuel tanks and water tanks, the addition of a new, larger freezer, raised the vertical centre of gravity to its added weight above the waterline. The displacement of the *Returner* would be further increased by the weight of any catch that it might contain, but very little catch was found in the freezer after salvage, which was consistent with phone calls made by crew members to family prior to the incident, in which they stated the catch was poor.[370]

[365] T 120.
[366] Exhibit 1, Tab 11, p. 60.
[367] Exhibit 1, Tab 11, p. 62.
[368] T 285.
[369] Exhibit 1, Tab 11, p. 63.
[370] Exhibit 1, Tab 11, p. 72.

Booms, Winches and Trawl Gear

268. The booms on the *Returner* were of aluminium construction with soft stays. Soft stays are steel cables that are used to lock the booms in place when they are deployed. As noted above at [75], Mr Tozer was concerned that soft stays were not appropriate for stability given the booms were aluminium. The soft stays did not stop the booms rising into an upright position.

269. No stabilisers were found attached to the booms after the vessel was salvaged but there was evidence that the booms were deployed at the time of the incident. At some point during the incident the starboard boom lifted vertically. This is evident from the damage present on the boom and is consistent with it lifting while the nets were deployed. Such an occurrence would significantly alter the vessel's centre of gravity as the full weight of the tow went to one side. It would also create a situation where the nets were more likely to tangle. The port and starboard nets were found tangled and bundled together with the otter boards on the seabed.[371]

270. However, the investigators noted that it could not be determined whether the starboard boom rising was a causal factor of the capsize, or was a consequential factor, because it is unknown at what point during the incident the boom rose.[372]

271. Nevertheless, a number of witnesses who had experience with the *Returner* and those types of soft stays expressed a strong view that they were likely to have played a role. I have already mentioned Mr Tozer's concerns about the soft stays on the booms, that he mentioned to Mr Turner when they were conducting the sea trials.

272. Like Mr Tozer, Mr Simpson expressed reservations about the soft stays and described them as "dangerous" although he accepted they are permitted.[373] Mr Simpson is aware of other boating incidents in Australia where a fishing vessel has been fishing side-on to the swell and the boat has started to roll and, irrespective of the vessel's stability, once it rolls past a certain point the boom on the outside will flip and the boat will roll immediately, in a matter of seconds.[374] Mr Simpson theorised that Mr Turner put his gear into the water and started to trawl a fair way back into Nickol Bay then at some point he had to turn back again and at that time he would have turned the vessel in the swell, at which time Mr Simpson believes the *Returner* turned too sharply and started to roll and the booms flipped over and took the boat down.[375] Mr Simpson also expressed his belief that it was more likely to have been Chad or Mason who was driving at this time, given Mr Turner's long experience, although that was just theorising on his part.[376]

[371] Exhibit 1, Tab 11, p. 64.
[372] Exhibit 1, Tab 11, p. 70.
[373] T 286 – 287.
[374] T 280.
[375] T 287.
[376] T 287.

273. Ultimately, as the investigators noted, it cannot be finally concluded that the stays played a role, but the weight of the evidence before me suggests a high likelihood that they may have contributed.

Conclusions of the AMSA investigation

274. The investigation of Mr Jess and Mr Matchett found that there were omissions made by Mr Turner in relation to notification of modifications to the vessel. They found Mr Turner did not fully disclose the scope of the works undertaken on the vessel to WA DoT. In particular, critical changes, such as the removal of ballast, were not noted on any paperwork relating to the survey process. This is consistent with my conclusions in regard to the same.[377]

275. Mr Jess and Mr Matchett also found oversights during the survey process by WA DoT, both in its own capacity and as delegate to AMSA as the National Regulator, as the survey did not accurately identify issues with the vessel's stability.[378]

276. The AMSA/DoT investigators observed that Mr Wren described the modifications to the vessel as 'minor' in an email to Simon Anderson, but it was not clear what processes he undertook to verify that assertion.[379]

277. Mr Jess indicated that he did not consider them to be 'minor' modifications.[380] Mr Jess acknowledged that he had the benefit of hindsight, but he expressed the opinion that this was an old vessel, built in 1985, suddenly having an extensive refurbishment, and this knowledge should have prompted the surveyor to say, "I need to ask more questions about this."[381] According to Mr Jess they could visually see, even when the vessel was on the seabed, that "the whole upper deck works was brand new" and were still shiny. Mr Jess agreed that these visible changes alone had the potential to severely affect stability.[382] In Mr Jess' expert opinion, even based upon what was known about the modifications from what was disclosed and visible, there were grounds for a surveyor to ask for the vessel to be re-inclined. Mr Jess emphasised that particularly when looking at the fuel tanks, he considered there were some obvious significant changes made to the vessel.[383] Mr Jess was asked his opinion as to whether the changes noted in the miscellaneous form were changes that would have affected the safety outcomes and increased the level of risk in the operation of the vessel, and he agreed that they would.[384]

278. Similarly, Mr Matchett's evidence was even after it had been underwater for some time, the *Returner* was visibly newer than the 1985 build date. He noted that this would be a visual cue to a surveyor that changes had been

[377] Exhibit 1, Tab 11, p. 6.
[378] Exhibit 1, Tab 11, p. 6.
[379] Exhibit 1, Tab 11, p. 5.
[380] T 113.
[381] T 115.
[382] T 124.
[383] T 130 – 131.
[384] T 137.

made.[385] Of those modifications that were clearly visible, Mr Matchett's evidence was that the large brine tank on the deck would have immediately raised an alarm bell for him as a surveyor, and in his experience as a naval architect, he would describe that as a major effect. He believed this ought to have prompted a review of the original stability book, which would have shown that the brine tank was not in the original stability book, which would then prompt some assessment of the risk that might cause to the vessel's stability.[386]

279. Of the modifications listed by Mr Turner on the miscellaneous form, Mr Matchett gave his opinion that the addition of any of the tanks could constitute a major modification in regards to stability, depending upon the size of the tanks and the layout of the tanks.[387] Mr Matchett described stability of a vessel as probably the most important thing about a vessel,[388] and no other witness appeared to disagree with this proposition. Therefore, any modifications that had a real likelihood of affecting the stability of the vessel required close investigation. Instead, the report of Mr Jess and Mr Matchett concluded that the modifications "were approved with minimal assessment of their effect on stability or the vessel's compliance with safety standards."[389]

280. Mr Matchett gave evidence that the conclusion of the DoT investigation, conducted jointly by himself and Mr Jess, found that the modifications that Mr Turner noted on the miscellaneous form could have caused the *Returner* to be defined as a 'new vessel' in accordance with the requirements of Marine Order 503 and as noted previously above, if it had been assessed as a 'new vessel', it would have required a stability assessment.[390] Further, Mr Matchett indicated that in his expert opinion, the changes the vessel described on the miscellaneous form required a review of stability.[391] Mr Matchett explained further that he agreed with the opinion expressed by Mr Jess that the changes indicated on the form by Mr Turner could have affected the safety outcomes for the vessel and potentially increased the level of risk in the operation of the vessel, so the vessel would have required stability testing to ascertain whether they were, indeed, a risk to the vessel's safety.[392]

