SHERIFFDOM OF GRAMPIAN HIGHLAND AND ISLANDS AT ABERDEEN

[2022] FAI 17

ABE-B63-21

DETERMINATION

BY

SHERIFF ANDREW MILLER

UNDER THE INQUIRIES INTO FATAL ACCIDENTS AND SUDDEN DEATHS ETC (SCOTLAND) ACT 2016

into the death of

GEORGE STEEN DOCHERTY GIBSON BARTLETT

Aberdeen, 11 April 2022

DETERMINATION

The sheriff, having considered the information presented at the fatal accident inquiry into the death of George Steen Docherty Gibson Bartlett, Determines in terms of Section 26 of the Inquiries into Fatal Accidents and Sudden Deaths Etc. (Scotland) Act 2016 ("the 2016 Act") that:

1. In terms of Section 26(2)(a) of the 2016 Act, the death of Mr Bartlett was confirmed at 04:52 hours on 27 February 2014 at Gilbert Bain Hospital, Lerwick, Shetland.

2. In terms of Section 26(2)(b) of the 2016 Act, the accident resulting in the death of Mr Bartlett occurred at about 02:17 hours on 27 February 2014 at lifeboat station number 4 on board the Harding Offshore Installation ("The Harding Platform"), 320 kilometres

northeast of Aberdeen, at latitude 59 degrees, 16'46.159"north and longitude 01 degrees 30'58.594"east in block 9-23b of the UK Sector of the Continental Shelf.

3. In terms of Section 26(2)(c) of the 2016 Act, the cause of Mr Bartlett's death, as ascertained following a post-mortem examination on 3 March 2014, was:

I (a) Immersion in water.

(b) Precipitate descent from height.

4. In terms of Section 26(2)(d) of the 2016 Act, the accident resulting in Mr Bartlett's death was caused by Mr Bartlett's actions, in the course of carrying out routine weekly maintenance of lifeboat 4 on board the Harding Platform, specifically the following actions:

i. Mr Bartlett failed, contrary to a procedural requirement of which he was aware, to ensure that, prior to commencing routine weekly maintenance of lifeboat 4 in the early hours of 27 February 2014, both the forward and aft safety pendants provided for use in relation to that lifeboat were secured to the appropriate components on the forward and aft sections of the lifeboat;

ii. Mr Bartlett failed, contrary to a procedural requirement of which he was aware, to ensure that the insertion by him of the shackle safety pins provided for use in securing the forward and aft safety pendants to the corresponding components of lifeboat 4 was verified by a second person; and

iii. Having entered lifeboat 4 and commenced routine maintenance of the lifeboat without having attached the forward safety pendant, Mr Bartlett

proceeded to operate the lifeboat release gear, contrary to a prohibition on doing so, of which he was aware.

5. In terms of Section 26(2)(e) of the 2016 Act, the following precautions could reasonably have been taken and, had they been taken, might realistically have resulted in the death of Mr Bartlett, or in the accident resulting in the death of Mr Bartlett, being avoided:

i. Mr Bartlett could have complied with the foregoing procedural requirements and prohibition. He could have attached both safety pendants and had the attachment of the pendants verified by a second person prior to proceeding with maintenance on lifeboat 4. Having commenced maintenance on the lifeboat, he could have refrained from operating the release gear;

ii. The attachment of both safety pendants could have been designated as a prerequisite control measure or equivalent, i.e. a control measure which required to be put in place and confirmed as being in place, to the satisfaction of the member of staff (the "Area Authority") responsible for authorising work on the platform, before Mr Bartlett could have been authorised to proceed with routine lifeboat maintenance work; and

iii. Completed work orders or other relevant documents pertaining to previously-completed routine weekly lifeboat maintenance could have been audited in order to assess compliance with the prohibition on operating lifeboat release gear during such maintenance and to identify any declared breaches of that prohibition, so that appropriate action could have been taken by the operators

of the platform, in the event that any breaches of the prohibition became apparent during such auditing, in order to prevent any recurrence.

6. In terms of Section 26(2)(f) of the 2016 Act, no defects in any system of working caused or contributed to the death of Mr Bartlett or to the accident which resulted in the death of Mr Bartlett.

7. In terms of Section 26(2)(g) of the 2016 Act, no other facts are relevant to the circumstances of Mr Bartlett's death.

RECOMMENDATIONS

In terms of Section 26(1)(b) of the 2016 Act, and having regard to the matters set out in Section 26(4) of the Act, I make the following recommendations which might realistically prevent other deaths in similar circumstances, namely circumstances in which members of staff on offshore installations require to carry out work or other activities on or in relation to lifeboats, and involving the attachment of pendants, of a similar nature to those used on the Harding Platform at the time of this fatal accident:

8. I recommend that operators of offshore installations whose procedures prohibit the operation of lifeboat release gear during any type of work or other activity in relation to lifeboats amend any applicable template work control certificate or equivalent document so that it states that prohibition clearly and prominently.

9. I recommend that operators of offshore installations equipped with lifeboats and pendants similar to those used on the Harding Platform at the time of this fatal accident whose procedures require the attachment of pendants prior to the commencement of

particular types of work or other activity on or in relation to lifeboats introduce measures whereby the secure attachment of pendants to each lifeboat requires to be confirmed to the satisfaction of the Area Authority or equivalent authorising official before the work or other activity in relation to that lifeboat is authorised to proceed.

10. I recommend that operators of offshore installations equipped with lifeboats and pendants of a similar nature to those used on the Harding Platform at the time of this fatal accident should ensure that their procedures concerning the role and competence of any person who is required to attach, or verify the attachment of, such pendants prior to the commencement of any work or other activity in relation to a lifeboat do the following things:

a. Clarify who is responsible for identifying a person who is to verify the secure attachment of pendants prior to any specific work or activity in relation to lifeboats and at what stage, with reference to that work or activity, that person is to be identified;

b. Identify the technical requirements of the tasks of securely attaching pendants and verifying that pendants have been securely attached;

c. Identify the level of knowledge and experience which is required in order to carry out these tasks effectively, including in relation to the mechanism by which pendants are attached to lifeboats and the identification of the correct components to which pendants should be attached, the consequences of insecure attachment of pendants and how to avoid insecure attachment;

d. Identify any training which is necessary in order to provide relevant staff members with the required level of knowledge and experience, the means by which such training is to be delivered and the means by which the knowledge and experience of the trained staff members are to be maintained and refreshed as necessary;

e. Identify the means by which the delivery of any necessary training, and the attainment of the necessary knowledge and experience, can be certified and evidenced;

f. Identify practical, quick and reliable means of establishing which members of staff on an installation are trained to attach pendants and to verify that pendants have been securely attached;

g. Identify the means by which operators will ensure that sufficient staff members who are trained to attach pendants and to verify that pendants have been securely attached are available before any work or other activity which requires the attachment of pendants to a lifeboat can commence; and

h. Identify appropriate means of monitoring and evaluation in order to ensure the maintenance of the necessary levels of competence to attach pendants and to verify that pendants are securely attached.

11. I recommend that operators of offshore installations on which the checking or operation of release gear is prohibited during particular types of work or other activity in relation to lifeboats should include, within their audit processes, the targeted auditing

of documents which record the details of such work or other activities actually carried out, in order to check compliance with that prohibition.

12. I recommend that operators of offshore installations on which a tool box talk or equivalent safety-focussed discussion is required to take place in advance of any type of work or other activity on or in relation to a lifeboat by a member of staff working alone should ensure that their procedures make clear to all staff members who may be required to arrange or participate in such a discussion:

a. The categories of such work or other activity which require a tool box talk or equivalent discussion to be held in advance;

b. Who should participate in such a discussion; and

c. The issues which should be discussed and, in particular, whether the discussion should include the identification of a second person, where required, to verify that pendants are securely attached.

For the avoidance of doubt, this recommendation proceeds on the assumption that a person whose role is limited to verifying that pendants are securely attached prior to the commencement of any work or other activity on or in relation to a lifeboat does not thereby participate in that work or activity.

NOTE

Introduction

Mr Bartlett

[1] George Steen Docherty Gibson Bartlett was born on 18 June 1951. He married his wife in 1973 and the couple had three daughters and one son. Mr and Mrs Bartlett lived in Shotts, North Lanarkshire.

[2] Having left school, Mr Bartlett completed an apprenticeship and then worked repairing heavy plant in the Glasgow area. He began to work as a mechanical technician offshore in 1976 and continued in that line of work, with various companies, until his death on 27 February 2014 at the age of 62.

[3] Mr Bartlett began working on the Harding Platform, in the North Sea approximately 320 kilometres north east of Aberdeen, in 2006. At that time the platform was operated by Britoil Limited, a subsidiary of BP. Mr Bartlett was employed as a mechanical technician, responsible for the repair and maintenance of equipment on the platform. The Harding Platform was acquired by TAQA Bratani Limited ("TAQA") in June 2013, at which time Mr Bartlett's employment transferred to TAQA. Mr Bartlett continued to work as a mechanical technician on the Harding Platform, employed by TAQA, until his death.

[4] I understand that, a number of months prior to his death, Mr Bartlett had begun to make practical arrangements for his retirement, which he looked forward to spending with his wife, children and grandchildren.

[5] Mr Bartlett suffered from high blood pressure and high cholesterol prior to his death. Both conditions were controlled with medication. He also had the onset of arthritis in one of his fingers, but otherwise kept good general health and, having undergone a medical examination whilst still a BP employee, was considered fit to work offshore without restriction.

[6] In addition to indicating the profound loss experienced by Mr Bartlett's family as a result of his death, the evidence painted a clear picture of Mr Bartlett as a man who was liked and respected by his colleagues, who viewed him as an experienced and very capable technician who maintained high standards in relation to his own work and expected the same of others.

[7] As will become apparent, it is beyond doubt that the Mr Bartlett breached a number of critical safety procedures, of which he was aware, in the moments prior to the fatal accident and that, but for Mr Bartlett's actions, the fatal accident would not have occurred. There is a tragic contradiction between those undisputed features of the evidence and other evidence which I heard, and accepted, which indicated that Mr Bartlett was generally regarded by his colleagues as a man who took safety procedures in the course of his work seriously and who expected others to do likewise.

[8] I wish to offer the sincere condolences of the court to Mr Bartlett's family on his untimely death.

Relevant procedural history

[9] A fatal accident inquiry into the death of Mr Bartlett was held via Webex at Aberdeen Sheriff Court over nine days, between 15 and 25 November 2021. I then heard legal submissions on 21 January 2022. The inquiry was mandatory in terms of Section 2(3) of the 2016 Act, Mr Bartlett's death having been the result of an accident which occurred while he was acting in the course of his employment.

[10] Preliminary hearings in terms of Section 16 of the 2016 Act were held on 26 March 2021 and a number of subsequent dates. The dates for the inquiry hearing were fixed at a preliminary hearing on 21 May 2021.

[11] The participants in the inquiry were the Crown, represented by Mr Gavin Callaghan, senior procurator fiscal depute, and TAQA, represented by Mr Peter Gray, Queen's Counsel. The Health and Safety Executive ("HSE") lodged a notice of intention to participate on 18 May 2021 and were represented by Mr Richard Pugh, Advocate, at a number of subsequent preliminary hearings. However the HSE withdrew from participation at the final preliminary hearing on 10 November 2021 on the basis that, following discussion with the other participants, they had concluded that there were no issues they wished to raise which were distinct from those which the Crown and TAQA intended to raise. The HSE did however maintain a watching brief during the inquiry hearing and made their inspectors available to provide any assistance either the Crown or TAQA may have required. Three HSE inspectors gave evidence at the inquiry hearing.

[12] Mr Bartlett's family elected not to formally participate in the inquiry proceedings but did observe all of the preliminary hearings, each day of the inquiry hearing and the submissions hearing, all of which were conducted via Webex. In addition, the Crown lodged a note (Crown Production No. 99) prepared by Mr Bartlett's son Brian Bartlett, setting out various concerns on behalf of the family relating to the circumstances of Mr Bartlett's death and the subsequent investigation.

[13] I am grateful to Mr Callaghan and to Mr Gray for their examination of the evidence and for the steps taken by them to identify and agree a large number of undisputed facts which were incorporated into two joint minutes of agreement lodged at different stages of the proceedings. This undoubtedly assisted in focussing the issues for examination at the inquiry hearing and in considerably reducing the duration of that hearing.

[14] The circumstances of Mr Bartlett's death were reported to the Crown Office and Procurator Fiscal Service ("COPFS") and to the HSE and were investigated by the HSE, as the primary investigating agency. The HSE's investigation began on 27 February 2014. The HSE reported its findings to COPFS on 28 March 2016.

[15] The next stage in the decision-making process was a report by COPFS to crown counsel, seeking instructions as to further procedure. This report was not submitted until 14 October 2019. On 30 October 2019 crown counsel instructed that no criminal proceedings should be brought and that a fatal accident inquiry should be held. That decision was intimated to Mr Bartlett's family and, following a meeting and correspondence, the family exercised their right to review crown counsel's decision not

to instruct criminal proceedings. The outcome of the review was that, on 27 May 2020, crown counsel's decision to proceed with a fatal accident inquiry, rather than criminal proceedings, was confirmed.

[16] Following the departure of the member of staff within COPFS to whom this investigation was originally assigned, the investigation was re-allocated to Mr Callaghan in September 2020. From that point the matter was dealt with promptly. Preparations for a fatal accident inquiry began in October 2020. The first notice, in terms of Section 15(1) of the 2016 Act, was issued by COPFS in late January 2021.

[17] This chronology was provided by Mr Callaghan on behalf of the Crown on the final day of the inquiry hearing in response to concerns expressed by the Bartlett family about the slow pace of the investigation into the circumstances of Mr Bartlett's death. Brian Bartlett made it clear that the family's concerns were expressed on their own behalf but also in the interests of ensuring that other families did not experience excessive delay whilst awaiting the conclusion of investigations arising from the deaths of family members.

[18] Mr Callaghan stated that COPFS recognised that it had taken too long to progress the matter and that there were periods, in particular the period of some three and a half years between the HSE's report to COPFS on 28 March 2016 and COPFS's request for crown counsel's instructions on 14 October 2019, during which the Crown had not ensured that the investigation had progressed as it ought to have done. Mr Callaghan apologised to Mr Bartlett's family on behalf of COPFS for the resulting delay and identified a number of improvements made by COPFS to its internal processes for

the handling of investigations into fatal incidents, which were intended to avoid similar delays in future.

[19] It appeared to me that the concerns of Mr Bartlett's family in relation to the delay in making progress with these proceedings were entirely understandable. Likewise, it was entirely proper and appropriate for COPFS, through Mr Callaghan, to recognise the force of the family's concerns, to apologise to the family for the delay and to explain what it had done in order to avoid similar delays in other investigations.

[20] I should add that, although a number of witnesses did make reference during their evidence to difficulties in recalling events as a result of the intervening delay, the scope for such difficulties to impact upon the inquiry was greatly limited by the fact that the Crown had lodged the statements given to the police and to the HSE, soon after this fatal accident, by all of the witnesses of fact who gave evidence during the inquiry hearing. My understanding is that each of the witnesses was offered the opportunity to view his statements in advance of the inquiry hearing. Where witnesses had difficulty remembering events during the hearing, they were able to refer to their statements. In addition, there were really no disputes of any materiality with regard to the facts surrounding the fatal accident. Thus there were no situations in which, due to the passage of time, witnesses were unable to recall or comment upon factual matters which were the subject of any significant dispute.

[21] Therefore, although the delay for which the Crown very properly apologised was clearly and understandably distressing to Mr Bartlett's family, in my view it did not ultimately interfere with the detailed examination of the evidence which took place

during the inquiry hearing and it did not impede the court's compliance with its statutory functions and duties.

Witnesses called

[22] Only the Crown called witnesses at the inquiry hearing. Virtually all of the witnesses called were cross-examined on behalf of TAQA. TAQA did not call any witnesses.

[23] The witnesses called by the Crown were:

1. Mr Bartlett's son Brian Bartlett;
2. Daniel Johnson, instrument technician;
3. Brian Marshall, retired instrument technician;
4. Christopher Sutherland, control room operator;
5. Brian Hawkesford, retired instrument technician and "Area Authority;"
6. William "Billy" Esplin, retired production technician;
7. Scott Brander, offshore installation manager;
8. Robert Thorne, mechanical technician;
9. Keiran Wilkinson, maintenance supervisor;
10. David Brendan (known as Brendan) Watts, maintenance technician;
11. Simon David Chalmers, mechanical team leader;
12. Andrew Cawley, retired maintenance supervisor;
13. Craig Finlayson, offshore installation manager;
14. Colin Martin, specialist inspector (mechanical engineering), HSE;

15. Dr. Paul Heeney, specialist inspector (offshore), HSE; and

16. Mark Alderson, inspector, HSE.

[24] It was agreed by joint minute that the contents of statements provided by a number of other witnesses who were not called at the inquiry hearing were to form part of the evidence to which regard could be had in determining the issues in the inquiry. Those witnesses were:

1. Gareth Jones, production technician;

2. Graham Hardy, operations team leader;

3. Jonathan Ibbotson, maintenance technician; and

4. William O'Donnell, mechanical technician.

[25] The Crown lodged 103 documentary and photographic productions in advance of the inquiry hearing. TAQA lodged one further production, namely a set of photographs.

Assessment of credibility and reliability

[26] Notwithstanding the extent of the evidence and the number of witnesses called, there was no significant dispute with regard to the facts and circumstances of the fatal incident or with regard to the credibility and reliability of the evidence given by any of the witnesses. The dispute between the participants related rather to the interpretation and adequacy of various underlying procedural documents and to the adequacy of work control, supervision, oversight and audit procedures which were relevant in one way or another to the work in which Mr Bartlett was engaged at the time of the fatal accident.

[27] I found all of the witnesses who gave evidence at the inquiry hearing to be credible and generally reliable, allowing for any lapses in memory which could reasonably be attributed to the passage of time, the distressing nature of the events surrounding the fatal accident and the generally hectic nature of life on board a busy offshore installation such as the Harding Platform.

The legal framework

[28] This inquiry was held under Sections 1 and 2(3) of the 2016 Act, governed by the Act of Adjournal (Fatal Accident Inquiry Rules) 2017.

[29] Sections 1 and 2 of the 2016 Act are in the following terms:

> "**1 Inquiries under this Act**
> (1) Where an inquiry is to be held into the death of a person in accordance with Sections 2 to 7, the procurator fiscal must –
> (a) Investigate the circumstances of the death, and
> (b) Arrange for the inquiry to be held.
> (2) An inquiry is to be conducted by a sheriff.
> (3) The purpose of an inquiry is to –
> (a) Establish the circumstances of the death, and
> (b) Consider what steps (if any) might be taken to prevent other deaths in similar circumstances.
> (4) But it is not the purpose of an inquiry to establish civil or criminal liability.
> …
>
> **2 Mandatory inquiries**
> (1) An inquiry is to be held into the death of a person which –
> (a) Occurred in Scotland, and
> (b) Is within subsections (3) or (4).
> (2) ….
> (3) The death of a person is within this subSection if the death was the result of an accident which occurred –
> (a) In Scotland, and

(b) While the person was acting in the course of the person's employment or occupation…."

[30] There was no dispute that the court had jurisdiction to hear this inquiry.

[31] The specific matters to be determined by the court are set out in Section 26 of the 2016 Act, which is in the following terms:

"26 The sheriff's determination

(1) As soon as possible after the conclusion of the evidence and submissions in an inquiry, the sheriff must make a determination setting out –

(a) In relation to the death to which the inquiry relates, the sheriff's findings as to the circumstances mentioned in subSection (2), and

(b) Such recommendations (if any) as to any of the matters mentioned in subSection (4) as the sheriff considers appropriate.

(2) The circumstances referred to in subSection (1)(a) are –

(a) When and where the death occurred,

(b) When and where any accident resulting in the death occurred,

(c) The cause or causes of the death,

(d) The cause or causes of any accident resulting in the death,

(e) Any precautions which –

(i) Could reasonably have been taken, and

(ii) Had they been taken, might realistically have resulted in the death, or any accident resulting in the death, being avoided,

(f) Any defects in any system of working which contributed to the death or any accident resulting in the death,

(g) Any other facts which are relevant to the circumstances of the death.

(3) For the purposes of subSection (2)(e) and (f), it does not matter whether it was foreseeable before the death or accident that the death or accident might occur –

(a) If the precautions were not taken, or

(b) As the case may be, as a result of the defects.

