WORKERS COMPENSATION COMMISSION

CERTIFICATE OF DETERMINATION

Issued in accordance with section 294 of the *Workplace Injury Management and Workers Compensation Act 1998*

Matter Number:	**1261/20**
Applicant:	**Diana Pescod as Executrix and Trustee of the Estate of the Late Christopher Edward Jones**
Respondent:	**Daniels Health Services Pty Ltd currently trading as Cleanaway Daniels Services Pty Ltd**
Date of Determination:	**16 July 2020**
Citation:	**[2020] NSWWCC 245**

The Commission determines:

1. The deceased worker, Christopher Edward Jones, died on 18 August 2018 as a result of injury sustained in the course of his employment with the respondent in the nature of an aggravation of a disease to which employment with the respondent was the main contributing factor in accordance with s 4(b)(ii) of the *Workers Compensation Act 1987* (the 1987 Act).

2. The deceased worker's employment gave rise to a significantly greater risk of injury than if the deceased worker had not been employed in work of that nature in accordance with s 9B of the 1987 Act.

3. There were no persons wholly or partly dependent for support upon the deceased worker at the date of death.

4. The applicant is the deceased worker's legal personal representative by way of the grant of probate to her by the Supreme Court of New South Wales on 2 January 2019.

The Commission orders:

5. The respondent to pay the applicant, in her capacity as legal personal representative of the deceased worker, lump sum compensation of $791,850 pursuant to ss 25(1)(a) and 85A(1)(a) of the 1987 Act.

6. The respondent to pay the applicant the sum of $7,215 for funeral expenses pursuant to s 26 of the 1987 Act.

A statement is attached setting out the Commission's reasons for the determination.

Rachel Homan
Arbitrator

I CERTIFY THAT THIS PAGE AND THE FOLLOWING PAGES IS A TRUE AND ACCURATE RECORD OF THE CERTIFICATE OF DETERMINATION AND REASONS FOR DECISION OF RACHEL HOMAN, ARBITRATOR, WORKERS COMPENSATION COMMISSION.

S Naiker

Sarojini Naiker
Senior Dispute Services Officer
As delegate of the Registrar

STATEMENT OF REASONS

BACKGROUND

1. Mr Christopher Edward Jones (the deceased worker) was in the course of his employment as a truck driver with Daniels Health Services Pty Ltd currently trading as Cleanaway Daniels Services Pty Ltd (the respondent) on 7 August 2018 when he collapsed beside his truck. The deceased worker was taken to Sutherland Hospital where he underwent emergency heart surgery and was placed in an induced coma until he passed away on 18 August 2018. The cause of death was identified on the death certificate as "Hypoxic Brain Injury and Cardiac Arrest".

2. A decision to decline liability to pay compensation in respect of the death was notified pursuant to s 78 of the *Workplace Injury Management and Workers Compensation Act 1998* (the 1998 Act) on 12 August 2019.

3. On 4 March 2020, the deceased worker's sister, Ms Diana Pescod, in her capacity as executrix and trustee of the deceased worker's estate (the applicant), lodged an Application in Respect of Death of Worker (Form 2D) in the Commission. The applicant claims the lump sum death benefit under s 25 of the *Workers Compensation Act 1987* (the 1987 Act) and funeral expenses under s 26 of the 1987 Act.

ISSUES FOR DETERMINATION

4. The parties agree that the following issues are in dispute:

    (a) Whether the deceased worker sustained an injury pursuant to s 4 of the 1987 Act;

    (b) Whether the deceased worker's employment was a substantial contributing factor to the injury as required by s 9A of the 1987 Act;

    (c) Whether the deceased worker's employment gave rise to a significantly greater risk of injury as required by s 9B of the 1987 Act;

    (d) The entitlement to lump sum compensation; and

    (e) The entitlement to funeral expenses.

PROCEDURE BEFORE THE COMMISSION

5. On 10 March 2020, a delegate of the Registrar issued a direction to the applicant requiring her to contact persons identified in the materials as possible dependants of the deceased worker at the time of his death as well as any other potential dependant to inform them of the proceedings and their potential entitlement to claim compensation. The applicant was directed to file and serve evidence as to whether any potential dependant wished to make a claim.

6. On 3 April 2020, the Registrar's delegate directed that the Commission send a letter to the deceased worker's brother, Mr Mark Jones, informing him of his potential entitlement to claim in relation to the lump sum death benefit. That letter was prepared and sent on the same date.

7. On 28 April 2020, the parties attended a telephone conference before the Registrar's delegate to discuss matters regarding the future conduct of the proceedings. The parties were directed to lodge and serve written submissions and informed that the matter would be referred to an arbitrator at the end of the timetable agreed upon to be determined on the papers if appropriate.

8. On 16 June 2020, the parties were informed that the matter had been referred to me and it was my intention to determine the matter without a conciliation conference or formal hearing. The parties were invited to express any concerns with this approach within seven days. The parties indicated to the Commission that they had no objection to the matter being determined in this way.

9. I am satisfied that the parties to the dispute understand the nature of the application and the legal implications of any assertion made in the information supplied. I am satisfied that the parties have had sufficient opportunity to explore settlement and that they have been unable to reach an agreed resolution of the dispute.

EVIDENCE

Documentary Evidence

10. The following documents were in evidence before the Commission and taken into account in making this determination:

    (a) Form 2D and attached documents;

    (b) Reply and attached documents;

    (c) Documents attached to an Application to Admit Late Documents filed by the applicant on 20 March 2020;

    (d) Documents attached to an Application to Admit Late Documents filed by the applicant on 31 March 2020;

    (e) Documents attached to two Applications to Admit Late Documents filed by the applicant on 1 April 2020;

    (f) Documents attached to an Application to Admit Late Documents filed by the respondent on 3 April 2020;

    (g) Documents attached to an Application to Admit Late Documents filed by the applicant on 22 April 2020;

    (h) Documents attached to an Application to Admit Late Documents filed by the applicant on 1 May 2020;

    (i) Written submissions prepared for the applicant, lodged 15 May 2020;

    (j) Written submissions prepared for the respondent, lodged 29 May 2020; and

    (k) Written submissions in reply prepared for the applicant, lodged 9 June 2020.

11. Neither party applied to adduce oral evidence or cross-examine any witness.

Employment and circumstances pertaining to death

12. A NSW Police Force COPS Event report dated 7 August 2018 provides a summary of the events which occurred on that date:

> "The Patient works for Daniels Health as a truck driver and has done so for 21 years. Police have ascertained he is a heavy smoker with no other medical history being available at this time.
>
> On Tuesday arrived 7th August 2018 about 9:30 am the Patient arrived at the medical practice of Dr KN Mitchell to deliver three 240 litre waste bins. The patient parked his truck bearing NSW plates BW14S in a lane way off Box Road and then unloaded the bins and re-loaded the used bins. The Patient has suffered a medical episode and was found by WIT 1 lying beside his truck in the lane way. WIT 1 commenced CPR with his wife calling 000. Chest compressions were continued with WIT 2 also doing CPR when WIT 1 fatigued.
>
> Plain clothes Police arrived a short time later and commenced chest compressions until Ambulance staff arrived, intubated the Patient and commenced medical intervention. The Patient was administered 3 x 1mg Adrenalin, 1 x 300mg Amiodarone to assist in stabilising his heart and fluid. The Patient was administered 4 x shocks with the Patient heart commenced beating and breathing spontaneously. The Patient was transported to Sutherland Hospital where he was assisted by medical staff and placed in a drug induced coma to assist with the medical exploration."

