FEDERAL COURT OF AUSTRALIA

Lucas Earthmovers Pty Limited v Anglogold Ashanti Australia Limited [2019] FCA 1049

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| File number: |  |
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| Judge: | **WHITE J** |
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| Date of judgment: | 5 July 2019 |
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| Catchwords: | **CONTRACTS** – Applicant contracted with the Respondents to construct an access road to a remote mine site – various matters led to the incurring of additional costs and to construction delays – claim for damages for breach of contract - claim for payment of the time-related costs incurred by the Applicant in respect of additional work – claim for other consequences of the additional time taken and the additional work – claim for payment of variations.  **Held:** claim for the time-related costs fails but other aspects of the breach of contract claim succeed in part.  **CONSUMER LAW** – claims of misleading or deceptive conduct contrary to s 18 of the Australian Consumer Law – claim that in entering into the contract the Applicant relied on four representations made by the Respondents which were misleading or deceptive – claim that if the representations had not been made the Applicant would not have entered into the contract at all or, alternatively, would have entered into a contract on schedule of rates terms which assigned the risk and cost of additional work and delay to the Respondents – Applicant did not prove that the representations were made or that they were misleading or deceptive – Applicant did not prove that it relied on the pleaded representations in entering into the contract – Applicant did not establish loss by reason of the alleged misleading or deceptive conduct.  **Held:** contraventions of s 18 of the ACL not made out. |
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| Legislation: | Australian Consumer Law ss 18, 236  *Competition and Consumer Act 2010* (Cth) Sch 2  *Evidence Act 1995* (Cth) ss 69, 81  *Trade Practices Act 1974* (Cth) s 82 |
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| Cases cited: | *Australian Broadcasting Commission v Australasian Performing Right Association Ltd* [1973] HCA 36; (1973) 129 CLR 99  *Australian Competition and Consumer Commission v Emerald Ocean Pty Ltd* [2002] FCA 740  *Australian Development Corporation Pty Ltd v White Constructions (ACT) Pty Ltd* (1996) 12 BCL 317  *BMD Major Projects Pty Ltd v Victorian Urban Development Authority* [2007] VSC 409  *Butcher v Lachlan Elder Realty Pty Ltd* [2004] HCA 60; (2004) 218 CLR 592  *Campbell v Backoffice Investments Pty Ltd* [2009] HCA 25; (2009) 238 CLR 304  *Codelfa Construction Pty Ltd v State Rail Authority of New South Wales* [1982] HCA 24; (1982) 149 CLR 337  *Dante De Grazia t/as Sydney Building Services v Solomon* [2010] NSWSC 322  *Dasreef Pty Ltd v Hawchar* [2011] HCA 21; (2011) 243 CLR 588  *Henville v Walker* [2001] HCA 52; (2001) 206 CLR 459  *Hevi Lift (PNG) Ltd v Etherington* [2005] NSWCA 42  *I&L Securities Pty Ltd v HTW Valuers (Brisbane) Pty Ltd* [2002] HCA 41; (2002) 210 CLR 109  *Jango v Northern Territory of Australia (No 4)* [2004] FCA 1539  *Jennings Construction Ltd v QH & M Birt Pty Ltd* (1986) 8 NSWLR 18  *Mackay v Dick* (1881) 6 App. Cas. 251  *Makita (Australia) Pty Ltd v Sprowles* [2001] NSWCA 305; (2001) 52 NSWLR 218  *Masters v Cameron* [1954] HCA 72;(1954) 91 CLR 353  *Mount Bruce Mining Pty Ltd v Wright Prospecting Pty Ltd* [2015] HCA 37; (2015) 256 CLR 104  *Opat Decorating Service (Aust) Pty Ltd v Hansen Yuncken (SA) Pty Ltd* (1994) 11 BCL 360  *Peninsula Balmain Pty Ltd v Abigroup Contractors Pty Ltd* [2002] NSWCA 211  *Perini Corporation v Commonwealth of Australia* [1969] 2 NSWR 530  *Reiffel v ACN 075 839 226 Ltd* [2003] FCA 194; (2003) 132 FCR 437  *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* [1979] HCA 51;(1979) 144 CLR 596  *Seven Network Ltd v News Ltd (No 14)* [2006] FCA 500  *Stone v Chappel* [2017] SASCFC 72; (2017) 128 SASR 165  *Sydneywide Distributors Pty Ltd v Red Bull Australia Pty Ltd* [2002] FCAFC 157; (2002) 234 FCR 549  *Walton Construction Pty Ltd v Illawarra Hotel Co Pty Ltd* [2011] NSWSC 534  *Wardley Australia Ltd v The State of Western Australia* [1992] HCA 55; (1992) 175 CLR 514  *Wilkie v Gordian Runoff Ltd* [2005] HCA 17; (2005) 221 CLR 522  *WMC Resources Ltd v Leighton Contractors Pty Ltd* [1999] WASCA 10; (1999) 20 WAR 489  *Wormald Engineering Pty Ltd v Resources Conservations Co International* (1988) 8 BCL 158 |
|  |  |
| Date of hearing: | 4-8, 12-15, 18, 19, 21, 26 and 27 June 2018 |
|  |  |
| Date of last submissions: | 4 July 2018 |
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| Registry: | South Australia |
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| Division: | General Division |
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| National Practice Area: | Commercial and Corporations |
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| Sub-area: | Commercial Contracts, Banking, Finance and Insurance |
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| Category: | Catchwords |
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|  |  |
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|  |  |
| Counsel for the Third Respondent: | The Third Respondent did not participate in the trial |