(4) The matters referred to in subSection (1)(b) are –

(a) The taking of reasonable precautions,

(b) The making of improvements to any system of working,

(c) The introduction of a system of working,

(d) The taking of any other steps,

which might realistically prevent other deaths in similar circumstances,

(5) A recommendation under subSection (1)(b) may (but need not) be addressed to –

(a) A participant in the inquiry,

(b) A body or office-holder appearing to the sheriff to have an interest in the prevention of deaths in similar circumstances.

(6) A determination is not admissible in evidence, and may not be founded on, in any judicial proceedings of any nature."

[32] Thus, in terms of Section 1(3) and (4) of the 2016 Act, the purpose of a fatal accident inquiry is to establish the circumstances of the death and to consider what steps (if any) might be taken to prevent other deaths in similar circumstances, but not to establish civil or criminal liability or blame. It is an inquisitorial, as opposed to an adversarial, process, in which the Procurator Fiscal represents the public interest.

[33] The 2016 Act does not contain a definition of the term "accident" for these purposes. However it is clear, and was a matter of agreement, that the "accident" which resulted in the death of Mr Bartlett was the unplanned, uncontrolled and precipitate descent of lifeboat number 4, on which Mr Bartlett was then carrying out routine maintenance, to the sea around 96 feet below, at about 02:17 hours on 27 February 2014.

[34] The terms of Section 26(2)(e), which requires the sheriff to identify "Any precautions which could reasonably have been taken and, had they been taken, might realistically have resulted in the death, or any accident resulting in the death, being avoided," are subtly different from the terms of the corresponding Section 6(1)(c) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 ("the 1976 Act"), which was the legislation which regulated fatal accident inquiries prior to the enactment of the 2016 Act. Section 6(1)(c) of the 1976 Act required the sheriff to identify "…the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided." However, neither the Crown nor TAQA submitted

that the differences between these two provisions were of any materiality in the context of this inquiry. Both the Crown and TAQA relied on the observations of sheriffs in determinations under the 1976 Act as indicating the proper approach to Section 26(2)(e) of the 2016 Act.

[35] On that basis, it was accepted that the court is entitled to use hindsight in identifying precautions in terms of Section 26(2)(e) of the 2016 Act. The rationale for the court's entitlement to identify precautions with the benefit of hindsight, with reference to the Section 6(1)(c) of the 1976 Act, has been explained as follows:[1]

> "… [A] fatal accident inquiry is very much an exercise in applying the wisdom of hindsight. It is for the Sheriff to identify the reasonable precautions, if any, whereby the death might have been avoided. The Sheriff is required to proceed on the basis of the evidence adduced without regard to any question of the state of knowledge at the time of the death. The statutory provisions are concerned with the existence of reasonable precautions at the time of the death and are not concerned with whether they could or should have been recognised. They do not relate to the question of foreseeability of risk at the time of the death which would be a concept relevant in the context of a fault-finding exercise, which this is not. The statutory provisions are widely drawn and are intended to permit retrospective consideration of matters with the benefit of hindsight and on the basis of the information and evidence available at the time of the Inquiry. There is no question of the reasonableness of any precaution depending upon the foreseeability of risk…[T]he reference to reasonableness relates to the question of availability and suitability or practicability of the precautions concerned.
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> "… [T]he purpose of a fatal accident inquiry is to look back, as at the date of the Inquiry, to determine what can now be seen as the reasonable precautions, if any, whereby the death might have been avoided, and any other facts which are relevant to the circumstances of the death.
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> "The purpose of any conclusions drawn is to assist those legitimately interested in the circumstances of the death to look to the future. They, armed with the benefit of hindsight, the evidence led at the inquiry, and the determination of the

[1] Determination into the death of Sharman Weir, 23 January 2003, Sheriff FL Reith, QC, Glasgow: https://www.scotcourts.gov.uk/search-judgments/judgment?id=13c286a6-8980-69d2-b500-ff0000d74aa7

> inquiry, may be persuaded to take steps to prevent any recurrence of such a death in the future."

[36] As is apparent from Section 26(3) of the 2016 Act, it does not matter in this context whether it was foreseeable that the fatal accident might occur if a particular precaution was not taken. Thus, whether a precaution could reasonably have been taken, judged with the benefit of hindsight, rather than the foreseeability of the fatal accident occurring without that precaution having been taken, is the critical issue. In this context "reasonableness" relates to the availability and suitability or practicability of the precaution.

[37] If the court is satisfied according to this approach that a particular precaution could reasonably have been taken, it is not necessary for the court to be satisfied that the precaution would in fact have avoided the fatal accident, only that it might realistically have done so. It was noted, in the context of Section 6(1)(c) of the 1976 Act, that the use of the word "might" in this context signified something less than a probability that the fatal accident would have been avoided and directed the mind of the sheriff towards the "lively possibilities."[2]

[38] Insofar as there may be any doubt about the meaning of Section 26(2)(e) of the 2016 Act, I note that the Policy Memorandum relating to the underlying bill stated that, with reference to the identification of precautions for the purposes of what is now Section 26(2)(e), the Scottish Government did not intend that the word "might" should

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[2] Determination in the death of James McAlpine, 17 January 1986, Sheriff Brian Kearney, Glasgow, referred to in Carmichael, *Sudden Deaths and Fatal Accident Inquiries*, 3rd edition, paragraph 8-99

be construed as meaning "any chance at all no matter how slim."[3] The same document suggested that the word "realistically," in Section 26(2)(e), is intended to indicate "…an actual rather than a fanciful possibility that the recommendation might have prevented the death,"[4] whilst the Explanatory Notes relating to the bill indicated, in reference to what is now Section 26(2)(e), that "…'reasonably' relates to the reasonableness of taking the precautions rather than the foreseeability of the death or accident. A precaution might realistically have prevented a death if there is a real or likely possibility, rather than a remote chance, that it might have done so."[5]

[39] Having regard to the subtle differences in terminology between Section 6(1)(c) of the 1976 Act and Section 26(2)(e) of the 2016 Act, it appears to me that a precaution will meet the requirements of Section 26(2)(e) so long as the court is satisfied, even with the benefit of hindsight, that the precaution could reasonably have been taken (i.e. that the precaution was available, suitable and practicable) and that, had it been taken, there is a real or likely possibility, rather than a slim or remote chance, that it might have resulted in the death or fatal accident being avoided. It is not necessary for the court to be

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[3] Inquiries Into Fatal Accidents and Sudden Deaths Etc (Scotland) Bill, Policy Memorandum, paragraph 178 (https://archive2021.parliament.scot/S4_Bills/Fatal%20Accidents%20(Scotland)%20Bill/b63s4-introd-pm.pdf)

[4] Ibid, paragraph 179

[5] Inquiries Into Fatal Accidents and Sudden Deaths Etc (Scotland) Bill, Explanatory Notes, paragraph 69 (https://archive2021.parliament.scot/S4_Bills/Fatal%20Accidents%20(Scotland)%20Bill/b63s4-introd-en.pdf)

satisfied that the precaution would in fact have avoided the death or fatal accident or even that it would probably have done so.

[40] In my view there is little practical difference between the effect of Section 6(1)(c) of the 1976 Act and the effect of Section 26(2)(e) of the 2016 Act. The latter still, in practical terms, directs the mind of the sheriff towards the lively possibilities of the death or fatal accident having been avoided as a result of a particular precaution which could reasonably have been taken.[6]

[41] It is not the function of the inquiry to determine whether any precaution should or could have been recognised and implemented. The statutory provisions are instead concerned with the existence of precautions which could reasonably have been taken at the time of the accident or death.[7]

[42] The court is required to consider, not whether any particular precaution complied with any relevant guidance or procedure, but whether it could reasonably have been taken, whereby the fatal accident might realistically have been avoided.[8]

[43] The sheriff can only identify a defect in a system of work in terms of Section 26(2)(f) of the 2016 Act if satisfied that the defect in question did in fact cause or contribute to the death or fatal accident.[9]

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[6] Determination in the death of James McAlpine, 17 January 1986, Sheriff Brian Kearney, Glasgow, referred to in Carmichael, *Sudden Deaths and Fatal Accident Inquiries*, 3rd edition, paragraph 8-99

[7] Determination into the death of Michael McDonald, 7 December 2015, Sheriff L A Drummond QC, paragraph [6] (https://www.scotcourts.gov.uk/search-judgments/judgment?id=e49001a7-8980-69d2-b500-ff0000d74aa7)

[8] Ibid, paragraph [27]

[9] Determination in the death of James McAlpine, 17 January 1986, Sheriff Brian Kearney, Glasgow.

[44] In the context of recommendations in terms of Section 26(1)(b) and (4) of the 2016 as to matters which might realistically prevent other deaths in similar circumstances, the close likeness between the language used in Section 26(4) and that used in Section 26(2)(e) suggests that, when considering whether to make a recommendation, the court should, as in the identification of precautions, consider not whether any particular recommendation would definitely or even probably prevent other deaths, but whether it would bring about a real, likely or "lively" possibility, rather than a remote chance, that it would do so.[10]

SUMMARY OF EVIDENCE RELEVANT TO DETERMINATION

Overview of fatal accident and identification of disputed issues

[45] This inquiry related to a fatal accident on board the Harding Platform at about 02:17 hours on 27 February 2014 when, during routine weekly maintenance checks on one of the platform's four lifeboats (lifeboat 4), carried out by George Bartlett in the course of his employment as a mechanical technician, Mr Bartlett operated the release gear mechanism designed to separate the lifeboat from the wires ("fall wires") by which it was suspended from its dedicated crane, known as a "davit." The purpose of the davit was to lower the lifeboat, by its fall wires, to the sea in a controlled manner, at which point the coxswain of the boat, from within the boat, would operate the release gear which was designed to separate the boat from its fall wires.

[10] Determination in the death of James McAlpine, 17 January 1986, Sheriff Brian Kearney, Glasgow.

[46] The operation of the lifeboat release gear in those circumstances was one of a number of breaches by Mr Bartlett of significant safety procedures of which he, a very experienced technician with many years' experience of carrying out this work, was aware.

[47] Firstly, Mr Bartlett failed, prior to commencing the maintenance checks on the lifeboat, to attach the forward and aft sections of the lifeboat to "pendants," which were fixed lengths of steel chain specifically provided for the purpose of securing the lifeboat to the permanent structure of the platform prior to the commencement of maintenance work, thereby removing any risk of the unplanned descent of the lifeboat whilst the maintenance was in progress. The pendants were thus quite separate from the lifeboat's moveable fall wires and, in contrast to the fall wires, the purpose of the pendants was to ensure that the lifeboat could not descend from its suspended position whilst the pendants were attached. Mr Bartlett secured the aft pendant but, due to oversight, omitted to secure the forward pendant.

[48] Secondly, Mr Bartlett failed to arrange for a second person to attend and verify the secure attachment by him of both pendants to the lifeboat, via steel shackles and associated steel pins provided for that purpose, prior to commencing the maintenance checks. Documents recovered from Mr Bartlett's overalls after his death indicated that, although he had not arranged for a second person to carry out this verification, he had inserted the initials of a colleague into a checklist relating to the work so as to give the impression that the necessary verification by a second person had taken place.

[49] Thirdly, the maintenance checks which Mr Bartlett was to carry out on the lifeboat were generally visual in nature. Although the testing of the lifeboat's release gear had previously formed part of the maintenance checks which Mr Bartlett was to carry out in relation to lifeboat 4, the testing of release gear had been removed from those checks in around 2007 or 2008 and, at the time of the fatal accident, was expressly prohibited in terms of the procedure which applied to that work. Despite being aware that the operation of the release gear did not form part of the maintenance checks which he was to carry out, Mr Bartlett proceeded to operate the release gear of lifeboat 4.

[50] When Mr Bartlett operated the release gear of lifeboat 4 in the circumstances described, the release gear operated precisely as it was designed to. The lifeboat separated from its forward and aft fall wires. The aft Section of the lifeboat remained suspended by its pendant, which Mr Bartlett had attached. However the forward Section of the lifeboat, not being attached to its pendant, began to fall in an uncontrolled manner, causing the lifeboat, in effect, to rotate or swing on its aft pendant. The lifeboat struck the platform and the resulting forces caused the Section of the lifeboat hull to which the aft pendant was attached to separate from the rest of the hull. The lifeboat, with Mr Bartlett inside, fell approximately 29.5 metres (96 feet) to the sea below. The sound of the collision between the lifeboat and the platform alerted other members of staff, who initiated emergency response procedures. Colleagues who visually located Mr Bartlett in the water soon afterwards described him as floating face down and apparently not moving independently. Mr Bartlett was recovered from the water, but

he died as a result of immersion, having sustained head injuries during the fall which were not fatal but which may have had a concussive effect.

[51] There was no dispute about these clear matters of fact and inference. Any dispute between the Crown and TAQA related to more remote issues concerning the possibility that TAQA, by means of: arrangements for authorisation and oversight of the work on which Mr Bartlett was engaged at the time of the fatal accident; clarification of certain operational procedures relating to that work; and targeted auditing of compliance with the prohibition on the operation of lifeboat release gear during routine maintenance, might have prevented Mr Bartlett from undertaking the work on which he was engaged at the time of the fatal accident, or at least from carrying out that work in breach of safety procedures.

TAQA Bratani Limited

[52] TAQA is part of a multi-national company which has interests in power generation, water desalination and oil and gas exploration and production. Its registered office is at 78 Cannon Street, London, EC4N 6AF. TAQA is a fully integrated exploration and production company operating in the North Sea. In 2014 it operated five offshore installations, including the Harding Platform.

The Harding Platform

[53] The Harding Platform is described as a heavy duty, three legged jack-up production platform resting on a storage tank which is capable of holding 550,000

barrels of oil. I understand that a jack-up platform is a type of mobile platform consisting of a buoyant hull which enables the platform to be moved, if desired, to different locations. The platform is fully integrated with drilling and production facilities and living quarters for approximately 100 crew members. Oil from the Harding Platform is exported via a pipeline to a submerged tanker loading system.

[54] It was a matter of agreement that the Harding Platform is located in 109 metres of water, 320 kilometres north-east of Aberdeen at latitude 59° 16'46.159" north and longitude 01° 30' 58.594" east in block 9/23b of the UK Sector of the Continental Shelf.

[55] The transaction in terms of which TAQA became the operators of the Harding Platform received UK government consent on 12 March 2013 and took effect on 1 June 2013. Prior to that the platform was operated by Britoil, a subsidiary of BP. From 1 June 2013 the crew members who had previously been Britoil employees, including Mr Bartlett, became employees of TAQA.

Transitional arrangements with regard to safety procedures

[56] In preparation for taking over the Harding Platform, TAQA prepared a safety case[11] for submission to the HSE, as required by the Offshore Installations (Safety Case) Regulations 2005. The safety case appears to have been updated following its original submission, as indicated by the various dates which appear at the foot of its pages. The purpose of the safety case was to provide reassurance to the HSE that TAQA had

[11] Crown Production No. 16

processes in place to effectively control major accident risks with regard to the operation of the platform. TAQA's safety case was submitted to the HSE on 25 January 2013. It included an overview of the proposed arrangements for review, during the transition of the platform from the ownership of Britoil to the ownership of TAQA, of over 500 documents prescribing procedures regulating the work carried out on the platform.[12] By letter dated 21 May 2013, the HSE confirmed that it was satisfied with TAQAs safety case.

[57] As explained in the safety case and elaborated in evidence by the witness Craig Finlayson, who was involved in the transition at a senior level, the hundreds of BP procedural documents were considered by teams of specialists from BP and TAQA, compared with TAQA's own procedures and divided into four priority groups based on "document criticality." The review of the highest priority documents was to commence by the end of August 2013. The programme for review of the remaining documents was staggered, with review of the least critical documents being due for completion by June 2015.

[58] Mr Finlayson stressed that the guiding principle in the transition process was "transition, not transformation" and that TAQA's objective was to minimise disruption for the workforce on the platform, who generally moved with the platform to become TAQA employees, from the first day of the new regime. TAQA endeavoured to ensure that any procedural transition proceeded at a pace which the platform could cope with,

[12] Crown Production No. 16, Section 2, paragraph 2.2

consistent with the need to maintain a safe working environment whilst allowing the platform to operate throughout the transition period. The procedures governing lifeboat maintenance appeared to be fit for purpose and to be well understood, and so these were left untouched when TAQA took over the platform. The earliest review date set for any of the BP documents relating to lifeboat maintenance was March 2014.[13]

The lifeboats

[59] In February 2014 the Harding Platform was fitted with four lifeboats, each of the "TEMPSC" type (Totally Enclosed Motor Propelled Safety Craft). Each had the capacity to carry 60 passengers plus a coxswain to control the boat.

[60] Each of the lifeboats had a glass reinforced plastic hull and a totally enclosed superstructure, which greatly restricted visibility from within. Access into the lifeboat was via a sliding door in the superstructure. Each boat also had two hatches on the superstructure, one vertically mounted towards the stern and the other horizontally mounted towards the front of the boat.

[61] Lifeboats of this type are not designed for speed or manoeuvrability. They are designed to convey crew members safely away from the platform in the event of an emergency, following a controlled descent, in order that they can be picked up by a larger vessel. The lifeboats were suspended in their allocated davits with their bows

[13] Crown Production No. 20

pointing away from the platform, to simplify the process of making away from the platform in the event of launch.

[62] The Harding Platform has two lifeboat stations.[14] In February 2014 lifeboats 1 and 2 were positioned immediately adjacent to each other at the north lifeboat station, to the north of "leg 1" of the platform, which was at the western extremity of the platform. Lifeboats 3 and 4 were positioned immediately adjacent to each other at the south lifeboat station, to the south of "leg 1." The platform's accommodation block was positioned in between the north and south lifeboat stations, allowing crew members swift access to the lifeboat stations from the accommodation block in the event of an emergency. The lifeboat stations were well lit given their significance in an emergency.

[63] Each of the four lifeboats was suspended from its own davit. A davit is a crane used for supporting, raising and lowering a lifeboat. Each of the four davits had an electrically powered overhead winch which had two fall wires, one of which attached to the forward end of the corresponding lifeboat and the other to the rear, or aft, end. The fall wires for each davit were connected to the forward and aft "release hooks" of the corresponding lifeboat.

[64] In the event that a lifeboat required to be launched, after the appropriate crew members had boarded the boat, the boat's coxswain, from within the boat, would pull on a wire above the steering position which would deploy the fall wires and lower the boat in a controlled manner to the sea.

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[14] Crown Production No. 8, page 4

The release gear

[65] Each lifeboat was fitted with "TOR on-load Lifeboat Disengaging Gear." This is a mechanical "release gear" system designed to enable the lifeboat coxswain to disengage the lifeboat from its fall wires when it reaches the water, at the end of the descent previously described. The phrase "on-load" indicates that the release gear was designed to enable the coxswain to release the lifeboat from its fall wires whilst the wires were still bearing the weight of the boat and not simply when they had become slack at the end of the descent.

[66] The release gear was operated using a mechanism positioned adjacent to the coxswain's seat on the starboard side of each lifeboat. The release gear consisted of the release unit, the forward hook assembly, the aft hook assembly and a hydrostatic unit. The release unit included a release handle, which was a substantial metal lever attached, at its base, to the ends of two cables which were, in turn, attached to the forward and aft hook assemblies respectively. Moving the release handle to the "open" position would, due to the action of these cables, open the forward and aft release hooks and thereby disengage the hooks from the fall wires, allowing the coxswain to safely manoeuvre the boat away from the platform.

[67] The release gear incorporated three particular safety features, which were intended to ensure that the release hooks could not be opened accidentally or inadvertently.

[68] The first safety feature was a hydrostatic lock within the release unit which, unless released, prevented the release lever from being moved into the "open" position

and opening the release hooks. The hydrostatic lock was linked to a "hydrostatic unit," mounted in the hull of each lifeboat below the water line and incorporating a diaphragm which was exposed to the external atmosphere and attached to a cable. The other end of the cable was attached to the hydrostatic lock. When the lifeboat was lowered into the water, the water would increase the pressure on the diaphragm, causing it to pull on the cable, which disengaged the hydrostatic lock.