13. A "Driver Activity Sheet" completed by the deceased worker indicates that on 7 August 2018, he commenced work at 5:10am and departed the respondent's depot at 5:40am. The deceased worker took a break between 8:50am and 9:05am. The document shows that the deceased worker had completed six jobs and commenced a seventh for Dr KN Mitchell. The start time for that job was recorded by hand as 9:30am. The finish time was incompletely recorded.

14. Run sheets for each of the jobs on that date described the deceased worker's tasks as including the pickup and delivery of a number of bins of varying sizes. For Dr KN Mitchell, the deceased worker was required to deliver three 240L clinical waste bins and pick up three 240L clinical waste bins. The deceased worker was instructed to park in the loading zone on Box Road and walk up Quessy Lane to the end where the bins would be located to the right.

15. Handwritten police notes recorded a signed statement from Mr Rafael Flores, an employee of the respondent. Mr Flores' statement indicated that he had known the deceased worker for 21 years. The deceased worker's job description was "transport specialist". His day consisted of collecting his truck at about 5am and commencing his rounds which were the same every day. Mr Flores had spoken to the deceased worker at about 11:30am the previous day. The deceased worker had no issues and did not complain of any illness. The deceased worker was described as a "really reliable employee who never took sickies" but was a heavy smoker.

16. Mr Flores said the deceased worker did have a "physical job" with a lot of manual handling. He needed to deliver and collect different sized bins. All of the businesses that the deceased worker went to were small medical practices with medium-sized bins but he had frequent stops. The truck had a tailgate lift that the deceased worker used to remove and load the bins from the truck.

17. Mr Flores said the deceased worker had never been married and had no children. His mother had recently died. Mr Flores thought the deceased worker had a brother.

18. Mr Julian Hodder, Head of Rehabilitation & Workers Compensation for the respondent provided information to the applicant's solicitors on 23 December 2019 regarding the deceased worker's duties. Mr Hodder was asked to estimate the weight of the loaded bins the deceased worker would have handled on 7 August 2018. Mr Hodder responded:

> "On the day, when we returned the truck to the depot the waste was processed without going to the weigh bridge as the police kept the run sheet so we didn't have any paper work to book the waste against to. In this instance we used the average total weight from historical data to charge the customer, 31.09 kg (carried over 2 or 3 bins).
>
> Historically this customer would typically fill up to x2 240 litre bins and on occasion/less frequently x3 bins on a typical pick up. An empty 240 bin weighs 12.47 kg, so we could assume that on that day the driver moved x2 or x3 bins weighing between 22.83 kg – 28.02 Kg".

19. Asked to describe the premises and terrain over which the deceased worker was required to push/pull the bins, Mr Hodder said there was a short distance between the truck and the premises as the facility had access through a back alleyway. Mr Hodder estimated the distance to be 2-3 metres.

20. Asked to describe the mechanism of loading the bins into the truck, Mr Hodder responded:

> "To load and unload bins, all trucks have a tailgate lift. The process:
>
> - Open the tailgate.
> - Drop the tailgate on the ground.
> - Get on the tailgate and lift it to gain access to inside the truck.
> - Roll the empty bin to the tailgate – Bins are on wheels.
> - Stand on the tailgate with the bin and drop tailgate to the ground.
> - Drag/push bin to the customer location.
> - Repeat operation with a full bin.
> - Note the driver does not lift the bin at any time in this process (the activity undertaken in terms of bin movement is primarily push/pull.
> - All tailgates functions are hydraulic driven"

Treating medical evidence

21. Clinical notes from Norwest Medical Practice dating from 20 September 2002 are in evidence and show irregular consultations. No long-term medications or active past history were recorded. The deceased worker consulted his general practitioners for matters such as dental infection, itchy skin rash, sore throat, sinusitis and for work-related blood tests.

22. In 2012, it was recorded that the deceased worker had been a heavy smoker at two packets per day for 20 years. The deceased worker was noted to be contemplating giving up cigarettes but was worried about the strain on his body while quitting. The deceased worker had been prescribed Cymbalta for the last five months for depression.

23. The last consultation was on 15 February 2013. The deceased worker was referred for blood tests and a number of recalls sent but the deceased worker did not respond.

24. The deceased worker's clinical records from Sutherland Hospital are in evidence. Documents completed by a doctor registrar on 18 August 2018 indicated that the deceased worker passed away on that date due to hypoxic brain injury and cardiac arrest. The same cause of death was listed in the death certificate.

Dr Herman

25. The applicant relies on a series of medicolegal reports prepared by consultant cardiologist, Dr Mark Herman dated 28 October 2019, 18 February 2020, 3 March 2020, 7 April 2020, 8 April 2020 and 21 April 2020. Letters of instruction from the applicant's solicitors to Dr Herman are also in evidence.

26. Dr Herman took a history of the deceased worker dying as a result of an inferior myocardial infarction provoking ventricular fibrillation, cardiac arrest and hypoxic brain injury. Dr Herman noted that the deceased worker had no documented coronary artery disease prior to his cardiac arrest but had a number of cardiac risk factors including a 20 year history of smoking, a low HDL and impaired fasting glucose. The deceased worker appeared fit and well and had never complained of chest pain or shortness of breath.

27. Dr Herman recorded that on 7 August 2018, the deceased worker was found unconscious and resuscitation was commenced by members of the public. The downtime was considered to be in excess of 10 minutes. Dr Herman recorded the treatment that followed:

> "When ambulance personnel arrived, the ECG revealed ventricular fibrillation and the patient received a total of 4 x 200 joule DC shocks, adrenaline and amiodarone and with this regimen, had return of spontaneous circulation at approximately 10:16 hours (ambulance staff commenced CPR at 9:59).
>
> He was intubated, ventilated and taken to Sutherland Hospital where coronary angiography revealed a high grade lesion in the right coronary artery which was stented.
>
> Following initial haemodynamic compromise requiring an intra-aortic balloon counter pulsation, he improved from a cardiac perspective but failed to regain consciousness due to irreversible cerebral damage.
>
> He died on 18 August 2018."

28. Dr Herman noted that the deceased worker had been employed as a collector of waste for medical practices for over 21 years. Dr Herman noted the evidence of Mr Flores with regard to the physical nature of the deceased worker's job.

29. Dr Herman was asked whether the deceased worker died from any injury arising out of or in the course of employment. Dr Herman responded:

> "There is no doubt that Mr Jones had pre-existent coronary artery disease with a probable non-obstructive plaque in the right coronary artery.
>
> On the day of the myocardial infarction, it is highly likely that Mr Jones sustained a plaque rupture (of the pre-existent atherosclerotic plaque) which occurs when the thin fibrous cap overlying the plaque gets disrupted and the protective covering allows blood to come into contact with the highly thrombogenic contents of the plaque with subsequent thrombosis and occlusion of the vessel.