ORDERS

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|  | | SAD 354 of 2015 |
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| BETWEEN: | LUCAS EARTHMOVERS PTY LIMITED (ACN 008 122 530)  Applicant | |
| AND: | ANGLOGOLD ASHANTI AUSTRALIA LIMITED (ACN 008 737 424)  First Respondent  INDEPENDENCE GROUP NL (ACN 092 786 304)  Second Respondent  KNIGHT PIÉSOLD PTY LIMITED (ACN 001 040 419)  Third Respondent | |

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| JUDGE: | WHITE J |
| DATE OF ORDER: | 5 July 2019 |

THE COURT ORDERS THAT:

1. The matter be adjourned to a date to be fixed for the hearing of submissions with respect to interest, costs and the entry of judgment.

Note: Entry of orders is dealt with in Rule 39.32 of the *Federal Court Rules 2011*.

REASONS FOR JUDGMENT

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## Introduction

1 On 10 May 2011, the Applicant (Lucas) entered into a contract (the Contract) with the First and Second Respondents to construct an access road of some 223.5 km to a mine site located approximately 330 km northeast of Kalgoorlie in Western Australia. Lucas achieved practical completion of the works on 9 April 2012.

2 The parties contemplated that the material to be used in the construction of both the sub‑base and the wearing course of the road would be obtained from areas along the road alignment. They recognised that the material in some areas would not be suitable for this purpose and would have to be sourced from borrow pits at other locations along the alignment. In fact, much of the material along the road alignment did not meet specification and, during the course of the work, the manner in which significant portions of the road was constructed was changed. Lucas had to haul greater amounts of material from borrow pits and for much greater distances than had been contemplated. It referred to this work and its incidents as the “Additional Works”. Those works resulted in construction delays and additional costs.

3 Lucas obtained variations under the Contract with respect to some of the additional work involved. The First and Second Respondents paid Lucas for the direct costs incurred in relation to the additional haulage and the placement of the material on the road. However, they did not make any payment with respect to the additional time‑related costs incurred by Lucas. These included onsite overheads such as the provision of management, supervision, facilities, accommodation and equipment during the longer period which it took to complete the works. These kinds of costs formed part of the “Preliminaries” in the Schedule of Remuneration to the Contract. Lucas claims to be entitled to $3,170,871.87 in respect of these costs.

4 In addition, Lucas claims to be entitled under the Contract to payments totalling $1,959,487.70 for other consequences of the time taken to complete the Contract. I will refer to these as the “Consequential Claims”.

5 Lucas makes a third claim for payment under the Contract, namely, payment with respect to seven variations to its work for which it has not been paid (the Other Variations Claims). The amount of the Other Variations Claims is $1,830,680.29.