[69] The second safety feature was the presence of a steel "safety pin" inserted into the side of the release unit. The safety pin was a sturdy steel rod several inches in length which, in turn, incorporated its own further safety feature, namely a button fitted to the handle of the pin, which required to be pressed in order to allow the pin to be withdrawn from the release unit. Only when the hydrostatic lock had been released could the safety pin be withdrawn, allowing the release handle to be moved to the "open" position.[15]

[70] Thus, the design of the release mechanism was such that the release handle could only be moved into the "open" position after the safety pin had been removed, which in turn required the button on the handle of the pin to be pressed and which could only happen after the hydrostatic lock had been disengaged by the operation of the hydrostatic unit when the boat was in the water.

[71] The third safety feature of the release gear related to the physical motion required in order to move the release handle into the "open" position. Even after the

[15] Joint Minute No. 1, paragraph 99

release of the hydrostatic lock and the removal of the safety pin from the release unit, in order to deploy the hook release gear the coxswain required to move the release handle along a non-linear track, dictated by the construction of the release unit housing, rather than simply moving the handle from one point to another along a straight, linear track.

[72] The three safety features described above, namely the hydrostatic lock, the safety pin and the non-linear motion required in order to operate the release handle, in combination, were designed to ensure that the hook release gear could not be operated inadvertently. It is clear that these safety mechanisms were considered necessary due to the potentially catastrophic consequences of any unplanned or inadvertent release of a lifeboat from its fall wires, particularly when one or more crew members were within.

[73] However, the hydrostatic lock within the release unit could be defeated or overcome in a number of ways:

a) By creating a vacuum at the internal side of the hydrostatic unit either by sucking through a hose or using a pump. By either of these means, the diaphragm of the hydrostatic unit could be manipulated, mimicking the effect of water pressure on the exterior of the hull, so as to disengage the hydrostatic lock;

b) By inserting one or more thin-bladed metal tools into the release unit mechanism at particular points, in order to physically disengage the hydrostatic lock from the release handle;

c) By unscrewing bolts from the release unit, removing the cover and physically disengaging the hydrostatic lock; and

d) By breaking a small glass panel attached to the release unit and physically releasing the hydrostatic lock via the access thereby gained to the interior of the unit.

[74] I understood that it was recognised that the hydrostatic lock may quite legitimately require to be overcome in an emergency, for example if for any reason the hydrostatic unit failed to disengage the lock.

[75] Finally, I also understand that, if the release gear completely failed to operate as described and there was no other option, it was possible for the fall wires to be manually released from the forward and aft release hooks via the forward and aft hatches in the superstructure of the boat.

The pendants, shackles and pins

[76] Each of the four lifeboat davits on board the Harding Platform was equipped with two fixed lengths of metal chain, variously referred to as "maintenance pendants" or "safety pendants." Although attached to the forward and aft sections of the davit structure, the pendants were separate from the fall wires. During maintenance work on a lifeboat, the free ends of the forward and aft pendants for that lifeboat required to be attached to the forward and aft hook assemblies of the lifeboat. When the pendants were securely attached the lifeboat was, for all practical purposes, attached, via the pendants, directly to the fixed structure of the davit, and hence to the platform itself, rather than only being attached to the davit via the moveable fall wires.

[77] Accordingly, so long as the pendants were securely attached to the forward and aft hook assemblies of the lifeboat, the lifeboat would remain securely suspended even if, for any reason, the davit fall wires were unable to hold the weight of the boat or the hook release mechanism was deployed, whether deliberately or due to a malfunction of some kind, thus releasing the lifeboat from its fall wires. In such an eventuality, the lifeboat would remain safety suspended on its pendants.

[78] It is for this reason that, as considered in more detail below, the safety procedures governing lifeboat maintenance on board the Harding Platform required the secure attachment of maintenance pendants before any maintenance work was undertaken in relation to any of the platform's lifeboats.

[79] The pendants, being fixed lengths of chain which were separate from the davit fall wires and attached to the permanent structure of the davit, could not be mechanically controlled and were incapable of lowering the lifeboat in an emergency. There was no mechanical release mechanism for the pendants. They required to be manually attached to, and disengaged from, the forward and aft hook assemblies of the lifeboat. Thus, pendants were only employed as a safety measure to exclude the possibility of unplanned descent of a lifeboat during maintenance. The pendants had to be removed on completion of the maintenance work in order to ensure that, in the event of an emergency, the lifeboat could be lowered on its fall wires.

[80] As at 27 February 2014, the mechanism by which a maintenance pendant was attached to the corresponding hook assembly of any lifeboat on the Harding Platform

was a steel shackle and pin, variously referred to as a "shackle pin" or "shackle safety pin."

[81] The shackle was a heavy cylindrical steel component bent into an elongated semicircle or bow, each end of which contained a threaded circular hole. Two shackles were stored within each of the platform's lifeboats, one for the forward pendant and one for the aft pendant. When not in use, the shackles were hooked over webbing within the lifeboats, at positions close to the forward and aft hatches of each lifeboat.

[82] The free end of a pendant was attached to the relevant component of the corresponding forward or aft hook assembly by means of a shackle safety pin, which was a heavy, thick, threaded steel rod, several inches in length. When screwed through the threaded holes in each end of the corresponding shackle, the pin created a sturdy steel link, which joined the free end of the pendant to the relevant component of the corresponding hook assembly.

[83] The shackle safety pins used for this purpose were kept in the control room of the platform. There were two pins nominally allocated to each of the platform's four lifeboats. The threading on all of the shackles and shackle safety pins for the four lifeboats on the platform was identical, with the result that any of the eight shackles and eight shackle safety pins which were available for this purpose could have been used, to equal effect, to attach any of the platform's pendants to any of the hook assemblies of any of the lifeboats.

Coxswains

[84] As at February 2014, at any given time, each of the Harding Platform's four lifeboats was allocated a designated coxswain. The lifeboat coxswains were members of the platform's crew who had undergone a four-day training course in relation to the operation of the lifeboats and who had then received further practical instruction from a technician on board the platform, to make them aware of certain differences between the lifeboats used in their training and those used on the platform.

[85] Suitably trained crew members were generally allocated coxswain duties, in addition to their regular duties, immediately on their arrival on the platform to begin a two-week work rotation. At that time, they would be told the lifeboat of which they were to be designated coxswain during their rotation. That designation remained until they completed their rotation or were otherwise relieved of coxswain duties.

[86] Within approximately 48 hours of arrival on the platform, each coxswain was expected to carry out a series of basic visual checks of the apparent readiness and seaworthiness of his allocated lifeboat. These checks included checking that pendants were not attached to the lifeboat, and therefore that the lifeboat was capable of being lowered in an emergency.

[87] However, the coxswain's training course did not include any training in the insertion of shackle safety pins or the attachment of pendants to lifeboats. Further, although some of the checks which coxswains were required to carry out on their lifeboats required them to enter the boats, the checks were sufficiently brief that there was considered to be no requirement for pendants to be attached. In the event that a

coxswain noted anything amiss with regard to the condition of his lifeboat in the course of carrying out his checks, he was required to report the issue so that it could be dealt with by a suitably qualified technician.

[88] The last occasion on which such coxswain's checks were carried out in relation the lifeboat 4 prior to the fatal accident was on 19 February 2014, when the relevant "Harding Coxswain's Lifeboat Acceptance Check List"[16] was completed by witness William Esplin, the allocated coxswain. The check list shows that Mr Esplin found nothing of concern.

Lifeboat maintenance and associated matters

[89] Lifeboats on an offshore installation are "safety critical elements" for the purposes of the Offshore Installations (Safety Case) Regulations 2005.[17] A safety critical element is any part of an installation or of its plant, the failure of which could cause or contribute substantially to, or a purpose of which is to prevent or limit the effect of, a major accident.

[90] Lifeboat maintenance and inspections on the Harding Platform were undertaken at periodic intervals determined by a schedule programmed into the platform's computerised maintenance management system, known as "maximo." There were different levels of maintenance, of different levels of complexity, which were carried out at weekly, monthly, six-monthly, annual and five-yearly intervals. As at February 2014,

[16] Crown Production No. 102
[17] Crown Production No. 66 Report by Dr Paul Heeney, page 9

the mechanical technicians based on the platform, including Mr Bartlett, undertook the weekly and monthly maintenance of the lifeboats. The six-monthly, annual and five-yearly maintenance was undertaken by a specialist external contractor, Survival Craft Inspectorate Ltd ("SCI").

[91] At the time of the fatal accident, Mr Bartlett was engaged in the task of routine weekly maintenance of the platform's lifeboats.

Support vessels

[92] On 27 February 2014, the Harding Platform had a dedicated support vessel, the MV Grampian Frontier. The role of the support vessel was to remain on standby, in proximity to the platform, in order to provide any necessary support to the platform and its crew. Support vessels are substantial vessels, which are distinct from the supply vessels which carry out other support tasks in relation to offshore platforms.

[93] It is the responsibility of the master of the support vessel to determine how closely the vessel should position itself to its allocated platform, having regard to factors such as the prevailing weather and sea conditions, the nature of any activities being undertaken on or around the platform at any given time and the level of risk which is considered to attach to those activities.

[94] It was a matter of agreement that, during "overside" work on an installation, the dedicated support vessel would generally take up a position within 500 metres of the

installation, so long as the wave height did not exceed 3.5 metres.[18] For these purposes I understand "overside" work to be:

> "…[A]ny work that is carried out where there is a risk of persons falling into the water where there are not permanent or temporary arrangements in place to prevent that from happening…"[19]

It was a matter of agreement that the lifeboat maintenance work in which Mr Bartlett was engaged at the time of the fatal accident was not "overside" work.[20]

George Bartlett's arrival on the Harding Platform and actions prior to the fatal accident

[95] During 2013 and 2014, Mr Bartlett worked a rota which required him to be on the Harding Platform for two weeks and then off duty for three weeks. This "2 on, 3 off" rota appears to have been typical for the crew of the platform at that time. In common with all other crew members, Mr Bartlett typically worked 12-hour shifts. The platform operated a day shift (06:00 hrs to 18:00 hrs) and a night shift (18:00 hrs to 06:00 hrs). Mechanical technicians such as Mr Bartlett generally only worked dayshift.

[96] Mr Bartlett generally stayed at a particular hotel in Dyce, close to Aberdeen Heliport, the night before he was due to deploy to the platform. It was a matter of agreement that he checked in to his hotel at 17:11 hours on 25 February 2014 and

[18] Joint Minute No. 1, paragraph 15
[19] International Association of Drilling Contractors, North Sea Chapter, Guidance on Overside Working & Alternatives to Close Standby Cover, July 2017, paragraph 2
[20] Joint Minute No. 1, paragraph 15; Crown Production No. 8 work control certificate; Crown Production No. 52 routine template work control certificate

checked out at 07:05 hours on 26 February. He departed Aberdeen Heliport at 08:40 hours on 26 February, arriving on the Harding Platform at approximately 10:00 hours.[21]

[97] Although Mr Bartlett would normally have worked day shift on the platform, on his arrival on 26 February he was asked by his supervisor Graham Hardy to undertake the night shift that evening in order to carry out planned work on a turbine. In accordance with TAQA's procedures for employees arriving on the Harding Platform, Mr Bartlett was entitled to a minimum rest period of eight hours prior to commencing nightshift. Mr Hardy accordingly told Mr Bartlett not to begin his nightshift until 22:00 hours that evening. Employees had a discretion as to how they spent their time when not on shift, but they were not expected to do any work and they were encouraged to rest during that period.[22]

[98] There is no dispute that Mr Bartlett was provided with the eight-hour rest period to which he was entitled prior to reporting for duty that evening. However, it was also a matter of agreement that, at about 13:00 hours on 26 February, Mr Bartlett assisted another mechanical technician, Jonathan Ibbotson, to remove some bolts from the turbine on which he had been assigned to work during the forthcoming night shift, a task which took approximately 15 to 20 minutes. It appears that Mr Bartlett assisted Mr Ibbotson with this task of his own volition, perhaps because he was interested in seeing the turbine on which he was due to work that evening. He was not asked or expected to

[21] Joint Minute No. 1, paragraphs 33-35
[22] Joint Minute No. 1, paragraph 36

assist Mr Ibbotson. Having completed this task Mr Bartlett returned to the accommodation block.[23]

[99] The work control procedures operated by TAQA required any employee who was due to carry out a job of work (such an employee was known as the "Performing Authority" or "PA" in relation to that task) to prepare a work control certificate ("WCC") identifying the task, any associated risks or hazards and any safety measures or "controls" to address those hazards. The WCC required to be submitted to another member of staff who was designated as the "Area Authority" ("AA"), and who was responsible for reviewing the WCC, checking that hazards and controls had been identified, checking that the controls were in fact available and could be implemented, checking for any conflict between the proposed work and any other ongoing work and, if satisfied, issuing a permit allowing the work to proceed.

[100] The nightshift Area Authority on the evening of 26 February 2017 was Brian Hawkesford. At about 18:30 hours on 26 February, Mr Bartlett went to Mr Hawkesford's office with a WCC, seeking a permit for the planned work on the turbine, for which Mr Bartlett would have been Performing Authority. Mr Hawkesford had not been made aware that Mr Bartlett had been asked to work that night, but by that stage he was, unlike Mr Bartlett, aware that the turbine in question was no longer available for Mr Bartlett or anyone else to work on that night. Mr Hawkesford told Mr Bartlett that there was, after all, no work for him during that shift and that he could simply go and

[23] Joint Minute No. 1, paragraph 37

watch a televised football match in the cinema. Mr Bartlett left Mr Hawkesford's office, but seemed displeased that his planned work had been cancelled. Mr Hawkesford did not expect to see Mr Bartlett again during the shift.

[101] However, Mr Bartlett returned to Mr Hawkesford's office shortly before 22:00 hours and stated that he wanted to do routine weekly maintenance on the lifeboats. That was a task which could have been done at any time during the week. According to Mr Hawkesford's evidence, it would probably have been done the following day. Mr Hawkesford did not ask Mr Bartlett to carry out the lifeboat maintenance. In his evidence Mr Hawkesford suggested that, although not required to do this work at that time, Mr Bartlett may have anticipated that, as his planned work on the turbine had been unable to proceed that night, he may be asked to work the following nightshift in order to work on the turbine then. He may therefore have wanted to keep himself busy during the remainder of that nightshift in order to get into the appropriate sleeping routine for the following night.

[102] Mr Hawkesford's evidence was that Mr Bartlett did not appear to be tired, either at 18:30 hours or at about 22:00 hours. There had been no discussion of tiredness at 18:30 hours. Although Mr Bartlett did not appear tired at 22:00 hours, Mr Hawkesford asked him if he was "okay," to which Mr Bartlett replied that he was fine. He appeared to be "bubbly" and in good spirits.

[103] After a discussion, during which Mr Hawkesford told Mr Bartlett not to do the parts of the weekly lifeboat maintenance checks which required the use of a compressor, due to the time of day and the proximity of the lifeboats to the accommodation block

where crew members would be asleep, Mr Hawkesford agreed to allow Mr Bartlett to carry out the weekly lifeboat maintenance. The shift was otherwise quiet. He told Mr Bartlett to stop if he felt tired.

[104] Mr Bartlett prepared an electronic WCC for the lifeboat maintenance work, which was reviewed by Mr Hawkesford, who granted the necessary permit for the work at 22:05 hours on 26 February.

[105] William "Billy" Esplin, a technician and trained coxswain, also saw Mr Bartlett during that shift. Mr Esplin was present during the discussion between Mr Hawkesford and Mr Bartlett, which Mr Esplin thought was around 19:00 hours, during which Mr Hawkesford told Mr Bartlett that the work planned for him had been cancelled, that he should go and watch football and rest and that there was no work for him to do that night. However Mr Bartlett appeared determined to do some work during his shift. Mr Esplin later became aware that Mr Bartlett intended to carry out the weekly lifeboat checks. The two men spoke later about other matters and Mr Bartlett said he would be "looking for [Mr Esplin's] signature later," which Mr Esplin took to indicate that Mr Bartlett would ask him to act as "second person" to verify the attachment of pendants prior to commencement of the lifeboat maintenance, as required by the applicable procedures. Mr Esplin saw Mr Bartlett in the technicians' office at about 23:50 hours. At all times he appeared to be fine and did not appear tired.

[106] The duty control room technician ("CRT"), Christopher Sutherland, saw Mr Bartlett at around 22:00 hours, when Mr Bartlett entered the control room and told Mr Sutherland that he would be working on the lifeboats. Mr Sutherland and another

technician, Daniel Johnson, sat and had a meal with Mr Bartlett between about 23:00 hours and midnight on 26 February. Mr Bartlett appeared to be "his normal self" and neither witness reported anything of concern in his behaviour or manner. Mr Sutherland was back on duty in the control room by about 00:30 hours on 27 February, when Mr Bartlett returned to the control room in order to take a set of shackle pins for lifeboat 1, along with a number of blank checklists relating to lifeboat maintenance. It appears that Mr Bartlett intended to use one set of shackle pins to attach the pendants to all four lifeboats in turn, as was the practice of some technicians.

[107] Mr Bartlett told Mr Sutherland that he intended to work on lifeboats 1 and 2 first. A short time later Mr Bartlett contacted Mr Sutherland by phone to tell him that he had inserted the shackle pins for lifeboat 1, which was therefore out of service. Mr Sutherland marked this information on a board within the control room. About twenty minutes later Mr Bartlett contacted Mr Sutherland to advise that he had finished with lifeboat 1, which was now back in service. Five minutes later Mr Bartlett phoned again to advise Mr Sutherland that he had inserted the shackle pins for lifeboat 2, so that Mr Sutherland could update the board accordingly.

[108] The final sighting of Mr Bartlett before the fatal accident was between 01:00 hours and 02:00 hours on 27 February, when Mr Esplin passed the south lifeboat station and saw Mr Bartlett, apparent in the process of carrying out checks on one or other of lifeboats 3 and 4. The interior lights of both lifeboats were illuminated and Mr Bartlett was standing in between the two boats. The two men briefly exchanged greetings and Mr Esplin continued on his way.

[109] At no point did Mr Bartlett actually ask Mr Esplin to attend at either lifeboat station in order to verify the insertion of shackle pins or the attachment of pendants. At no time did either Mr Esplin or Mr Sutherland initial any of the checklists which Mr Bartlett had taken from the control room when he went to carry out the lifeboat maintenance.

The fatal accident and its aftermath

[110] In relation to the emergency response, the various actions taken and the times of those actions were contemporaneously recorded on a board within the control room of the platform. Crown Production No. 101 contains a screen grab of the contents of the board. That information informs the timings which follow.

[111] At approximately 02:17 hours on 27 February 2014 crew members on board the platform heard a loud bang and felt the structure vibrate. Following urgent checks to identify the source of the noise, it was quickly established that lifeboat 4 was missing from its davit. A general platform alarm was initiated and the Offshore Installation Manager ("OIM"), Craig Finlayson, was summoned to the control room to take charge of the situation.

[112] Around this time crew members on board the platform saw lifeboat 4 and, close to it, a person floating face down in the sea below the platform. The person appeared to be unconscious and did not, at any stage, appear to be moving independently. All crew members were required to muster and it was confirmed that Mr Bartlett was the only crew member who was unaccounted for.

[113] The platform's dedicated support vessel, the MV Grampian Frontier, was contacted at approximately 02:17 hours with a request for assistance. The master of the Grampian Frontier was summoned to the bridge and took command of the vessel at 02:20 hours. At that time the Grampian Frontier was positioned approximately 1.7 nautical miles from the platform, but moved to a position approximately 400 metres from the platform. From that position, at 02:32 hours, the Grampian Frontier launched its fast rescue craft ("FRC"), which was a small, fast, mobile boat, in order to locate and recover Mr Bartlett. The master of the Grampian Frontier decided to launch the FRC despite the fact that the wave height at that time was between 4 and 6 metres, in excess of the normal operating limit of the FRC, namely 3.5 metres.

[114] The FRC made its way towards the platform, passing lifeboat 4 as it did so. A high-powered lamp on board the FRC was used, in conjunction with radio communication between the crew of the FRC and crew members on board the platform who had maintained intermittent visual contact with Mr Bartlett. Mr Bartlett was approximately 200 metres from the platform, still face down in the water, when the FRC reached him and recovered him at 02:47 hours. At that time Mr Bartlett was unresponsive and appeared to have an injury to his nose and swelling to one of his eyes. He was placed into the recovery position and the FRC then returned to the Grampian Frontier, arriving at 02:51 hours.

