WORKERS COMPENSATION COMMISSION

CERTIFICATE OF DETERMINATION

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

Matter Number: **5679/19**
Applicant: **Matthew Charles Byrnes**
Respondent: **Steel Building Systems QLD Pty Limited**
Date of Determination: **6 March 2019**
Citation: **[2020] NSWWCC 66**

The Commission determines:

1. Pursuant to section 60(5) of the *Workers Compensation Act 1987*, the Commission directs that the respondent is to pay the applicant's medical and related treatment expenses in respect of proposed surgery in the form of total disc replacement at the C5/6 level of the cervical spine to be undertaken by the applicant's nominated treating specialist.

2. Pursuant to section 60(5) and section 62(6A) of the *Workers Compensation Act 1987*, the Commission directs that the respondent is to pay the cost of the applicant's hospital treatment in respect of the proposed surgery in the form of a total disc replacement at the C5/6 level of the cervical spine to be undertaken by the applicant's nominated treating specialist.

3. Respondent is to pay the applicant's reasonably necessary medical and related treatment expenses as a result of injury on 15 August 2016 pursuant to section 60 of the *Workers Compensation Act 1987*.

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

Grahame Edwards
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 GRAHAME EDWARDS, ARBITRATOR, WORKERS COMPENSATION COMMISSION.

A Sufian

Abu Sufian
Senior Dispute Services Officer
As delegate of the Registrar

STATEMENT OF REASONS

BACKGROUND

1. Mr Matthew Charles Byrnes (the applicant) claims medical and related treatment expenses pursuant to s 60(5) of the *Workers Compensation Act 1987* (the 1987 Act) for proposed surgery in the form of a total disc replacement at the C5/6 level of the cervical spine as a result of injury in the course of employment on 15 August 2016.

2. The respondent accepts Mr Byrnes suffered injury to his left upper extremity in the course of employment whilst lifting and moving a heavy steel frame weighing about 100 kilograms with a co-worker, but disputes he suffered injury to his cervical spine.

3. While the respondent issued notices pursuant to s 78 of the *Workplace Injury Management and Workers Compensation Act 1998* (the 1998 Act) dated 30 April 2019 and 30 August 2019[1] disputing the proposed surgery was reasonably necessary as a result of injury within the meaning of s 60 of the 1987 Act, it did not dispute injury to the cervical spine within the meaning of s 4; and that the employment concerned was not a substantial contributing factor to the injury within the meaning of s 9A of the 1987 Act.

4. Leave was granted to the respondent pursuant to s 289A(4) of the 1998 Act delivered in an oral decision at the arbitration hearing at Tweed Heads on 19 December 2019 to dispute previously unnotified issues of injury to the cervical spine, and that the employment concerned was not a substantial contributing factor to the injury.

5. The matter was adjourned to 19 February 2020 at Tweed Heads for hearing of the substantive issues in dispute between the parties.

6. Mr Baran of counsel, instructed by Mr Clarke, solicitor, represented Mr Byrnes who was in attendance at the arbitration hearings.

7. The respondent was represented by Mr Halligan of counsel in the interests of the insurance scheme agent at the arbitration hearing on 19 February 2020. Mr Perry of counsel previously represented the respondent at the arbitration hearing on 19 December 2019.

8. The arbitration hearings were sound recorded.

ISSUES FOR DETERMINATION

9. The parties agree that the following issues remain in dispute:

    (a) injury to the cervical spine as a result of the injurious event or incident[2] on 15 August 2016 within the meaning of s 4 of the 1987 Act;

    (b) whether the employment concerned was a substantial contributing factor to the injury within the meaning of s 9A of the 1987 Act, and

    (c) whether the proposed surgery in the form of a total disc replacement at the C5/6 level of the cervical spine is reasonably necessary medical and related treatment as a result of injury within the meaning of s 60 of the 1987 Act.

[1] Application to Resolve a Dispute (the Application) – pp 51-65

[2] *Lyons v Master Builders Association of NSW Pty Ltd* (2003) 25 NSWCCR 422 (*Lyons*) approved of by Roche DP in *Spicer Axle Australia Pty Limited v Merza* [2007] NSWWCCPD 148

Matters previously notified as disputed

10. The proposed cervical spine surgery was not reasonably necessary as a result of injury within the meaning of s 60 of the 1987 Act.

Matters not previously notified

11. Injury to the cervical spine as a result of the injurious event or incident on 15 August 2016; and that the employment concerned was not a substantial contributing factor to the injury.

PROCEDURE BEFORE THE COMMISSION

12. The parties attended conciliation conferences/arbitration hearings on 19 December 2019 and 19 February 2020. 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 have used my best endeavours in attempting to bring the parties to the dispute to a settlement acceptable to all of them. 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

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

Applicant

(a) Application to Resolve a Dispute (the Application) and attached documents, and

(b) Application to Admit Late Documents dated 18 December 2019.

Respondent

(a) Reply

Oral evidence

14. No application was made by either party to adduce oral evidence. No application was made by the respondent to cross-examine the applicant.

FINDINGS AND REASONS

Issue 1 – Did the applicant suffer injury to his cervical spine within the meaning of s 4 of the 1987 Act?

Background

15. The respondent manufactures and assembles steel frames at its premises at Chinderah for the housing and building industry.

16. On 20 April 2016, Mr Byrnes commenced employment with the respondent in the position of assembler/factory hand. Mr Byrnes' duties included assembling steel frames.

17. Mr Byrnes underwent a pre-employment medical examination by Dr Heng Chong at the request of the respondent on 24 March 2016. Dr Chong assessed Mr Byrnes to be medically suitable for employment in the proposed role subject to four monthly review by the general practitioner for the pre-existing condition of diabetes type one, which was diagnosed in 2004[3]. Dr Chong's report was issued by "JOBFIT" on 14 April 2016.

18. In 1997, Mr Byrnes suffered an injury to his neck whilst playing football when he was 16 years of age. While Mr Byrnes underwent scans of his cervical spine at Randwick Children's Hospital, he was not referred to a specialist for review. Mr Byrnes was provided with a neck collar on discharge, which he wore for about two weeks, and was reviewed by his general practitioner. Mr Byrnes said he made a full recovery from the neck injury.

19. In 2002 or 2003, Mr Byrnes moved to the Gold Coast. He worked for a large supermarket outlet at the Tweed Shopping Centre filling shelves; and from 2003 to 2011 he worked in sales in the car industry before obtaining work with a meat supplier. His role at the meat supplier was to pack and deliver meat to customers. He did this work from 2012 to 2014. Mr Byrnes next worked for a major electricity supplier, selling gas and electricity to business customers in Queensland. This job required him to drive to various locations in Queensland. He remained in this employment until November 2015. Mr Byrnes then took a few months off before commencing employment with the respondent.

Injury – 15 August 2016

20. Mr Byrnes was working with a co-worker at the respondent's premises at Chinderah moving galvanised steel wall frames in preparation for the framework of a house to be assembled.