6 In relation to the time‑related costs and Consequential Claims, Lucas makes an alternative claim under the Australian Consumer Law (ACL) contained in Sch 2 to the *Competition and Consumer Act 2010* (Cth). It seeks recovery under s 236 of the ACL on the basis that those costs were incurred by reason of the Respondents’ misleading or deceptive conduct in contravention of s 18 of the ACL. Lucas says that it relied on four representations made by the Respondents or by others on their behalf which it alleges were misleading or deceptive.

7 Lucas’ Amended Statement of Claim (ASC) also included a claim in negligence against the Respondents. However, Lucas did not pursue that claim, and it need not be mentioned further.

8 For the reasons which follow, I consider that Lucas’ s 18 claim wholly fails as does its claim for the time‑related costs associated with the Additional Works. Lucas does, however, establish some of the remaining breach of contract claims and is entitled to judgment, before interest, in the sum of $1,038,050.97.

## The parties

9 Lucas is an Adelaide‑based firm engaged, principally, in the business of earthmoving, civil contracting and road construction. Its preference is for work in the contract price range of $10‑$50 million, but it does undertake both larger and smaller jobs.

10 Lucas was established by David Lucas. At the times relevant to these proceedings, David and his wife Vivienne were its directors and their son, Ben Lucas, its General Manager.

11 Before November 2010, the First Respondent, Anglogold Ashanti Australia Limited (Anglo), and the Second Respondent, Independence Group NL, established an unincorporated joint venture called the “Tropicana JV” to undertake a gold mining project at a site situated some 330 km northeast from Kalgoorlie called the Tropicana Gold Project (the Tropicana Project). Anglo had a 70% interest in the Tropicana Project and Independence Group the remaining 30%. Anglo was the manager of the project. As it is generally not necessary for the purposes of this judgment to distinguish between Anglo and Independence Group, I will refer to them collectively as “AGA”.

12 AGA recognised that it would be necessary to construct an access road to the mine site, including building a bridge over Ponton Creek.

13 On or around 22 September 2009, AGA entered into a consultancy agreement with the Third Respondent, Knight Piésold Pty Ltd, pursuant to which Knight Piésold was, amongst other things, to prepare a “bankable feasibility study” for the access road. The work to be performed by Knight Piésold included a site investigation of the proposed road, a geotechnical investigation, a geotechnical survey of its proposed route, and the preparation of the feasibility study. Knight Piésold carried out that work.

14 On 19 April 2011, AGA entered into a formal contract with Lycopodium Minerals Pty Ltd (Lycopodium) pursuant to which Lycopodium provided engineering, procurement and construction management services in relation to the Tropicana Project (the EPCM Contract). Although the formal contract was made on 19 April 2011, Lycopodium had been providing services to AGA for some time before that date, pursuant to earlier contracts. The terms of the EPCM Contract provided for Lycopodium to be AGA’s agent with respect to aspects of the work associated with the construction of the access road.

15 Earlier, on or around 20 January 2011, Lycopodium had entered into a written consultancy agreement with Knight Piésold pursuant to which the latter was to provide services which included the final design of the access road, the final design of the Ponton Creek bridge, participation in the tender process for the contract for the construction of the access road, preparation of construction drawings, and construction quality control and field engineering. In addition, Lycopodium subcontracted certain work under the EPCM Contract to Knight Piésold, including road design, construction supervision, the identification and testing of “borrow material” and certain geotechnical works.

16 When Lucas commenced the proceedings, it also sought relief against Knight Piésold. However, Lucas compromised that claim and Knight Piésold did not take any part in the trial.

## The witnesses

17 Lucas led evidence from eight lay witnesses and three expert witnesses. The lay witnesses were:

 Mr David Lucas, one of its two directors;

 Mr Ben Lucas, its General Manager;

 Mr Nicholas Matthews, its Construction Manager;

 Mr Ian Hentschke, one of its Project Managers;

 Mr Christopher Maiolo, its Site Engineer;

 Mr John Doyle, who was its employed Legal Counsel and later Commercial and Legal Manager;

 Mr Bruce Bate, a Senior Estimating Engineer with Macmahon Contractors Pty Ltd, which had also tendered for the access road contract; and

 Mr William Payne, an Engineering Surveyor who, in 2011, had been employed by AGA.