[115] Mr Bartlett was placed on a stretcher and recovered onto the Grampian Frontier at 02:54 hours. He was taken to the treatment room, where he was noted to be unresponsive. Crew members cleared his airway and commenced chest compressions

and rescue breaths using a breathing mask. A defibrillator was connected to Mr Bartlett. The defibrillator instructed that resuscitation should continue. No shocks were administered because no shockable heart rhythm was detected.

[116] A helicopter was launched from another installation, the Miller Platform, at 02:55 hours and arrived at the Grampian Frontier's position at 03:05 hours. A paramedic winchman was lowered onto the Grampian Frontier and made his way to the treatment room. A stretcher was lowered to the deck and Mr Bartlett and the winchman were recovered to the helicopter at 03:26 hours.

[117] The helicopter made its way to the Clickimin landing site at Sumburgh, Shetland. During the flight, the paramedic winchman and the winch operator provided advanced life support to Mr Bartlett, including endotracheal intubation, intraosseous cannulation, oxygen, fluids and drugs. A defibrillator was attached to Mr Bartlett, which disclosed that he had no cardiac output throughout the flight.

[118] The helicopter landed at Clickimin at 04:10 hours. Mr Bartlett was transferred to a waiting ambulance and driven the short distance to Gilbert Bain Hospital, arriving there at approximately 04:20 hours. Resuscitation continued during the journey to the hospital.

[119] On arrival at the hospital Mr Bartlett was taken into the care of hospital medical staff. He was provided with mechanical ventilation, drugs and other interventions. Ultimately medical staff considered that Mr Bartlett's condition was not compatible with life. Mr Bartlett was declared dead at 04:52 hours on 27 February 2014.

The post-mortem examination and cause of death

[120] A post mortem examination was carried out at Aberdeen mortuary on 3 March 2014 by Dr James Grieve and Dr Matthew Lyall, both senior lecturers in forensic medicine. Their report is lodged as Crown Production No. 2. During the post-mortem examination, various samples were taken from Mr Bartlett, which were subsequently analysed by Dr Duncan Stephen, consultant clinical biochemist and forensic toxicologist. Dr Stephen's report setting out his findings is lodged as Crown Production No. 3.

[121] The pathologists took account of Dr Stephen's findings, in addition to their own findings, in formulating their conclusions. Although Mr Bartlett had suffered blunt force trauma to his head, which had possibly resulted in concussion, rendering him vulnerable to drowning, his head injuries were not considered to have been fatal.

[122] The cause of Mr Bartlett's death was identified as:[24]

I(a) Immersion in water.

(b) Precipitate descent from height.

Recovery and examination of lifeboat 4

[123] After George Bartlett had been flown to Shetland, lifeboat 4 was recovered and towed to Lerwick, arriving on 1 March 2014. On its arrival in Lerwick the lifeboat was examined by DS Bryan Ronald of Police Scotland. DS Ronald noted that the lifeboat was in a damaged condition, that the front safety shackle was within the lifeboat but that no

[24] Crown Production No. 4

safety pin for that shackle was apparent, that the release handle was in the "closed" or "safe" position and that the release unit safety pin was not inserted into the locking hole on the release unit but was instead hanging by its chain from the release unit.

[124] Lifeboat 4 was subsequently transported to Aberdeen, where it was taken into the custody of the HSE and transported to the HSE laboratory in Buxton, Derbyshire. At the laboratory the lifeboat and associated mechanisms relating to the lifeboat and its davit, which had been recovered from the platform, were examined by HSE specialists. Two long, thin-bladed metal tools, namely a flat file and a round file, were recovered from within the lifeboat. The tools belonged to George Bartlett, as indicated by distinctive green tape applied to their handles. The characteristics of the tools would have made them suitable for insertion into the lifeboat's release unit in order to overcome the hydrostatic locking mechanism in the manner previously described.

[125] Subsequent examination of the lifeboat and its hook release mechanism confirmed that the descent of the lifeboat had not been the result of any failure of either the hook release mechanism or the basic structure of the lifeboat.[25]

Reconstruction of fatal accident

[126] The evidence, including the results of the HSE investigations,[26] clearly indicates that, having completed the routine maintenance checks on the other three lifeboats

[25] Crown Production No 67 'Report on the TAQA Harding TEMPSC Incident Investigation,' C. Rudall and W. Harris, Conclusions, page 22

[26] Crown Production No. 65, paragraphs 11.7 to 12.12; Crown Production 66 'HSE Specialist Inspector's Investigation Report,' Dr. P. Heeney, page 11; Crown Production No. 67, page 22

during his final shift, Mr Bartlett finally embarked on the maintenance checks in relation to lifeboat 4. Despite having inserted the initials of his colleague William "Billy" Esplin ("BE") into a checklist to indicate that Mr Esplin had acted as the "second person" who had verified the attachment of the pendants for all four lifeboats, Mr Bartlett did not in fact arrangement for Mr Esplin or anyone else to carry out this task in relation to any of the lifeboats.

[127] Mr Bartlett attached the aft pendant to the corresponding component of lifeboat 4's aft hook assembly. He did not attach the forward pendant to the corresponding component of the forward hook assembly. His failure to attach the forward pendant was an oversight rather than a deliberate decision. He then commenced his maintenance checks in the mistaken belief that both pendants were attached. Because, at that stage, the forward Section of the lifeboat was still suspended on its fall wire, Mr Bartlett mistakenly believed that the boat was held by both its forward and aft pendants.

[128] In the course of carrying out the maintenance checks on lifeboat 4, Mr Bartlett inserted one or both of the two thin-bladed tools later recovered from the lifeboat into the lifeboat's release unit in order to disengage the hydrostatic lock. Having done that, he withdrew the steel safety pin from the release unit and deployed the release handle. The release mechanism operated precisely as it was designed to, and both of the lifeboat's release hooks opened, disengaging the lifeboat from its forward and aft fall wires.

[129] The aft Section of the lifeboat was held in position by the aft pendant. The forward section, having nothing to hold it, began to fall. The lifeboat, with Mr Bartlett within, rotated or swung on its aft pendant, a motion for which neither the lifeboat nor its associated components were designed. The lifeboat struck the platform and the resulting forces were sufficient to cause catastrophic failure of the Section of the lifeboat's hull to which the aft hook assembly was attached, causing that Section of the hull, including the aft hook assembly, to detach from the lifeboat. At this point the tension on the cable connecting the aft release hook to the release handle was sufficient to return the release handle to the "closed" or "safe" position which was noted when the lifeboat was examined on arrival in Lerwick. [27]

[130] The lifeboat, with Mr Bartlett within, fell 96 feet or so to the sea below. In the process Mr Bartlett sustained head injuries which potentially compromised his ability to take any action to save himself and he died as a result of immersion in the sea.

[131] Had Mr Bartlett attached both pendants, rather than simply the aft pendant, prior to commencing his maintenance checks on lifeboat 4, the fatal accident would not have happened.

[132] Had Mr Bartlett arranged for a second person to attend the lifeboat station to verify the secure attachment by him of both of lifeboat 4's pendants prior to commencing his maintenance checks on lifeboat 4, his failure to attach the forward pendant would have become obvious. He would not have proceeded with the checks on

[27] Crown Production No. 65 'Health and Safety Executive, Offshore Safety Division Investigation Report,' paragraph 11.10; Crown Production No. 67, paragraph 95

lifeboat 4 until the forward pendant had been attached. The fatal accident would not have happened.

[133] Had Mr Bartlett refrained from operating lifeboat 4's release gear in the course of carrying out his maintenance checks on lifeboat 4, the fatal accident would not have happened.

Critical Documents

[134] A number of documents were of particular significance to the issues raised during the inquiry hearing.

Crown Production No. 19 – TAQAs Integrated Safe System of Work (ISSOW) Procedure

[135] It was a matter of agreement[28] that this document was designed to ensure that, prior to the commencement of any task on the platform, proper consideration was given to all potential hazards and that suitable precautions were taken to minimise risk to those directly involved in the work, and to anyone else who could be affected. This was originally a BP document which had been temporarily adopted by TAQA pending full review and update of the matters falling within its scope. The version of the ISSOW procedure which was in force as at 27 February 2014 was issued in May 2013.

[136] The ISSOW procedure described the systems, processes and responsibilities relative to the control, authorisation and review of work-related tasks aboard the

[28] Joint Minute No. 1, paragraphs 104 et seq

platform. It is a lengthy and detailed document. A number of its features are particularly noteworthy in the context of this inquiry.

[137] I understood from the evidence that, in relation to any given maintenance task aboard the platform which was covered by the ISSOW procedure, a work order would be generated by the platform's electronic maintenance management system, known as "maximo." Such work orders were the result either of routine maintenance work, such as lifeboat maintenance, becoming due according to a schedule stored on maximo, or of other work planned by members of staff who were tasked with the planning of work during any given week. The purpose of the work order was to identify a task which required to be completed. A work order also identified any written safety procedure which specified how the task was to be completed. In the case of routine lifeboat maintenance, that document was the "S01 – 001A Lifeboat Maintenance and Inspections" document, which is considered below in the context of Crown Production No. 100.

[138] The technician to whom the task identified in a particular work order was allocated, either as the individual who would personally carry out the work or as the leader of a team which would do so, was known, for work control purposes, as the Performing Authority ("PA") for the job. The Performing Authority would prepare an electronic work control certificate (WCC) for the job. In the course of composing the WCC, the Performing Authority would identify and state therein the scope and component parts of the work, the risks ("hazards") applicable to the task and the safety measures ("controls") which were necessary in order to address those hazards.

[139] I understood that, because of the routine nature of weekly lifeboat maintenance, that work was covered by a "routine template" WCC stored on the platform's IT system, which was valid for 180 days at a time, after which a member of staff would review the template and prepare a new template for the next 180-day period. The routine template WCC which was in force for weekly lifeboat maintenance as at 24 February 2014 was Crown Production No. 52, issued on 14 January 2014. I understood that the theory underlying the routine template WCC was that its terms reflected the prevailing risk assessment covering this routine work. Thus the routine template WCC identified the hazards and controls which were considered to be generally relevant to this work during the period for which the template was valid. This avoided the need for technicians preparing to undertake weekly lifeboat maintenance to devise a bespoke list of hazards and controls every time the work was undertaken. The limited life of the routine template WCC reflected the possibility that the overarching risk assessment might be amended, in which case the template WCC might be updated to include an amended list of hazards and controls. There was no suggestion that the terms of the routine template WCC covering weekly lifeboat maintenance had altered prior to Mr Bartlett's death in any way which was relevant to the circumstances of the fatal accident.

[140] I understood that a technician who, as Performing Authority, was required to undertake weekly lifeboat maintenance would use the routine template WCC as the basis for the WCC to be created by him for the particular episode of such maintenance which he was to undertake.

[141] The WCC prepared by the Performing Authority then required to be reviewed by another member of staff who was designated, for work control purposes, as the Area Authority ("AA") who, if satisfied in relation to the scope of the proposed work, the identification of the hazards pertaining to the work, the controls to address those hazards, the availability of those controls at the time when the work was to take place and that the proposed work would not clash with any other planned work, would approve the WCC, a step in the process known as "granting a permit" for the work described in the WCC. Thereafter, the WCC became "live" when the Performing Authority commenced the work to which it related. These various steps in the authorisation process were completed electronically on the platform's IT system. The ISSOW procedure prohibited the same person from acting as Performing Authority and Area Authority for the same task.[29]

[142] I understood that this general structure, with regard to the oversight and authorisation of work on the Harding Platform, reflected general industry practice and was not particular to the platform or to TAQA.

[143] In relation to the routine weekly lifeboat maintenance undertaken by George Bartlett during his final shift, Mr Bartlett was the Performing Authority and Brian Hawkesford was the Area Authority.

[144] In terms of paragraph 4.5 of the ISSOW procedure, the duties of the Area Authority included the following:

[29] Paragraph 4.9

- "Liaising closely with the PA when planning work to ensure that all of the appropriate hazards and controls have been identified for that task;"

- "Ensuring that the appropriate level of risk assessment has been carried out for the task…;"

- "Ensuring that all of the prerequisite control measures have been put in place prior to allowing a WCC to go live;"

- "Conducting an interview with the PA prior to work starting, to ensure that they fully understand the scope of the task;" and

- "Ensuring that the PA carries out a pre-job safety Toolbox Talk (the process by which the PA discusses with the work party the relevant task, hazards and controls) at the worksite with the other members of the work party before any work commences."

[145] Paragraph 4.9 of the ISSOW Procedure lists the Performing Authority's main duties, which include the following:

- "Where the PA is working alone, the Toolbox Talk check list **shall** be used to review the worksite hazards and controls before work commences, and the PA **shall** still sign the work party declaration on the WCC;"

- "Ensure that all members of the work party are aware of their right and duty to stop the job, Time Out For Safety (TOFS), if they consider the work to be unsafe;"

- "Ensure that supplementary controls are applied;" and

- "Ensure that only work covered within the scope of the WCC takes place."

[146] For these purposes, supplementary controls are safety measures identified on the WCC which the Performing Authority must put in place at the appropriate times in the course of carrying out the work. Prerequisite controls, by contrast, are safety measures which must be put in place prior to the authorisation of the work by the Area Authority.

Crown Production No. 8 – work control certificate no. 00138323

[147] This is the WCC relating to the routine lifeboat maintenance work on which George Bartlett was engaged at the time of the fatal accident on 27 February 2014.

[148] The "authorisation history" of the document indicates that it was created electronically by Mr Bartlett, as Performing Authority in relation to the work, at 21:59:19 hours on 26 February 2014, that the associated permit was issued by witness Brian Hawkesford, as Area Authority, at 22:05:58 hours the same day and that Mr Bartlett designated the WCC as "live" at 22:06:25 hours.

[149] The only significant difference between the routine template WCC (Crown Production No. 52) and the WCC prepared by Mr Bartlett is that Mr Bartlett's document included a typed Section headed "Task Description Details," which did not appear in the routine template but which was clearly added by Mr Bartlett in the course of preparing his document. The terms of the "Task Description Details" Section of Mr Bartlett's WCC are as follows:

> "Carry out checks on lifeboats, davits, charger & air cylinders.
> Use of hand tools.
> Use of electrically driven portable air compressor.
> Air cylinder to be charged to 200bar. MAWP[30] = 220bar".

[150] Apart from this difference, comparison of the WCC prepared by Mr Bartlett with the prevailing routine template WCC shows that Mr Bartlett used the same general description of the job and the same hazards and controls as appeared on the routine

[30] I understand 'MAWP' to be an abbreviation for 'Maximum Allowable Working Pressure'

template. The "Risk Assessment" Section of the WCC prepared by Mr Bartlett lists a number of hazards associated with the job and, for each hazard, one or more controls, all of which are in the terms stated in the routine template WCC. All of the controls listed are supplementary controls, which Mr Bartlett as the Performing Authority was therefore responsible for putting in place at appropriate times during the work.

[151] One of the hazards identified on both the routine template WCC and Mr Bartlett's WCC was "Unplanned release/lowering of lifeboat". The controls identified in order to address this hazard are stated to be:

> "Second man to check that both forward and aft maintenance pins are fitted prior to boat being lowered on to chains;
> Maintenance pendants must be fitted prior to any work being carried out on the lifeboats;
> Follow checklist on SWP 054 for control of shackle pins".

I understand "chains" in this context to be another name for the lifeboat pendants. "SWP 054" is a reference to Crown Production No. 20, which is considered in more detail below.

[152] A further hazard identified in both the routine template WCC and Mr Bartlett's WCC is "Inadequate Control of Work", for which the identified control is "All work party members to have read and adhered to Taqa Safe Work Standards."

[153] The final page of Mr Bartlett's WCC comprises the "Workparty Declaration," which the document explicitly requires all members of the workparty, including a single Performing Authority, to sign. The Workparty Declaration is in the following terms:

> "• I understand the task described on this WCC. I have read and understood the controls and precautions that have to be in place to carry out the task.

- I will carry out only the work detailed in the WCC task description.
- I have participated in a pre-job safety toolbox talk/personal risk assessment.
- I will stop the job if I consider work unsafe.
- I will stop the job if I observe any of the agreed Stop the Job Triggers.
- I will stop and review work risks after each step or chunk of the task.
- I have read and will follow supplementary controls & procedures relevant to this task."

In the context of "following procedures", in terms of the final bullet point, I heard evidence that the work order which, via the maximo system, would have prompted the completion of routine lifeboat maintenance, would have explicitly referred to the "S01-001A Lifeboat Maintenance and Inspections"[31] document as the procedure governing this work. I saw a number of examples of work orders for routine lifeboat maintenance which explicitly identified this as the applicable procedure.[32]

Crown Production No. 20 – "TAQA Harding Safe Working Procedure – Control of Lifeboat Shackle Safety Pins (SWP – 054)"

[154] This document bears to be a BP document, issued on 1 June 2012, which was temporarily adopted by TAQA pending review as part of the transitional procedures already noted. It was due for review in March 2014. It expressly relates to the control of

[31] Contained within Crown Production No. 100 'Harding Control of Lifeboat Shackle Safety Pins folder'

[32] Crown Productions Nos 46, 48 and 51

lifeboat shackle safety pins during maintenance and/or training exercises. It was in force as at the date of the fatal accident.

[155] Under the heading "Procedure," this document provides as follows:

> "**The following procedure and precautions are to be adhered to at all times.**
>
> - Only competent personnel are to fit the shackle safety pins.
> - Only one lifeboat to be out of service & worked on at any time.
> - Only 1 set of pins to be issued at any time.
>
> 1. Area authority to issue WCC for the task.
> 2. The Performing authority for the task is to discuss the work programme with the CRT [control room technician] prior to the work commencing as part of the pre task Tool box talk .
> 3. CRT to check and confirm that the PA is registered on the competent person register.
> 4. CRT to issue the pins for the relevant lifeboat to the PA.
> 5. PA to Insert shackle safety pins on entry into the lifeboat, 2nd person is to witness that the pins have been fitted correctly.
> 6. PA to report to CRT that pins have been fitted correctly and that the boat is now out of service.
> 7. CRT to mark up the [control room] information board "Lifeboat out of service for maintenance."
> 8. On completion of task the Lifeboat is to be left in the ready to load and launch condition.
> 9. PA to inform CRT that the pins have been removed and the Lifeboat is returned to service.
> 10. PA to return Lifeboat shackle safety pins to the storage point in the [control room].
> 11. CRT to update the [control room] information board regarding Lifeboat status."

[156] This document includes a template checklist including eleven sections, one corresponding to each item from the numbered list above. The checklist indicates that it is to be completed by the duty control room technician and responsible Performing Authority, by circling the appropriate lifeboat number on the checklist (1, 2, 3 or 4) and

then initialling each stage of the procedure, working through items 1 to 11 from the numbered list given above.

[157] Item number 5 on the checklist is:

> "PA to Insert shackle safety pins on entry into the lifeboat, 2nd person is to witness that the pins have been fitted correctly".

Crown Production No. 100 – "Harding Control of Lifeboat Shackle Safety Pins folder"

[158] This folder was kept in the control room of the platform, on the same shelf as the platform's eight shackle safety pins, arranged in four pairs, one pair nominally allocated to each of the platform's lifeboats. The folder contained two lists which bore to include the names of "…personnel… deemed competent to fit the shackle safety pins." I understand this to be the "competent person register" which is referred to at item 3 of the checklist on Crown Production No. 20.

[159] The folder also contained various completed checklists from Crown Production No. 20, relating to weekly lifeboat maintenance completed during the four weeks or so prior to the fatal accident. Technicians who had conducted weekly lifeboat maintenance would file the completed checklists relating to the work in this folder for subsequent audit.

[160] Finally, the folder contained a hard copy of the lengthy and detailed "S01-001A Lifeboat Maintenance and Inspections" document, which set out a detailed description of the procedure for lifeboat maintenance and inspections on the platform. The version of this document which was in force in February 2014 was "revision 6," apparently issued in May 2012. Part A of the document set out the detailed procedure for the

weekly lifeboat maintenance in which Mr Bartlett was engaged at the time of the fatal accident. Part B set out the procedure governing monthly lifeboat maintenance. Part C was not in use in February 2014. Part D set out the procedure governing six- monthly lifeboat maintenance and Part E set out the procedure governing annual lifeboat maintenance.

[161] Weekly and monthly lifeboat maintenance was undertaken by TAQA's mechanical technicians. As previously explained, six-monthly, annual and 5-yearly maintenance was carried out by an external contractor, SCI.