> While Mr Jones probably had a vulnerable plaque due to his underlying smoking and additional cardiac risk factors, he had never been symptomatic from coronary disease suggesting that the right coronary artery lesion was nonobstructive until the time of his cardiac event.
>
> It is well described that physical activity is associated with a temporary increase in the risk of having a myocardial infarction but particularly in individuals who exercise infrequently.
> …
> Whilst there is no doubt that regular exercise improves health outcomes and most mortality data favor regular moderate exercise, my concern in this matter is whether the work performed on the day of his myocardial infarction was of sufficient severity to induce hypertension (high blood pressure) and a high pulse rate thereby increasing the shear stress on the vulnerable atherosclerotic plaque and provoking plaque rupture with the subsequent events leading to his death.
>
> From the available evidence, it is not entirely clear as to whether heavy lifting of > 20kg equivalent was required by Mr Jones (taking into account the tailgate lift that Mr Jones used to remove and load the bins from the truck).
>
> If Mr Jones required physical activity of > 20kg lifting equivalent, it is possible that the haemodynamic stress associated with his job predisposed him to plaque rupture of a prior vulnerable plaque."

30. Asked whether employment was the main contributing factor to the onset or aggravation of a disease, Dr Herman responded:

> "Given that Mr Jones had performed the same work for 21 years without difficulty, it is unlikely that his work was the main contributing factor. However, more information is required as to how heavy the workload was."

31. Asked whether employment gave rise to a significantly greater risk of the applicant suffering cardiac arrest in accordance with s 9B of the 1987 Act, Dr Herman again suggested that if the deceased worker needed to expend energy to the equivalent of lifting loads of greater than 20 kg it was "possible" that he had a significantly greater risk of suffering cardiac arrest. However, the nature of the deceased worker's employment and energy expenditure was not entirely clear.

32. Asked to comment on the medicolegal opinion provided to the respondent by Dr O'Rourke, Dr Herman said:

> "Dr O'Rourke is correct in his assessment that smoking was by far the greatest risk factor for the provocation of underlying atherosclerotic plaque as well as the increasing vulnerability of the plaque to rupture.
>
> I note that Dr O'Rourke opines that the work was of moderate nature only and also note that Mr Jones had been doing the same work for the past 21 years.
>
> However, it is not clear to me how Dr O'Rourke's assessed the workload as being "moderate".

> I agree that constitutional factors including the heavy smoking were the main causes of Mr Jones' underlying atherosclerotic plaque development and furthermore, that moderate activity is beneficial in terms of cardiovascular health. However, the exact nature of the work and the intensity needs to be characterised."

33. The applicant's solicitors indicated to Dr Herman that resuscitation efforts were not undertaken for quite some time due to the fact that persons at the scene were instructed by emergency workers not to approach the deceased as there may be toxic substances in the vicinity due to the signage on his truck. Dr Herman was asked whether the delay of resuscitation efforts would have been a main contributing factor to the deterioration of the heart attack and subsequent death. Dr Herman said there was no doubt that delay of resuscitation efforts were a substantial contributing factor to the deterioration of the heart attack and subsequent death. Early defibrillation was said to equate with improved survival and shorter defibrillation responses correlated well with improved survival to hospital discharge.

34. In his supplementary report of 18 February 2020, Dr Herman indicated that he had been provided with additional correspondence regarding the nature of the work performed by the deceased worker. Dr Herman said:

> "I am of the opinion that the nature of his work would have resulted in sufficient haemodynamic stress to provoke a plaque rupture and subsequent myocardial infarction.
>
> Specifically, an empty 240 litre bin weighs 12.47kg and the nature and the frequency of his needing to move these loaded bins of up to 28kg would, in my opinion, be of sufficient severity to promote plaque rupture as mentioned.
>
> In summary, I do feel that the nature of Mr Jones' work was of sufficient intensity to provoke haemodynamic stress sufficient to promote plaque rupture and subsequent myocardial infarction."

35. In the supplementary report of 3 March 2020 Dr Herman was invited to express an opinion in the language of the relevant provisions of the 1987 Act. Dr Herman gave the opinion that the deceased worker's duties, which involved manual labour described as heavy by his employer were the main contributing factor to the aggravation or deterioration of the heart attack and subsequent death. Dr Herman also expressed the opinion that the nature of the deceased worker's employment gave rise to a significantly greater risk of suffering a cardiac arrest in accordance with s 9B of the 1987 Act.

36. In his supplementary report of 7 April 2020, Dr Herman provided further analysis of the deceased worker's duties immediately prior to the cardiac arrest:

> "In my opinion, loading and unloading of 240L industrial bins weighing between 22-28kg on 2-3 occasions is a significantly manual task. It is moreover clear from the information available to me, that the worker was required to push/drag the full bin from the premises to the truck which involved going through an alleyway and this occurred on 2-3 occasions.
> …
> It is well known that heavy physical exertion often triggers the onset of acute myocardial infarction and studies show that approximately 5% of patients with myocardial infarctions report strenuous exertion immediately preceding their symptoms.

In the study by Mittleman et al (provided by Dr O'Rourke), shows that the time of onset to myocardial infarction after an episode of heavy physical exertion is frequently in the first hour post the physical activity. Furthermore, heavy exertion (defined as physical activity >6 METS or more) occurs with an extreme relative risk of 107 in habitually sedentary people but is 2.4 times higher than baseline risk in patients who report heavy exertion 5 or more times a week.

In my opinion:
1. the nature of Mr Jones' work at the time of his myocardial infarction,
2. the temporal relationship to the activity and
3. the 2.4 times increased risk in non-sedentary patients certainly suggests that his work was related.

The proposed mechanism remains the disruption of a vulnerable (but non-necessarily stenotic plaque) in response to haemodynamic stress.

In my opinion, Mr Jones would have expended more than 6 METS of energy in the process of carting heavy loads across the alleyway."

37. In a supplementary report dated 8 April 2020, Dr Herman explained that his opinion had altered from that provided in his initial report in view of the precise elements of the employment tasks described to him.

38. In his final report of 21 April 2020, further clarified his opinions:

> "The mechanism of Mr Jones' death was almost certainly due to an acute plaque rupture in a pre-existent coronary artery plaque. He had not been symptomatic from this plaque suggesting the blockage (stenosis) had not been severe (i.e. vessel <70% blocked).
>
> The main contributing factor provoking the plaque rupture on the day of his death was, in my opinion, the haemodynamic stress provoked by his work situation. With increased blood pressure and pulse rate (in response to exertion), the sheer stress on the arterial wall (particularly the endothelial layer) increases and predisposes to plaque rupture provoking acute thrombosis and subsequent complete occlusion of the vessel resulting in a myocardial infarction.
>
> The timing of Mr Jones' event suggests that the physical stress provoked by his work situation was a significant factor provoking aggravation of the disease and the main contributing factor to the disruption of the atherosclerotic plaque.
>
> Whilst I acknowledge that smoking predisposes to inflammation of the endothelium (making atherosclerotic plaque more vulnerable), I do not believe this was the main contributing factor on the day of the event."

Dr O'Rourke

39. The respondent relies on medicolegal reports provided by cardiovascular medicine specialist, Prof Michael F O'Rourke dated 21 July 2019 and 2 April 2020.