21. Mr Byrnes suffered his injury about 6.30 am whilst lifting a rectangular galvanised steel wall frame, measuring approximately 3.5 metres in height and 6 metres in length and weighing approximately 100 kilograms, onto a table. Mr Byrnes was at one end of the frame and the co-worker was at the other end. The steel frame was lifted vertically onto its axis on the top of the table. Mr Byrnes left arm got caught under the frame as its was being laid flat onto the table.

22. Mr Byrnes described the mechanism of the injury as follows[4]:

> "As we moved the steel frame onto the table, my left arm got caught underneath the frame. The frame came down onto my left forearm and it then bounced up and I pulled my left arm out from underneath it and in so doing, felt pain in my left arm and in my neck at the time of the injury. I believe that the pain in my left arm was more severe. So at the time, I was focusing more on my left arm pain then what I was on my neck pain, but I can definitely recall suffering neck pain at the time."

23. The co-worker informed the team leader of Mr Byrnes' injury. Mr Byrnes was taken to the lunchroom where the team leader attempted to strap the left arm but was unable to do so because Mr Byrnes was in too much pain. The team leader told Mr Byrnes he should go to the doctors for treatment. Mr Byrnes decided to drive his automatic car to his home. His mother drove him to the Strand Medical Centre where he saw Dr Black. Mr Byrnes said Dr Black did not examine him or offer him medical treatment. Mr Byrnes' mother then drove him to the Tweed Heads Hospital where he said he reported the problems with his left elbow and left shoulder. He said he was more concerned with the pain in his left arm rather than his neck. Mr Byrnes said he was prescribed Endone for his pain and discharged about 1 pm the same day.

[3] Application – p 71
[4] applicant's statement – Application – p 41 at [16]

Post-injury medical treatment

24. On 18 August 2016, Mr Byrnes consulted his general practitioner, Dr Mohanu about the left shoulder and elbow condition. Dr Mohanu referred Mr Byrnes for an ultrasound of his left shoulder and left biceps.

25. In early September 2016, Mr Byrnes returned to work performing light duties for four hours per day. Mr Byrnes performed light duties until 16 March 2017 when he stopped work.

26. Mr Byrnes continued to consult Dr Mohanu for his left shoulder and left elbow pain.

27. Mr Byrnes alleges he was subjected to harassment and bullying in the workplace. The clinical records show Mr Byrnes first consulted Dr Mohanu for his psychiatric condition on 21 March 2017[5].

28. Dr Mohanu referred Mr Byrnes to Dr Adams, consultant neurologist.

29. On 13 February 2017, Dr Adams reported to Dr Mohanu that Mr Byrnes complained of pain around the left elbow with pins and needles and some numbness in the left ring and little fingers as well as pain over the left triceps brachii area[6].

30. Dr Mohanu referred Mr Byrnes to Dr Rando, orthopaedic surgeon, who specialises in shoulder, wrist and hand conditions, for review of his left arm problems.

31. On 31 August 2017, Dr Rando reviewed Mr Byrnes.

32. On 5 September 2017, Dr Rando reported to Dr Mohanu his findings on examination and his recommendation as to further investigations including a CT scan of the cervical spine "to rule out a disc prolapse that is most likely pinching on C7-C8 nerve roots"[7].

33. On 7 September 2017, Mr Byrnes underwent a CT scan of the cervical spine and an x-ray of the left elbow[8].

34. On 5 October 2017, Mr Byrnes was reviewed by Dr Mohanu

35. On 10 October 2017, Mr Byrnes consulted Dr Mohanu for "joint pain. Joint stiffness, Restricted movement. Back pain, and neck pain"[9]. Dr Mohanu referred Mr Byrnes to Dr McEntee, orthopaedic surgeon.

36. On 12 October 2017, Mr Byrnes underwent nerve conduction studies by Dr Maxwell[10].

37. On the same date, Mr Byrnes was reviewed by Dr McEntee.

38. On 13 October 2017, Dr McEntee reported to Dr Mohanu that he had reviewed the CT scan of the cervical spine showing multilevel cervical spondylosis and variable degrees of neural foraminal narrowing with some mild bilateral stenosis at C5/6, C6/7 and C7/T1, advising he would request an MRI scan of the cervical spine[11].

[5] Application – p 131
[6] report of Dr Adams dated 13 February 2017 – Application – p 272
[7] report of Dr Rando dated 5 September 2017 – Application – p 274
[8] CT report dated 7 September 2017 – Application – p 276
[9] Application – p 144
[10] Application – p 278
[11] report of Dr McEntee dated 13 October 2017 – Application – p 224

39. On 26 October 2017, Dr Rando reported to Dr Mohanu that Mr Byrnes had left shoulder bursitis and he would arrange a hydrocortisone injection; and that nerve condition studies of the left ulnar nerve revealed a motor delay just below the elbow, and an element of thoracic outlet syndrome[12].

40. On 2 November 2017, Dr Rando reviewed Mr Byrnes.

41. On 6 November 2017, Dr Rando reported to Dr Mohanu that the left shoulder was giving Mr Byrnes "quite significant troubles". Dr Rando was concerned Mr Byrnes may have developed a frozen shoulder[13]. Dr Rando said he would organise an MRI scan of the left shoulder to be undertaken before considering ulna nerve release surgery.

42. On 23 November 2017, Dr Rando, responding to a letter from the insurance scheme agent, reported[14]:

> "**1. Can you please details** [sic] **how the left shoulder impingement and bursitis are directly related to the compensable injury sustained on 15 August 2017** [sic]**?**
>
> This gentleman has developed impingement and bursitis and stiffness within his left shoulder following what was a hyperextension and traction injury to his left upper arm. He also had numbness on the medial border of the forearm, **which raised the possibility of a cervical spine or traction type injury** [emphasis not in original] to the brachial plexus and this would have caused an episode of immobilisation of the shoulder, stiffness and scarring, which is the cause of the bursitis and impingement. This is how it relates to the compensable injury sustained on 15 August 2017."

43. On 23 November 2017, Dr Rando reviewed Mr Byrnes.

44. On 5 December 2017, Dr Rando reported to Dr Mohanu that the MRI scan of the left shoulder showed no significant lesion; and the "working diagnosis" was scarring in the left shoulder and lack of mobilisation causing stiffness[15]. Dr Rando also advised that he had sought approval from the insurance scheme agent to perform a release and transpose of the left ulna nerve.

45. The insurance scheme agent approved the ulna nerve transposition and medial epicondylectomy proposed by Dr Rando in his request dated 9 January 2018[16].

46. On 15 January 2018, Mr Byrnes underwent a left ulna nerve transposition/medial epicondylectomy at the Gold Coast Private Hospital by Dr Rando[17].

47. On 23 May 2018, Mr Byrnes underwent an MRI scan of the cervical spine reported upon by the radiologist, Dr Burgin, as showing[18]:

> "At C5/C6 there is a posterior left paracentral annular tear and disc bulge but no disc protrusion. Mild degenerative changes are present at the unconvertebral joints but there is no evidence of foraminal stenosis or nerve root compression."