[162] Two provisions of the S01-001A document which appear to have been applicable to all of the lifeboat maintenance tasks to be undertaken by TAQA's mechanical technicians are as follows:

> "1.4 Before any work commences, the maintenance pendants will be fitted, and checked for correct attachment by two **competent** persons (emphasis added). All personnel to vacate lifeboat prior to transferring weight on to maintenance pendants.
>
> 1.5 Under no circumstances is the lifeboat release system to be tampered with or operated during checks. Failure to heed this warning could prove FATAL."

[163] Thereafter, part A of the document describes the particular tasks to be carried out during weekly lifeboat maintenance. The following procedures are stated to apply to this work:

> "3.8 Attachment of maintenance pendants: Before work proceeds, the maintenance pendants will be fitted, and checked for correct attachment by two **competent** persons (emphasis added);
> …
> 3.12 Second **competent** person to verify correct attachment of pendants." (emphasis added)

[164] Paragraphs 3.42 to 3.46 inclusive of part A of the document set out the checks of the lifeboat release gear system which were to be carried out during weekly lifeboat maintenance. These are essentially visual checks of the fall wires, the release handle, release unit and release hooks. They do not require the operation of the release gear mechanism which, as already noted, was expressly prohibited by paragraph 1.5 of the document.

Crown Production No. 9 – documents recovered from George Bartlett's overalls

[165] Crown Production No. 9 comprises a number of documents recovered, after Mr Bartlett's death, from the overalls worn by him at the time of the fatal accident. The documents can be divided into three groups.

[166] One of the documents appears to be a WCC (reference 00137491) concerning work carried out on 24 January 2014, which appears to have been completely unrelated to lifeboat maintenance or to the work undertaken by Mr Bartlett during his final shift.

[167] The second document appears to be a hard copy of Crown Production No. 8 WCC (bearing reference 00138323) relating to the weekly lifeboat maintenance undertaken by Mr Bartlett during his final shift. It appears that Mr Bartlett printed this hard copy and took it with him when he went to carry out the routine lifeboat maintenance on which he was engaged at the time of the fatal accident. This document indicates that Mr Bartlett completed, by hand, a Section of the document which required him to identify the "task chunks" for the work and the "significant hazards/actions required" for each "chunk." "Chunking the job" was an expression used by a number of

the witnesses to refer to the practice of breaking a task down into individual component steps or "chunks," to assist with the planning of individual tasks and the identification of hazards and associated controls or safeguards for each stage of a task.

[168] The only "chunk" identified by Mr Bartlett in this document was "CARRY OUT MAINT CHECKS," presumably a reference to lifeboat maintenance checks. The associated hazards identified by him included:

"FALL TO SEA: - FIT PENDANT PINS"

[169] This document indicates that Mr Bartlett signed the "Workparty Declaration", in his capacity as Performing Authority for the job, at 0000 hours on 27 February 2014.

[170] The third group of documents recovered from Mr Bartlett's overalls comprised four copies of the checklist from Crown Production No. 20 to which reference has already been made. It appears that Mr Bartlett took four copies of this checklist with him during his final shift, intending to complete one checklist in relation to each of the four lifeboats on which he was to carry out maintenance checks. On each copy, the number 1, 2, 3 or 4 was circled by hand. However, only the checklist for lifeboat number 1 was actually completed and signed by Mr Bartlett. That checklist is dated 27 February 2014 and bears the handwritten work control certificate reference 138323, confirming beyond any doubt that it corresponds to the WCC (Crown Production No. 8) relating to the lifeboat maintenance on which Mr Bartlett was engaged at the time of the fatal accident.

[171] The completed checklist has initials opposite each of the listed items previously referred to. The initials all appear to be in the same handwriting, which can only be that

of Mr Bartlett. The initials inserted, opposite the items in the list, are "GB", presumed to be the initials of Mr Bartlett, "CS," presumed to refer to the duty control room technician Christopher Sutherland, and "BE," presumed to be a reference to William "Billy" Esplin, a technician who was on duty during Mr Bartlett's final shift and who had expected to be asked, but who was not asked, to act as "second person" to verify the attachment of the pendants to the lifeboats by Mr Bartlett.

[172] Specifically, the initials "GB/ CS" or "CS" appear opposite items 2, 3, 4, 6 and 11 in the checklist, which are the items involving the control room technician, and the initials "GB/BE" appear opposite item 5 in the checklist, namely:

> "PA to insert shackle safety pins on entry in to the lifeboat, 2nd person is to witness that the pins have been fitted correctly".

[173] These checklists bear the following inferences: firstly, that Mr Bartlett either intended the checklist relative to lifeboat number 1 to serve in relation to the maintenance work which he intended to carry out in relation to all four of the platform's lifeboats during his final shift or he intended to copy the entries he had made on that checklist onto the other three checklists on completion of the work; secondly, that all of the initials which appear in the completed checklist were added by Mr Bartlett, with no initials added by either Mr Sutherland or Mr Esplin; and, thirdly, that Mr Bartlett inserted the initials of Mr Esplin at item 5 on the checklist so as to indicate that Mr Esplin had, during Mr Bartlett's final shift, acted as the "second person" who witnessed that the shackle safety pins used by Mr Bartlett to attach the forward and aft pendants to

each of the four lifeboats had been fitted correctly and that the pendants had thereby been attached.

[174] As indicated elsewhere, Mr Esplin's unchallenged evidence, which I accept, is that he did not carry out that role in relation to the lifeboat maintenance work undertaken by Mr Bartlett during his final shift. Further, the unchallenged evidence of both Mr Esplin and Mr Sutherland was that neither had initialled any checklist relating to the lifeboat maintenance work undertaken by Mr Bartlett during his final shift.

Issues arising from the critical documents

[175] A number of issues arose at the inquiry hearing in relation to these critical documents.

Operation of release gear during routine maintenance

[176] As already noted, the "S01-001A Lifeboat Maintenance and Inspections" document prohibited the Harding Platform's technicians in the most explicit terms from "tampering with" or operating lifeboat release gear during routine maintenance. However that had not always been the case. The operation of release gear was at one time included within routine lifeboat maintenance on board the platform. Estimates from witnesses varied as to when that changed. The general consensus was that the change occurred at least two or three years prior to the fatal accident. As already indicated, the version of the "S01-001A Lifeboat Maintenance and Inspections" document which was in force at the time of the fatal accident was issued in May 2012,

just under two years prior to the fatal accident. Prior versions of the document were not produced. However, the investigations carried out HSE inspector Colin Martin disclosed that BP in fact removed the operation of release gear from the routine lifeboat maintenance checks carried out by technicians on the platform in around 2007 or 2008.[33]

[177] Despite this, it appears that Mr Bartlett persisted in operating release gear during routine maintenance. He also trained less experienced technicians to operate release gear when they carried out routine lifeboat maintenance. I heard unchallenged evidence from Brendan Watts and Simon Chalmers, who started work as mechanical technicians on the platform in January 2013 and November 2013 respectively, that they received practical training from Mr Bartlett in relation to routine lifeboat maintenance, in the course of which Mr Bartlett instructed them that the operation of the release gear formed part of the maintenance checks. Mr Chalmers only became aware that the training he had received from Mr Bartlett was contrary to procedure as a result of the fatal accident. Mr Watts became aware of the contradiction between Mr Bartlett's practice and the prohibition set out in the "S01-001A Lifeboat Maintenance and Inspections" document whilst he was being trained by Mr Bartlett and challenged Mr Bartlett about the matter. In response, Mr Bartlett did not dispute the discrepancy between his practice and the procedure, but stated that the procedure was being updated and that the release gear needed to be checked in order to make sure that it would work in an emergency. Mr Watts accepted Mr Bartlett's explanation. The evidence of Mr Watts leads inevitably to

[33] Crown Production No. 65 report by Colin Martin, paragraph 6.7

the inference that Mr Bartlett was aware that the applicable procedure prohibited the operation of the release gear.

[178] As already indicated, Mr Bartlett would have been quite correct in understanding that many procedures applicable to different types of work on board the platform were subject to review as part of the transitional process already described. However, according to the unchallenged evidence of the Offshore Installation Manager, Craig Finlayson, there was no proposal to review the appropriateness of release gear checks in the context of the routine lifeboat maintenance carried out by the platform's technicians. Even if there had been any such proposal, the review process would have been very detailed, involving consideration not only of the procedure which applied on board the Harding Platform but also of best practice from TAQAs other platforms. The outcome of any such review could not have been predicted in advance with any confidence. One possible outcome would have been the confirmation of the existing procedure. Any changes would only have been introduced after careful thought, including in relation to the appropriate means of disseminating any changes and of delivering any consequential training to affected staff. Such a review would have taken two or three months.

[179] Mr Finlayson's evidence was that, even if the exclusion of release gear checks from routine lifeboat maintenance had been the subject of a review, which it was not, the clear duty of technicians was to comply with the existing procedure until any changes were introduced. In that respect his evidence was consistent with the general culture of procedural compliance which emerged in evidence and, indeed, with the terms of the

"Workparty Declaration" signed by Mr Bartlett in relation to the maintenance work on which he was engaged at the time of the fatal accident.[34]

The scope of the work control certificate

[180] As indicated, the Workparty Declaration which formed part of the WCC prepared by Mr Bartlett in relation to the lifeboat maintenance work to be carried out by him during his final shift included an undertaking to "carry out only the work detailed in the WCC task description."

[181] The terms of the "task description" from the WCC have already been noted.[35] They do not include the operation of the lifeboat release gear. This is significant because of the very clear picture which emerged from the evidence of a culture on board the platform whereby it was widely understood that technicians were expected to carry out the work which was positively required of them, in terms of any applicable procedural documents, rather than having the freedom to carry out their work as they wished, subject to complying with any prohibitions set out in such documents. As explained by Craig Finlayson, the practice of only carrying out tasks, and steps within tasks, which were positively required in terms of the applicable procedural documents could be traced back to the general focus on safety in the offshore environment. The procedures set out in the documents applicable to a task would have been developed following a

[34] Crown Production No. 9, page 6
[35] Supra, paragraph [149]

process of risk assessment relating to that task. Failure to follow the stated procedure invalidated and circumvented that risk assessment.

[182] Thus it is clear that, by operating the lifeboat release gear during his final shift, Mr Bartlett exceeded the scope of the WCC which he himself had prepared for the work and acted in contravention of the Workplace Declaration signed by him in relation to that work.

The role and competence of the "second person"

[183] Although the controls identified in the WCC prepared by Mr Bartlett (Crown Production No. 8), the checklist contained within the "TAQA Harding Safe Working Procedure – Control of Lifeboat Shackle Safety Pins (SWP – 054)" (Crown Production No. 20) and the detailed procedures contained within the "S01–001A Lifeboat Maintenance and Inspections" document (Crown Production No. 100) all required a second person to verify either the insertion of the shackle safety pins (Crown Productions Nos. 8 and 20) or the attachment of the pendants (Crown Production No. 100), which are in effect different descriptions of the same task, only the "S01–001A Lifeboat Maintenance and Inspections" document stated that the second person had to be "competent." The document does not, however, indicate what it meant by "competence."

[184] Although it was clear that the need for a second person to verify the insertion of shackle safety pins and hence the secure attachment of the pendants prior to commencement of routine lifeboat maintenance was universally understood at the time

of this fatal accident, the requirement in terms of the "S01–001A Lifeboat Maintenance and Inspections" document for the second person to be "competent" was not. For example, neither Brian Hawkesford, the Area Authority responsible for authorising the work undertaken by Mr Bartlett during his final shift, nor Christopher Sutherland, the control room technician on duty at the time, were aware of this requirement.

[185] Further, although the witnesses who gave evidence on this issue appeared to be united in their view that the insertion of shackle safety pins, and hence the task of verifying that pins had been correctly inserted and pendants consequently attached, were straightforward matters, there was no consensus with regard to what would constitute competence, or who might be a competent person, for these purposes.

[186] The mechanical technicians who carried out lifeboat maintenance were formally assessed in relation to their competence to fit shackle safety pins as part of the wider assessment of their competence to carry out lifeboat maintenance. Mr Bartlett's certificate of competence in relation to these matters, valid from 25 November 2011 until 25 November 2014, was produced as an example.[36] That certificate notes that, in the course of that particular assessment, Mr Bartlett explained to his assessor that:

> "…maintenance on the boats is strictly forbidden without the shackle pins being attached and a second man was required to witness the pins were fitted correctly."

[36] Crown Production No. 28

However, there was no corresponding process of assessment for individuals who might be asked to act as "second man" to verify the correct insertion of the shackle pins and hence the attachment of pendants.

[187] Some witnesses considered that, because of their training and experience, mechanical technicians were the ideal candidates to act as second person for these purposes. Other witnesses considered that, because of their connection to and knowledge of the platform's lifeboats, coxswains were also competent to carry out the "second person" role. However, it was clear from the evidence that the training provided to coxswains did not include instruction in the insertion of shackle safety pins or verification that pendants had been correctly attached. Evidence was led of the content of the four-day training course undertaken by coxswains, which focussed on the operation of the lifeboats and on the visual seaworthiness checks to be undertaken by coxswains when allocated to a lifeboat on arrival on a platform. Those visual checks included verifying that the lifeboat's pendants were <u>not</u> attached and that the lifeboat was therefore capable of being lowered on its fall wires. William Esplin gave evidence that, after he completed his coxswain's training course, a mechanical technician on board the Harding Platform spent some time with him pointing out certain differences between the platform's lifeboats and the lifeboats used during the training course. However Mr Esplin was not given training in relation to either the insertion of shackle safety pins or the verification that they had been correctly inserted.

[188] A third suggestion which emerged in evidence was that riggers, who specialise in the movement of loads on board a platform using lifting equipment, would be

competent to act as second person because the shackle and pin arrangement used to attach pendants was also commonly used by riggers for securing loads prior to lifting. Therefore, some witnesses considered that the correct assembly of a shackle and pin would be a simple matter for a rigger to assess and verify.

[189] The view that the insertion of a shackle safety pin into a shackle, which was simply a matter of screwing a sturdy, threaded steel bolt through the correspondingly-threaded holes in each side of the associated shackle, was a very simple task appeared to be universally shared. As one witness commented:

> "It's hard to think of a more basic thing than fitting a pin into a shackle."

[190] Perhaps as a result of this view, one mechanical technician with significant experience of lifeboat maintenance expressed the view that "any person walking by" could have acted as second person.

[191] Some focus for the discussion around the competence requirements of the second person was provided by HSE inspector Dr Paul Heeney, who highlighted the need for pendants not only to be attached to lifeboats via correctly assembled shackles and pins, but to be attached to the correct load-bearing components of lifeboat hook assemblies. Dr Heeney's research had revealed a fatal accident on board the Claymore Platform in the North Sea in 1996, in which a lifeboat fell from the platform after an inexperienced crew member attached the pendants via correctly assembled shackles and pins, but to the wrong components, and then operated the release gear.

The identification of crew members who could act as "second person"

[192] Leaving aside the uncertainty around the competence of the second person, another issue which emerged in evidence concerned how a crew member who required the assistance of a second person could quickly identify which other crew members were considered competent (whatever that meant) to carry out that role.

[193] As already noted, one of the requirements imposed on the control room technician in the context of lifeboat maintenance work by the checklist within Crown Production No. 20 – "TAQA Harding Safe Working Procedure – Control of Lifeboat Shackle Safety Pins (SWP – 054)" was to "…check and confirm that the [Performing Authority] is registered on the competent person register," before releasing shackle safety pins to that person. The evidence of Christopher Sutherland suggested that this requirement was something of a formality, since only mechanical technicians ever carried out routine lifeboat maintenance, only they ever required the shackle safety pins and they were all trained and therefore competent to fit the pins. However, the document placed no corresponding obligation on the control room technician to check that the proposed second person was also registered on the "competent person register," or even to establish who was to carry out the role of second person.

[194] I understood the "competent person register" to be a reference to the two lists contained within Crown Production No. 100 – "Harding Control of Lifeboat Shackle Safety Pins" folder, which contained the names, either typed or in handwriting of unknown authorship, of numerous crew members who generally appeared to be either mechanical technicians or coxswains. Although some of the technicians who gave

evidence expressed the belief that the "second person" also required to be listed on this "register," that view was not universally held.

[195] In addition, the value of this "register" was cast into some doubt by the evidence that Brian Hawkesford was listed on it, although he did not know that he was, and that William Esplin, a trained coxswain who would thereby have been regarded as suitable to act as second person by at least some of those who gave evidence, was not. In addition, as already noted, the coxswains listed would have had no formal training in the insertion of shackle safety pins or in verifying that they were correctly inserted and that pendants were thereby attached to the correct load-bearing components of a lifeboat.

[196] In these circumstances, HSE Inspector Mark Alderson expressed the view that the "competence register" was "redundant" and his colleague Dr. Paul Heeney expressed the view that the register appeared to be "simply a piece of paper for the sake of having a piece of paper with names on it."

Responsibility for identifying an appropriate second person

[197] Notwithstanding these issues around the role and competence of the second person and the identification of individuals who could carry out that function, the weight of evidence clearly indicated that, in the context of any particular lifeboat maintenance work, the responsibility for identifying a suitable second person lay squarely with the mechanical technician assigned to the job, in his capacity as Performing Authority. In particular, both Brian Hawkesford, the nightshift Area

Authority, and Christopher Sutherland, the duty control room technician, gave clear evidence that they did not regard themselves as having any role in the identification of a suitable individual to act as second person. This responsibility lay with Mr Bartlett, the ultimate safeguard being his responsibility as Performing Authority to "stop the job" if he could not identify a suitable second person or if, for any other reason, he found himself unable to complete the job safely and in accordance with the applicable procedures (as per the Workparty Declaration within Crown Productions Nos. 8 and 9).

[198] This view was fully supported by the evidence of Craig Finlayson who, as Offshore Installation Manager, was the senior person on board the platform at the time of the fatal accident. A number of witnesses emphasised the principle that any job could and should be stopped if those assigned to it could not complete it safely. As a number of witnesses put the matter, "no job is so important that it can't be done safely." The weight of evidence pointed towards a general culture on board the Harding Platform of focussing on safety and complying with procedure. I heard evidence from a number of witnesses of examples of jobs being stopped because technicians were not confident that they could be completed safely. None of those who gave evidence suggested that there was any prevailing culture of applying pressure to technicians to complete jobs in the face of unresolved safety concerns. The weight of evidence pointed in the opposite direction.

<u>The "tool box talk"</u>

[199] A number of procedural documents, and the evidence of multiple witnesses, referred to the "tool box talk." The tool box talk was enshrined within the culture of the Harding Platform. Paragraph 4.5 of Crown Production No. 19 ISSOW procedure defines the tool box talk as:

> "…the process by which the [Performing Authority] discusses with the work party the relevant task, hazards and controls…"

[200] Even though weekly lifeboat maintenance was essentially a one-person job, apart from the verification to be provided by the second person, it was clear that the applicable procedures still envisaged that a tool box talk would take place before the work commenced. For example, item 2 on the checklist within Crown Production No. 20 – "TAQA Harding Safe Working Procedure – Control of Lifeboat Shackle Safety Pins (SWP – 054)" required the Performing Authority allocated to the task to "…discuss the work programme with the [control room technician] prior to the work commencing as part of the pre task tool box talk."

[201] Paragraph 4.5 of Crown Production No. 19 ISSOW procedure made it clear that one of the responsibilities of the Area Authority, in relation to the authorisation of work, was:

> "Ensuring that the PA carries out a pre-job safety Toolbox Talk."

[202] Paragraph 4.9 of the same document lists the responsibilities of the Performing Authority in relation to any work to be undertaken by him, which include:

> "Where the PA is working alone, the Toolbox Talk check list **shall** be used to review the worksite hazards and controls before work commences…"

[203] Finally, the workparty declaration forming part of Crown Production 8 and 9, the WCC prepared and signed by Mr Bartlett in relation to the lifeboat maintenance work on which he was engaged during his final shift, is expressly applicable to a single Performing Authority, i.e. a technician working alone, and includes the statement that:

"I have participated in a pre job safety toolbox talk/ personal risk assessment."

[204] Despite all of these provisions, no clear consensus was apparent to me with regard to the requirements of a tool box talk in the context of routine lifeboat maintenance undertaken by a single technician, and it was not clear to me that Mr Bartlett participated in any such process, in any recognisable sense, during his final shift.