40. Dr O'Rourke took a history of the deceased worker's employment and events on 7 October 2018 that was consistent with the other evidence. Dr O'Rourke noted the medical history revealed in the clinical notes of the general medical practice attended by the deceased worker:

> "Mr. Jones had attended a general medical practice Tl Norwest in Toongabbie for over 10 years, with the last visit on 17/01/2013. His heavy smoking habit was known and he was advised on multiple occasions to quit, but he did not. At one stage, a high glucose level was noted, and a diagnosis of diabetes mellitus was considered. His LDL cholesterol level was marginally elevated, but HDL cholesterol was low. I could not find a recording of his weight.
>
> Mr. Jones attendances on his doctor were for relatively minor conditions (skin rash, sinusitis, bronchitis, tooth infection). His occupation was considered by his doctor. There was no evidence of hepatitis A, B, or C infection or exposure. He was considered to be reasonably active about the time of his death, and had no significant limitations. Blood pressure was not elevated."

41. Dr O'Rourke gave an opinion on the cause of death as follows:

> "…coronary atherosclerotic disease specifically of the right coronary artery, was the cause of an arrhythmia (ventricular fibrillation) that caused cardiac arrest, and that the resulting cerebral ischemia was sufficiently severe and prolonged as to cause irreversible brain damage despite expert medical and paramedical care."

42. With regard to the contribution made by the applicant's employment to the death, Dr O'Rourke stated:

> "I do agree that employment was not a substantial contributing factor to the worker's death. I do note that he had a very heavy smoking habit of 40 cigarettes/day for at least the previous 20 years, and that this was in my opinion the major factor in his premature death (at age 50 years). I do believe that Mr Jones cardiac arrest is likely to have occurred even if he had not been at work at around the same time."

43. Dr O'Rourke agreed that the nature of the deceased worker's employment had not given rise to a significantly greater risk of the worker suffering from a cardiac arrest. Dr O'Rourke considered the moderate exertion required of the deceased worker by his work was beneficial to his health. Dr O'Rourke described main cause of the deceased worker's death as constitutional factors in combination with heavy smoking:

> "I do believe that constitutional factors, and heavy smoking were the main cause of Mr Jones death. Multiple studies over the past century (see attached) attest to the strong causal relationship between cigarette smoking and death from coronary disease. The moderate activity required in Mr Jones described employment has not been linked to higher risk for coronary events. Mr Jones general practitioner, was concerned about his habits, and had to post out 11 recall notices to have him discuss his health with her."

44. Attached to Dr O'Rourke's report were a number of journal articles and essays together with a lengthy curriculum vitae.

45. In his supplementary report of 2 April 2020, Dr O'Rourke considered the reports of Dr Herman dated 28 October 2019, 18 February 2020 and 3 March 2020. Dr O'Rourke said he disagreed with Dr Herman's assessment and it did not cause him to change the opinion set out in his previous report. Dr O'Rourke disagreed with Dr Herman's assessment of the nature of the deceased worker's duties:

> "I consider that Mr Jones duties were not heavy, since he was just required to move the bins on their wheels along the lift back platform of his truck. He did not have to lift the bins. He had been engaged in this type of work for some 20 years, so that this was not unaccustomed exercise or work."

46. Asked whether his opinion that smoking was the greatest risk factor in the worker's death had changed, Dr O'Rourke stated:

> "I agree that the heavy smoking history (at least 20 pack years) was the greatest risk factor in Mr Jones death. I note from the material provided that Mr Jones had been advised by his General Practitioner about the risk of smoking and the benefits of quitting. Mr Jones' work did not involve heavy lifting, but did involve the type of manual physical exertion recommended in physical exercise programs. In my opinion his health was the better to have had such an opportunity to undertake such moderate exertion in his job. Unaccustomed heavy exertion can precipitate acute coronary events (see attached responses), particularly in women but this need be intense as well as unaccustomed. Mr Jones work was not intense, and was not unaccustomed. He had been undertaking this type of work for over 20 years."

47. Dr O'Rourke attached a number of additional journal articles to his supplementary report.

Applicant's submissions

48. Written submissions were prepared on behalf of the applicant by Ms Eraine Grotte of counsel.

49. The applicant submitted that the nature of the deceased worker's work caused sufficient haemodynamic stress to provoke a plaque rupture and subsequent myocardial infarction.

50. The applicant noted the driver activity sheet and run sheets attached to the Form 2D. It was submitted that the incomplete entry for the delivery for Dr Mitchell in the driver activity sheet suggested that the deceased worker had passed away whilst completing the sheet, immediately after completing the delivery and collection of bins for Dr Mitchell.

51. The applicant noted the evidence from the respondent that historically this customer would typically fill up two 240 L bins and less frequently three 240 L bins. An empty bin would weigh 12.47 kg and so it could be assumed that on 7 August 2018, the deceased worker had moved two or three bins weighing between 22.83 kg and 28.02 kg.

52. The applicant noted that Dr Herman was unwilling to commit to an opinion in his first report until further information was obtained. The applicant referred to the evidence of Mr Hodder and said this had been provided to Dr Herman. Dr Herman then gave the expert opinion that the nature of the deceased worker's employment would have resulted in sufficient haemodynamic stress to provoke a plaque rupture and consequent myocardial infarction.

53. In particular, the applicant noted the study relied on by Dr O'Rourke and Dr Herman's view that the deceased worker would have expended more than six METS of energy in the process of carting heavy loads across the alleyway. The applicant asserted that one MET of energy is the energy spent sitting at rest. A brisk walk had a value of four METS and skipping with a rope had a MET value of 12.3.

54. The applicant submitted that Dr Herman and Prof O'Rourke were in agreement with regard to the cause of death. The applicant submitted that Dr O'Rourke had underestimated the exertion required and misunderstood the duties involved immediately prior to the myocardial infarction. The applicant said it was not correct that the deceased worker's duties simply involved "moving bins on their wheels along the left back platform of his truck".

55. The applicant submitted that Dr O'Rourke had not provided the type of detailed analysis that Dr Herman undertook in respect of the measure of force required to move the bins. Dr O'Rourke did not consider that the deceased worker was required to repetitively push and pull bins some estimated to weigh close to 30 kg to and from an alleyway. Dr O'Rourke did not consider that the worker performed this work over many hours throughout the working day and on the day of the incident. The factual basis of Dr O'Rourke's opinion was not consistent with the description of work duties from the respondent's representative.

56. The applicant submitted that in expressing the view that smoking was the greatest risk factor in the deceased worker's death, Dr O'Rourke had not considered the impact of other causes including the work activity Dr O'Rourke had not address the question whether there was an aggravation to underlying pre-existing disease. The injury in the circumstances of this case was not the underlying disease but the aggravation of the disease, namely the plaque rupture. Noting the timing of the myocardial infarct, the applicant submitted that Dr O'Rourke not consider the possibility that work activity could have caused the rupture of the atherosclerotic plaque.