281. Mr Wren's statement was not before the AMSA investigators, nor his oral evidence. Mr Wren has, however, now provided a lengthy statement and given oral evidence. I note Mr Wren in effect agreed with Mr Matchett and Mr Jess that it was open to him at the time to have found the modifications disclosed by Mr Turner to be major, not minor, and to have considered that they required a review of the vessel's stability. He did not, however, agree

[385] T 168.
[386] T 168.
[387] T 169.
[388] T 167.
[389] Exhibit 1, Tab 11, p. 5.
[390] T 157 – 158.
[391] T 158.
[392] T 158.

that the modifications meant that the vessel should have been treated as a 'new vessel'.[393]

282. Mr Buccholz, the General Manager of the Marine Safety Division of the DoT, gave evidence that to the best his knowledge, AMSA has not provided specific guidance as to when an existing vessel has been altered to such an extent that it would be considered a 'new vessel'.[394] Therefore, he maintained it is a question of judgment. Consistently with the position taken by Mr Wren, the DoT's position, as stated by Mr Buccholz, was that the trigger under clause 7 of Marine Order 503 that can make an existing vessel be considered a new vessel was not released.[395]

283. As I have noted earlier in this finding, I don't propose to make a determination either way as to whether Mr Wren was right not to characterise the *Returner* as a 'new vessel', given his concession that stability testing was a matter for careful consideration as part of the process he was undertaking in any event, and I am satisfied that there was evidence before him that should have triggered that further testing be ordered. I have relied upon the expert evidence of Mr Jess and Mr Matchett in forming that opinion, as well as some of the concessions made by Mr Wren and the evidence of other witnesses.

284. I am satisfied that Mr Turner failed to disclose critical information to Mr Wren about the nature of some of the modifications he had made to the *Returner*, in particular the removal of ballast, possibly for fear that he would be required to undergo the costly exercise of a stability test. Mr Turner had clearly convinced himself that a process of weighing items and trying to replace 'like weight for like weight', was sufficient. I don't believe Mr Turner would have deliberately put his life, and the lives of his two young deckhands at risk. However, not having the expertise in stability that a shipwright or naval architect would have, he failed to appreciate that the location of the weight and the type of weight had a significantly detrimental effect upon the vessel's centre of gravity.

285. I am also satisfied that, putting to one side the lack of disclosure of some key items, there was still sufficient evidence before Mr Wren in April 2015 that should have alerted him to the real possibility that the modification process completed by Mr Turner on the *Returner* had altered the stability of the vessel and it required expert stability testing. I acknowledge that Mr Wren took some steps to satisfy himself, via testing the freeboard, that the stability of the vessel had not been affected, but given the age of the vessel and the extent of the modifications that were visibly apparent, such steps were inadequate in the circumstances.

286. The stability testing that was done by Mr Jess and Mr Matchett as part of their investigation, subsequently showed that the *Returner*, as configured at the time of the incident, did not comply with any but one of the IMCO

[393] T 363 – 364.
[394] Exhibit 3, Tab 21 [32].
[395] T 447.

stability criterion by a considerable margin.[396] So if Mr Wren had ordered stability testing at the time he conducted the survey and the miscellaneous form process, it would have failed the test, which was not disputed by Mr Wren or the DoT.

287. The process of signing off Mr Wren's recommendation by Mr Anderson also appears to have been deficient, given he was not told all of the modifications from the miscellaneous form in the paperwork he was given, as a safeguard, it could not be expected to work effectively when there were gaps in the information provided. No evidence was heard from Mr Anderson directly, but Mr Buccholz indicated that he had discussed the matter informally with Mr Anderson and been told the extra information would not have affected his decision. Nevertheless, it shows a less than ideal system was in place at the DoT at the time in terms of oversight of Mr Wren's decision-making.

288. The AMSA investigation concluded the *Returner's* lack of stability "greatly reduced her chances of surviving conditions and occurrences that could be reasonably expected by a vessel undertaking commercial trawling."[397] In particular, it "made the vessel particularly vulnerable to capsize should it be exposed to one or more heeling moments in its operation. Capsizing heeling moments that the *Returner* likely encountered on 11 July 2015 would include those from wind, waves, lifting heavy masses, turning or trawling.[398]

289. The investigation also concluded the *Returner* likely capsized due to its lack of stability in combination with the prevailing weather and sea state at the time. Occurrences such as the tangling of the nets and raising or failure of the starboard boom were either contributing factors or occurred as a result of the vessel being in a capsize cycle. However, the precise reason why the *Returner* capsized, in terms of the order of those events, could not be determined conclusively based upon the available evidence.[399] Mr Jess' evidence was that it needed the right set of circumstances for the vessel to capsize, "as it's very rare to get a vessel so unstable it will just tip over immediately when it goes to sea,"[400] but the inherent instability of the vessel is the key in the sense that the conditions described were not so extreme as to have been likely to lead to a stable vessel having foundered.[401]

290. Interestingly, Mr Jess gave evidence that the *Returner* may have appeared deceptively stable to the men who were on it. It was a big heavy vessel with a very slow roll, so it may have actually felt stable and Mr Jess theorised that "that's probably part of the reason why crew members on board were lulled into a false sense of security"[402] as the vessel may have appeared to be a good vessel. In effect, the vessel was low in the water and had a minimal range of movement so it didn't roll much, but the problem was that "it couldn't roll, because if it did, it would capsize."[403] Therefore, the lack of

[396] Exhibit 1, Tab 11, p. 82.
[397] Exhibit 1, Tab 11, p. 81.
[398] Exhibit 1, Tab 11, p. 82.
[399] Exhibit 1, Tab 11, p. 81.
[400] T 116 – 117.
[401] T 69.
[402] T 129.
[403] T 138.

rolling would have felt reassuring, but masked the inherent instability of the vessel. This was borne out by Mr Tozer, who was an experienced fisherman and was involved in the first sea trials on the *Returner*. He described the vessel as very stable when fully laden and noted it only had a gentle roll.[404] It is probably for this reason that experienced fishermen such as Mr Turner, Chad and Mason did not realise the danger they were in until it was too late.

291. If the *Returner* had been required to undergo stability testing in April 2015, there is no doubt that the inherent instability of the vessel would have been identified and required to be rectified, which in all probability would have saved three lives.

CAUSE AND MANNER OF DEATH OF MR TURNER

292. On 7 August 2015 Dr C T Cooke, the Chief Forensic Pathologist, conducted a post mortem examination on the body of Mr Turner. The examination showed established post mortem decomposition changes. Previous amputation of the right leg was noted. There was no evidence of recent injury to the soft tissues or bones. No natural disease was evident other than early arteriosclerotic hardening of the arteries. Congestion and some emphysematous change in the lungs was seen, which is a change that may be seen with immersion (drowning).[405]

293. Limited toxicology analysis showed no common drugs to be present.[406]

294. In view of the known circumstances of the death, and in the absence of significant natural disease or injuries, it appeared to Dr Cooke that Mr Turner died from immersion (drowning).[407]

295. I accept and adopt the conclusion of Dr Cooke as to the cause of death.

296. Given the known circumstances of how Mr Turner's death occurred, I find that the manner of death was by accident.

POLICE INVESTIGATION INTO THE DISAPPEARANCE OF MASON CARTER & CHAD FAIRLEY

297. The WA Police investigation did not identify any eyewitnesses to the *Returner* capsizing.[408] However, witnesses were able to provide accounts of the general weather conditions that were experienced in the relevant area on the night the *Returner* sank and there was a possible sighting of the vessel prior to it sinking.