[205] Both Brian Hawkesford, the Area Authority, and Christopher Sutherland, the control room technician, were clear that they had not participated, and did not consider that they would have been expected to participate, in a tool box talk with Mr Bartlett in relation to such a routine task. However, each speculated that Mr Bartlett may have held a tool box talk with the other. Various technicians with experience in conducting lifeboat maintenance gave conflicting evidence on the point. Keiran Wilkinson recalled that in his experience the tool box talk did involve the Area Authority. Brendan Watts gave evidence that the tool box talk involved the Performing Authority discussing the task with "anyone else who was involved in the task, for example the second person…" Simon Chalmers stated that the tool box talk involved the control room technician, around the time when the Performing Authority obtained the shackle safety pins from the control room. Andrew Cawley, the Offshore Operations Engineer on the platform in

February 2014, with practical responsibility for all operations, gave evidence that the tool box talk would simply have involved the Performing Authority "speaking to the control room technician and telling him what he was about to do, who would be working with him and how long the work would take." The Offshore Installation manager Craig Finlayson gave evidence that, even for a routine, one-man job such as lifeboat maintenance, the Performing Authority was required to arrange a tool box talk prior to commencement of the work and that he would have expected the tool box talk to include "anyone involved in or affected by the job," for example the second person.

[206] Although there was a distinct lack of clarity with regard to what might constitute a tool box talk in relation to routine lifeboat maintenance and with regard to who, other than the technician allocated to the job, should be involved in such a talk, two points of clarity were that: (i) it was universally understood that such a talk required to take place prior to commencement of the work; and (ii) it was the responsibility of the allocated technician, as Performing Authority, to arrange the talk.

[207] Ultimately it appeared to me that, as a result of the routine nature of lifeboat maintenance of the kind on which Mr Bartlett was engaged during his final shift, different technicians and supervisors interpreted the requirement to arrange a tool box talk differently, in much the same way as they held a range of views about who might be competent to act as second person.

Comparison of Mr Bartlett's actions and the prescribed procedures

[208] The weight of evidence, including the unchallenged evidence of the HSE inspectors with regard to the reconstruction of the fatal accident, led to the unavoidable conclusion that Mr Bartlett's own actions, in breach of a number of clear safety provisions of which he was aware, led directly to this fatal accident.

[209] Firstly, Mr Bartlett failed to ensure that, prior to the commencement by him of maintenance on lifeboat 4, the forward pendant was attached to the forward hook assembly of the lifeboat.

[210] Secondly, despite Mr Bartlett having given his colleague Mr Esplin the impression at an earlier stage of his final shift that he would ask him to act as second person, Mr Bartlett failed to ensure that the attachment of both pendants was verified by Mr Esplin or any other second person prior to the commencement by him of maintenance work on lifeboat 4 or indeed any of the other lifeboats on which he had already completed maintenance work during his shift.

[211] Thirdly, having entered lifeboat 4 and commenced maintenance checks on the lifeboat when the forward pendant had not been attached, Mr Bartlett operated the release gear.

[212] Had Mr Bartlett attached the forward pendant as well as the aft pendant, the fatal accident would not have happened. Had he arranged for anyone, even someone who was not trained, experienced or "competent," to attend in order to verify the attachment of both pendants, that exercise would undoubtedly have prompted him to realise that he had not attached the forward pendant. He would then have attached that

pendant before proceeding with maintenance of lifeboat 4, with the result that the fatal accident would not have happened.

[213] If, even after omitting to attach the forward pendant, Mr Bartlett had refrained from operating the release gear, the fatal accident would not have happened.

[214] The documents recovered from Mr Bartlett's overalls after his death also indicate that, in the course of his final shift, Mr Bartlett completed a checklist from Crown Production No. 20 – "TAQA Harding Safe Working Procedure – Control of Lifeboat Shackle Safety Pins (SWP – 054)" by inserting Mr Esplin's initials ("BE") so as to indicate that Mr Esplin had carried out the role of second person, which Mr Bartlett knew was not true.

Audit procedures

[215] I heard evidence from a number of witnesses who held supervisory positions of one kind or another on the Harding Platform about various forms of audit or review of work which were carried out from time to time on the platform. This evidence was significant because I was referred to three completed work orders filed on TAQA's maximo maintenance management system which openly disclosed that technicians conducting routine lifeboat maintenance had operated the release gear in direct contravention of the express prohibition on doing so, contained within the "S01-001A Lifeboat Maintenance and Inspections" document. The work orders in question related to lifeboat maintenance carried out by Brendan Watts on 25 July 2013 and 1 October 2013 (Crown Productions Nos. 46 and 48) and by George Bartlett on 27 December 2013

(Crown Production No. 51). As already indicated, Mr Watts was trained by Mr Bartlett to operate release gear during routine lifeboat maintenance.

[216] The most immediate opportunity to review work came at the end of each shift, when the maintenance team leader would have a brief face to face discussion with the technicians who had completed work during the shift. As previously explained, tasks carried out on board the platform generally originated in work orders produced by the maximo system. When a work order was allocated to technician, the technician created a WCC for the job, to be considered and, if appropriate, authorised by the Area Authority. However it appears that, at shift end, the originating work orders for that shift's jobs required to be updated by the technicians, by typing into the maximo system the details of the work actually carried out, along with details of any problems encountered which might require further action or work and which might require the generation of further work orders. It was clear to me, from the evidence of various witnesses who held supervisory roles on the platform, that the focus of this discussion was not on the issue of whether, in completing their work during the shift, technicians had complied with all of the procedures applicable to the array of tasks undertaken by them. Rather it was to establish that the work which was due to be completed during the shift had been completed and, if not, to establish why not and whether there were any unresolved problems or issues arising from the work planned for the shift which would require further action or further work to be planned. Even in the latter event, the maintenance team leader would be unlikely to delve into the details of the work actually carried out by a technician unless something unusual had arisen which the technician

could not be left to address by requesting an appropriate further work order via the maximo system. Unresolved issues of any significance would have been rare in the case of routine lifeboat maintenance. In general therefore, completed work orders relating to that work would pass without scrutiny and the maintenance team leader would generally simply update the maximo system to move the status of these work orders to "completed".

[217] Another form of review related to the completed checklists arising from routine lifeboat maintenance, which were filed by technicians in Crown Production No. 100, the "Harding Control of Lifeboat Shackle Safety Pins" folder. These were audited by a supervisor every four weeks or so, but it was clear from the evidence I heard that the focus of that audit was very much on checking that the documents had been filled in and signed or initialled where required, rather than on the question of whether lifeboat maintenance was being conducted in a manner which complied with the applicable safety procedures.

[218] A third form of review was known as a "quality of information" audit, during which a random sample of 10-20 per cent of the 200 to 300 completed work orders closed off each week on the platform were audited by supervisors. The focus of this type of audit was on checking that the information entered by technicians when updating completed work orders was sufficiently detailed to provide TAQA with helpful data about issues such as recurring faults or problems with equipment. For example, an expression such as "job completed" would have been considered insufficiently detailed.

Thus, once again this type of audit was not designed to check whether technicians, in carrying out their work, were complying with the applicable safety procedures.

[219] The final form of review which featured in the evidence was described as a "permit audit," in terms of which a supervisor would make an unannounced visit to a random sample of ongoing jobs in progress in order to check that the technicians involved in the work had all of the procedural guidance documents relating to the job with them and that the controls prescribed for the job in terms of those documents were in place.

[220] It seems to me to be a reasonable interpretation of the evidence that, although each of these forms of audit had an understandable purpose, none appeared to focus on the question of whether the work actually carried out by technicians complied with the applicable safety procedures. This appears to have been due to the fact that the relatively small team of technicians on the platform were trained and assessed as competent to carry out their work and that the culture on the platform very much depended on everyone being aware of and complying with the procedures applicable to their work, in the context of the multitude of technical tasks which were undertaken on the platform each week.

[221] As to the latter issue, it was also clear that the supervisors who carried out the various forms of audit and review to which I have referred would not necessarily have the same technical background as the technicians whose records they may have been required to audit. Putting this together with the number of work orders generated each week on the platform, the small proportion of those work orders which were audited

and the random selection of work orders for auditing, the end result was that even an openly disclosed contravention of a fundamental safety requirement or prohibition might only come to the notice of a supervisor if a number of things happened: the work order happened to be selected for auditing; the supervisor who carried out the audit was sufficiently familiar with the procedures applicable to the task to identify the non-compliance; and the supervisor did in fact notice and identify the non-compliance.

[222] The witnesses who gave evidence in relation to the audit procedures were united in their view that it was simply not practicable for supervisors to audit every completed work order to check that all work had been carried out in compliance with all of the applicable procedures.

[223] According to Craig Finlayson, had any supervisor become aware, as a result of any form of audit or review, that a mechanical technician had operated the lifeboat release gear in the course of routine maintenance in contravention of the clear prohibition on doing so, some form of action should have been taken. That action could have ranged from a discussion with the technician in order to establish the reason for the breach of procedure and to offer "coaching" in relation to the need to comply with the procedure, in the case of an inadvertent breach, to formal disciplinary proceedings, the suspension of Performing Authority status and potentially dismissal for gross misconduct, in the case of a wilful, deliberate, repeated breach of procedure. In addition, action towards the higher end of that scale would, in Mr Finlayson's view, have been a realistic outcome had Mr Bartlett's various breaches of procedure during his final shift come to light.

[224] However, it appears that none of the three completed work orders identified above which openly disclosed the operation of release gear during routine lifeboat maintenance did come to the attention of any supervisor during any form of audit or review. As a result, any opportunities which they may have represented for supervisors to intervene and address the practices of Mr Bartlett and others who had been trained by him were lost.

Changes made by TAQA following the fatal accident

[225] In the course of giving his evidence, Craig Finlayson identified a number of procedural changes made by TAQA following an internal review of the circumstances of this fatal accident. These included the following:

i. The routine template WCC for routine lifeboat maintenance was amended to explicitly refer to the "S01-001A Lifeboat Maintenance and Inspections" document[37] as the governing procedure and to explicitly prohibit the operation of the release gear during routine lifeboat maintenance. Crown Production No. 64 is a copy of the revised template. This was introduced as an additional safeguard, even although TAQA's review indicated that there was no observable data to suggest that, with the exception of Mr Bartlett and the two technicians who had been trained by him, technicians were not following the relevant procedure (and complying

[37] Contained within Crown Production No. 100

with this prohibition) prior to the fatal accident. On the contrary, TAQA's review indicated that technicians were generally following the procedure.

ii. TAQA introduced a requirement for the second person who verifies the attachment of pendants to be a mechanical technician, and for all mechanical technicians to complete an assessment conducted by TAQAs external contractor, SCI. As a result, all TAQA staff involved in either attaching pendants or verifying that pendants have been attached prior to the commencement of routine lifeboat maintenance are now required to have completed this assessment.

iii. Instead of a single WCC covering maintenance on all four lifeboats, as was the case at the time of the fatal accident, a separate WCC is now required for the maintenance work on each lifeboat.

iv. As a result, the attachment of the pendants is now classed as a prerequisite control in relation to the maintenance work on each lifeboat, i.e. a control which requires to be put in place and confirmed as such to the satisfaction of the Area Authority before a permit for the maintenance work in relation to any lifeboat can be issued. At the time of the fatal accident, the attachment of pendants was a supplementary control, i.e. a control which the Performing Authority required to put in place at the appropriate time after a permit for the work had been issued. The two mechanical technicians involved in the attachment and verification of pendants in relation to any lifeboat are now required to sign a document

(an "isolation confirmation certificate") confirming that the pendants have been attached and that the lifeboat is therefore out of service. This must be presented by the Performing Authority to the Area Authority along with the WCC, before a permit for the lifeboat maintenance work to proceed can be issued.

v. Shackles are no longer used to attach pendants to lifeboats. Instead the free end of each pendant now has an attachment which fits onto the appropriate load-bearing component of the lifeboat, although the attachment of the pendant to this component still requires the insertion of a safety pin.

[226] Although this passage of Mr Finlayson's evidence gave a helpful insight into changes made by TAQA to its procedures following this fatal accident, I did not hear evidence about the practices of other operators in the North Sea oil and gas industry.

Issues raised in evidence by HSE inspectors

[227] Evidence was given by three HSE inspectors, Colin Martin, Dr Paul Heeney and Mark Alderson, in relation to the scope of the HSE's investigation and with regard to their reconstruction of the fatal accident, having regard to the results of their investigations. Three reports by HSE inspectors were lodged as productions.

[228] Both Dr Heeney and Mr Alderson expressed concerns in relation to the lack of clarity already noted around the role and competence of the second person who was required to verify the attachment of pendants. Dr Heeney emphasised the need for

pendants not simply to be attached to lifeboats, but to be attached to the correct load-bearing components. Greater clarity was required in relation to defining the role of the second person, identifying the knowledge and experience required in order to enable the second person to carry out that role, devising means of providing those who were to act as second person with the necessary training and experience and of keeping their skills up to date and establishing a quick and reliable method by which relevant staff could identify, whenever the need arose, those who were qualified to act as second person.

[229] Both Dr Heeney and Mr Alderson also expressed concerns in relation to the adequacy of TAQA's audit procedures prior to the fatal accident and suggested that deficiencies in those procedures may have resulted in missed opportunities for TAQA to identify the three openly declared examples of the operation of release gear which have already been noted and to intervene in a way which might have prevented this fatal accident.

Issues raised by the Bartlett family

[230] Brian Bartlett's evidence articulated the loss which his family had experienced as a result of his father's death and also identified a number of issues which had troubled the family about the circumstances of the fatal accident. Those concerns were helpfully expressed in a document prepared by Brian Bartlett, which was lodged as Crown Production No. 99.

[231] Apart from the issue of delay, another concern for the family related to whether Mr Bartlett should have been permitted to carry out routine lifeboat maintenance during the nightshift of 26/ 27 February 2014. That work was generally done during dayshift. Mr Bartlett was aged 62 and had only arrived on the platform that morning. The weather conditions were adverse. Perhaps the decision should have been taken out of Mr Bartlett's hands even if he did tell Brian Hawkesford that he felt "fine," by analogy with the drivers' hours regulations which apply to long-distance lorry drivers. The family also highlighted the issues already noted with regard to the role and competence of the second person. Another concern was whether there were adequate records of training for technicians in relation to the procedures applicable to routine lifeboat maintenance. The transitional review of safety procedures may have impacted adversely on the working conditions on board the platform. Concerns were expressed about TAQA's processes for auditing and control of work and about whether alternative emergency response arrangements might have improved Mr Bartlett's prospects of survival. I shall endeavour to address all of the family's concerns, in one way or another, in the "discussion and conclusions" Section of this note.

Submissions

[232] Mr Callaghan and Mr Gray expressed the condolences of the Crown and TAQA to Mr Bartlett's family. Both Mr Callaghan and Mr Gray had helpfully lodged comprehensive written submissions, which they adopted and supplemented with further submissions during the hearing.

Common ground

[233] Neither the Crown nor TAQA took issue with the credibility or reliability of any of the evidence of fact given during the inquiry hearing. Neither was there any dispute with regard to the general legal principles to be applied by the court in arriving at its determination in terms of Section 26 of the 2016 Act. There was agreement with regard to a number of matters which the court required to address in its determination.

[234] Firstly, in terms of Section 26(2)(a) of the 2016 Act, it was common ground that Mr Bartlett's death should be recorded as having occurred at Gilbert Bain Hospital at 04:52 hours on 27 February 2014, this being when death was first formally confirmed by a medical practitioner.

[235] Secondly, in terms of Section 26(2)(b) of the Act, there was agreement that the accident resulting in Mr Bartlett's death, namely the unintended and precipitate descent of lifeboat 4 with Mr Bartlett within, had occurred at approximately 02:17 hours on 27 February 2014 at lifeboat station 4 on board the Harding Platform.

[236] Thirdly, in terms of Section 26(2)(c) of the Act, it was a matter of agreement that the cause of Mr Bartlett's death was as ascertained by the pathologists.

[237] Fourthly, in terms of Section 26(2)(d) of the Act, the immediate cause of the fatal accident was not in dispute, namely Mr Bartlett's actions in testing the release gear of lifeboat 4 in the course of routine weekly maintenance without attaching the forward maintenance pendant, in breach of a clear prohibition on the testing of the release gear, and in breach of clear requirements for both maintenance pendants to be attached before

any maintenance work was undertaken and for the insertion of the shackle safety pins and thus the secure attachment of the pendants to be verified by a second person before the maintenance commenced.

[238] The Crown and TAQA were in agreement that the evidence pointed to the conclusion that Mr Bartlett was aware of the clear prohibition on the testing of release gear during routine weekly lifeboat maintenance and of the clear requirements for both pendants to be attached and for the insertion of the shackle safety pins and thus the secure attachment of the pendants to be verified by a second person before the maintenance work commenced. He was also aware that, as the Performing Authority responsible for carrying out the work, it was his responsibility to stop the job if the necessary controls could not be put in place. Mr Bartlett proceeded with the work in breach of each of these fundamental requirements. In addition, the documents recovered from Mr Bartlett's overalls indicated that he had inserted the initials of a colleague, William "Billy" Esplin, ("BE") in a checklist[38] relating to the work so as to indicate that Mr Esplin had performed the role of second person, when he knew that this was not so.

[239] Mr Callaghan confirmed that the Crown took no issue with regard to the times between the fatal accident (02:17 hours on 27 February 2014), the Grampian Frontier moving into position and launching its Fast Recovery Craft (02:31 hours) and the recovery of Mr Bartlett from the water (02:49 hours). No criticism could realistically be

[38] Crown Production No. 9

made of the response of the Grampian Frontier and its crew or of the delay inevitably involved, particularly having regard to the prevailing sea conditions and darkness. The time taken to recover Mr Bartlett from the sea was unlikely to have made any difference to Mr Bartlett's prospects of survival, given the potential for Mr Bartlett's head injuries to have concussed him and the fact that, according to the evidence of the witnesses who saw Mr Bartlett floating in the water prior to being recovered by the FRC, he appeared at all times to be face down and not moving independently.

[240] The Crown noted that the arrangements set out by TAQA in its safety case with regard to the transitional review of the safety procedures which applied during Britoil's stewardship of the platform had been accepted as appropriate by the HSE when the safety case was submitted. The Crown did not submit that the transitional arrangements had contributed to the fatal accident.

[241] The Crown accepted that Mr Bartlett had been provided with the requisite eight hours' rest prior to the commencement of his work at 22:00 hours on 26 February 2014. Although Mr Hawkesford raised the question of fatigue with Mr Bartlett, he did not consider Mr Bartlett to be fatigued and there was no evidence to contradict Mr Hawkesford's assessment. None of the witnesses who encountered Mr Bartlett in the course of his final shift formed the impression that he appeared to be fatigued or that he was behaving in a manner which gave rise to any concerns. No-one had instructed or expected Mr Bartlett to do routine lifeboat maintenance during that shift. The initiative had come from him.

Disputed issues

[242] Notwithstanding these agreed or undisputed matters, the Crown and TAQA were at odds with regard to other issues concerning the procedures which applied to the routine lifeboat maintenance undertaken by Mr Bartlett and the arrangements in place for oversight and for auditing compliance with those procedures, which the Crown submitted may have exerted some influence as secondary causes of the fatal accident in terms of Section 26(2)(d) of the Act.

[243] With regard to Section 26(2)(e) of the Act, the Crown and TAQA were in agreement that precautions which could reasonably have been taken and, had they been taken, might realistically have resulted in the fatal accident being avoided would have included Mr Bartlett complying with the various procedural requirements which he breached in the moments prior to the fatal accident. However the Crown and TAQA were at odds as to the scope for any further precautions to have been taken which might realistically have avoided the fatal accident. The Crown and TAQA were also at odds as to whether any defects in any system or working could be said to have contributed to the fatal accident, for the purposes of Section 26(2)(f) of the Act and with regard to whether any recommendations were appropriate in terms of Section 26(1)(b) and (4) of the Act.

Submissions on behalf of the Crown

[244] Mr Callaghan submitted that there was a lack of clarity as to whether the second person, who was universally understood to have a role in verifying the attachment of

pendants prior to the commencement of lifeboat maintenance work, required to be "competent," as to what "competence" entailed for these purposes, as to how the requisite level of competence was to be verified and as to how relevant staff members were expected to quickly identify crew members who were competent for these purposes. Unlike the training and certification procedures which applied to maintenance technicians or coxswains, no such procedures applied at the time of the fatal accident in relation to the certification of competence to verify the insertion of shackle safety pins and the attachment of pendants.