57. The applicant submitted that the opinion of Dr Herman should be preferred to that of Dr O'Rourke. Dr Herman's opinion was well reasoned and based on information provided by the respondent as to the extent and nature of the work duties generally and on the date of the incident. Dr Herman also considered the timing of the myocardial infarction. His opinion that an increase in blood pressure caused the rupture was set to fit logically with the timing of the rupture soon after exertion took place. In contrast, that possibility was not considered by Dr O'Rourke, who underestimated the physical nature of the work.

58. The applicant referred to comments in the arbitral decision in *De Silva v Secretary, Department of Finance, Services and Innovation* (2015) NSWWCC 279 and presidential decision in *Renew God's Program Pty Ltd v Kim* [2019] NSWWCCPD 45 with regard to the test in s 9B. The applicant submitted that Dr Herman's opinion satisfied the test in s 9B and was to be preferred over that given by Dr O'Rourke.

Respondent's submissions

59. Written submissions were prepared on behalf of the respondent by Mr Greg Guest, solicitor, dated 29 May 2020.

60. The respondent agreed with the background information provided in the applicant's written submissions except to note that the deceased worker was a two pack a day smoker in 2012 and the clinical notes failed to indicate what occurred after that date. Mr Flores had noted that the deceased worker was a heavy smoker at the time of his death. The respondent submitted that this suggested that the habit recorded in 2012 had been maintained.

61. The respondent agreed that the cause of death was not in dispute and arose as a result of a heart attack injury.

62. The respondent submitted that the deceased worker was a heavy smoker and had pre-existent coronary artery disease. The respondent noted that it had been considered by Dr Herman that smoking was the main risk factor for the deceased worker's heart disease.

63. The respondent submitted that Dr Herman's opinion was based on an assumption as to the facts which was patently incorrect, being his determination that the work the deceased worker was engaged in at the time of his death was heavy.

64. The respondent noted that Dr Herman's initial report indicated that he was of the view that employment was unlikely to be the main contributing factor to the aggravation of the disease condition. Dr Herman changed his mind after further analysis of the duties performed. The respondent submitted that this was based on Dr Herman's view that the deceased worker's duties involved heavy work after reading the email response from Mr Hodder.

65. The respondent submitted that the questions put to Dr Herman suggested that the applicant's duties involved manual labour including "lifting" which had been described by his employer as heavy at times. It was submitted that this evidence had not been given by the respondent's representatives and the question was misleading and inconsistent with the evidence adduced. Referring to the evidence of Mr Flores and Mr Hodder, the respondent submitted that the work was not described as 'heavy' and did not require any lifting at all. This error had the effect of rendering the whole basis of Dr Herman's opinion unreliable.

66. The respondent submitted that the deceased worker's duties were consistent with Dr O'Rourke's description of moderate activity which was not causative of the cardiac event but was rather beneficial to his health. The respondent submitted that there was a fair climate for the acceptance of Dr O'Rourke's opinion.

67. The respondent submitted that moving 240 L bins on wheels weighing a maximum of 28.02 kg would not be regarded as heavy work. Common experience would indicate that the activity was in fact fairly light. The respondent noted a complete lack of expert evidence examining the forces involved in the activity.

68. The respondent noted that the driver activity sheet confirmed that the deceased worker was not required to push or pull bins for any lengthy period of time. Most of the jobs involved activity for around 10 to 15 minutes. There was no expert evidence to support the allegation that the work was heavy. The preferable view was that the work was physical and required moderate activity.

69. Even if employment was accepted as contributing to the aggravation, it was not the main contributing factor as required by s 4(b)(ii). The evidence established that the deceased worker was a heavy smoker. This along with hereditary risks could explain the death. The respondent submitted that the only link with employment was that the injury occurred during a period of work.

70. The respondent noted the opinion given by Dr Herman that smoking was by far the greatest risk factor for the provocation of underlying atherosclerotic plaque as well as the increasing vulnerability of the plaque to rupture. To concentrate solely on the cause of the plaque rupture and not on the reasons behind its presence and vulnerability to rupture was said to be to ignore the requirements of s 4(b)(ii).

71. The respondent agreed with the applicant's observations as to the requirements of s 9B of the 1987 Act. The respondent submitted that the work engaged in by the deceased worker at the time of his death was moderate physical activity. The message that moderate activity was beneficial in relation to the prevention of cardiovascular disease was common in the community and accepted by both Dr Herman and Dr O'Rourke. The respondent submitted that the deceased worker's employment did not give rise to a significantly greater risk of heart attack but was rather protective of his health.

72. The deceased worker had been performing his work for 21 years. That work required the deceased worker to be physically active but did not require heavy lifting. The work was beneficial to the deceased worker's overall health, particularly in relation to his cardiac condition.

Applicant's submissions in reply

73. The applicant submitted that the respondent's characterisations of Dr Herman's expert opinion were neither fair nor accurate. The applicant submitted Dr Herman had not changed his mind but rather indicated in his first report that a final view could not be formed without more information as to how heavy the workload was. Further information was obtained from Mr Hodder and provided to Dr Herman.

74. The applicant submitted that it was accurate to describe the deceased worker's work as "heavy at times" given that he was required to drag, push and pull both empty and loaded bins which according to the run sheets included bins up to 660 L. In any event, Dr Herman was not influenced by this description of the work duties in the instructing letter from the applicant's solicitors and explicitly considered for himself whether the work was indeed sufficiently heavy to provoke the plaque rupture. The applicant submitted that the most important part of Dr Herman's opinion was expressed in his report of 18 February 2020 in which he analysed the information from the respondent and concluded that the work was of sufficient severity to cause the rupture.

75. In contrast, the applicant submitted that Dr O'Rourke did not analyse all of the work duties the deceased worker engaged in on the relevant date or consider whether they were of sufficient severity to cause the events that led to the rupture. The applicant described Dr O'Rourke's opinion as a true *bare ipse dixit*. The applicant said it was irrelevant whether or not exercise was beneficial. The relevant question was whether or not the physical activity engaged in as part of the deceased worker's work caused an increase in blood pressure such that a plaque rupture occurred. Dr O'Rourke also did not consider the obvious temporal relationship between employment and the cardiac arrest. The opinion that the cardiac arrest would have occurred at around the same time even if the deceased had not been at work was without explanation. Dr O'Rourke simply dismissed the opinion of Dr Herman without explanation.

76. The applicant submitted that it was not necessary for the applicant to provide expert ergonomic evidence to establish a case. The applicant's medicolegal expert evaluated the work being undertaken by the deceased worker on the day of his death. Dr Herman had the relevant expertise as a cardiologist to make an evaluation based on his skill, qualifications and extensive experience. The respondent also relied on a cardiologist to provide an opinion.

77. The applicant submitted that the injury was capable of satisfying s 4(a) or 4(b)(ii) of the 1987 Act.

FINDINGS AND REASONS

Injury

78. In order to determine the applicant's entitlement to the compensation sought, it is necessary to determine whether the deceased worker's death resulted from "injury". The term "injury" is relevantly defined in s 4 of the 1987 Act as follows:

> **"4 Definition of 'injury'**
>
> In this Act:
> **injury:**
>
> (a) means personal injury arising out of or in the course of employment,
>
> (b) includes a disease injury, which means:

(i) a disease that is contracted by a worker in the course of employment but only if the employment was the main contributing factor to contracting the disease, and

(ii) the aggravation, acceleration, exacerbation or deterioration in the course of employment of any disease, but only if the employment was the main contributing factor to the aggravation, acceleration, exacerbation or deterioration of the disease, and

(c) does not include (except in the case of a worker employed in or about a mine) a dust disease, as defined by the *Workers' Compensation (Dust Diseases) Act 1942*, or the aggravation, acceleration, exacerbation or deterioration of a dust disease, as so defined."