[404] T 189.
[405] Exhibit 1, Tab 5.
[406] Exhibit 1, Tab 6.
[407] Exhibit 1, Tab 5.
[408] T 35.

298. Although debris from the vessel was located, nothing was found on any of the nearby islands or shore that suggested either Chad or Mason had made it to land safely.

299. As part of the coronial investigation, Inspector Nicolau arranged for a number of enquiries to be made by officers from the Missing Persons Bureau, which are commonly known as 'proof of life' checks. Police officers performed the following tasks:

- interviewed family members and friends of Chad and Mason;
- obtained call-charge records for the last known calls from their mobile telephones;
- looked at personal property, including a quantity of money, located on the vessel that was believed to belong to the crew;
- considered the state of the life raft found on Dolphin Island, which showed it had been deployed through 'hydrostatic release' rather than by any human interaction; and
- made enquiries with financial institutions and government agencies such as the Department of Immigration and Centrelink, to establish that no records had been updated or transactions recorded in relation to either man.[409]

300. All of the proof of life checks indicated that neither Chad nor Mason had been seen or heard from since Saturday, 11 July 2015. The last known contact with either man was the telephone message exchange between Chad and his brother, which ended at 1.27 am on 11 July 2015. Chad's mobile telephone, along with the mobile telephones of Mason and Mr Turner, were all located on the *Returner* when it was recovered from the ocean floor.[410]

301. A check of any unidentified human remains was also conducted and none were identified as being Chad or Mason.[411]

302. At the conclusion of the extensive investigation, Inspector Nicolau advised that although the bodies of Chad and Mason were not found, the evidence obtained in the investigation suggested Chad and Mason were on the *Returner* when it capsized and sank and both men died at sea.[412]

CAUSE AND MANNER OF DEATH OF MASON CARTER & CHAD FAIRLEY

303. The evidence supports the conclusion the *Returner* capsized due to the lack of stability of the vessel in combination with the squalling weather and the state of the sea at the time.[413] The last telephone communication between Chad and his brother was around 1.30 am and the *Returner*'s ALC stopped

[409] Exhibit 1, Tab 2, p. 72.
[410] Exhibit 1, Tab 2, p. 73.
[411] Exhibit 1, Tab 2, p. 72.
[412] Exhibit 1, Tab 2, p. 77.
[413] Exhibit 1, Tab 2, p. 78.

responding at 1.46 am, which suggests the vessel sank before 2.00 am on Saturday, 11 July 2015 and Mr Turner died shortly thereafter.

304. The AMSA investigation report noted that modelling and assessment indicated that capsize likely occurred rapidly. This indicated to the investigators that,

> *when combined with the sudden flooding of the accommodation area and wheelhouse, accessing the safety equipment or escaping the vessel would have been extremely difficult. Any survivors of the initial incident would likely have encountered rough surface conditions with low levels of light. This would have made it difficult to locate and reach the life raft or any items floating in the water.*[414]

This is supported by the evidence that the life raft, found on an island, did not appear to have been used.

305. There was no evidence of an event such as an explosion on the *Returner* and no evidence to suggest any person had suffered a violent injury on the vessel. Mr Turner, whose body was found on the vessel, was determined to have died by way of immersion (drowning).

306. The fact that Chad and Mason were not found on the vessel when it was recovered raises the possibility they were thrown from the vessel when it capsized or alternatively that they may have tried to swim to safety. Their bodies may also have initially been on the vessel when it sank but drifted away while it was submerged.

307. Sergeant Crawshaw concluded that if Chad and Mason had attempted to swim in the water without life jackets it is unlikely they would have been able to make meaningful progress swimming as the wind and sea state at the time would have hindered swimming severely even for a strong swimmer. Additionally, the sea state and darkness would have made it very difficult to see what direction to swim in to head towards land as there would have been few lights visible. The closest island from the vessel location was 8.7 km and Dolphin Island, where most of the debris was found, was 15.9 km from that location. These locations have been extensively searched by air and from land and no trace of any person was found.[415]

308. The last telephone communication between Chad and his brother was around 1.30 am and the *Returner*'s ALC stopped responding at 1.46 am, which suggests the vessel sank before 2.00 am on Saturday, 11 July 2015 and Mr Turner died shortly thereafter.

309. Considered in totality, the evidence before me supports the conclusion that Chad and Mason died at approximately the same time as Mr Turner when the vessel sank, or within the period of 48 hours thereafter if they managed to escape the vessel. I am satisfied on the basis of all the evidence before me

[414] Exhibit 1, Tab 11, p. 81.
[415] Exhibit 1, Tab 7, pp. 50 – 52.

that the deaths of Mason Carter and Chad Fairley have been established beyond reasonable doubt and I so find.

310. The evidence suggests the most likely cause of death would be immersion (drowning). However, some other cause of death from injury cannot be ruled out. In the circumstances, the evidence is insufficient to allow me to make a finding as to the cause of death for either Chad or Mason, although immersion is the most likely possibility.

311. Despite the uncertainty about the cause of death I am, however, satisfied that the manner of their deaths was, in both cases, by way of accident.

COMMENTS ON PUBLIC SAFETY

312. Under s 25(2) of the Act, where a death investigated by a coroner, the coroner may comment on any matter connected with the death including public health or safety or the administration of justice. However, a coroner is precluded from framing a finding or comment in such a way as to appear to determine any question of civil liability or to suggest that any person is guilty of an offence.[416]

The National Law and 'grandfathering' of existing vessels

313. This inquest highlighted an important difference in the National Law between how 'existing vessels' and 'new vessels' are treated, in that if the *Returner* had been a new vessel, it would have required an automatic stability test as part of the five year renewal survey it was undergoing, whereas as an existing vessel it did not. While there was an option for the *Returner* to have been treated as a new vessel given the modifications it had undergone, with the consequence that a stability test would be required, that places an onus on the surveyor to form a difficult judgment, as opposed to the very simple automatic requirement for a new vessel.

314. From a layman's point of view, one would think the opposite rule would apply, at least for now with the recency of the introduction of the National Law, given the newer the vessel, the greater the likelihood that they will have already met strict stability standards when being constructed. In comparison, as Mr Fossey noted in his evidence, one would think that that all older vessels, such as the *Returner*, should be subject to a stability test as they were not done when they were built.[417]

315. Nevertheless, as explained at the inquest, the reasoning behind the different treatment of the two types of vessels stems from practical reasons behind implementing the National Law in the various jurisdictions, and not any suggestion that existing vessels are less likely to require stability testing.

[416] Section 25(5) of the Act.
[417] T 38.