18 AGA led evidence from five lay witnesses and three expert witnesses. The lay witnesses were:

 Mr Massoud Massoudi, the Senior Vice President, Capital Projects, of Anglo;

 Mr Paul Stuchbury, a Project Engineer employed by Lycopodium;

 Mr Mark Walker, a Senior Project Manager employed by Lycopodium;

 Ms Marzena Rudowski, the Senior Contracts Engineer of Lycopodium; and

 Mr Robert Sceresini, a Project Manager employed by Knight Piésold.

19 Although AGA had said in its opening submissions on the first day of the trial that it also intended to call Mr Bruno Ruggiero as a witness, it later informed the Court that it would not be doing so. Mr Ruggiero had been Lycopodium’s Project Director for the works and the Contract Representative nominated by AGA under the Contract. In some periods, Mr Ruggiero delegated aspects of his responsibilities as Company Representative to others including Mr Bradley McGregor, Mr Stuchbury and Mr Walker. At AGA’s request, Mr Ruggiero was released from the obligation to comply with the subpoena served on him.

20 The evidence in chief of all the non‑expert witnesses was contained in affidavits. All were subjected to cross examination. I consider that all gave their evidence honestly and were attempting to assist the Court. The fact that the matters in issue had occurred some six or seven years previously meant that the memories of some of the witnesses about matters were less than complete. I also thought that some of the witnesses had an appreciation of where the interests of the parties calling them lay, and some were to an extent defensive or self‑justificatory. Nevertheless, as I have said, I thought that for the most part, the witnesses were doing their best to assist the Court. There was no suggestion that any witness should be disbelieved on grounds of honesty. In fact, issues of credibility did not loom large in the trial.

21 I will refer to the expert witnesses later.

22 In the next five sections of these reasons, I make findings of fact in order to provide the setting for the identification and resolution of the issues in the trial. Most of the matters which I record were non‑contentious.

## The Lucas Tender of 31 January 2011

23 On 23 December 2010, Lycopodium provided a Request for Tender (the RFT) to a number of contractors, including Lucas. The RFT included:

(a) the Conditions of Tender;

(b) the proposed General Conditions of Contract;

(c) the Scope of Work (which included the Technical Specification);

(d) template Schedules of Remuneration to be completed by tenderers;

(e) Construction Schedules; and

(f) some geotechnical reports.

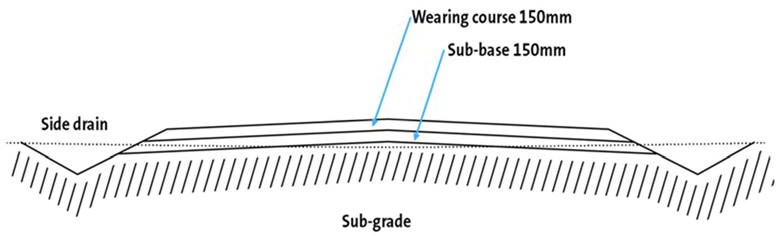
24 The RFT contemplated that pricing would be provided by tenderers on:

(a) a schedule of rates basis for performance of direct works; and

(b) a lump sum basis for Preliminaries.

Pricing Schedule 5 contained the template of the schedule of rates for the works.

25 The Scope of Work indicated that the works included the construction of a road with an overall width (on average) of 10 m and a 7 m wide running surface. That surface was to comprise a 150 mm sub‑base and a 150 mm gravel wearing course. Side drains (often referred to as V‑drains) were also to be excavated. The profile of the contemplated road can be depicted diagrammatically as follows:



26 The road was to be 223.5 km in length running in a generally southwest to northeast direction. The parties used the term “chainage” to refer to intervals in the road, with each chainage being equivalent to 1 km. The datum point for the identification of the chainages was the proposed Main Camp for the Tropicana Project, located about 9.5 km from the mine site itself, at the north‑eastern end of the road. One section of road of about 214 km in length ran from the Tropicana Main Camp (Chainage 0) in the northeast to Pinjin Station in the southwest (Chainage 214). The other section of 9.5 km ran from the Tropicana Main Camp (Chainage 0) to the mine site (Chainage ‑9.5).