79. In *AV v AW*, Snell DP considered the expression, "main contributing factor" in s 4(b)(ii) and observed:

> "The following may be taken from the above:
>
> (a) The test of 'main contributing factor' in s 4(b)(ii) is more stringent than that in s 4(b)(ii) in its previous form, which applied in conjunction with the test in s 9A. There will be one 'main contributing factor' to an alleged aggravation injury.
>
> (b) The test of 'main contributing factor' is one of causation. It involves consideration of the evidence overall, it is not purely a medical question. It involves an evaluative process, considering the causal factors to the aggravation, both work and non-work related. Medical evidence to address the ultimate question of whether the test of 'main contributing factor' is satisfied is both relevant and desirable. Its absence is not necessarily fatal, as satisfaction of the test is to be considered on the whole of the evidence.
>
> (c) In a matter involving s 4(b)(ii) it is necessary that the employment be the main contributing factor to the aggravation, not to the underlying disease process as a whole."

80. The expression, "aggravation, acceleration, exacerbation or deterioration" of a disease was considered by Windeyer J in *Federal Broom Co Pty Ltd v Semlitch*[1] (*Semlitch*):

> "The words have somewhat differing meanings: one may be more apt than another to describe the circumstances of a particular case: but their several meanings are not exclusive of one another. The question that each poses is, it seems to me, whether the disease has been made worse in the sense of more grave, more grievous or more serious in its effects upon the patient. To say that a man's sickness is worse or has deteriorated means in ordinary parlance, oddly enough, the same thing as saying that his health has deteriorated."

81. The applicant has submitted that the injury in this case could be characterised as one falling within both s 4(a) and s 4(b)(ii). I accept that the definitions in each subsection are not mutually exclusive, however, for convenience, I have directed my attention first to the requirements of s 4(b)(ii) as it was this definition on which the primary submissions focussed.

[1] [1964] HCA 34; (1964) 110 CLR 626 at 640.

82. There is consistency in the medical opinions before me, and I accept that, that the deceased worker had pre-existent coronary artery disease although this was undocumented and apparently asymptomatic. None of the doctors have suggested that the deceased worker's employment was causative of the coronary artery disease. Rather it is suggested that constitutional factors, the deceased worker's heavy smoking habit, low HDL cholesterol and impaired fasting glucose are likely to have been the dominant factors in the contraction of the disease.

83. Where the medicolegal experts differ is on the issue of whether employment was the main contributing factor to an aggravation of that disease on 7 August 2018.

84. I am satisfied on the evidence before me including the police records, driver activity sheet, run sheets and evidence from Mr Hodder that the deceased worker's employment was physical in nature and involved a lot of manual handling.

85. The driver activity sheet indicated that on 7 August 2018, the deceased worker had 12 jobs and had completed seven of those, including the last at the premises of Dr KN Mitchell. The run sheet indicated that those jobs required the delivery and pickup of varying numbers of bins of varying sizes, ranging from sharpsmart containers to large 660 L bins. For example, in one job completed by the deceased worker on the morning of 7 August 2018, in excess of 130 sharpsmart containers were required to be delivered and collected.

86. Each job would have required the deceased worker to alight from his truck, open the truck's tailgate and drop it to the ground. The deceased worker would use the tailgate hydraulic lift to gain access to the truck, roll the empty bins onto the tailgate and drop them to the ground. The deceased worker was then required to pull/push the empty bins from his truck to the delivery location and pull/push the full bins from the delivery location and return them to the truck.

87. In the case of the job for Dr KN Mitchell, I accept the evidence of Mr Hodder that the distance from the lane where the truck was parked to the delivery location would have been approximately 2 to 3 m. That job would have required the deceased worker to move two or three empty bins weighing 12.47 kg and two or three full bins weighing between 22.83 kg – 28.02 kg in this way. I accept the applicant's submission that the evidence indicates that the deceased worker had completed the job for Dr Mitchell and was in the process of filling in the driver activity sheet at his truck when he suffered a cardiac arrest.

88. There is a dispute as to whether these duties are appropriate characterised as "heavy", "moderate" or "light". Ultimately, the terminology matters little. What is necessary to consider is whether the medicolegal experts who have provided opinions in this case had a proper understanding of the nature of the deceased worker's duties so as to provide a fair climate for the acceptance of their opinions.

89. Dr O'Rourke's initial history was that the deceased worker had been employed continuously over the previous 21 years as a collector of waste from medical practices, in sealed bins, which he loaded onto a truck, with the aid of a hydraulic lift attached to the truck. Dr O'Rourke said this type of moderate activity had not been linked to a higher risk for coronary events.

90. In his supplementary report, Dr O'Rourke was asked whether the work undertaken by the deceased worker was moderate or heavy. Dr O'Rourke responded,

> "I consider that Mr Jones' duties were not heavy, since he was just required to move the bins on their wheels along the lift back platform of his truck. He did not have to lift the bins."

91. It is not apparent from Dr O'Rourke's reports that he had taken into account the number or weight of the bins that the applicant was required to move and over what period of time. It is not apparent that Dr O'Rourke appreciated that the applicant did not simply have to roll bins onto the back platform of his truck but also push/pull them between the delivery location and the truck. Dr O'Rourke's attention appears to have been focused on the fact that the bins were not required to be lifted but rather rolled on wheels.

92. Dr Herman indicated in his first report that he had considered the evidence of Mr Flores but on the evidence available to him at the time it was not clear whether "heavy lifting of greater than 20 kg equivalent" was required noting the use of a tailgate lift.

93. By the time of his report of 18 February 2020, Dr Herman had been provided with the additional correspondence from Mr Hodder. Dr Herman did not give any indication in that report that he understood the applicant's duties to involve lifting of bins. Dr Herman did refer to a description by the employer of the deceased worker's duties as involving "heavy" manual labour in the 3 March 2020 report. I have not been able to locate any evidence from the employer before me in which the duties are described as "heavy". This is likely to have been a misdirection from the applicant's solicitors. Dr Herman's reasoning does otherwise suggest, however, an accurate understanding of the nature of the work performed by the deceased worker.

94. The clearest indication of Dr Herman's understanding of the deceased worker's duties is set out in the supplementary report of 7 April 2020. Dr Herman described the applicant's duties as including loading and unloading of 240L industrial bins weighing between 22-28kg on 2-3 occasions. Dr Herman indicated that he understood that the deceased worker was required to push/drag the full bin from the premises to the truck which involved going through an alleyway and this occurred on 2-3 occasions. Dr Herman described this as a significantly manual task and said it would have caused the deceased worker to expend more than 6 METS of energy "in the process of carting heavy loads across the alleyway".

95. In the above analysis Dr Herman demonstrated a more detailed and complete understanding of the deceased worker's duties than is revealed by Dr O'Rourke's reports. This is a factor which weighs in favour of the acceptance of Dr Herman's opinions over those of Dr O'Rourke.