[245] Mr Hawkesford, the Area Authority who granted the permit allowing Mr Bartlett to carry out routine lifeboat maintenance during his final shift, was unaware that the "S01-001A Lifeboat Maintenance and Inspections" document required the second person to be "competent." Had Mr Hawkesford been aware of that requirement, the possibility existed that he may not have been prepared to authorise Mr Bartlett to carry out lifeboat maintenance on the evening of 26/27 February 2014 unless he was satisfied that a "competent" second person was available. The lists of crew members deemed competent to fit shackle safety pins, which were filed within Crown Production 100 "Control of Lifeboat Shackle Safety Pins" folder, were of doubtful value.

[246] These issues were significant given that, although the insertion of a shackle safety pin was a simple enough task, the potential existed for a catastrophic outcome if a pendant was attached to the wrong component of a lifeboat.

[247] Mr Callaghan submitted that the evidence of technicians Robert Thorne and William O'Donnell indicated the possibility that technicians other than Mr Bartlett and

those who were trained by him may also have been under the impression that the checking of release gear was part of routine lifeboat maintenance at the time of the fatal accident. If so, the court could not confidently conclude that Mr Bartlett was the origin of any and all failures to understand and observe the prohibition on operating release gear.

[248] A related issue was the adequacy of TAQA's arrangements for auditing compliance with the procedures applicable to routine lifeboat maintenance. Whether an audit of completed work orders, or any other form of audit, would have disclosed even a clearly-stated breach of the prohibition on operating release gear during routine maintenance was, in effect, a matter of chance despite the potentially fatal consequences of such a practice. The review by maintenance team leaders at shift end of all work orders completed during the shift was an opportunity to identify completed work orders for routine lifeboat maintenance which indicated that release gear had been operated. For example, the work order relating to weekly lifeboat maintenance carried out by George Bartlett on 27 December 2013 (Crown Production No. 51) included, in the description of work undertaken, "…release gear operated and hooks checked for ease of release." Had the significance of that information been noted by the maintenance team leader in the process of reviewing work orders at shift end, steps could have been taken to intervene and end Mr Bartlett's practice, even at the potential cost of disciplinary action against Mr Bartlett.

[249] Precautions in terms of Section 26(2)(e) of the 2016 Act, which could reasonably have been taken and, had they been taken, might realistically have resulted in the fatal accident being avoided included:

i. The provision of greater clarity with regard to the tasks to be undertaken by mechanical technicians in the course of weekly lifeboat maintenance, specifically with regard to the prohibition of the operation of release gear during such maintenance;

ii. Greater clarity in relation to the question of whether the second person who was to verify the attachment of pendants required to be "competent," if so what such competence entailed and how, in practical terms, relevant personnel involved in undertaking or authorising lifeboat maintenance could quickly and reliably identify those who had the necessary competence;

iii. For Crown Production No. 51, the work order confirming that Mr Bartlett had operated the lifeboat release gear during weekly lifeboat maintenance on 27 December 2013, to have been checked at shift end by the maintenance team leader, so that he would have been alerted to a clear breach of the prohibition on operating release gear and he would have been able to intervene to prevent any recurrence; and

iv. For a system of work to be put in place which obviated or significantly reduced the risk of circumvention of the requirement for "second person" verification of the attachment of pendants to take place. This could have been achieved in a number of ways, such as making the attachment of pendants a

prerequisite control. Alternatively, two competent (properly defined) staff members, one being the technician undertaking the maintenance work, could have been required to verify the proper attachment of pendants prior to the commencement of the maintenance work.

[250] Mr Callaghan submitted that, in terms of Section 26(2)(f) of the 2016 Act, Mr Bartlett's actions in failing to fit both pendants before undertaking maintenance work on lifeboat 4, failing to arrange for a second competent person to check the attachment of the pendants and then operating the release gear all constituted defects in the system of working which contributed to the fatal accident.

[251] The Crown did not identify any other facts as being relevant to the circumstances of Mr Bartlett's death, for the purposes of Section 26(2)(g) of the 2016 Act.

Submissions on behalf of TAQA

[252] Although Mr Gray accepted that it was open to the court to apply hindsight to the identification of precautions which could reasonably have been taken, in terms of Section 26(2)(e) of the 2016 Act, he submitted that a distinction ought to be drawn between precautions which could be identified without the benefit of hindsight and those which could only be identified with the benefit of hindsight and knowledge of the circumstances of the fatal accident.

[253] Having regard to this distinction, Mr Gray emphasised Mr Bartlett's duties as the Performing Authority responsible for carrying out the lifeboat maintenance work on which he was engaged at the time of the fatal accident, as illustrated by the "Workparty

Declaration" signed by Mr Bartlett on page 7 of the hard copy WCC relating to that job which was recovered from his overalls after his death[39] and also by the definition of the role of a Performing Authority, in terms of Section 4.9 of TAQAs Integrated Safe System of Work (ISSOW) Procedure.[40]

[254] Mr Bartlett had primary responsibility for ensuring that he carried out weekly lifeboat maintenance strictly in accordance with the procedures which applied to that work. In the event that it was not possible to attach the pendants or to secure the attendance of a second person for verification purposes, his clear responsibility was to stop the job. Notwithstanding the risk of the lifeboat falling to the sea if the pendants were not attached prior to the commencement of the work, weekly lifeboat maintenance was essentially a routine task for which Mr Bartlett was qualified and competent and in which he was vastly experienced. The safety controls disregarded by Mr Bartlett were known to him. His breaches of procedure were compounded by the fact that he had inserted the initials of a colleague, Mr Esplin, to a checklist[41] so as to suggest that Mr Esplin had verified the attachment of the pendants, which Mr Bartlett knew was not true.

[255] It was entirely reasonable for TAQA to have expected Mr Bartlett to comply with the clear procedures of which he was aware. Had he done so, the fatal accident would not have occurred. Against this background, Mr Gray submitted that, for the purposes of Section 26(2)(e) of the 2016 Act, without the benefit of hindsight there were no

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[39] Crown Production No. 9
[40] Crown Production No. 19; Supra, paragraph [145]
[41] Crown Production No. 9

reasonable precautions which could be identified and which, had they been taken by TAQA, might realistically have avoided the fatal accident.

[256] With the benefit of hindsight, had TAQA been aware that Mr Bartlett was in the habit, contrary to the clear prohibition of which he was aware, of operating the lifeboat release gear during routine weekly lifeboat maintenance, and that he had trained less experienced colleagues (Brendan Watts and Simon Chalmers) to do the same, it would have been reasonable and appropriate for TAQA to have taken such remedial or disciplinary action as management considered to be appropriate, which might have included the suspension of Mr Bartlett's Performing Authority status, thus avoiding the fatal accident.

[257] The court could not conclude, even with the benefit of hindsight, that there were any other precautions which could reasonably have been taken by TAQA and which, had they been taken, might realistically have resulted in this fatal accident being avoided. The evidence of witnesses O'Donnell and Thorne supported the proposition that the checking of release gear ceased to be part of weekly lifeboat maintenance some years prior to the fatal accident and that thereafter it was only Mr Bartlett and those trained by him who continued to test release gear.

[258] Mr Gray invited me to reject the Crown's submission that the provision of greater clarity in respect of the elements that were to be undertaken as part of the weekly lifeboat maintenance, including greater specification of the need for the second person to be "competent," would have been a precaution which met the terms of Section 26(2)(e). There was no lack of clarity. Had Mr Bartlett simply followed the

applicable and clear procedures, of which he was aware, the fatal accident would not have occurred.

[259] Although there was inconsistency between the applicable procedural documents as to whether the second person required to be "competent," and although there was no formal definition of competence for these purposes, it was clear from the evidence that the process of attaching pendants via shackle and pin was essentially very straightforward and that various crew members, in addition to mechanical technicians, would have been perfectly capable of carrying out that task. Examples given were riggers and coxswains. There was no evidence to suggest that there was any shortage of crew members during Mr Bartlett's final shift who could easily have verified the attachment of the pendants to lifeboat 4, had Mr Bartlett sought their assistance. There was no evidence to suggest that there was any wider shortage of crew members who could have acted as second person, or that there was any widespread practice of technicians attaching shackle safety pins without seeking the attendance of, or being able to identify, a suitable second person.

[260] This fatal accident had occurred because Mr Bartlett had failed to arrange for <u>any</u> second person to perform the necessary verification, despite having completed documentation which falsely indicated that Mr Esplin had done so. In these circumstances, even if there had been greater clarity with regard to the role and competence of the second person, there was no evidence to suggest that Mr Bartlett would have behaved any differently during his final shift or that the fatal accident would have been avoided. There was no evidence to suggest that Mr Hawkesford, the

Area Authority, would have withheld authorisation for lifeboat maintenance work to proceed if the requirement for the second person to be "competent" had appeared consistently in all of the applicable procedural documents.

[261] Mr Gray invited me to reject the Crown submission that the introduction of a system of work which obviated or significantly reduced the risk of circumvention of the requirement for "second person verification" would have been a precaution which met the terms of Section 26(2)(e). Routine lifeboat maintenance was a straightforward task, carried out by trained technicians. The applicable procedure was clear and widely understood. There was no evidence to suggest that the circumvention of the requirement for second person verification was a recurring issue. There was no evidence of any prior occasion on which this had been done, by Mr Bartlett or anyone else. The court should be slow to accept that alternative procedures such as treating the attachment of pendants as a prerequisite control could be regarded as a precaution which could reasonably have been taken in advance of the fatal accident. Any changes to safety procedures offshore required to be very carefully considered to ensure that they did not create new or different risks, to ensure that they did not clash with other established procedures and to ensure that all affected staff were provided with the necessary information and training prior to the implementation of any changes.

[262] Although it was open to the court to consider whether alternative procedures should be recommended in terms of Section 26(1)(b) and (4) of the 2016 Act as measures which might realistically prevent other deaths in similar circumstances in the future, there was no evidential basis upon which they could be regarded as precautions which

could reasonably have been taken in advance of the fatal accident, for the purposes of Section 26(2)(e).

[263] Even if the attachment of the pendants had been a prerequisite control on 27 February 2014, it would not have been reasonable to expect the Area Authority to go to the lifeboat station in order to directly confirm the attachment of the pendants and therefore there would have been nothing to prevent Mr Bartlett from disregarding such a control and falsely representing to the Area Authority that it was in place, when in fact it was not.

[264] Mr Gray invited me to reject the Crown's submission that the checking of Crown Production No. 51, the completed work order filed by Mr Bartlett in relation to weekly lifeboat maintenance carried out by him on 27 December 2013, at shift end that day would have been a precaution which met the terms of Section 26(2)(e). Hundreds of work orders were completed by technicians of a variety of specialities every week. The maintenance team leader's primary focus in reviewing those orders was to identify any outstanding, or additional, work which required to be planned arising from the work to which that day's work orders related. The volume of work orders made it impossible for each to be reviewed in detail. It would be highly unlikely that the team leader would have any need to review the details of a completed work order for weekly lifeboat maintenance. There was no evidential basis upon which the court could accept that further or more detailed scrutiny of Crown Production No. 51, at shift end, could be regarded as a precaution which could reasonably have been taken and which might realistically have avoided the fatal accident.

[265] In relation to Section 26(2)(f) of the 2016 Act, Mr Gray submitted that there were no defects in any system of working which contributed to the fatal accident. The system of working was entirely appropriate and adequate and would have avoided the fatal accident had Mr Bartlett simply complied with it. The matters proposed by the Crown as defects in the system of working were, in fact, simply failures by Mr Bartlett to comply with safety requirements enshrined in that system.

DISCUSSION AND CONCLUSIONS

Section 28(2)(a) – when and where the death occurred

[266] Although Mr Bartlett almost certainly died shortly after he entered the sea at about 02:17 hours on 27 February 2014, it was a matter of agreement that the time and place of death should be recorded according to when and where death was first certified by a medical practitioner, which was at 04:52 hours on 27 February 2014 at Gilbert Bain Hospital, Lerwick, Shetland.

Section 28(2)(b) – when and where any accident resulting in the death occurred

[267] It was a matter of agreement that the accident resulting in the death of Mr Bartlett occurred at about 02:17 hours on 27 February 2014 at lifeboat station number 4 on board the Harding Platform, 320 kilometres northeast of Aberdeen at latitude 59 degrees, 16’46.159“north and longitude 01 degrees 30’58.594“east in block 9-23b of the UK Sector of the Continental Shelf.

Section 28(2)(c) – the cause or causes of the death

[268] The cause of Mr Bartlett's death, as ascertained following a post-mortem examination on 3 March 2014, was:

I (a) Immersion in water.

(b) Precipitate descent from height.

Section 28(2)(d) – the cause or causes of any accident resulting in the death

[269] I am satisfied that this fatal accident was directly caused by the following actions on the part of Mr Bartlett:

(1) Mr Bartlett failed, contrary to a procedural requirement of which he was aware, to ensure that, prior to commencing routine weekly maintenance of lifeboat 4 in the early hours of 27 February 2014, both the forward and aft pendants were secured to the appropriate components on the forward and aft release hook assemblies of the lifeboat. Had Mr Bartlett complied with this requirement, the fatal accident would not have happened.

(2) Mr Bartlett failed, contrary to a procedural requirement of which he was aware, to ensure that the insertion by him of the shackle safety pins to secure the forward and aft pendants to the corresponding components of lifeboat 4 was verified by any second person. Mr Bartlett added the initials of his colleague, Mr Esplin, to a checklist so as to indicate that Mr Esplin had acted as second person for these purposes, despite being aware that Mr Esplin had not in fact done so. If, for any reason, Mr Bartlett was in any doubt as to

whether a suitable second person was available, it was his duty to stop the job until a suitable second person became available. I am satisfied that Mr Bartlett was aware of this, given his many years of experience, particularly in relation to lifeboat maintenance. The lack of clarity with regard to the competence of the second person played no part in the circumstances of this fatal accident, because Mr Bartlett proceeded without any second person to verify the attachment of the pendants. Had Mr Bartlett arranged for the attendance of any second person to verify the attachment of the pendants, I am satisfied that he would have been prompted to realise that he had not attached the forward pendant, and this fatal accident would not have happened.

(3) Having entered lifeboat 4 and commenced routine maintenance of the lifeboat without having attached the forward pendant, Mr Bartlett proceeded to operate the lifeboat release gear, contrary to the clearest possible prohibition. I am satisfied that Mr Bartlett was aware of the prohibition on the operation of the release gear during weekly lifeboat maintenance. According to a report[42] by HSE inspector Colin Martin, the operation of release gear was removed from the scope of weekly lifeboat maintenance in around 2007 or 2008. I accepted the evidence of Mr Bartlett's less experienced colleague Brendan Watts that, when he challenged Mr Bartlett's practice of operating the release gear during weekly lifeboat maintenance, Mr Bartlett responded not by

[42] Crown Production No. 65

disputing the existence of the prohibition but by telling Mr Watts, inaccurately, that the procedures governing lifeboat maintenance were to be reviewed, the clear implication being that Mr Bartlett believed that the operation of release gear was to become part of the weekly maintenance checks.

Even if such a review had been planned, which it was not, I am satisfied that Mr Bartlett's clear duty, as illustrated by the "Work Party Declaration" which he signed[43] around two hours prior to the fatal accident, was to comply with the procedures as they then stood, including the prohibition on the operation of release gear. Had Mr Bartlett refrained from operating the release gear, the fatal accident would not have happened.

Section 28(2)(e) – reasonable precautions

Introduction

[270] With regard to any precautions which could reasonably have been taken and which, had they been taken, might realistically have resulted in this fatal accident being avoided, I do not agree with Mr Gray that the court should seek to distinguish between such precautions according to whether or not they have been identified with the benefit of hindsight, having regard to the known circumstances of this fatal accident. In my view this would amount to the classification of precautions according to whether or not

[43] Crown Production No. 9

the court considers that it was foreseeable, prior to the fatal accident, that the accident might occur if the precautions were not taken. Such an approach is not contemplated by Section 28(2)(e) of the 2016 Act and is inconsistent with the express terms of Section 26(3) of the Act. Such a distinction may also imply the attribution of liability or blame, which would be inconsistent with the basic purpose of a fatal accident inquiry. I therefore do not consider that it is necessary or appropriate for the court to adopt this approach.

[271] TAQA's approach to the transitional review of safety procedures has already been noted[44] and was apparently considered to be adequate by the HSE, which approved TAQA's safety case in advance of its acquisition of the Harding Platform. As I understand it, all of the procedures which applied to lifeboat maintenance on board the platform in February 2014 were still as they had been at the time of the acquisition in June 2013, pending review in accordance with TAQA's timetable. The first of the inherited procedural documents relating to lifeboat maintenance was due to be reviewed in March 2014.[45] Having regard to these issues and to the fact that these inquiry proceedings are not an exercise in attributing blame, where I identify precautions which might reasonably have been taken by the operators of the platform in advance of this fatal accident, it seems to me that it is not necessary for me to specify whether the precautions might have been taken by TAQA or by their predecessors Britoil, who elected not to participate in these proceedings.

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[44] Supra, paragraphs [56] et seq
[45] Crown Production No. 20

Compliance by Mr Bartlett with applicable procedural requirements

[272] An obvious precaution which could reasonably have been taken and which, had it been taken, would have resulted in this fatal accident being avoided would have been for Mr Bartlett, in the course of his final shift, to comply with the various procedural requirements, the contravention of which by him led directly to the accident. Mr Bartlett could have attached both safety pendants and arranged for the attachment of the pendants to be verified by a second person. The attendance of a second person would have exposed Mr Bartlett's omission to attach the forward pendant. Mr Bartlett would then have attached that pendant. If he had been unable to identify a second person he considered to be suitable, he could have stopped the job. Having commenced maintenance on the lifeboat, he could have complied with the prohibition on operating the release gear, which in any event formed no part of the task description on the WCC which he had prepared for the job. I am satisfied that he was aware of all of these procedural requirements. If he had complied with them, or indeed with any of them, this fatal accident would have been avoided.

Designating the attachment of pendants as a prerequisite control

[273] Whilst acknowledging the contradiction between different procedural documents around the question of whether or not the second person who required to verify the attachment of pendants required to be "competent" and as to the meaning of "competence" in that context, I am satisfied that, at the time of the fatal accident, the requirement for both pendants to be attached prior to the commencement of routine

lifeboat maintenance of the kind carried out by Mr Bartlett was clearly stated and universally understood by Mr Bartlett and the other technicians who carried out that work. The requirement for the pendants to be attached was designated as a supplementary control, i.e. a control which required to be put in place by the Performing Authority conducting the work, at the appropriate point during the work, after the Area Authority had issued a permit for the work to proceed. Had this requirement been designated as a prerequisite control, a permit for the work could not have been granted until the attachment of the pendants had been confirmed as being in place to the satisfaction of the Area Authority.

[274] I do not accept Mr Gray's submission that, had the attachment of pendants been a prerequisite control in February 2014, it would not have avoided this fatal accident because there would have been nothing to prevent Mr Bartlett from failing to comply with any system of prerequisite controls, and falsely assuring the Area Authority that the pendants had been attached in order to secure a permit to continue with his work. Whilst I accept that it would be difficult to exclude the possibility that a determined employee might unexpectedly and deliberately breach procedure, this submission overlooks the clear inference that Mr Bartlett's failure to attach the forward safety pendant to lifeboat 4 was an oversight, rather than a deliberate act. Had the attachment of the pendants been a prerequisite control it is likely that the process of having to confirm to the Area Authority that both pendants had been attached in order to obtain a permit to proceed with the work, in conjunction with the requirement for a second person to verify the attachment of the pendants, would have prompted Mr Bartlett to

realise that he had failed to attach the forward pendant. He would then have attached the forward pendant and the fatal accident would have been avoided.

[275] According to the evidence led at the inquiry hearing, the designation of pendant attachment as a prerequisite control could only work in practical terms if a separate WCC was created for routine maintenance on each lifeboat, rather than a single WCC covering all four lifeboats, as was the practice on the Harding Platform at the time of the fatal accident. The reason for this is that, if the attachment of pendants was specified as a prerequisite control on a single WCC covering all four lifeboats, all four sets of pendants would require to be attached before the Area Authority could issue a permit to allow maintenance to proceed in relation to the boats. This would require all four lifeboats to be simultaneously incapable of being lowered on their fall wires in case of a sudden need to evacuate the platform. This was understandably regarded as an unacceptable risk. In light of this concern, pendant attachment could only be treated as a prerequisite control if a separate WCC was required for routine maintenance on each lifeboat, so that only one lifeboat required to be out of service at any one time. This is the system introduced by TAQA after this fatal accident. There is no obvious reason why such a system could not have been introduced by the operators of the platform at some point prior to the fatal accident.