27 The Scope of Work contemplated that suitable material would be used and compacted to form the sub‑grade. It stated that in many areas the in situ material could be used as fill, that is, to form the sub‑grade but also indicated that some fill may have to be hauled to the required locations. The Scope of Work contemplated that the contractor would obtain the material for the sub‑base from the V‑drains adjacent to the road or from borrow pits and that it would obtain the material for the wearing course from borrow pits. In each case, the borrow pits were to be designated by AGA’s representative.

28 Pricing Schedule 5 contained information concerning the source of the material to be used in the construction of the road. It indicated that some 240,750 m3 (which amounted to 75%) of the material to be used to form the sub‑base was expected to be derived from the material in situ in the road alignment together with material excavated from the V‑drains (involving haulage up to 2 km), and that the remaining 80,250 m3 (which amounted to 25%) was expected to be obtained from borrow pits (for which haulage distances using 2 km increments up to 28 km were given).

29 The RFT contemplated that there would be 11 culvert sites along the road alignment at which precast concrete drainage pipes and headwalls were to be used. A precast concrete pile bridge was to be constructed over Ponton Creek at Chainage 181.

30 Lycopodium sought tenders with respect to the provision of “all supervision, labour, temporary accommodation, temporary works, [e]quipment and materials necessary to perform the supply and construction of civil infrastructure earthworks for the Site Access Road … in accordance with the Technical Specification, Drawings and all other documents forming part of the Contract …”. After 23 December 2010, Lycopodium issued several addenda to the prospective tenderers, including Lucas.

31 The second representation on which Lucas relies for its misleading or deceptive conduct cause of action is alleged to have been conveyed by documents in the RFT.

32 Ben Lucas and Mr Matthews participated in a site visit over the period 10‑12 January 2011 as a preliminary to the submission by Lucas of its tender. The others who participated in the visit included Mr Massoudi (Anglo) (first day only), Mr Payne and Mr Tucker (Anglo), Mr Walker (Lycopodium), Mr Sceresini and Mr McKean (Knight Piésold), as well as representatives of the other contractors who had been invited to tender.

33 The site visit commenced with a briefing in Kalgoorlie. The group then travelled in convoy along, or near, the proposed road alignment, stopping from time to time at places at which particular features were pointed out. This included a stop at at least one borrow pit. The site visit concluded with a debriefing in Kalgoorlie.

34 The first representation on which Lucas relies for its misleading or deceptive conduct claim is alleged to have been made during this site visit.

35 Lucas submitted its tender on 31 January 2011. Its tendered price on a schedule of rates basis for the whole of the works was $46,510,922.28.

36 Lucas stated that its tender was subject to a number of qualifications and assumptions. In particular, it said that it had not made allowance for a number of matters, including:

 Treatment of unsuitable Subgrade material including the excavation, replacement, importing of material, backfill or compaction of the same within rates, m3 to apply

…

* Geotechnical Testing
* No allowance for processing, crushing or screening of subbase or wearing course materials: it is assumed that this material is suitable once placed on road

…

* Liquidated damages to the contract

…

* Importing or exporting of fill or spoil materials from off site (ie off the alignment of the road and over and above the distances as per the schedule)

…

37 Under the heading “General Assumptions”, the Tender stated:

* Subbase and cut as general fill to be done as one operation
* Materials in situ as subbase can be treated and compacted in place

…

* Material from excavations and borrow pits meets the specification for the fill and pavement materials as per the Schedule of Rates

…

* Geotechnical testing will be provided on timely basis

38 Lucas attached significance in the trial to the stated assumption that “[m]aterial from excavations and borrow pits meets the specification for the fill and pavement materials as per the Schedule of Rates”.

## Post Tender negotiations

39 Ms Rudowski, from Lycopodium, sought clarification of a number of matters in the tender of Lucas. She did so by issuing a series of Tender Clarification Notices (TCNs) to which Lucas responded in writing. Lycopodium issued a total of 12 TCNs. Some of these addressed the qualifications and assumptions contained in Lucas’ Tender. With respect to some items, there was an exchange of communications before the item was regarded as closed. The matters which were the subject of the TCNs and the respective parties’ responses were recorded in a document entitled “Tender Non‑conformances and Clarification Schedule” (TCS). The TCS was in the nature of a running sheet and was revised six times, with Lucas providing Revision 5 as an attachment to its tender clarification submission dated 11 March 2011 and Revision 6 being issued by Lycopodium on 14 March 2011. It was common ground that the TCS 6 contained a summary of the matters about which the parties had sought clarification, their respective responses, and the agreement which they had reached with respect to those matters.