96. Dr Herman's reports also demonstrate a clearer application of the correct legal tests. In his first report, Dr O'Rourke was asked whether he agreed that employment was "not a substantial contributing factor to the worker's death". Dr O'Rourke expressed agreement with that proposition indicating the major factor in the deceased worker's premature death was his heavy smoking habit. Dr O'Rourke was later asked to comment on the "main cause of the worker's death". Dr O'Rourke believed that constitutional factors and heavy smoking were the main causes of death.

97. The correct questions are more nuanced. What I am required to consider for present purposes is whether employment was the main contributing factor to "an aggravation of a disease"; and, if so, whether death "resulted from" that injury (that is, the aggravation of the disease). It is not necessary that employment be the main contributing factor to the "death".

98. Dr Herman's reports provide a more nuanced analysis of the circumstances leading to the deceased worker's death. Dr Herman's reports indicate that there was pre-existing coronary artery disease with a probable non-obstructive plaque in the right coronary artery. Dr Herman noted that the fact that the deceased worker had not previously been symptomatic suggested that the blockage had not been severe. Dr Herman said it was highly likely that on 7 August 2018 there was a rupture of the pre-existent atherosclerotic plaque. Whilst the deceased worker's plaque was probably vulnerable due to the smoking and additional cardiac risk factors, the work on 7 August 2018 was of sufficient intensity to provoke haemodynamic stress and provoke a plaque rupture. Dr Herman explained:

> "With increased blood pressure and pulse rate (in response to exertion), the sheer stress on the arterial wall (particularly the endothelial layer) increases and predisposes to plaque rupture provoking acute thrombosis and subsequent complete occlusion of the vessel resulting in a myocardial infarction."

99. Dr Herman has given a clear opinion that this constituted an aggravation of the deceased worker's pre-existing disease to which employment was the main contributing factor.

100. A question which arises is whether Dr Herman's view that the intensity of the work was sufficient to provoke haemodynamic stress and plaque rupture was founded upon an accurate factual basis. As already indicated above, I find that Dr Herman has demonstrated a detailed and complete understanding of the deceased worker's duties.

101. Dr Herman referred to a study by Mittleman et al which is attached to Dr O'Rourke's supplementary report and indicated that "heavy exertion", defined as physical activity greater than 6 METS generated a 2.4 times higher than baseline risk of myocardial infarction within one hour in patients who reported heavy exertion five or more times a week.

102. The article in question indicates that the degree of physical exertion was quantified for the purposes of the study on a scale from 1 to 8 metabolic equivalents (METs) as set out in a table reproduced in the article. According to that table, sleeping or reclining required an estimated one MET. Vigorous exertion with panting or overheating required an estimated six METs. The types of activities falling within that category were described as:

> "Slow jogging, speed-walking, tennis, swimming, cross-country skiing, shoveling snow, fast biking, mowing with a push mower, pruning trees or shrubs, heavy gardening, factory assembly work, heavy household repairs, climbing up and down a ladder, overhead work, ice hockey, drills, softball, picking up garbage, laying bricks, hurried heavy restaurant work."

103. According to the table, an estimated 7 METs might be exerted in activities such as:

> "Running, fast jogging, nonstop racquetball, pushing a car stuck in snow, moving boulders, changing tires, shovelling heavy or deep snow, mixing cement, competitive basketball, touch football, hanging drywall, putting down wall to-wall carpet, ladder or stair climbing with a 23-kg load, using a jackhammer."

104. Having regard to the article in question and noting my findings as to the nature of the deceased worker's employment duties, I am not satisfied that Dr Herman has misunderstood or misapplied the findings of the Mittleman study.

105. Dr Herman's opinion that the deceased worker's employment was the main contributing factor to a plaque rupture triggering a myocardial infarction was based on the findings of the Mittleman study; on the nature of the employment duties which I accept were properly appreciated by Dr Herman; and also on the temporal relationship between the cardiac arrest and with the deceased worker's employment activity.

106. This last factor was not given any express consideration by Dr O'Rourke, who found no relationship at all between employment and the cardiac arrest. Dr O'Rourke considered that the cardiac arrest was likely to have occurred even if the deceased worker had not been at work at around the same time. It is relevant, however, that the cardiac arrest occurred whilst the applicant was in the course of employment, immediately after completing his seventh job of the day, whilst the deceased worker was standing at his truck completing the driver activity sheet. These factors alone are insufficient to establish that employment was the main contributing factor to an aggravation of the disease. They are, however, relevant factors to take into account.

107. I am satisfied that Dr Herman's opinion was well explained and reasoned and is based on an apparently complete and accurate factual foundation. After careful analysis of all of the evidence I am satisfied that Dr Herman has provided a more persuasive opinion than Dr O'Rourke.

108. I accept on the basis of Dr Herman's reports that on 7 August 2018, the deceased worker experienced an aggravation of a disease to which employment was the main contributing factor. I am satisfied that the deceased worker sustained an injury pursuant to s 4(b)(ii). In view of this finding it is not necessary to give additional consideration to s 4(a) and s 9A of the 1987 Act which apply to injuries other than disease injuries.

Whether death resulted from injury

109. The dicta of Kirby P in *Kooragang Cement Pty Ltd v Bates* (1994) 35 NSWLR 452; 10 NSWCCR 796 (*Kooragang*) remains the critical guide when determining whether the death of a worker results from a work injury. Kirby P said at [462]:

> "…it has been well recognised in this jurisdiction that an injury can set in train a series of events. If the chain is unbroken and provides the relevant causative explanation of the incapacity or death from which the claim comes, it will be open to the Compensation Court to award compensation under the Act."

110. Kirby P then said at [463-4]:

> "The result of the cases is that each case where causation is in issue in a workers compensation claim, must be determined on its own facts. Whether death or incapacity results from a relevant work injury is a question of fact. The importation of notions of proximate cause by the use of the phrase 'results from', is not now accepted. By the same token, the mere proof that certain events occurred which predisposed a worker to subsequent injury or death, will not, of itself, be sufficient to establish that such incapacity or death 'results from' a work injury. What is required is a common sense evaluation of the causal chain. As the early cases demonstrate, the mere passage of time between a work incident and subsequent incapacity or death, is not determinative of the entitlement to compensation. In each case, the question whether the incapacity or death 'results from' the impugned work injury… is a question of fact to be determined on the basis of the evidence, including, where applicable, expert opinions."

111. Having made a determination that employment was the main contributing factor to an aggravation of the deceased worker's coronary atherosclerotic disease, it is necessary to consider whether death "resulted from" that aggravation.

112. It is apparent that the deceased worker's death resulted from multiple causes including the presence of the coronary atherosclerotic disease itself and the constitutional and lifestyle factors noted in the evidence. Dr O'Rourke considered that these factors were the main cause of death and I am prepared to accept that this may have been the case. It is only necessary for me to determine, however, whether the injury I have found materially contributed to the death.

113. Dr Herman has given the opinion, which I have accepted, that the deceased worker's employment caused an acute plaque rupture which constituted an aggravation of coronary atherosclerotic disease. Dr Herman said the plaque rupture provoked acute thrombosis and subsequent complete occlusion of the vessel and this resulted in a myocardial infarction and cardiac arrest.