[276] The designation of pendant attachment as a prerequisite control on individual WCCs for maintenance on individual lifeboats is a precaution which would have been available and which would have been suitable and practicable to be introduced by the operators of the platform prior to the fatal accident. Prerequisite controls were used in

relation to other tasks carried out on board the platform prior to the fatal accident and the attachment of pendants was designated as a prerequisite control in relation to routine lifeboat maintenance following the fatal accident.

[277] The designation of pendant attachment as a prerequisite control on individual WCCs for maintenance on individual lifeboats is a precaution which could reasonably have been taken and, had it been taken, might realistically have resulted in this fatal accident being avoided.

Audit procedures

[278] I accept that the process of auditing compliance with safety procedures in an environment which is as busy as the Harding Platform poses significant challenges for supervisors. Various forms of audit and review of work were in place and available to the operators of the platform prior to the fatal accident. The auditing which was carried out by TAQA on the platform prior to the fatal accident had a number of legitimate purposes but it also represented a missed opportunity to identify breaches of the express prohibition on the operation of release gear during routine lifeboat maintenance, which were openly declared in completed work orders by Brendan Watts on 25 July 2013 and 1 October 2013 (Crown Productions Nos. 46 and 48) and by Mr Bartlett on 27 December 2013 (Crown Production No. 51).

[279] I do not accept the Crown's submission that the evidence of the witnesses Robert Thorne and William O'Donnell points towards a more widespread misunderstanding with regard to the appropriateness of operating release gear during weekly lifeboat

maintenance. I accept the submission on behalf of TAQA that the evidence of these witnesses in fact supports the contrary conclusion. The only evidence led at the inquiry hearing of breaches of the prohibition against operating release gear concerned the actions of Mr Bartlett and two technicians who were trained by him, one of whom was Brendan Watts.

[280] I accept Mr Finlayson's evidence that, had these declared breaches of procedure by Mr Bartlett and Mr Watts come to light in the course of any audit or review of completed work orders, an informed supervisor would have been sufficiently concerned to intervene and take action of some kind to prevent any recurrence. The matter may have been escalated to a senior level and, in the event of a finding of wilful and deliberate breach of safety procedures, may have resulted in disciplinary action and the suspension of Mr Bartlett's status as a Performing Authority, which would have limited his ability to carry out work without supervision.

[281] As already noted, the "S01-001A Lifeboat Maintenance and Inspections" document,[46] which set out the detailed procedures for routine lifeboat maintenance, specifically provided that the lifeboat release system was not to be tampered with or operated during maintenance checks, and explicitly stated that "Failure to heed this warning could prove FATAL." Bearing that in mind and having regard to the level of concern which, according to Mr Finlayson, would have arisen in the event that any practice of testing lifeboat release gear during routine maintenance had come to light, it

[46] Crown Production No. 100, S01-001A procedure, paragraph 1.5

is noteworthy that there appears to have been no effective means of auditing compliance with this prohibition.

[282] It would be unrealistic to expect that any audit processes in a busy environment such as the Harding Platform would have identified each and every breach of procedure, however inconsequential. However it is difficult to reconcile TAQAs position that Mr Bartlett's practice of operating the release gear during weekly lifeboat maintenance and his actions in instructing others to do so, had they been known about at supervisory level, would have been treated with such concern as to justify action up to and including disciplinary proceedings and the suspension of Mr Bartlett's Performing Authority status, with the proposition that no available, suitable and practicable means could have been found to audit compliance with such a basic yet safety-critical prohibition. My impression from the evidence was that lifeboat maintenance was regarded as being such a basic and straightforward task that it was largely left to the mechanical technicians to deal with, with little oversight or review.

[283] Given the culture of auditing which was ingrained on the Harding Platform, some means of including within the platform's audit processes targeted checks, even on a sample basis, of completed work orders or other work-related documents in order to assess compliance with such a basic, safety-critical measure as the prohibition on operating lifeboat release gear during routine maintenance must have been available, suitable and practicable, had there been a will to introduce it. Such a practice might have identified one or more of the openly declared contraventions of the prohibition on operating release gear during routine lifeboat maintenance which have been noted

above, in which case an opportunity would have arisen for supervisors to intervene and potentially prevent this fatal accident.

[284] The implementation of a process to audit compliance with that prohibition therefore appears to me to be a precaution which could reasonably have been taken and which, had it been taken, might realistically have resulted in this fatal accident being avoided.

Section 28(2)(f) – defects in any system of working

[285] In terms of Section 26(2)(f) of the 2016 Act, no defects in any system of working caused or contributed to this fatal accident. The procedures which applied to the work undertaken by Mr Bartlett during his final shift were clear and were known to Mr Bartlett. Had he complied with them, the fatal accident would not have occurred. Mr Bartlett's breaches of the applicable procedures were individual failings on his part rather than, as submitted by the Crown, defects in a system of working.

Section 28(2)(g) – any other facts which are relevant to the circumstances of the death

[286] In my view no other facts are relevant to the circumstances of Mr Bartlett's death.

Section 26(1)(b) – recommendations

[287] I have identified a number of recommendations in terms of Section 26(1)(b) and (4) of the 2016 Act which might realistically prevent other deaths in similar circumstances in the future. By "similar circumstances," I have in mind circumstances

in which technicians require to carry out work or other activities on or in relation to lifeboats, and involving the attachment of pendants, of a similar nature to those used on the Harding Platform.

Terms of work control certificates relating to routine lifeboat maintenance

[288] I recommend that operators of offshore installations whose procedures prohibit the operation of lifeboat release gear during any type of work or other activity in relation to lifeboats amend any applicable routine template WCC or equivalent document so that it states that prohibition clearly and prominently. TAQA introduced such an amendment to their routine template WCC for lifeboat maintenance following this fatal accident.[47]

[289] The identification of types of work or other activity in relation to which the operation of release gear should be prohibited is a matter for operators and is beyond the scope of this determination.

Designating the attachment of pendants as a prerequisite control

[290] I recommend that operators of offshore installations equipped with lifeboats and pendants similar to those used on the Harding Platform at the time of this fatal accident whose procedures require the attachment of pendants prior to the commencement of particular types of work or other activity on or in relation to lifeboats introduce

[47] Crown Production No. 64

measures whereby the secure attachment of pendants to each lifeboat requires to be confirmed to the satisfaction of the Area Authority or equivalent authorising official before the work or other activity in relation to that lifeboat is authorised to proceed.

[291] For the reasons given above in relation to the changes introduced by TAQA subsequent to this fatal accident, this recommendation would require that a separate WCC or equivalent document be prepared in relation to each lifeboat.

[292] I heard evidence indicating that not all activities in relation to lifeboats on the Harding Platform were considered to require the attachment of pendants. For example, pendants did not require to be attached prior to the coxswain's checks, because of the visual nature and brevity of those checks. The identification of types of work or other activity which require the prior attachment of pendants is a matter for operators and is beyond the scope of this determination.

The role and competence of the "second person"

[293] Considerable attention was paid during the inquiry hearing to a number of issues relating to the role and competence of the second person who was required to verify the insertion of the shackle safety pins used to secure pendants to lifeboats prior to the commencement of routine maintenance. These issues included inconsistency as to whether the second person required to be "competent" and a lack of clarity as to precisely what "competence" entailed for these purposes, as to how such competence could be assured and certified and as to how members of staff could quickly establish who had the necessary competence at any given time.

[294] These issues are not without substance but, for the reasons already given, they played no part in this fatal accident. Different considerations may have arisen had Mr Bartlett enlisted a second person who turned out to be unsuitable to carry out the necessary verification and who failed to identify some catastrophic error in the attachment of the pendants. However the evidence is clear that Mr Bartlett did not ask anyone to attend the lifeboat stations and verify the attachment of pendants.

[295] I do not accept the Crown's submission that, had Brian Hawkesford, the Area Authority during Mr Bartlett's final shift, been aware of, and considered, the requirement in terms the S01-001A "Lifeboat Maintenance and Inspections" document[48] for the second person to be "competent," he might not have been willing to authorise Mr Bartlett to undertake lifeboat maintenance work during that shift, at least until he had been reassured that a second competent person was available. This is somewhat speculative. Even if Mr Hawkesford had been aware of the requirement in terms of that document for the second person to be "competent," there was no clarity as to what "competence" meant in that context. In the absence of such clarity, the selection of an appropriate second person would still have been a subjective matter. Had "competence" been defined in any procedural document, I have no reason to doubt that TAQA would have had arrangements in place to ensure that sufficient members of staff who had the necessary competence were available before work which required their involvement was authorised. For the avoidance of doubt, I heard no evidence which

[48] Crown Production No. 100

caused me to doubt that Mr Esplin and others who were on the shift could have carried out the necessary verification, had they been asked to do so by Mr Bartlett.

[296] Although these issues concerning the role and competence of the second person played no part in this fatal accident, I accept Dr Heeney's evidence that pendants need to be attached to the correct load-bearing components of lifeboats in order to achieve their purpose. These issues therefore have the potential, if not addressed, to contribute to further fatal accidents in similar circumstances in the future.

[297] As indicated above, I heard evidence that TAQA have implemented changes since this fatal accident which have largely addressed the issues identified in relation to the role and competence of the second person, at least so far as TAQA's own practice is concerned. These changes include introducing a requirement for the second person to be a mechanical technician who has completed an assessment conducted by an external contractor. As a result, all of TAQA's staff who could potentially be involved in either attaching pendants or verifying that pendants have been attached will now have completed this assessment. This appears to address any issue with regard to the identification of staff who have the necessary competence to verify the attachment of pendants. I also heard that TAQA have modified the attachment between pendant and lifeboat, so that it no longer requires a shackle, although it still requires the insertion of a steel pin.

[298] Although the changes made by TAQA appear to address the potential for these issues to contribute to any further fatal accidents on platforms operated by TAQA, I did not hear evidence about the practices of other operators. I therefore recommend that

operators of offshore installations equipped with lifeboats and pendants of a similar nature to those used on the Harding Platform at the time of this fatal accident should ensure that their procedures concerning the role and competence of any person who is required to attach, or verify the attachment of, pendants prior to the commencement of any work or other activity in relation to a lifeboat meet the following criteria:

a. Clarification of who is responsible for identifying a person who is to verify the secure attachment of pendants prior to the commencement of any specific work or activity in relation to lifeboats and at what stage, with reference to that work or activity, that person is to be identified;
b. Identification of the technical requirements of the tasks of securely attaching pendants and verifying that pendants have been securely attached;
c. Identification of the level of knowledge and experience which is required in order to carry out these tasks effectively, including in relation to the mechanism by which pendants are attached to lifeboats and the identification of the correct components to which pendants should be attached, the consequences of insecure attachment of pendants and how to avoid insecure attachment;
d. Identification of the training which is necessary in order to provide relevant staff members with the required level of knowledge and experience, the means by which such training is to be delivered and the means by which the knowledge and experience of the trained staff members are to be maintained and refreshed as necessary;

e. Identification of the means by which the delivery of the necessary training, and the attainment of the necessary knowledge and experience, can be certified and evidenced;

f. Identification of practical, quick and reliable means of establishing which members of staff on an installation are trained to attach pendants and to verify that pendants have been securely attached;

g. Identification of the means by which operators will ensure that sufficient staff members who are trained to attach pendants and to verify that pendants have been securely attached are available before any work or other activity which requires the attachment of pendants to a lifeboat can commence; and

h. Identification of appropriate means of monitoring and evaluation in order to ensure the maintenance of the necessary levels of competence to attach pendants and to verify that pendants are securely attached.

Audit procedures

[299] I recognise that different operators of offshore installations may impose different requirements and restrictions on their staff who conduct lifeboat maintenance, depending on nature of the lifeboats used and on any other safeguards against the unintended release of lifeboats which may be available on particular installations. The identification of types or classes of lifeboat in relation to which the checking or operation of release gear during maintenance work or other activities should be prohibited is a matter for operators and is beyond the scope of this determination.

[300] However, I recommend that operators of offshore installations on which the checking or operation of release gear is prohibited during particular types of work or other activity in relation to lifeboats should include, within their audit processes, the targeted auditing of documents which record the details of such work or other activities actually carried out, in order to check compliance with that prohibition.

Tool box talk

[301] The evidence I heard indicated that the tool box talk , prior to the commencement of many jobs on board the Harding Platform, was considered to be an essential element in ensuring that the hazards applicable to the job were identified, considered and addressed in one way or another before the work commenced. Even technicians who were assigned to "one-man" jobs such as routine weekly lifeboat maintenance were expected to arrange a tool box talk.

[302] It was not at all clear to me that Mr Bartlett arranged or participated in a tool box talk during his final shift. I was left with a general impression of a lack of clarity and consistency with regard to practice around the holding of a tool box talk in the context of lifeboat maintenance and about who should participate in such a discussion. Not every activity carried out in relation to lifeboats on board the Harding Platform required a tool box talk to be held in advance. For example, I understood that a tool box talk was not required prior to the commencement of coxswain's checks. Again, the identification of tasks which require a tool box talk to be held in advance is a matter for operators and is beyond the scope of this determination. However, having regard to the potential

significance of the tool box talk in the context of ensuring a safe working environment, I recommend that operators of installations on which a tool box talk or equivalent safety-focussed discussion is required to be arranged in advance of any type of work or other activity to be carried out by a single technician in relation to a lifeboat should ensure that their procedures make clear to all staff members who may be required to participate in such a discussion:

a. The categories of work or other activity which require a tool box talk or equivalent discussion to be held in advance;
b. Who should participate in such a discussion; and
c. The issues which should be discussed and, in particular, whether the discussion should include the identification of a second person, where required, to verify that pendants are securely attached.

For the avoidance of doubt, this recommendation proceeds on the assumption that a second person whose role is limited to verifying that pendants are securely attached prior to the commencement of any work or other activity on or in relation to a lifeboat does not thereby participate in that work or activity.

Other issues raised by the Bartlett family

[303] I now wish to comment on the other issues raised by Mr Bartlett's family which I have not addressed so far, in one way or another, in the course of identifying precautions and recommendations within the scope of Section 26 of the 2016 Act.

Emergency response procedures

[304] No evidence was led before me to suggest any defect in any of the emergency procedures initiated after the fatal accident came to the attention of crew members on board the Harding Platform. Those procedures were initiated immediately the loss of lifeboat 4 came to the attention of crew members and they resulted in the recovery of Mr Bartlett from the sea, by which time he was unresponsive. In particular, the platform's support vessel, the Grampian Frontier, had no reason to be positioned any closer to the platform at the time of the accident and responded swiftly to the call for assistance. The master of the Grampian Frontier launched its fast response craft despite the existence of sea conditions which were beyond the level generally considered appropriate for the deployment of such a craft.

[305] As I understood the evidence, there is no established practice of launching fast response craft from an installations such as the Harding Platform. The platform had three other lifeboats, but it was clear from the evidence that they were neither designed, nor fit, for the purpose of searching for and locating a casualty. TEMPSC lifeboats of the kind used on the platform are totally enclosed, with very limited visibility and manoeuvrability. They are not designed to undertake search and rescue operations.

[306] Finally, so far as the circumstances of this particular fatal accident are concerned, the evidence is clear that, from the point at which crew members on board the platform first spotted Mr Bartlett floating in the sea far below them, he was at all times face down and not moving independently. This evidence, coupled with the post mortem findings indicating that Mr Bartlett had sustained potentially concussing head injuries during the

descent of the lifeboat, strongly infers that Mr Bartlett died shortly after he entered the water. There was no evidence to suggest that any different, realistically available, emergency response would have resulted in a different outcome for Mr Bartlett.

The time of day and the possible significance of fatigue

[307] There is no evidence to suggest that, during Mr Bartlett's final shift, he exhibited any sign of fatigue which ought to have prompted the Area Authority, Brian Hawkesford, or anyone else to be concerned or to intervene to prevent him from carrying out routine lifeboat maintenance work. The initiative for Mr Bartlett to undertake this work came from Mr Bartlett himself, after Mr Hawkesford had told him that the work originally planned for him could not proceed and that there was no work for him to do. Mr Hawkesford agreed to Mr Bartlett's wish to carry out weekly lifeboat maintenance because the shift was otherwise quiet and after Mr Bartlett insisted that he was not tired. Mr Hawkesford told him to stop work if he felt tired. None of the other witnesses who had contact with Mr Bartlett or spent time in his company during his shift thought that he seemed tired. Mr Bartlett was not instructed or required to do this work and no pressure was applied to him to do the work.

[308] Reference was made in evidence to Crown Production No. 22, a list of standard controls extracted from TAQA's ISSOW system, which includes a number of controls to address the hazard of fatigue, including "personnel must have had minimum of 8 hours rest before start of shift" and "safety critical parts of task to be identified to workparty and must not to be carried out within 2 hours of end of shift or at "low point" of

nightshift, e.g. 2 – 5am." I understood these provisions to have contributed to the family's concerns about the issue of fatigue.

[309] However it is clear from the evidence, and was not disputed by the Crown, that Mr Bartlett was provided with eight hours' rest prior to starting night shift at 22:00 hrs on 26 February 2014, the time at which his supervisor Graham Hardy had asked him to start, apparently in order to ensure that he had eight hours' rest. Mr Bartlett was seen by witnesses prior to 22:00 hours, but he was not required to carry out any work or other tasks during that period. As to the issue of tasks being undertaken during the "low point" of the nightshift, I accepted the evidence of Craig Finlayson that Crown Production No. 22 was not a statement of TAQA policy but rather a lengthy "pick list" of potentially relevant controls which technicians could refer to when creating a WCC or to prompt the discussion of potential hazards and controls during a tool box talk.

[310] Ultimately, Mr Bartlett was permitted to undertake, at his request, routine maintenance work which he was competent to perform and in which he was highly experienced. The lifeboat stations were well lit, as would be expected having regard to their purpose. He showed no signs of fatigue, denied feeling tired and, if he had felt tired, he could simply have stopped his work. There is no evidence to support the assertion that Mr Hawkesford or anyone else had any basis upon which to prevent Mr Bartlett from undertaking this work on the grounds of fatigue.

The prevailing weather conditions

[311] I heard evidence that, by the time the fast response craft from the Grampian Frontier was launched, the wave height was in excess of the level at which such a craft would generally operate. That is a testament to the willingness of the master and crew of the Grampian Frontier to assist in recovering Mr Bartlett. However I heard no evidence to suggest that that the weather conditions played any part in the circumstances of this fatal accident.

Training and the transitional review of safety processes

[312] There is no question that Mr Bartlett was competent to carry out the maintenance work in which he was engaged at the time of this fatal accident, having been assessed as competent prior to TAQA's acquisition of the Harding Platform. Mr Bartlett's last assessment of competence in relation to lifeboat safety was completed in November 2011 and was valid until November 2014.[49] As I have already explained, I am satisfied that Mr Bartlett was aware of all of the procedural requirements which he breached in the moments prior to this fatal accident.

[313] I heard no evidence to suggest that the arrangements for the transitional review of procedures following the acquisition of the Harding Platform by TAQA in June 2013 played any part in this fatal accident. I accepted the evidence of Craig Finlayson to the effect that, although the review of BP's procedures by TAQA was a task of significant

[49] Crown Production No. 28

scale and complexity, the process which was put in place to manage it had been tried and tested during previous transitions. One of the objectives of the process was to minimise confusion and disruption for members of staff from the first day of the new regime. The HSE accepted that the transitional review arrangements set out in TAQA's safety case, submitted in advance of TAQAs acquisition of the platform, were in order. I heard no evidence to suggest that the transition of the platform to TAQA's ownership caused any confusion with regard to the safety procedures applicable to routine lifeboat maintenance. The version of the main procedural document, "S01-001A Lifeboat Maintenance and Inspections,"[50] which was in force at the time of the fatal accident, had been in force since May 2012, well in advance of TAQA's acquisition of the platform. The operation of release gear was removed from the scope of routine lifeboat maintenance by the operators of the platform in 2007 or 2008.

Conclusion

[314] In conclusion I would once again offer the sincere condolences of the court to the family of Mr Bartlett.

[50] Crown Production No. 100