40 The tenders which AGA received on 31 January 2011 exceeded its own budget of $35 million for the construction of the access road. It embarked upon a negotiation with Lucas and another tenderer concerning their tenders. Lycopodium invited Lucas to participate in a tender review meeting on 11 February 2011. The agenda for the meeting stated its purpose as follows:

Whilst tenders have been short listed, it is noted that the tenders submitted are significantly higher than the Company’s budget. This presents the Company with two options, (1) conduct meaningful negotiations with the short listed tenderers where both parties openly contribute ideas towards performing the work in a more cost effective way or (2) failing this, re‑tender the work.

Therefore, the tender review meetings have been arranged with the shortlisted tenderers to explore option 1.

41 Five persons from Lucas attended the tender review meeting in Perth on 11 February 2011 (TRM 1). These were David and Ben Lucas, Messrs Matthews and Hentschke and a Mr Wade Matthews. Messrs Massoudi and Payne attended for AGA, Messrs Sceresini and McKean for Knight Piésold and Messrs Giura, Walker, McGregor and Belford together with Ms Rudowski for Lycopodium. At TRM 1, the Lucas personnel suggested, amongst other things, that an alternative methodology could be adopted, namely, watering and proof‑rolling the in situ material to form the sub‑grade and then using the material excavated from the V‑drains to form the sub‑base. It contemplated that these two operations would “essentially be undertaken as one”. That is to say, the alternative methodology contemplated as a first step the compaction of the in situ material coming from the cut and fill along the road alignment so as to form the sub‑grade and, a second step, the excavation of the V‑drains and the pushing of that material onto the road to form the sub‑base as one operation. The road would then be capped with wearing course material taken from borrow pits. One of the slides in the PowerPoint presentation by Lucas at TRM 1 indicated its expectation that it would source approximately 300,000 m3 of the materials required for the sub‑grade and sub‑base from in situ materials.

42 Lucas also indicated at TRM 1 that it may be willing to change from a tender on a schedule of rates basis to a lump sum price.

43 Ms Rudowski prepared and circulated minutes of TRM 1. In relation to the alternative proposal, the minutes record:

* Lucas to submit an alternative proposal for performing the work in a more cost effective way, for Company review and consideration.
* Lucas advised that the alternative proposal will take into the consideration the following options:

 Pugmill & screen used for wearing course

 Water minimisation

 Mobilisation costs

 Use soil stabilisers and dry forming of the roadway

 Management & Supervision requirements

 Moisture content

 Sub base material location

 Wearing course thickness

 Alternative material and size for culverts, and alternative end treatments

 Construction of a “Fit for Purpose” road

* The alternative proposal is to state relevant scope of work or specification clauses and itemise savings respectively.
* Topsoil stripping and re-spreading to be deleted from the scope of work, subject to final confirmation from AGA.
* Lucas was advised that the following specifications cannot be changed:

⮚ Wearing course

⮚ Road surface material

⮚ The parameters of the moisture content to be advised by [Mr Sceresini].

44 In relation to the construction programme, the minutes recorded:

* Lucas to amend its programme with the award date of 25/02/2011 and advise any impact if the award is delayed.
* Lucas to submit a revised proposed construction programme in line with the alternative proposal.

45 The minutes also record that Lucas confirmed that its unit rates in the Schedule of Rates included only direct costs, with all indirect costs included in the Preliminaries pricing schedule.

46 Apart from some evidence by Ben Lucas, there was no suggestion that the minutes of TRM 1 did not record accurately the matters to which they referred and, in particular, that Lucas had been told that the specifications for the “wearing course” and “road surface material” could not be changed. However, Mr Massoudi acknowledged in his cross‑examination that these were references to the same thing.