316. Mr Brian Hemming is employed as the National Operations Manager Regions for AMSA. Mr Hemming accepted that one of the important reasons for the introduction of a national maritime scheme for domestic commercial vessels is to achieve a single set of safety rules, and indicated that he was "highly optimistic that this will be very successful."[418]

317. In that regard, Mr Hemming gave evidence that AMSA, as the National Regulator, has expressed some concerns with the grandfathering arrangements for existing vessels as it has slowed down industry's approach to modifying or updating the fleet. Mr Hemming indicated that some of the work AMSA is currently doing is to revise Marine Order 503 to look at things like the trigger points to describe a 'new' versus 'existing vessel'. It is aimed at allowing operators to carry out modifications without having to take the vessel up to full standard, because it is accepted that there would be serious financial implications or obligations to operators if the grandfathering was to end at a point in time.[419] Nevertheless, AMSA has been quite public in saying that, as the National Regulator, they have the right to review the grandfathering scheme as safety concerns are revealed.[420]

318. Mr Cywicki, appearing on behalf of AMSA at the inquest, submitted an appropriate recommendation I might make in this regard. I accept that submission and make the following recommendation:

RECOMMENDATION 1

I recommend that AMSA, as the National Regulator of the National Law, should give consideration to establishing a transitional approach to ending the grandfathering of safety standards for existing vessels. Compliance with current standards in regard to vessel operations and safety equipment should be given priority.

Surveyor Accreditation Scheme

319. There was evidence before me that in the early stages of 2018 the DoT will be transitioning out of its responsibilities to conduct surveys for AMSA, as the National Regulator moves towards using only private accredited surveyors. The process will be fully complete by 1 July 2018. From that time a private surveyor scheme will completely take over the delivery of these services. The private surveyors must, however, have completed the AMSA accredited marine surveyor scheme and a quality assurance program is being developed for that time.[421]

[418] T 399.
[419] T 400 – 401.
[420] T 402.
[421] T 394; Exhibit 3, Tab 22.

320. In the meantime, I was informed at the inquest that the DoT had conducted a formal review after the AMSA investigation report was completed to ascertain what improvements could be made in the survey process, and made some changes as a result. For example, the latest survey checklist includes an item prompt for fixed ballast, to trigger inquiries about ballast.[422] Also, there is a new instruction to surveyors, which gives some guidance to consider the accumulative effect of modifications.[423] Specifically, the instructions indicate in capital letters that the marine surveyor, when conducting a standard periodical survey and being notified of alterations to the vessel, "is to consider any cumulative impact from identified vessel modifications on the vessel's stability."[424] Further, vessel files are now available electronically. These are all positive steps, but they do not go as far as one might hope in encouraging surveyors to rely less on the 'trust' part of the process and a little more on the 'verify' part of their task.

321. It is difficult, going forward, to know exactly what instructions will be given to surveyors about how to approach stability. I was provided with a copy of a publication, *Survey Matters*, on behalf of AMSA following the inquest, as an example of how some information will be disseminated to surveyors under the new system.[425] However, the portion on stability does not canvas the area of concern that arises in this inquest. In order to highlight the concerns that have arisen in this inquest, I therefore make a recommendation, in general terms, so that it is available to AMSA to consider adapting into a useful format to ensure all of their accredited surveyors have stability at the forefront of their minds when reviewing modifications moving forward.

RECOMMENDATION 2

I recommend that AMSA, as the National Regulator of the National Law, should give guidance to accredited surveyors to remind them of the importance of independently verifying key information when assessing a vessel's stability, given the critical importance of the stability of a vessel in allowing a vessel to operate safely.

Vessel Monitoring System

322. Throughout the investigation and early part of the inquest the Department of Fisheries maintained the position that the VMS system was introduced purely for compliance with management plans and is not a safety tool. It is monitored to find out where vessels are located, their speed and their direction solely for compliance purposes, to ensure that vessels are only operating in the fishery for which they are licensed. If they operate outside

[422] T 419.
[423] T 426.
[424] T 427 - 428; Exhibit 3, Tab 21, Attachment, Instruction to Marine Surveyors, p. 8.
[425] Exhibit 6.

the boundaries of their fishery they can be prosecuted.[426] Consistent with that position, it was the evidence of Fisheries' staff that their role was to make contact with the master of the *Returner* after the ALC stopped responding for compliance purposes and not to check on the crew's welfare.[427]

323. Mr Dunne's evidence was that commercial vessels are fitted with safety equipment, such as EPIRBs and flares, for the purpose of seeking assistance when in distress and the VMS is not one of those distress tools, although some systems do have a distress button in addition to the normal ALC.[428]

324. Given it was considered by Fisheries to be a compliance tool, it had not been considered a priority by Fisheries for the VMS to be monitored 24/7. Instead, as noted earlier, the VMS unit was only staffed during office hours from Monday to Friday, and this had always been the case. Staff worked retrospectively with information obtain overnight or on weekends to follow up any issues or breaches during office hours.[429] There was no urgency to those enquiries.

325. Some other witnesses who gave evidence at the inquest disputed the correctness of Fisheries' position that the VMS was never intended to have a safety component.

326. Mr Tozer and his family have been involved in the commercial fishing industry for many years. Mr Tozer gave evidence at the inquest that his family had a vessel in the early nineties that was the first in the state to use the VMS system as part of a trial by the Department of Fisheries for the northern prawn fishery. Mr Tozer was utilised by the Department of Fisheries to try to engage other fishermen in the project. Many fishermen were reluctant to participate as they were concerned that they were giving away sensitive commercial information such as good fishing spots. Therefore, while it was described as a management tool, part of the information provided to commercial fishermen at the time was that it would also be a safety tool to help the fishermen.[430] Based upon that early involvement in the process, Mr Tozer had always believed the VMS was there as a support for fishermen and he was understandably distressed to find out following the death of his friend that this was not the case.[431]

327. Mr Simpson has been a professional fisherman for close to 50 years and he also had personal experience with the introduction of the VMS system. Like Mr Tozer, Mr Simpson understood that it had originally been promoted as having a safety function. His evidence was that the industry had accepted it being introduced on the basis of it being first of all a safety tool, with compliance and research as secondary priorities.[432] Mr Simpson was aware over the years that Fisheries had withdrawn from that position and focussed

[426] T 58 – 59, 478.
[427] T 59.
[428] T 478 – 479.
[429] T 484.
[430] T 195 – 196.
[431] T 198 – 199.
[432] T 274; Exhibit 2, Tab 9.

more on the compliance component, which he described as "inconsistent, irresponsible and contrary to the origins of its initial implementation."[433] It was for this reason that Mr Simpson had become agitated with Ms Cosgrove when she had told him that the *Returner* going offline was a compliance issue rather than a safety issue and did not require reporting to the authorities.[434]

328. Mr Simpson indicated that he has expressed a view for some time that the Department of Fisheries is underfunded so they don't have enough money to manage the system properly. In Mr Simpson's view, the system should be monitored around the clock, seven days a week, and once a signal stops all efforts should be made to contact them straight away.[435]

329. Mr Philip Shaw, the Manager of Strategic Compliance for Fisheries gave evidence at the inquest in relation to the VMS. Part of Mr Shaw's responsibilities is the administration and oversight of the VMS, including the VMS unit, although he is not involved in the day to day operations of the VMS. Mr Shaw confirmed that the way the Fisheries staff handled the *Returner's* ALC failure was in accordance with the departmental policy, which did not emphasise a safety component.[436]

330. Mr Shaw was asked about his recollection of the introduction of the VMS, many years ago. Mr Shaw was a Fisheries officer in Broome at that time and he recalled that there was a lot of resistance to its introduction by the local fishing industry, with concerns expressed about being watched by 'Big Brother' and a lack of confidentiality of their data including special fishing spots. He did not, however, recall safety being promoted by the Department as a way to overcome that resistance, although he accepted it was possible.[437]