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[12] report of Dr Rando dated 26 October 2017 – Application – p 279
[13] report of Dr Rando dated 6 November 2017 – Application – p 280
[14] report of Dr Rando dated 23 November 2017 – Application – p 281
[15] report of Dr Rando dated 5 December 2017 – Application – p 283
[16] Application – p 284
[17] Application – p 285
[18] report of Dr Burgin dated 23 May 2018 – Application – p 182

48. On 2 July 2018, Dr McEntee reported to the insurance scheme agent that Mr Byrnes should undergo a CT guided left C6 nerve block[19].

49. On 23 July 2018, Dr McEntee reported upon the MRI scan to the insurance scheme agent as showing an annular tear and disc bulge to the left-hand side at C5/6, noting that bulge and protrusion are often used interchangeably, on the background of cervical spondylosis; recommending a CT guided left C6 nerve block, both as a diagnostic and potentially therapeutic procedure [20].

50. On 24 July 2018, the insurance scheme agent wrote to Dr McEntee advising approval had been given for a CT guided left C6 nerve block[21].

51. On 16 August 2018, an uncomplicated CT guided left C6 nerve root block was performed by Dr Edwards[22].

52. On 28 November 2018, Dr McEntee wrote to the insurance scheme agent requesting that the ongoing symptoms of left C6 radiculopathy should be investigated further by an EMG and nerve conduction studies[23].

53. On 11 December 2018, the insurance scheme agent wrote to Dr McEntee advising that the request for an EMG of the cervical spine and nerve conduction studies had been approved[24].

54. On 9 January 2019, EMG and nerve conduction studies were reported upon by Dr Bonev, neurologist, as: "findings are consistent with chronic, low grade neurogenic denervation in the left C6 myotome"[25].

55. On 29 January 2019, Dr McEntee wrote to the insurance scheme agent requesting that Mr Byrnes undergo an up to date MRI scan of his cervical spine to assess possible surgical intervention at the C5/6 level because the EMG nerve conduction test confirmed left C6 radiculopathy[26].

56. On 5 February 2019, the insurance scheme agent wrote to Dr McEntee advising approval of the cervical MRI scan[27].

57. On 5 March 2019, MRI scan of the cervical spine was undertaken.

58. The radiologist, Dr Napper, reported upon the MRI scan[28]:

> "**C5/6** [emphasis in original]
> Left paracentral annular fissure with associated shallow disc protrusion minimally indenting the thecal sac. No associated canal or foraminal stenosis. The fact joints are normal.
> …

[19] report of Dr McEntee dated 2 July 2018 – Application – p 184
[20] report of Dr McEntee dated 23 July 2018 – Application – p 161
[21] Application – p 188
[22] report of Dr Edwards dated 16 August 2018 – Application – p 191
[23] report of Dr McEntee dated 28 November 2018 – Application – p 193
[24] Application – p 196
[25] report of Dr Bonev dated 9 January 2019 – Application – pp 197-198
[26] report of Dr McEntee dated 29 January 2019 – Application – p 200
[27] Application – p 202
[28] report of Dr Napper dated 5 March 2019 – Application – pp 203-204

Comment

The present radiculopathy is likely related to irritation of the left C6 nerve root at the C5/C disc level given the left paracentral annular fissure visible. No site for potential neural compression has been identified [emphasis in original]."

59. On 9 April 2019, Dr McEntee wrote to the insurance scheme agent seeking approval for surgical intervention in the form of a C5/6 cervical total disc replacement[29].

60. Liability for the proposed cervical surgery was declined by the respondent when the insurance scheme agent issued the s 78 notice dated 30 April 2019.

Submissions

61. I do not propose to set out fully the submissions of counsel other than to refer to relevant submissions because a sound recording was made of the arbitration hearing.

Applicant

62. Mr Baran submitted the injury to the left arm was a "significant injury" which deteriorated over a period of time consistent with the "alarming nature of the left arm injury", and that the focus of the medical treatment was on the left arm condition.

63. Mr Baran submitted that Mr Byrnes complained to Dr Mohanu about his neck pain on 10 October 2017[30], and that he was referred to Dr McEntee who took a "closer look at the neck because the primary focus had been on the upper limb".

64. Mr Baran, referring to Dr McEntee's report dated 23 July 2018[31] and the doctor's observations of the MRI scan taken on 23 May 2018[32], submitted the imaging showed an annular tear and disc bulge to the left hand side at C5/6, noting that Dr McEntee said: "bulge and protrusion are often used interchangeably", and while there was underlying degenerative changes (spondylosis) Dr Mc Entee opined:

> "he may well have injured the left hand side of his C5-6 disc at the time of his work injury and sustained an annular tear and disc bulge which is potentially responsible for his ongoing left arm symptoms".

65. In respect of causation of the injury to the cervical spine as a result of the injury, Mr Baran submitted that McEntee addressed the causation issue in response to the following question from the insurance scheme agent[33]:

> "**6. Please advise if bilateral stenosis at C5-6, C6-7 and C7-T1 is constitutional in nature or 'trying to stop a wall frame from falling and over extended his arm causing an injury and elbow pain' dated 15 August 2016. Please also not in the MRI report dated 23 May 2018 that there is 'no evidence of foraminal stenosis or nerve root compression'.** [emphasis in original]

[29] report of Dr McEntee dated 9 April 2019 – Application – p 210
[30] clinical records – Strand Medical Centre – Application – p 144
[31] Application – p 161
[32] Application – p 182
[33] report of Dr McEntee dated 23 July 2018 – Application – p 162

> The underlying degenerative changes and stenosis are constitutional in nature, however, was noted above, the C5-6 annular tear and disc bulge may well relate to his work injury. I note your comments regard the MRI report but comment that actual nerve compression is not required to cause radicular pain which is often an inflammatory phenomenon and certainly seen when an annular tear occurs near a nerve root."

66. Mr Baran submitted there was no evidence other than Mr Byrnes being "a hard working person capable of undertaking heavy work prior to his injury", supported by his pre-employment medical examination undertaken at the request of the respondent.

67. Mr Baran submitted the insurance scheme agent approved Dr McEntee's request for CT guided left C nerve block, which was performed on 16 August 2018[34].

68. Mr Baran submitted on the basis of the *Koorgang* principle[35], Mr Byrnes has established on the balance of probabilities on a commonsense evaluation, the causal link or connection between the cervical disc pathology as revealed by the MRI scan and the injury.

69. Mr Baran, in support of his submission on the question of causation, referred to following evidence:

    (a) report of Dr McEntee dated 29 June 2018[36];
    (b) report of Dr McEntee dated 25 January 2019[37];
    (c) report of Dr McEntee dated 26 March 2019[38], and
    (d) report of Dr McEntee dated 9 October 2019[39]

70. Mr Baran submitted the applicant's independent medical examiner, Dr Machart, found Mr Byrnes suffered a "complex injury to the left arm"[40]; and the reasoning provided by Dr McEntee of "cervical C6 radiculopathy is objectively sound, although clinically difficult to confirm".