47 On 17 February 2011, Lucas provided a revised Tender (dated 16 February 2011) to Lycopodium. The revised tender included Lucas’ responses to TCNs 2 and 3. Lucas’ revised tender price on a schedule of rates basis for the whole of the works was $36,528,324.72.

48 By an email from Ms Rudowski to Lucas of 25 February 2011, AGA requested a second meeting with Lucas. The parties referred to this email as TCN 6. The email indicated that the first matter which AGA wished to discuss at the meeting was:

Any further potential savings to the submitted tender price, which may be achieved through the following:

* Revised quantities and haulage distances for borrow materials, as per the attached revised Schedule of Remuneration …
* Potential to lump sum contract.
* Relaxation of Liquidated Damages.
* Any other potential savings proposed by the Tenderer for Company consideration.

49 The email proposed a target mobilisation date of 15 March 2011, commencement of the works on 15 April 2011 and Practical Completion on 21 November 2011. The revised Schedule of Remuneration which Ms Rudowski attached to the email, still contemplated that 240,750 m3 of sub‑base material would be obtained in situ or from the V‑drains and hauled distances up to 2 km, but contemplated that the remaining 80,250 m3 may have to be hauled up to 6 km, identified in 1 km increments. In relation to wearing course material, the revised Schedule contemplated it being hauled up to 13 km, again using 1 km increments. This differed from Pricing Schedule 5 in the RFT which had contemplated that the remaining 80,250 m3 may have to be hauled distances up to 28 km, and had provided for pricing on 2 km increments.

50 Item 8 in Ms Rudowski’s email was as follows:

Further to the geotechnical testing clarification (item 12 of the [TCS]), the Company reiterate comments made at [TRM 1] whereby Lucas were informed that Company will supply a QA/QC/Supervising Engineer and a QA/QC Soil Technician. Given the logistics of the Project and Lucas’ proposed methodology to work on two opposing construction fronts (in terms of them progressing away from the laboratory/office facilities) the turnaround times for test results shall also be dependent on when/where testing is required and the time taken to travel to and from each test location. In other words turnaround times may vary from time to time and Lucas shall make provision for this in accordance with the Specification.

51 This Item is significant because the arrangements for geotechnical testing to which Ms Rudowski referred tended to confirm AGA’s requirement that the road to be built should conform with the technical specification.

52 The second tender review meeting (TRM 2) was held in Perth on 28 February 2011. On this occasion, the attendees were Messrs Massoudi and Payne from AGA, Messrs Ruggiero and Walker and Ms Rudowski from Lycopodium, Mr Sceresini from Knight Piésold and Messrs David Lucas, Ben Lucas, John Doyle and Paul Turder from Lucas.

53 The minutes of the meeting prepared by Ms Rudowski record that Ben Lucas indicated that Lucas would offer a lump sum price of $34,999,999 based on nine conditions. These included that the haulage distances were based on those reflected in the Schedule of Remuneration issued in TCN 6 with variances in haulage distances to be subject to variation orders under the Contract. This reflected a statement made by Mr Massoudi in the meeting to the effect that “if more haulage [is] required it [will] be treated as a variation”. Three of the conditions related to practical completion as follows:

 Practical Completion to be 30 November 2011.

 Liquidated damages to apply to the sub‑base from the date of practical completion (i.e. 30 November 2011).

 Liquidated damages to apply to the wearing course 6 weeks from the date of practical completion.

54 The minutes also record that Lucas was to submit its lump sum offer officially with all the stated conditions, including the revised Schedule of Remuneration and cashflow.

55 I am satisfied that the lump sum price of $34,999,999 was agreed at TRM 2. There were various accounts in the evidence as to how and between whom that agreement was reached. Not much turns on it but I am satisfied that the price was settled on between Mr Massoudi and David Lucas, outside the formal meeting. It is possible that others were also present at the time but Mr Massoudi and David Lucas were the principal actors involved.

56 In the same discussion in which David Lucas and Mr Massoudi settled on the price of $34,999,999, David Lucas told Mr Massoudi “you can’t make a silk purse out of a sow’s ear” and “we’ll use the best materials available, but we’ve got what we’ve got”. Mr Massoudi could not remember these words being used but accepted that it was possible that David Lucas had made these statements. In particular, Mr Massoudi accepted that the context of the discussion had been that the material with which to build the road had to be sourced from the road alignment itself and from the borrow pits. I accept the evidence of David Lucas about his statements to Mr Massoudi.