331. Mr Shaw was asked whether the VMS could be used as a safety tool and he expressed the opinion that it would be "folly to use it as a primary safety device"[438] but accepted that it "would be a useful secondary safety device,"[439] although like Ms Nicoloff, Mr Shaw suggested that it would be better done within a system of regular phone calls by another party, and then if a call failed the VMS unit could be contacted to ascertain if the ALC had also failed.[440]

332. Ms Stephanie Nicoloff, who is the Acting VMS unit manager, gave evidence at the inquest. Prior to giving evidence Ms Nicoloff had provided a supplementary statement. In the supplementary statement Ms Nicoloff confirmed that prior to the introduction of the VMS the then Minister for Fisheries published a media release which, amongst other things, described the VMS as having a dual purpose of enabling more effective management of

[433] Exhibit 2, Tab 9 [13].
[434] Exhibit 2, Tab 9 [13].
[435] T 284 – 285.
[436] T 500.
[437] T 502.
[438] T 502.
[439] T 502.
[440] T 502.

the industry and also improving safety. The Fisheries website also, at the time of the inquest, stated that data from the VMS is used to, amongst other things, assist safety and rescue organisations. This is clearly a different position to what was maintained early in the piece by Fisheries, and supports the evidence of Mr Tozer and Mr Simpson that the fishing industry was promised that the VMS would have a safety component when it was introduced.

333. Ms Nicoloff went on to explain what Fisheries, as at the time of the inquest, considered the safety component advertised on the website to comprise. Ms Nicoloff stated that the first part was the use of a distress button attachment installed on some models of ALC's, although I'm informed it is not monitored by Fisheries.[441] Secondly, Ms Nicoloff indicated that the VMS can be used as a tool in a rescue operation to assist "to locate a vessel known to be in distress, locate other vessels in the vicinity of the search area, or to contact vessels via a two-way communication"[442] by sending a message to a vessel. Data received by the VMS can also be used to assist safety and rescue organisations during marine emergencies, by providing the last ALC coordinates and contact details on file, as was done in this case.[443]

334. Despite those concessions, Fisheries remained firm on the position that an ALC cannot be used "as an automatic safety device when signal is lost."[444] Reasons given for this position were that there might be other reasons why the ALC signal has stopped and also because only some of the commercial fishing vessels in WA have an ALC, suggesting that making it a mandatory safety device would be "ineffective."[445]

335. Ms Nicoloff gave evidence was that there is an average of about 100 matters a year where an alert cannot be resolved on the first attempt and the crew cannot be contacted straightway so it escalates to an incident report being created and referral to the regional officer. Usually they find that the crew have their phones off or they are out of phone reception.[446] Ms Nicoloff did acknowledge that in most cases the length of time to contact the vessel is not long.[447] There was a concern that constant notification of the police would be onerous for both agencies.

336. In that regard, Inspector Nicolau, a high ranking officer of the WA Police, expressed the opinion that where the ALC has stopped responding and efforts by the Department of Fisheries to contact the vessel have been unsuccessful, it would be appropriate for the Department of Fisheries to notify the lead authority, which is the WA Police, in case a search needs to be undertaken. Inspector Nicolau indicated that the WA Police would welcome such notification and in such circumstances he believed they

[441] T 478, 489.
[442] T 490.
[443] T 489 – 490.
[444] T 490.
[445] T 490.
[446] T 492 – 493.
[447] T 493.

should be notified as it allows the WA Police to make their own decision as to whether there is a need to progress with a search and rescue operation.[448]

337. Sergeant Crawshaw from the Water Police, who is often involved in leading a marine search and rescue operation, also welcomed such information being provided at an early stage, even if it later turned out that the ALC had stopped responding for another reason other than the vessel was in distress.

338. Sergeant Crawshaw and Inspector Nicolau felt sufficiently strongly about this issue to urge a recommendation that, a loss of signal from VMS combined with a failure to establish contact via other means (marine radio, mobile or satellite phone) should prompt an immediate alert to SAR authorities.[449]

339. Sergeant Crawshaw also suggested that Fisheries should, where possible, maintain a list of emergency contacts for vessel operators, including details of two persons who would not be on the vessel with the operator.[450] Sergeant Crawshaw's suggestion is that the details of next of kin or a business partner who would not be on board, would assist searchers to find out more information at an early stage when the vessel can't be contacted.[451]

340. Aligning to some extent with the recommendations sought by the WA Police, I was informed by Ms Nicoloff that following this incident, in October 2015 a new ALC breakdown and manual reporting procedure was implemented, which summarised the existing procedures in place and added an additional requirement for VMS staff to contact Water Police if they are unable to reach the master on board a vessel and if they are unable to contact the regional supervising fisheries officer or the regional compliance manager. VMS unit staff have been following this procedure since October 2015.[452] It should be noted that, at this stage, the VMS unit is still only staffed for limited hours and the procedure only involves contacting the Water Police if other relevant Fisheries staff cannot be contacted.[453] At the time of the inquest there had been no steps taken to amend the standard operating procedure to include some form of time prompt to notify the WA Police other than in those circumstances.[454] Ms Nicoloff accepted at the time that it might be productive to have a more robust discussion with Water Police to establish a set timeframe in which Water Police should be notified as a matter of procedure.[455]

341. I was also later informed in submissions from counsel on behalf of Fisheries that in response to these coronial proceedings Fisheries is now taking steps to further update its standard operating procedures to direct Regional Supervising Fisheries Officers (if available), or alternatively the VMS officer, to contact police within four hours of receiving a notification of an ALC

[448] T 62, 70 – 72.
[449] T 229 – 230.
[450] T 229.
[451] R 230 – 231.
[452] T 491.
[453] T 491.
[454] T 492 - 493.
[455] T 494.

ceasing to report in cases where attempts to contact the vessel are unsuccessful. This will only be done during business hours. Steps are also being taken to add an alternative on-shore contact to the relevant contact details form, as recommended by Sergeant Crawshaw in his report.

342. The possibility of the VMS being monitored outside of office hours, perhaps by diverting alerts to a call centre or a staff member at home, was explored at the inquest but is resisted by Fisheries, who have indicated it would impose a significant impost on the Department's resources.[456] Another difficulty raised with that proposal was a person not trained in the VMS, or working from home, may not have the diagnostic tools available to them to follow the usual procedure.[457] Counsel on behalf of the families of Chad and Mason, on the other hand, urged me to that it should be monitored 24 hours a day, 7 days a week.

343. While I accept that the VMS was not put in place primarily as a safety tool, but more as a regulatory tool, I also accept the evidence of the witnesses who strongly recalled this aspect being a key factor in why the industry acceded to the introduction of the system many years ago. I can see how, from a propaganda point of view when trying to convince a reluctant industry to come on board, safety might well have been promoted as a selling point. However, the reality is that since that time, at least from the perspective of Fisheries, it has not been the case.