71. Mr Baran further submitted Dr Machart acknowledged on the question of causation of injury:

> "It is plausible that the type of injury he sustained, traction injury to the arm, stretched the cervical area in addition to the more obvious injuries at the time of, forearm, elbow, ulnar nerve, and shoulder."[41]

72. Mr Baran further submitted that the "obvious treatment was for the arm and it was not obvious what had happened to the cervical spine" until confirmed by the various investigations and Dr McEntee's clinical findings.

73. Mr Baran further submitted Dr Machart supports Dr McEntee's opinion that the injury caused the pathology in the cervical spine[42].

74. Mr Baran further submitted that Dr Machart's opinion on the question of causation of the cervical spine pathology as a result of the injury is the same as Dr McEntee's opinion[43].

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[34] Application – p 191
[35] *Kooragang Cement Pty Ltd v Bates* (1994) 35 NSWLR 452 at pp 463-464 (*Kooragang*)
[36] Application – p 233
[37] Application – p 241
[38] Application – p 242
[39] Application – pp 314-321
[40] report of Dr Machart dated 8 October 2019 – Application – pp 303-313 at p 307
[41] Supra
[42] supra at p 309 – cl (xii)(b)
[43] supra at p 312 – cl (xxiii)

75. Mr Baran submitted that the Commission would prefer Dr McEntee's opinion on the question of causation, supported by Dr Machart, to Dr Cochrane's opinion because he saw him on only one occasion whereas Dr McEntee is the treating surgeon who examined Mr Byrnes on numerous occasions.

76. In respect of whether the proposed cervical spine surgery is reasonably necessary as a result of injury, Mr Baran submitted Dr McEntee's opinion, supported by Dr Machart, fulfils the criteria of s 60 as required by the authorities and distilled by Deputy President Roche in *Diab v NRMA Ltd* (*Diab*)[44].

77. Mr Baran submitted that Mr Byrnes has discharged his onus on the balance of probabilities that the proposed cervical spine surgery recommended by McEntee is reasonably necessary as a result of injury within the meaning of s 60 of the 1987 Act.

Respondent

78. Mr Halligan submitted the respondent disputes Mr Byrnes suffered an injury to his cervical spine as a result of the event or incident on 15 August 2016.

79. Mr Halligan submitted that no recorded complaint about the neck was made at the Tweed Heads Hospital.

80. Mr Halligan submitted Mr Byrnes consulted the Strand Medical Centre on a number of occasions from 15 August 2016 but it was not until 10 October 2017 that the first recorded complaint about the neck appears, and on that occasion the complaint was about musculo-skeletal joint pain, joint stiffness, restricted movement, back pain and neck pain[45].

81. Mr Halligan submitted that Mr Byrnes consulted Dr Black on the day of the injury, but there is no reference in the clinical notes of complaint about the neck[46].

82. Mr Halligan, in support of his submission that the first recorded complaint about neck pain was not until 10 October 2017, referred to a number of entries in the clinical notes between 15 August 2016 and 10 October 2017.

83. Mr Halligan submitted that whilst Mr Byrnes consulted Dr Mohanu on 11 October 2017 about joint pain, there is no record of him complaining about neck pain.

84. Mr Halligan submitted the comment made by Dr Rando in his report dated 1 May 2018[47] that the pain on the lateral aspect of the left arm following the ulnar nerve type decompression in the C5/6 and C7 distribution may or may not be coming from the cervical spine is not convincing that it emanates from the cervical spine.

85. Mr Halligan submitted that Dr McEntee provided his opinion on the basis of a possibility that Mr Byrnes sustained an injury to the C5/6 disc at the time of the work injury[48].

86. Mr Halligan submitted that Dr McEntee cannot have an opinion "both ways" as to causation of injury to the cervical spine.

87. Mr Halligan submitted that Dr Machart found it difficult on clinical grounds to assign neurological symptoms in the left arm to a cervical disc lesion[49].

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[44] [214] NSWWCCPD 72 at [76]-[90]
[45] clinical records of Strand Medical Centre – Application – p 144
[46] supra – p 93
[47] Application – p 292
[48] report of Dr McEntee dated 23 July 2018 – Application – p 162 at paragraph 7
[49] report of Dr Machart dated 8 October 2019 – Application – p 307

88. Mr Halligan submitted that Dr Machart put a "caveat" on the reasons provided by Dr McEntee when he said: "it is difficult to assign the neurology to a cervical disc lesion".

89. Mr Halligan submitted Dr Machart's statement that it is plausible that the type of injury stretched the cervical spine does not establish injury on the balance of probabilities; it is nothing more than a possibility.

90. Mr Halligan, referring to the MRI scan of the cervical spine taken on 23 May 2018[50], submitted the radiologist reported an annular tear and a disc bulge with mild degenerative changes present but did not report there was a disc protrusion.

91. Mr Halligan submitted that Dr McEntee places too much emphasis that there is an annular tear at the C5/6 level when seeking permission for cervical surgery.

92. Mr Halligan submitted that the radiologist reported there was no evidence of cervical spine stenosis or nerve root compromise.

93. Mr Halligan submitted that whilst Dr Cochrane only saw Mr Byrnes on one occasion for assessment; his opinion should not be disregarded when Mr Byrnes saw his general practitioners on many occasions between 15 August 2016 and 10 October 2017 and made no complaint about neck pain.

94. Mr Halligan submitted the failure by Mr Byrnes to complain to his general practitioners about neck pain until 10 October 2017 favours the respondent's case.

95. Mr Halligan submitted "it is hardly a glowing reference" when Dr Machart commented: "there is nothing wrong with the operation proposed"[51].

96. Mr Halligan submitted that based upon review of the clinical records of the general practitioners and the lack of medical plan it is a "long bow to conclude there is a temporal connection with the accident and the diagnosis of neck pain emanating from arm pain when the first presentation about neck pain was so long after the accident".

97. Mr Halligan submitted that Dr McEntee based his opinion on a history of neck pain at the time of the event which is not supported by any recorded complaint until 10 October 2017.

98. Mr Halligan submitted that Dr McEntee's reasons for the proposed surgery are not compelling when compared with the opinion of Dr Machart.

Applicant's submissions in reply

99. Mr Baran submitted that the height of the respondent's submissions is the lack of recorded complaint about neck pain at the Tweed Heads Hospital and to the general practitioners.

100. Mr Baran submitted that care needs to be exercised when reading the clinical notes and records of busy general practitioners.

101. Mr Baran submitted there is nothing unusual about symptoms of an injury coming on slowly when the entire medical process was focused for some time upon the significant injury to the left arm.

102. Mr Baran submitted Dr Rando, who is an upper limb specialist, identified numbness in the medial border of the forearm, raising the possibility of a disc prolapse of the cervical spine and arranging for a cervical CT scan to be undertaken.

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[50] Application – p 186

[51] report of Dr Machart dated 8 October 2019 – Application – p 310 at cl (i)

103. Mr Baran submitted that while Dr Rando used the words “may or may not be coming from the cervical spine”, he does not say the symptoms in the left arm were not caused by the cervical disc pathology result.