114. Dr O'Rourke has only indicated that the coronary atherosclerotic disease caused ventricular fibrillation that caused cardiac arrest. For the reasons given above, I prefer Dr Herman's opinion.

115. It is not disputed that the cardiac arrest caused cerebral ischemia which was sufficiently severe and prolonged as to cause irreversible brain damage. The cardiac arrest and hypoxic brain injury were identified as the cause of death in the death certificate and documents from Sutherland Hospital.

116. I am satisfied on the evidence that the injury which I have found above set in train an unbroken chain of events which "resulted in" the deceased worker's death.

Whether employment gave rise to a significantly greater risk of the deceased worker suffering the injury

117. Despite my findings above, the compensation sought by the applicant will not be payable unless the requirements of s 9B(1) of the 1987 Act are also satisfied. Section 9B relevantly provides:

> **"9B No compensation for heart attack or stroke unless nature of employment results in significantly greater risk**
>
> (1) No compensation is payable under this Act in respect of an injury that consists of, is caused by, results in or is associated with a heart attack injury or stroke injury unless the nature of the employment concerned gave rise to a significantly greater risk of the worker suffering the injury than had the worker not been employed in employment of that nature.
>
> (2) In this section—
>
> ***heart attack injury*** means an injury to the heart, or any blood vessel supplying or associated with the heart, that consists of, is caused by, results in or is associated with—
>
> (a) any heart attack, or
> (b) any myocardial infarction, or
> (c) any myocardial ischaemia, or
> (d) any angina, whether unstable or otherwise, or
> (e) any fibrillation, whether atrial or ventricular or otherwise, or
> (f) any arrhythmia of the heart, or
> (g) any tachycardia, whether ventricular, supra ventricular or otherwise, or
> (h) any harm or damage to such a blood vessel or to any associated plaque, or
> (i) any impairment, disturbance or alteration of blood, or blood circulation, within such a blood vessel, or
> (j) any occlusion of such a blood vessel, whether the occlusion is total or partial, or
> (k) any rupture of such a blood vessel, including any rupture of an aneurism of such a blood vessel, or
> (l) any haemorrhage from such a blood vessel, or
> (m) any aortic dissection, or
> (n) any consequential physical harm or damage, including harm or damage to the brain, or
> (o) any consequential mental harm or damage."

118. There is no dispute that the injury in this case constituted a “heart attack injury”. The injury was to a blood vessel supplying or associated with the heart and resulted in a myocardial infarction for the purposes of s 9B(2)(b).

119. The applicant referred me to the discussion of s 9B by Senior Arbitrator Snell, as he then was, in *De Silva v Secretary, Department of Finance, Services and Innovation* [2015] NSWWCC 279 and to the presidential decision of *Renew God's Program Pty Ltd v Kim* [2019] NSWWCCPD 45 (30 August 2019). Those cases hold that the test in s 9B requires that the relevant risk in the employment concerned be “significantly greater” than the risk “had the worker not been employed in employment of that nature”. In *Da Silva*, Arbitrator Snell concluded that satisfaction of this test required a risk in the employment concerned that was greater, in a way that was “important; of consequence”. Additionally, whereas ss 4 and 9A are concerned with the actual cause of the injury, s 9B is concerned with the risk of injury.

120. Dr Herman has given a clear opinion that the nature of the deceased worker’s employment gave rise to a significantly greater risk of the deceased worker suffering the injury than had the worker not been employed in employment of that nature. As I have found, above this opinion was based upon a demonstrated proper understanding of the nature of the employment. The opinion was reasoned and explained by reference amongst other things to the study by Mittleman et al. In contrast, I am not satisfied that Dr O’Rourke’s reports demonstrate a full appreciation of the nature of the deceased worker’s employment.

121. In the circumstances, I accept Dr Herman’s opinion that the nature of the employment concerned gave rise to a significantly greater risk of the deceased worker suffering the injury than had the deceased worker not been employed in employment of that nature for the purposes of s 9B(1). The compensation sought is therefore payable.

Lump sum death benefit

122. Section 25(1) of the 1987 act provides:

> “(1) If death results from an injury, the amount of compensation payable by the employer under this Act shall be—
>
> (a) the amount of $750,000 (the lump sum death benefit), which is to be apportioned among any dependants who are wholly or partly dependent for support on the worker or (if there are no such dependants) paid to the worker’s legal personal representative,”

123. The parties are in agreement that the applicable lump sum death benefit in this case is $791,850.

124. The Form 2D (as amened) does not identify any relevant member of the deceased worker’s family who was wholly or partly dependent for support upon the deceased worker at the time of his death. The applicant has not claimed to have been dependent on the deceased worker herself. The applicant has lodged a written statement indicating that the deceased worker’s parents were both deceased at the time of his death. The deceased worker had no spouse or partner and no children. The deceased worker had two brothers and I am satisfied that, having been made aware of their potential entitlement to make a claim for a portion of the compensation, they have elected not to do so. The applicant has given uncontradicted evidence and I accept that there were no other members of the family or any other person who lived with or was financially dependent upon the deceased worker. I find on the evidence that there were no relevant dependants.

125. The last will of the deceased worker dated 21 April 2005 names the applicant to these proceedings, as the executrix and trustee of his will. Probate of that will was granted to the applicant by the Supreme Court of New South Wales on 2 January 2019.

126. Pursuant to s 25(1)(a) of the 1987 Act, the lump sum death benefit of $791,850 will be paid to the applicant, as the legal personal representative of the deceased worker by way of the grant of probate made to her by the Supreme Court of New South Wales.

Funeral expenses

127. Section 26 of the 1987 Act provides:

> "If compensation is payable under this Division for a death resulting from an injury, the employer must pay additional compensation equal to reasonable funeral expenses not exceeding $15,000 or such other amount as may be prescribed by the regulations."

128. The evidence before me indicates that an amount of $7,215 was paid by the applicant for the deceased worker's funeral expenses. It is appropriate that an order be made for the respondent to reimburse the applicant for those funeral expenses pursuant to s 26 of the 1987 Act.

SUMMARY

129. The deceased worker, Christopher Edward Jones, died on 18 August 2018 as a result of injury sustained in the course of his employment with the respondent in the nature of an aggravation of a disease to which employment with the respondent was the main contributing factor in accordance with s 4(b)(ii) of the 1987 Act.

130. The deceased worker's employment gave rise to a significantly greater risk of injury than if the deceased worker had not been employed in work of that nature in accordance with s 9B of the 1987 Act.

131. There were no persons wholly or partly dependent for support upon the deceased at the date of death.

132. Diana Pescod, as executrix and trustee of the estate of the deceased worker is the deceased worker's legal personal representative by way of the grant of probate made to her by the Supreme Court of New South Wales.

133. The respondent to pay the applicant, in her capacity as legal personal representative of the deceased worker, lump sum compensation of $791,850 pursuant to ss 25(1)(a) and 85A(1)(a) of the 1987 Act.

134. The respondent to pay the applicant the sum of $7,215 for funeral expenses pursuant to s 26 of the 1987 Act.