344. It is disappointing, from a coronial point of view, that a tool that could be such a useful safety tool, has not been utilised to its full capacity. There is little doubt that if Fisheries staff had taken some responsibility for public safety and alerted the Water Police that the *Returner* had stopped responding at an earlier stage, such as Monday afternoon, the chances of survival of Chad and Mason would at least have improved greatly, although it can't be said that they would have been saved. I find it inexplicable that, even with family members and local fishermen expressing concern, it was left to a local fishermen, in conjunction with the Harbour Master, to eventually alert the police on Wednesday afternoon. The fact that Fisheries staff were acting consistently with their usual practice provides little comfort, as it indicates the procedures themselves were flawed.

345. The current position is certainly an improvement, in that Fisheries has acknowledged some responsibility to contact Water Police when a vessel cannot be contacted within a four hour period of the VMS unit becoming aware of an alert. The difficulty is that, as in this case, that might well result in no notification being given to police for many hours or days, if the alert occurs overnight or on a weekend. However, I accept that there are some practical issues, and cost issues, involved in monitoring the system for anything more than business hours, which is difficult to justify when it is primarily designed as a regulatory tool. Accordingly, my recommendation does not go as far as is urged upon me by the families of Chad and Mason, but is designed to emphasise that Fisheries must acknowledge the history of

[456] Written Closing Submission on behalf of the Department of Fisheries and Department of Transport dated 31 August 2017 [18].
[457] T 507.

the VMS, and how it was promoted to industry, and take some ownership of the role they can, and should play, in improving the safety of commercial fishermen in Western Australia.

RECOMMENDATION 3

I recommend that Fisheries give guidance to its staff that, in addition to the regulatory aspect to the VMS, there is an important secondary safety aspect that they have a responsibility to facilitate as part of their duties. Staff should prioritise communicating with a vessel that has issued an ALC alert that cannot be resolved and if the relevant staff are unsuccessful in contacting the vessel or ascertaining its whereabouts within 4 hours of becoming aware of the alert, they should notify Water Police of the relevant circumstances and provide any relevant information that is available from the VMS to aid police in determining whether, and where, a search should be commenced. In addition, I recommend that, moving forward, Fisheries should consider ways in which the VMS can be monitored 24 hours a day, 7 days a week, and if a practical means can be found, they should be resourced accordingly.

Float Free, Water-activated EPIRBs and PLB

346. In an emergency situation in which a vessel rapidly capsizes or sinks out at sea, the survival of those on board often depends on the successful transmission of a distress signal to search and rescue authorities, so that a search is commenced quickly. While radio alerts and flares have been around for a long time, in the more modern age seafarers have access to much more reliable means of sending out a signal via emergency position location devices.

347. There are different types of emergency position locating devices. The most common are personal locating beacons (PLB), which are attached to a person via a lifejacket, and emergency position indicating radio beacons (EPIRB), which are carried on, or attached to, a vessel via a bracket.[458] Once the beacon is activated it emits a signal that can be detected by satellite. The information is sent in Australia to the Joint Rescue Coordination Centre (JRCC). The JRCC operates 24 hours, 7 days a week from the AMSA Head Office in Canberra. The JRCC can then initiate a search and rescue operation.

[458] Exhibit 3, Tab 22.

348. Traditionally, an EPIRB on a vessel has required manual activation, which requires a person to lift it from the cradle and activate a switch in order for the signal to be sent. In an emergency situation, it can often be difficult for people to access the EPIRB, remove it from its cradle and activate it. Mr Brian Hemming, as National Operations Manager Regions for AMSA, gave evidence that there have been a number of incidents where vessels have sunk in Australian waters in recent years where the cradled EPIRB has failed to activate.[459] Mr Hemming explained that the evidence to date shows that many fishing vessels, particularly trawlers, can go down reasonably fast and there is often not a lot of time for someone to lift a beacon out of its cradle, which is the likely explanation for why an EPIRB has not been activated.[460]

349. To solve this problem, a different type of EPIRB is now available, which is designed to sit in a float-free bracket. For the float-free bracket to work, the vessel must sink and reach a depth of 1 to 3 metres, which then triggers a hydrostatic release. If the EPIRB is correctly fitted within the bracket then the EPIRB should disconnect from the bracket, be activated by its water sensor or a magnetic switch that operates when the EPIRB disengages from the bracket, then the EPIRB is designed to float to the surface. It can also be manually removed and activated if access to it is available.[461]

350. Although the advantage of such a device in a sudden emergency would appear to be obvious, Mr Hemming expressed the opinion that there is a genuine need to get the industry members to understand the benefits of such devices and be willing to install them. Mr Hemming explained that there have been some concerns expressed by industry operators about the vulnerability or susceptibility of these devices to theft and tampering when a vessel is berthed in harbour because the float-free devices must be stored outside the locked wheelhouse in order to float free when a vessel sinks. There is also currently a difference in cost, in the vicinity of an extra $300 to $400 for the float-free device.[462]

351. In concert with Maritime New Zealand, who have presently had the same proposals before their fishing industry, AMSA has determined that changes to the current regulatory requirements for EPIRB's should be considered. AMSA is moving forward with a proposal to investigate regulating the carriage of float free EPIRB's. AMSA's Fishing Industry Advisory Group has already been consulted and extensive further consultation with the industry is planned, particularly as such a change would cut across some of the current 'grandfather' arrangements for existing vessels. AMSA will also need to engage with manufacturers, importers and suppliers of float free EPIRBS and associated apparatuses to ensure that supply can meet the demand.[463]

352. If the changes are recommended, then it will require amendment to the National Standard for Commercial Vessels, National Law Marine Orders,

[459] T 395.
[460] T 395.
[461] Exhibit 3, Tab 22.
[462] T 395.
[463] T 395 – 396; Exhibit 3, Tab 22.

with the process estimated by Mr Hemming to take approximately a year or more.[464]

353. Interestingly, in this inquest Mr Simpson, a very experienced commercial fisherman, was very supportive of the use of these float-free EPIRB's on fishing trawlers. Mr Simpson was asked about water-activated EPIRB's and he expressed the opinion that all trawlers or commercial operators should have water-activated EPIRB's and believes that the requirement to have them should be legislated for the future safety of all seafarers. Mr Simpson stated that he personally has one water-activated EPIRB in his life raft and two in his fishing vessel.[465]

354. Mr Tozer, another experienced commercial fisherman, was not asked about the water-activated EPIRB's, but was asked about the option of personal EPIRBS. With the proviso that they need to be charged up and manned properly, he considered them to be a great idea.[466]

355. The perspective of both of these men is likely to have been coloured by the tragic loss of the crew of the *Returner*, and the knowledge that these sorts of devices could potentially have saved their lives. However, this shows that if the dangers are truly explained and the safety advantages of apparatus are made clear, then commercial fishermen are prepared to embrace new technology despite some practical implementation issues. I commend the actions being taken by AMSA toward requiring the installation of float-free EPIRB's on domestic commercial vessels, and I hope that the publication of this finding will assist in convincing industry of the need to embrace this new technology, which will improve the safety of commercial fishermen in this country and hopefully go some way towards preventing a similar tragedy as occurred in this case.