104. Mr Baran submitted the opinion of Dr Cochrane that the radiological findings are more likely coincidental and degenerative is “non-sensical”.
105. Mr Baran submitted that Mr Byrnes alleges Dr Black did not examine him[52].

106. Mr Baran submitted there is no evidence from the respondent that the injury to the cervical spine did not occur.

Findings

107. I accept Mr Byrnes’ evidence that he made a full recovery from the neck injury whilst playing football when he was 16 years of age evidenced by the physical activities he undertook working at the supermarket, the meat words and with the respondent before suffering his injury as well as the pre-employment medical examination by Dr Chong.

108. I agree with Mr Baran’s submission that Mr Byrnes was a “hard working person capable of undertaking heavy work prior to his injury”, which required him to lift heavy steel frames.

109. I also agree with Mr Baran’s submission that Mr Byrnes suffered a significant injury to his left upper extremity; and that the focus of medical treatment was the investigation of the cause of pain and discomfort in the shoulder, arm and elbow resulting in referral to Dr Rando by Dr Mohanu.

110. Dr Rando acknowledged there was a complex history involving a “hypertension and traction type injury” of the left upper arm. Dr Rando’s initial diagnosis was ulnar nerve compression, but the nerve conduction studies were not consistent with a “definite compression at the elbow, rather than possible neuropraxia”, and shoulder pain, subsequently diagnosed as bursitis.

111. Significantly, in my view, Dr Rando’s clinical examination revealed “some numbness in the medial border of the forearm” which raised, in his opinion, the possibility there was a disc prolapse in the cervical spine, recommending a cervical CT scan.

112. Dr Rando commented that he was perplexed as to how long it had taken for Mr Byrnes to be referred for management of his problems. Mr Byrnes was not referred to Dr Rando by Dr Mohanu until 17 August 2017[53], a year after continual complaints about his left upper extremity following the injury.

113. I am satisfied on balance that the symptoms of radiculopathy in the left arm was not clinically identified until the examination by Dr Rando on 31 August 2017 because the focus of the treatment by Dr Mohanu had been on the left elbow. It was Dr Rando who referred Mr Byrnes for cervical spine CT scan “to rule out a disc prolapse that is most likely pinching on C7-C8 nerve roots”.

114. Dr Rando’s clinical findings of “some numbness in the medial border of the forearm”, raising the possibility of a cervical spine prolapse, is consistent, in my view, with Dr Adams recorded complaint of “pins and needles and some numbness for the left ring and little fingers” following the incident[54].

115. The cervical CT scan was undertaken on 7 September 2017.

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[52] applicant’s statement – Application – p 41 at paragraph 18
[53] Application – p 142
[54] Report of Dr Adams dated 13 February 2017 – Application – p 272

116. The radiologist reported upon the CT scan as follows[55]:

> "**C5/6:** [emphasis in original) There is mild bilateral uncinate process hypertrophy. There is bilateral mild to moderate exit foraminal stenosis. No significant can stenosis. Mild fact joint degenerative change."

117. It appears the focus of Dr Rando's management of the left arm and elbow complaints in his role as a shoulder, wrist and hand specialist with Mr Byrnes coming to surgery on 15 January 2018 in the form of left ulna nerve transposition/medial epicondylectomy.

118. I agree with Mr Baran's submission that it was not until Mr Byrnes was examined by Dr McEntee on referral from Dr Mohanu that the cervical spine was considered as the cause of radicular symptoms in the left arm as a result of injury.

119. The history of radiation of pain down the left forearm and associated numbness and pins and needles in the ring little finger of the left hand taken by McEntee at his consultation on 13 October 2017 is consistent, in my view, with the histories taken by Drs Adams and Rando.

120. Dr McEntee referred Mr Byrnes for MRI scan of his cervical "to assess more closely for any obvious neural compression" because he suspected "his pain is discogenic"[56].

121. It was not until 23 May 2018, Mr Byrnes underwent an MRI scan of the cervical spine, reported upon by the radiologist as showing[57]:

> "At C5/C6 there is a posterior left paracentral annular tear and disc bulge but no disc protrusion. Mild degenerative changes are present at the unconvertebral joints but there is no evidence of foraminal stenosis or nerve root compression."

122. Dr McEntee did not see Mr Byrnes again until 29 June 2018, reporting to Dr Mohanu that Mr Byrnes was making good progress since the ulna release by Dr Rando but was "still having a lot pain down his left arm, however, in the C6 distribution"[58].

123. Dr McEntee reported that the MRI scan showed an annular tear and disc bulge to the left hand side at C5/6 abutting the left C6 nerve but not compressing it.

124. Approval was given by the insurance scheme agent to Dr McEntee for a CT guided left C6 nerve block, which was undertaken by Dr Edwards on 16 August 2018.

125. The insurance scheme agent gave further approval for an EMG to be carried, which was done on 9 January 2019 and reported upon by Dr Bonev, neurologist: "findings are consistent with chronic, low grade neurogenic denervation in the left C6 myotome"[59].

126. Dr McEntee wrote to the insurance scheme agent on 29 January 2019 advising that the EMG and nerve conduction study confirmed left C6 radiculopathy pointing to the neck as the cause of the ongoing symptoms[60]; requesting an updated MRI scan of the cervical spine.

127. The insurance scheme agent approved the cervical MRI scan, which was undertaken on 5 March 2019.

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[55] Application – p 276
[56] report of Dr McEntee dated 13 October 2017 – Application – p 225
[57] Application – p 182
[58] report of Dr McIntee dated 29 June 2018 – Application – p 233
[59] supra – footnote 25
[60] supra – footnote 26

128. The radiologist reported upon the MRI scan[61]:

> "**Comment**
>
> **The present radiculopathy is likely related to irritation of the left C6 nerve root at the C5/6 disc level given the left paracentral annular fissure visible. No site for potential neural compression has been identified** [emphasis in original]."

129. Dr McEntee wrote to the insurance scheme agent on 9 April 2019 seeking approval for surgical intervention in the form of a C5/6 cervical total disc replacement because of the chronicity and severity of symptoms and their failure to improve over a two and half year period[62].

130. I am satisfied on balance that while clinical examinations by Drs Adams, Rando and McEntee showed radicular symptoms into the left arm, it was not until the investigations were undertaken at the request of Dr McEntee that the pathology in the cervical spine at the C5/6 level was identified as the cause of the radicular symptoms.

131. Dr Cochrane examined Mr Byrnes at the request of the respondent on 23 July 2019. Dr Cochrane found symptoms radiating down the triceps and forearm, which would be suggestive of C7 radicular pain but unconfirmed radiologically, with no convincing evidence of any C6 radiculopathy[63].

132. I prefer the clinical findings of radicular symptoms in the left arm of Drs Adams, Rando, Bonev and McEntee to the clinical findings of Dr Cochrane because their findings were confirmed by the EMG showing "chronic, low grade neurogenic denervation in the left C6 myotome"; and the radiologist reporting upon the latest MRI scan that the radiculopathy is likely related to irritation of the left C6 nerve root at the C5/6 level. Dr Cochrane acknowledged the EMG study may relate to the presence of C5/6 annular fissure radiologically but could not "tie this to the workplace incident".