356. Sergeant Crawshaw expressed his belief that the *Returner* suffered an event which resulted in its rapid and catastrophic sinking, so quickly that crew were unable to access and utilise standard safety equipment. He commented that if the *Returner* had been fitted with an EPIRB that was designed to float free from the vessel upon immersion and automatically activate, a distress signal and position would have been received by JRCC within minutes and search and rescue operations would have commenced at that time. Sergeant Crawshaw was supportive of a recommendation in the vein of what AMSA is proposing, for all commercial vessels working in specified areas to be fitted with a float-free EPIRB, which must be mounted in a location that would allow it to float free of the vessel in the event of the vessel sinking.[467]

357. Sergeant Crawshaw noted that if the Water Police, who would be notified by AMSA, received notice of such an EPIRB alert, they would immediately treat it as a distress situation, rather than an uncertainty or alert situation, and

[464] Exhibit 3, Tab 22.
[465] T 282.
[466] T 201 - 202.
[467] T 231 – 232.

could deploy air assets straight away. This significantly increases the chance of survivors being rescued.[468]

358. Sergeant Crawshaw gave evidence that in his experience at Water Police he has dealt with quite a number of incidents, both commercial and recreational, where the emergency equipment could not be used because of the circumstances surrounding the incident (for example people being injured or the vessel sank too quickly or they could not reach the equipment in time), which is why he emphasises the importance of a float-free water activated EPIRB device. Sergeant Crawshaw noted that as neither the EPIRB on the *Returner* or the one in its life raft was water activated float free devices, neither of them did what they were supposed to do, which is to notify the authorities in the event of a catastrophic event.[469]

359. Since the hearing of the inquest I have been informed that AMSA has commenced consultation with industry about float-free EPIRBs on the AMSA website. Mr Cywicki also suggested an appropriate recommendation, on behalf of AMSA, to further the cause. I accept his submission and make the following recommendation.

RECOMMENDATION 4

I recommend that AMSA, as the National Regulator of the National Law, should give strong consideration to making changes to the current regulatory requirements concerning EPIRBs to include mandatory requirements for the carriage on both new and existing vessels of float free EPIRBs that deploy automatically when immersed in water, where these are appropriate.

360. As for the wearing of PLBs, Mr Hemming indicated that AMSA does not consider the wearing of PLBs is a suitable alternative to carriage of float-free EPIRBs as PLBs rely heavily on the individual and also have a shorter signal transmission time. There is also some concern about 'splashability impact', as some PLBs have activated through water contact not involving submersion in water.[470]

361. In terms of the need for the individual to wear the PLB, it ties in with the discussion of life jackets below, as Mr Hemming noted that PLBs are typically 'attached' to a person via their lifejacket.[471] Mr Hemming's evidence was that AMSA certainly encourages the wearing of a PLB, but does not

[468] T 234.
[469] T 235.
[470] T 396; Exhibit 3, Tab 22.
[471] Exhibit 3, Tab 22.

consider it an appropriate alternative to having a float-free EPIRB on a vessel.[472]

Life Jackets

362. What most commercial fishermen, including some of the witnesses who were heard in this inquest, have so far indicated is that they are not prepared to embrace the wearing of lifejackets, or at least the practice of wearing lifejackets when engaged in fishing/trawling.[473]

363. Mr Butler gave evidence that he did not wear a lifejacket when fishing particularly up north, as it was restrictive and also made him hot and sweaty. He did not know anyone in the fishing industry, when he was involved, who did wear a lifejacket.[474]

364. Mr Tozer also gave evidence that in his experience most fishermen at sea do not wear lifejackets. Mr Tozer explained that they are considered bulky and often fishermen are either wearing wet weather gear, which made it uncomfortable, or it was too hot for the wearing of a lifejacket to be comfortable. Mr Tozer's evidence was that on his boat they only used to wear lifejackets in extreme conditions (indicating that he did not include in that description the conditions he usually experienced in Nickol Bay) or when offshore trawling in deep water.[475] Mr Tozer expressed the opinion that the lifejackets can be a hazard as they get caught up in things and people get trapped by them and dragged overboard.[476]

365. Mr Tozer was asked about the new form of self-inflating lifejackets, as a more comfortable and safer alternative. He indicated that he has been involved in trialling them doing hydrographic survey work but indicated he had seen two people die while using them as they did not function when people fell into the water, either because the salt water tablet had dissolved or the cylinder had been punctured at some earlier time. In those circumstances, he did not consider them to be a better alternative to the standard lifejackets.[477] Mr Tozer was so strongly against the option of lifejackets that he expressed the view that if he had "to go to sea with someone wearing a life jacket, I don't want to be on the boat with them. I wouldn't trust them."[478]

366. Mr Hemming stated that AMSA's view is that there is adequate regulatory provision to require the wearing of lifejackets by crew on fishing vessels through the general safety duties in the National Law and in the broader Work, Health and Safety laws. The National Law mandates the carriage of lifejackets and the general safety duties imposed by Part 3 of the National Law requires a vessel to have a Safety Management System as an integral component of the granting of a Certificate of Operation. What is required to

[472] T 396.
[473] T 397.
[474] T 181 – 182.
[475] T 200.
[476] T 201 – 202.
[477] T 202.
[478] T 202.

form part of the Safety Management System is not defined in the legislation but involves the principle of doing 'what is reasonably practicable to ensure safety'.[479]

367. Mr Hemming advised that AMSA's view is that it would be 'reasonably practicable' to require the master and crew on a fishing vessel to wear their lifejacket when working, as a means to mitigate the risk in such operations, if it was felt it was warranted.[480] However, I note the views expressed by witnesses in this case are not consistent with this position. Mr Hemming acknowledged that whether people choose to wear a lifejacket or compel crew to do so is often dependent on the safety culture within the workplace. So if the fishermen do not accept that wearing a lifejacket is an important safety procedure, they won't do it, notwithstanding a regulatory obligation to do so.[481]

368. Mr Hemming likened it to the previous road safety days when the compulsory wearing of seatbelts in vehicles was introduced. He noted it takes generational change to get the acceptance of such safety features so that people see it as something that is going to save a life. There is a need to change the attitudes of fishermen from a focus on catching fish to also being concerned about their own safety and the safety of their crew while they do so. Mr Hemming described the current position as starting at 'a very low base'.[482] However, Mr Hemming was aware of a recent incident where a fisherman fell overboard from a trawler near Shark Bay and he was wearing a lifejacket. The reason he was wearing a lifejacket was because the company he was working for had a safety management system that required wearing a lifejacket when working on the deck of a trawler. The lifejacket saved his life. Mr Hemming noted that anecdotal evidence suggests that incidents such as these, as they become known in the industry, can have a positive effect on attitudes.[483] However, Mr Hemming also observed that sometimes compliance is only as good as the last time there was an incident, as complacency steps in.[484]

369. Mr Hemming noted that advances in technology can also have an impact, as the options available, and their wearability, increases. AMSA has been undertaking lifejacket awareness trials in particular fisheries (in Karumba, Queensland and the lakes of Coorong Fishery in South Australia) involving the testing of the wearability of different types of life jackets that suit that type of operation and weather conditions. AMSA have then sat down with the manufacturers to talk through the problems fishermen have experienced with particular jackets. Mr Hemming acknowledged that the fishing sector, where nets are involved, presents a particular problem as they are vulnerable to hook up to nets and cause injury and concern. For that reason the current trials have been in inshore net fisheries to show that different types of lifejackets are out there that can suit the particular purpose and conditions. Mr Hemming likened it to the offshore oil and gas industry,

[479] Exhibit 3, Tab 22.
[480] Exhibit 3, Tab 22.
[481] Exhibit 3, Tab 22.
[482] T 398.
[483] T 397.
[484] T 399.

where the need and wearability of this type of equipment has gradually become accepted and is now part of the general employment agreement.[485]

370. For now then, I am advised that AMSA is promoting the wearing of life jackets in the fishing industry, and working with manufacturers to improve the wearability and practicality of such life jackets, but AMSA is not actively moving towards regulating mandatory wearing of lifejackets in the fishing industry as it is AMSA's belief that without industry acceptance, they are unlikely to achieve compliance.