133. While Dr Machart found his examination difficult to interpret and localise it to C6 nerve root and compression by the C5/6 pathology, he found the reasoning of Dr McEntee's analysis of the pathology as "fairly compelling evidence" because Dr McEntee had the advantage of seeing Mr Byrnes on several occasions rather than assessing him once as was the case with himself and Dr Cochrane[64].

134. While the radiologists have reported the MRI investigations not showing a disc protrusion at the C5/6 level of the cervical spine, an annular tear and disc bulge to the left hand side at this level was confirmed. Dr McEntee noted the term bulge and protrusion are often used interchangeably[65], and that actual nerve compression is not required to cause radicular pain, which is often an inflammatory phenomenon one and certainly seen when an annular tear occurs near a nerve root. The special investigations confirmed the annular tear and disc bulge to the left hand side at the C5/6 level abutting the left C6 nerve root but not compressing it.

135. While there is a lack of recorded complaint about neck pain until 10 October 2017, I am satisfied on balance that Mr Byrnes suffered with significant symptoms in the left arm, and that the focus of medical treatment was in that area resulting in the left ulna nerve transposition/medial epicondylectomy procedure by Dr Rando on 15 January 2018.

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[61] supra – footnote 28
[62] supra – footnote 59
[63] report of Dr Cochrane dated 21 August 2019 – Reply – p 25
[64] Application – p 312
[65] Application – p 161

136. I am also satisfied that the radicular symptoms in the left arm were not identified until Dr Rando's examination with further delay in their investigation by Dr McEntee until after the ulna nerve transposition and epicondylectomy procedure had been undertaken by Dr Rando.

137. I agree with Dr Machart's comment that the history provided by Dr Cochrane as to the mechanism of the injury is not the same as the one obtained by him. The history of the mechanism of the injury obtained by Dr Machart is consistent with the history recorded by Dr McEntee of a hyperextension injury to the left elbow. Nevertheless, the history of forcibly pulling the left elbow free from under the frame as recorded by Dr Cochrane would result in a traction type injury.

138. The unchallenged evidence of Mr Byrnes as to the mechanism of the injury of the frame coming down on his left forearm and bouncing up enabling him to pull his arm out from underneath it supports Dr Machart's opinion that it is plausible he suffered a traction injury to the arm and stretched the cervical spine.

139. While Mr Halligan was critical of Dr Machart's conclusions on the questions of causation and whether the proposed cervical surgery is reasonably necessary as a result of injury, in my view, the documents and medical reports provided to him, together with the history of the injury and his findings on examination, represent a fair climate[66] for the opinions expressed in his report.

140. While Drs McEntee and Machart have proffered their opinions on the hypothesis of a possibility that the mechanism of the injury caused the disc pathology at the left C5/6 level of the cervical spine, a tribunal of fact can determine a scenario regarded by expert medical witnesses as being possible to be made out on the balance of probabilities having regard to the whole of the evidence[67].

141. The question of causation in common law and workers compensation legislation is a "commonsense test"[68].

142. I am satisfied on a commonsense evaluation of the causal chain that the pathology at the C5/6 level of the cervical spine with symptoms of radiculopathy down the left arm is the result of injurious event or incident in the course of employment with the respondent on 15 August 2016.

143. I find on the balance of probabilities that Mr Byrnes suffered a personal injury to his left upper extremity and cervical spine as a result of injury in the course of employment with the respondent on 15 August 2016 within the meaning of s 4 of the 1987 Act.

Issue 2 – Was the employment concerned a substantial contributing factor to the injury within the meaning of s 9A of the 1987 Act?

144. The parties made no submission on the disputed issue whether the employment concerned was a substantial contributing factor to the injury within the meaning of s 9A of the 1987 Act because the proceedings were conducted on the basis of injury within the meaning of s 4 of the 1987 Act.

145. Section 9A involves a "causative element", given the requirement that the "employment concerned" be a substantial contributing factor to the injury. That causal connection, having regard to the presence of the word "substantial", is one that is "real and of substance"[69]. [81]).

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[66] *Paric v John Holland Constructions Pty Ltd* [1984] 2 NSWLR 50-5 at 509-510
[67] *Tubemakers of Australia Limited v Fernandez* (1975) ALJR 720
[68] *Korragang*; *March v Stramare (E & MH) Pty Ltd* (1991) 171 CLR 506 and *Sarkis v Summitt Broadway Pty Ltd t/as Sydney City Mitsubishi* [2006] NSWCA 358
[69] *Badawi v Nexon Asia Pacific Pty Ltd t/as Commander Australia Pty Ltd* [2009] NSWCA 324 at [80]-[81] (*Badawi*);

146. In the present case, as in *Badawi*, the injury arose in the course of employment and the only question for determination is, as stated by Basten JA in *Badawi* (at [114], the "nature of the causal connection".
147. The task that I am required to do is to evaluate the linkage between the employment and the injury[70].

148. Deputy President O'Grady in *Taylor* reviewed the authorities and at [53] said: "The authorities establish that the test imposed by s 9A is intended to be more stringent than the test or standard created by reference to the concept of the injury arising "out of" employment (s 4)."

149. The court in *Badawi* summarised a number of propositions distilled from *Mercer v ANZ Banking Group Ltd*[71][2000] NSWCA 138; 48 NSWLR 740 at [48]:

> "(1) The strength of the causal linkage between the employment concerned and the injury is the question in issue: *Heavy Lift (PNG) Ltd v Etherington* [2005] NSWCA 42; (2005) 2 DDCR 271 at [106] per McColl JA (Mason P and Beazley JA agreeing).
>
> (2) The fact of the injury arising out or [sic – of) in the course of employment is relevant but not determinative of itself: *Chubb Security Australia Pty Ltd v Trevarrow* [2004] NSWCS 344; (2004) 5 DDCR 1 at [36] per Santow JA (Beazley and Ipp JAA agreeing).
>
> (3) Both s 4 and s 9A require independent satisfaction: *McMahon v Lagana (t/as the Vessel Nimble II)* [2004] NSWCA 164; (2004) 4 DDCR 348 at [25] and [33] per Hodgson JA (Santow JA and Stein AJA agreeing) and *Larson v Commissioner of Police* [2004] NSWCA 126; (2004) 3 DDCR 365 at [38] per Tobias JA (Mason P and Santow JA agreeing).
>
> (4) Section 9A requires that the employment concerned be 'a substantial contributing factor to the injury'. The use of the indefinite article admits of the possibility of other and possibly non-employment related substantial contributing factors: *Department of Education and Training v Sinclair* [2005] NSWCA 465; (2005) 4 DDCR 206 at [49] per Spigelman CJ (Hodgson and Bryson JJA agreeing); and *Dayton* at [22] per Giles JA.
>
> (5) Although the strength of the linkage between the employment and the injury is the question in issue, the determination is an evaluative one, leaving a broad area for the personal judgment of the trial judge: *Hevi Lift* at [105] – [106] per McColl JA (Mason P and Beazley JA agreeing).
>
> (6) Being an evaluative matter involving questions of impression and degree, a finding as to relative contributing factors is a finding of fact: *Haider v JP Morgan Holdings Aust Ltd (t/as JP Morgan Operations Australia Ltd)* [2007] NSWCA 158; (2007) 4 DDCR 634 at [56] per Basten JA (Gilles and McColl JJA agreeing); *WorkCover Authority (NSW) v Walsh* [2004] NSWCA 186 at [99]; *McMahon v Lagana* at [32] per Hodgson JA (Santow JA and Stein AJA agreeing); *Dayton* at [22] per Giles JA and *Murray v Shillingsworth* [2006] NSWCA 367; (2006) 68 NSWLR 451; 4 DDCR 313; (2006) 4 DDCR 313 at [65] per Einstein J.

[70] *Taylor v PJM Building Management Pty Limited* [2013] NSWWCCPD 52 (*Taylor*); cited with approval by Roche DP in *Super Retail Group Services Pty Ltd v Uelese* [2016] NSWWCCPD 4 (*Uelese*)
[71] [2000] NSWCA 138; 48 NSWLR 740 at [48]

(7) The phrase 'employment concerned' in s 9A(1) bears the same meaning as 'employment' in the phrase 'arising out of or in the course of employment': *Mercer* at [13] and *Federal Broom* at 632 – 633 We agree."

150. I find on balance that the casual connection between the employment concerned (the task which Mr Byrnes was performing at the time of his injury) and the injury was "real and of substance".

151. I find on the balance of probabilities that the employment concerned was a substantial contributing factor to the injury to the left upper extremity and cervical spine within the meaning of s 9A of the 1987 Act.

Issue 3 – Is the proposed surgery in the form of a total disc replacement at the C5/6 level of the cervical spine reasonably necessary medical and related treatment as a result of injury within the meaning of s 60 of the 1987 Act?

152. The relevant parts of s 60 of the 1987 Act are set out as follows:

"60 (1) If, as a result of an injury received by a worker, it is reasonably necessary that:

(a) any medical or related treatment (other than domestic assistance) be given; or
(b) any hospital treatment be given; or
(c) any ambulance service be provided; or
(d) any workplace rehabilitation service be provided,

the worker's employer is liable to pay, in addition to any other compensation under this Act, the cost of that treatment or service and the related travel expenses specified in subsection (2)."

153. Deputy President Roche *in Bielecki v Rianthelle Pty Ltd t/as Belfora*[72] (*Bielecki*) found that for a worker to establish liability under s 60 three conditions must be satisfied:

(a) that the worker received an injury to which employment was a substantial contributing factor;

(b) that the treatment or expense was as a result of that injury, and

(c) that the treatment was reasonably necessary.

154. *Bielecki* was decided before the introduction of s 60(5) which is set out as follows:

"60(5) The jurisdiction of the Commission with respect to a dispute about compensation payable under this section extends to a dispute concerning any proposed treatment or service and the compensation that will be payable under this section in respect of any such proposed treatment or service. Any such dispute may be referred by the Registrar for assessment under Part & (Medical assessment) of Chapter 7 of the 1998 Act."

[72] [2008] NSWWCCPD 53 at [18]-[21]

155. In *Bartolo v Western Sydney Area Health Service*[73] Burke CCJ considered the meaning of the words "reasonably necessary" in s 60(1). His Honour at p 238 said:

> "… should the patient have this treatment or not. If it is better that he have it, then it is necessary and should not be forborne. If in reason it should be said that the patient should not do without this treatment, then it satisfies the test of being reasonably necessary."

156. In *Rose v Health Commission (NSW)*[74] (*Rose*) Burke CCJ said:

> "…
>
> 3. Any necessity for relevant treatment results from the injury where its purpose and potential effect is to alleviate the consequences of injury.
>
> 4. It is reasonably necessary that such treatment be afforded a worker if this Court concludes, exercising prudence, sound judgment and good sense, that it is so. That involves the Court deciding, on the facts as it finds them, that the particular treatment is essential to, should be afforded to, and should not be forborne by, the worker.
>
> 5. In so deciding, the Court will have regard to medical opinion as to the relevance and appropriateness of the particular treatment, any available alternative treatment, the cost factor, the actual or potential effectiveness of the treatment and its place in the usual medical armoury of treatments for the particular condition."

157. In *Diab v NRMA*[75] (*Diab*) Deputy President Roach considered the meaning of the phrase "reasonably necessary":

> "80. The Court of Appeal considered the meaning of 'reasonably necessary' in *Clampett v WorkCover Authority (NSW)* [2003] NSWCA 52; (2003) 25 NSWCCR 99 (*Clampett*). That case concerned whether proposed home modifications for a paraplegic were 'reasonably necessary' having regard to the nature of the worker's incapacity. Grove J (Meagher and Santow JJA agreeing) noted that the trial judge had sought guidance from *Rose* and *Pelama Pty Ltd v Blake* [1988] NSWCC 6; (1988) 4 NSWCCR 264 (*Pelama*), another decision by Burke CCJ where his Honour applied the principles discussed in *Rose* and *Bartolo*.
>
> 81. Grove J referred to the dictionary definition of 'necessary' as being 'indispensable, requisite, needful, that cannot be done without' (Shorter Oxford English Dictionary, 3rd ed) and 'that cannot be dispensed with' (Macquarie Dictionary).

[73] [1997] NSWCC 1
[74] [1986] NSWCC 2
[75] [2014] NSWWCCPD AT [80]-[90]

82 His Honour added, at [23]-[24]:

> '23. The essential issue is what effect flows from conditioning such qualities as "reasonably". The consequence is to moderate any sense of the absolute which might otherwise be conveyed by the word "necessary" if it stood alone. In order to contemplate such moderation it is apt to consider surrounding circumstances, but the question to be addressed is whether modification of a worker's home, having regard to the nature of the worker's incapacity, is reasonably necessary. In contemplation of what might be "reasonably necessary" there is this statutory obligation specifically to have regard to the nature of the worker's incapacity. It provides emphasis towards moderating the meaning of "necessary" in this context.
>
> 24. The statute does not inhibit inquiry as to what may be thought reasonable in all, or in any particular, circumstances but its terms clearly point to predominant attention being paid to the nature of the worker's incapacity. In my opinion, to reject the appellant's proposal on the basis that expenditure is to be made on premises of which he is a weekly tenant is an elevation rather than a moderation of the meaning of "necessary".'

83. It is important to remember that Grove J's reference in the above passages was in the context of a claim for home modifications under s 59(g). That subsection is restricted to claims for modification of the worker's home or vehicle directed by a medical practitioner 'having regard to the nature of the worker's incapacity' (emphasis added). Apart from s 59(f), which deals with care (other than nursing care), there is no such restriction in the other subsections in s 59.

84. In *Wall v Moran Hospitals Pty Ltd t/as Annandale Nursing Home*, Burke CCJ, unreported, Compensation Court of NSW, 30 June 2003, Burke CCJ acknowledged (at [10]) that, contrary to *Rose* and *Pelama*, *Clampett* held that the word 'reasonably' was 'effectively used as a diminutive and moderated the effects of the word 'necessary'.