371. Mr Buccholz, noted from the DoT's perspective that the comments of some of the fishermen against the wearing of life jackets is a "typical and frustrating and disappointing response."[486] However, in support of Mr Hemming's description of a gradual generational change, Mr Buccholz noted that when the DoT required mandatory wearing of lifejackets by their own compliance officers on the water they were met with resistance, but some years on it is now second nature.[487] Mr Buccholz noted that, in the same sense, being out on a fishing boat is being in a workplace, and safety should be a priority.[488] Mr Buccholz also demonstrated some of the more modern, smaller and lighter lifejackets that can be manually inflated, as an appropriate solution to some of the complaints about the standard bulky lifejackets, and there are many other options available.[489]

372. Based upon the evidence before me, it is premature for any recommendation to be made to change the regulations to require mandatory wearing of life jackets by commercial fishermen, as without a change in the mentality of the fishermen themselves, AMSA is likely to struggle to ensure compliance. I accept the proposition that it is better, at this stage, for the relevant agencies to work cooperatively to try to change the mindset of the members of the industry, by promoting the new alternatives available and by focussing on the responsibility of employers to provide a safe workplace, even if that workplace is a fishing boat out at sea.

RECOMMENDATION 5

I recommend that AMSA, as the National Regulator of the National Law, working in conjunction with Worksafe in Western Australia, should promote and encourage the wearing of life jackets while working on commercial fishing vessels, noting that commercial fishing vessels are workplaces and there is a need to improve the safety culture on these vessels.

[485] T 398.
[486] T 430.
[487] T 430.
[488] T 430.
[489] T 431 – 432.

Criticism of the Search

373. Mr Tozer was involved in the search for the missing vessel and its crew with members of Mason and Chad's family. Mr Tozer was critical of some aspects of the way the search was handled. He felt the communication between the parties was very poor and that there was no transparency between the police and other authorities that were searching. He felt like the police were trying to keep information from their group, rather than collaborating. Mr Tozer felt frustrated when he found out where the vessel had been found as they had been told that area had already been searched. Mr Tozer believed that if they had been given more information by the police they could have helped identify the best area to search and utilised the very advanced equipment that was available on his search group's boat, Big Ned and an aircraft that was arranged to assist.[490]

374. Mr Simpson, who is a very experienced local fisherman in the relevant area, told the court that his associate fisherman, Mr Ian Morrison, is even more experienced and yet his offer to assist with the search in the very early days was largely ignored. Mr Morrison was understandably upset and angry that his offer to help was not accepted as he knows the area intimately and felt that he had valuable information that could have assisted the search. Mr Simpson suggested that the Water Police, or other people coordinating a search, should show a little bit more compassion towards local people that want to have input.[491]

375. Sergeant Crawshaw was asked during his evidence whether he felt there were any policies that potentially could be changed to enable better communication with families, particularly where the family have skills that could be utilised during the search operation. His response was that he did not believe so, and felt that the police did a good job of keeping in contact with family members and keeping them abreast of everything that was happening.[492] Inspector Nicolau expressed a similar view.

376. There is an obvious disconnect between how the families and friends and concerned members of the public felt about how the communication lines worked with police and how the police felt that they worked in reverse. It is not really an area that I feel a recommendation is appropriate, but I do simply note that Sergeant Crawshaw and Inspector Nicolau closely attended the inquest and I am sure that they will do their best to pass on that feedback within the WA Police and take whatever steps they can to improve lines of communication with the interested parties wherever possible.

CONCLUSION

377. The evidence has established that Mr Turner, Chad and Mason died sometime after the vessel the *Returner* sank in the early hours of the

[490] T 194.
[491] T 289.
[492] T 238.

morning on 11 July 2015. The weather that night, while bad, was not extreme and it was not unlikely that a vessel would experience that kind of weather in that area. It was the instability of the vessel coupled with the particular weather and sea conditions experienced at the time, as well as the fact that they were fishing at the time, that created "perfect storm for that vessel to be sunk."[493]

378. Despite knowledge that the vessel's ALC had stopped reporting on Monday, 13 July 2015, the relevant search and rescue authorities were not alerted until Wednesday, 15 July 2015, by which time there was no realistic chance that any of the men would be found alive. While the vessel was eventually found, with Mr Turner's body on board, to the great distress of their families, the bodies of Chad and Mason have never been found.

379. At the end of the inquest a lawyer appearing on behalf of the Carter and Fairley families read out heartfelt statements prepared on behalf of each family member in which they attempted to describe the indescribable loss of Mason and Chad and articulate their grief. Both Mason and Chad were clearly much-loved and valued members of their families and the hole left by their deaths will never be filled. It is clear that they are missed every day.

380. Mr Turner's family were not as actively involved in the inquest, although they were present for much of the hearing and Morgan Turner had provided a statement as part of the coronial investigation. I have no doubt that Mr Turner is also greatly missed by his family, but he was an older man who had experienced life and his body was found and could be properly buried, so they have been able to grieve in a different way to the Carter and Fairley families.

381. For the Carter and Fairley families, there is also the sense that their sons were not part of the decision making process in deciding whether the *Returner* was seaworthy, so they seek answers as to how that was determined and by whom. The Carter and Fairley families do not express any expectation that the results of this inquest will give them any real closure, as their sons' deaths came too suddenly and too soon. However, they expressed hope that the inquest would provide some answers as to how these tragic events came to take place, so that lessons could be learned to ensure that such a tragedy does not happen again to other families.[494]

382. These issues are also important for the whole community. It was acknowledged by the police that many valuable assets and many hours of working time were generously donated by companies and individuals to assist with the search.[495] The government agencies involved also put in huge amounts of staff and equipment into both the search and subsequent investigation. It is important that lessons are learnt as a result, to ensure that public safety is prioritised and search and rescue operations are able to be conducted in the most timely and optimal manner.

[493] T 69.
[494] T 511.
[495] Exhibit 1, Tab 7, p 42.

383. I have found that Mr Turner played a role in his own demise as he took responsibility for significantly modifying the *Returner* and did not disclose the full extent of those modifications during the survey process.

384. I have also found that the surveyor's decision not to require the *Returner* to undergo a stability test, despite the extent of the modifications known to him, was unreasonable in the circumstances.

385. Separate to those findings, I have considered various safety issues and made comments about the roles of the various agencies in the surveying process and the search and rescue process. In that regard, I have made a number of recommendations that it is hoped will improve the safety of the many commercial fishermen in this State. While much of that responsibility rests upon the agencies involved, it is also incumbent upon those in the industry to embrace the recommendations and make their safety, and the safety of their employees, a priority.

S H Linton
Coroner
February 2018