85. The approach in *Clampett* is consistent with the modern approach to statutory interpretation, which is to construe the language of the statute, not individual words (*Sea Shepherd Australia Limited v Commissioner of Taxation* [2013] FCAFC 68 per Gordon J (Besanko J agreeing)). Thus, 'reasonably necessary' is a composite phrase in which necessity is qualified so that it must be a reasonable necessity (Giles JA (Campbell JA agreeing) in *ING Bank (Australia) Ltd v O'Shea* [2010] NSWCA 71 at [48] (*O'Shea*)). The Court, Bathurst CJ, Beazley and Meagher JJA, followed this approach in *Moorebank Recyclers Pty Ltd v Tanlane Pty Ltd* [2012] NSWCA 445 at [113] (*Moorebank*).

86. Reasonably necessary does not mean 'absolutely necessary' (*Moorebank* at [154]). If something is 'necessary', in the sense of indispensable, it will be 'reasonably necessary'. That is because reasonably necessary is a lesser requirement than 'necessary'. Depending on the circumstances, a range of different treatments may qualify as 'reasonably necessary' and a worker only has to establish that the treatment claimed is one of those treatments. A worker certainly does not have to establish that the treatment is 'reasonable and necessary', which is a significantly more demanding test that many insurers and doctors apply. Dr Bodel and Dr Meakin were both wrong to apply that test.

87. Giles JA added (at [49] in *O'Shea*) that the qualification whereby the necessity must be reasonable calls for an assessment of the necessity having regard to all relevant matters, according to the criteria of reasonableness. His Honour was talking in the context of whether an easement should be granted under s 88K of the *Conveyancing Act* 1919, which provides that 'the Court may make an order imposing an easement over land if the easement is reasonably necessary for the effective use or development of other land that will have the benefit of the easement'. However, his Honour's observations are applicable in the present matter and are clearly consistent with *Clampett*.

88. In the context of s 60, the relevant matters, according to the criteria of reasonableness, include, but are not necessarily limited to, the matters noted by Burke CCJ at point (5) in *Rose* (see [76] above), namely:

    (a) the appropriateness of the particular treatment;
    (b) the availability of alternative treatment, and its potential effectiveness;
    (c) the cost of the treatment;
    (d) the actual or potential effectiveness of the treatment, and
    (e) the acceptance by medical experts of the treatment as being appropriate and likely to be effective.

89. With respect to point (d), it should be noted that while the effectiveness of the treatment is relevant to whether the treatment was reasonably necessary, it is certainly not determinative. The evidence may show that the same outcome could be achieved by a different treatment, but at a much lower cost. Similarly, bearing in mind that all treatment, especially surgery, carries a risk of a less than ideal result, a poor outcome does not necessarily mean that the treatment was not reasonably necessary. As always, each case will depend on its facts.

90. While the above matters are 'useful heads for consideration', the 'essential question remains whether the treatment was reasonably necessary' (*Margaroff v Cordon Bleu Cookware Pty Ltd* [1997] NSWCC 13; (1997) 15 NSWCCR 204 at 208C). Thus, it is not simply a matter of asking, as was suggested in *Bartolo*, is it better that the worker have the treatment or not. As noted by French CJ and Gummow J at [58] in *Spencer v Commonwealth of Australia* [2010] HCA 28, when dealing with how the expression 'no reasonable prospect' should be understood, '[n]o paraphrase of the expression can be adopted as a sufficient explanation of its operation, let alone definition of its content'."

158. Mr Byrnes relies upon the opinions of Drs McEntee and Machart expressed in their reports dated 9 October 2019[76] and 8 October 2019[77] respectively as fulling the principles of *Rose* and *Diab.* Drs McEntee and Machart responded to questions asked of them by Mr Byrnes' solicitor as to the criteria referred to in *Rose* and *Diab* to establish the proposed surgery is reasonably necessary as a result of injury within the meaning of s 60 of the 1987 Act.

159. I agree with Mr Halligan's submission that while Dr Machart has not given a "glowing reference" for the proposed surgery, he did, however, find there was nothing wrong with the operation proposed designed to alleviate the symptoms where ongoing symptoms have been resistant to conservative treatment.

[76] Application – pp 314-321
[77] Application – pp 303-313

160. While Dr Machart found it difficult on his single assessment to assign the neurology in the left arm to a cervical disc lesion, he considered the reasoning provided by Dr McEntee of cervical radiculopathy objectively sound supported by the EMG and nerve conduction studies.

161. I accept Dr McEntee's clinical findings made over several assessments, supported by the radiological investigations, the EMG and nerve conduction studies, that Mr Byrnes suffers with radiculopathy in the left arm emanating from the disc pathology at the C5/6 level of the cervical spine.

162. I found the complaints of neck pain on the left side and the left arm radiculopathy results from the disc pathology at the left C5/6 level of the cervical spine as a result of the injury.

163. Dr Cochrane on examination found symptoms radiating down the triceps and forearm suggestive of C7 radicular pain, but while acknowledging an annular tear at the C5/6 level considered the MRI scans in May 2018 and March 2019 did not show a nerve compression lesion.

164. The difficulty with accepting Dr Cochrane's opinion is that he has not commented upon the radiologist's findings: "The present radiculopathy is likely related to irritation of the left C6 nerve root at the C5/C disc level given the left paracentral annular fissure visible"[78].

165. In respect of whether the proposed surgery is reasonably necessary, Dr Cochran appears to base his conclusion on his impression that Mr Byrnes would be a poor candidate for surgery and "certainly the fact that I cannot clearly tie the presence of an annular fissure at C5/6 to either the primary workplace injury nor to his current presentation"[79].

166. I have rejected Dr Cochrane's opinion on the question of causation of the disc pathology at the C5/6 level of the cervical spine as a result of injury for the reasons I have given. The only additional comment I would make is that Dr Cochrane appears also to have reached his conclusion on causation because "there is no clear reports of neck pain or neck injury occurring at the time of injury" without considering whether a wrenching or traction type injury caused the annual tear or aggravated, accelerated, deteriorated or exacerbated of any pre-existing degenerative condition at this level of the cervical spine resulting in radicular symptoms, which were not identified until the examination by Dr Rando whose primary role at that time was assessment of the ulna symptoms and the left elbow.

167. Dr Cochrane appears to disregard the findings of the nerve conduction studies conducted by Prof Corbett of neurogenic denervation in the left C6 myotome because he could not "tie this to the workplace incident".

168. I accept Dr McEntee's opinion for the reasons he has given set out in his report dated 9 October 2019 at paragraph 7 (a)-(k) to reach his conclusion that the proposed cervical spine surgery is reasonably necessary as a result of the injury.

169. I find that the proposed surgery in the form of a total disc replacement at the C5/6 level of the cervical spine is reasonably necessary medical and related treatment as a result of injury on 15 August 2016 within the meaning of s 60 of the 1987 Act.

[78] 2019 MRI – Application – pp 203-204
[79] Reply – p 25