57 On 1 March 2011, Ben Lucas sent to Ms Rudowski confirmation of Lucas’ offer with respect to the access road contract of a lump sum of $34,999,999, stating that it was subject to 16 conditions. Those conditions which are pertinent for present purposes are the proposed target mobilisation date of 15 March 2011 with Lucas taking possession of the site from that date, a work commencement date of 15 April 2011, and terms with respect to the Date of Practical Completion matching those indicated above. Lucas’ 13th condition related to the haulage distances:

The Lump sum price will apply subject to the haulage distances for subbase and wearing course being as per Schedule TGP‑001 Sched of Rem 110224.xls as received from you on 25th February 2011. The Contractor and AGA will work together to ensure so far as practical that these are not exceeded however any increase in these shall constitute a variation.

58 Further TCNs and responses to TCNs followed.

## Issue of the Notice of Award for the Contract

59 On 14 March 2011, Lycopodium issued a Notice of Award for the Contract. Although the notice described itself as a Notice of Award of the Contract, it was limited to a value of $5 million. This was the only Notice of Award issued in respect of the Contract. Its content had some significance in the trial. It provided (relevantly):

Dear Sir

**TROPICANA GOLD PROJECT CONTRACT NUMBER: TPG‑001**

**SITE ACCESS ROAD CONTRACT**

**NOTICE OF AWARD OF CONTRACT**

[AGA] (‘Company’), as agent and manager for the participants in the Tropicana unincorporated joint venture, issues this Notice of Award and awards the Contract to [Lucas] (the ‘Contractor’).

The Company further advises that it has appointed [Lycopodium] as its Company Representative to fulfil the functions of the Company Representative under the Contract.

This Notice of Award is limited to the Contractor’s pre‑mobilisation, mobilisation and early work activities to a value not exceeding $5,000,000. A Notice of Award for the total Contract Price will be issued in due course.

A prerequisite to the validity of this Notice of Award is for the Contractor to sign, date and return the letter formally acknowledging acceptance including the conditions stated below.

The Parties agree that the Contract will be prepared and executed based on the terms of [the] RFT document, all addenda issued during the tender period and the following documentation:

a) Tender submission dated 31 January 2011.

b) Clarification Notices 1 to 11.

c) Tender Review Meeting 1 held on 11 February 2011.

d) Tender Review Meeting 2 held on 28 February 2011.

e) Contractor’s tender clarification submission, dated as follows:

i) 4 February 2011

ii) 16 February 2011

iii) 18 February 2011

iv) 22 February 2011

v) 23 February 2011 (e-mail)

vi) 1 March 2011

vii) 3 March 2011 (e-mail)

viii) 4 March 2011

ix) 7 March 2011

x) 8 March 2011 (e-mail)

xi) 10 March 2011

xii) 14 March 2011

The Parties agree to enter into the Contract within 28 days after the Contractor receives this Notice of Award, unless the parties agree otherwise.

**1.0 PROGRAMME**

The Contractor has confirmed the Construction Programme as follows:

|  |  |  |
| --- | --- | --- |
| **Description** | **Start Date** | **Finish Date** |
| Contract Award | 10 March 2011 |  |
| Mobilisation | 20 March 2011 |  |
| Work Commencement Date | 20 April 2011 |  |
| Practical Completion |  | 30 November 2011 |

**2.0 ACCEPTANCE**

The Contractor is required to confirm acceptance of the terms of this Notice of Award by signing in full in the space provided below and dating and initialling the Notice of Award, and by returning a copy of all pages by facsimile to [Lycopodium], attention to Ms Marzena Rudowski …

…

**CONTRACTOR’S ACKNOWLEDGEMENT AND ACCEPTANCE OF NOTICE OF AWARD**

**FOR**

**TROPICANA GOLD PROJECT**

**CONTRACT NUMBER: TPG‑001**

**SITE ACCESS ROAD CONTRACT**

Acceptance: We accept this Notice of Award without exception.

Signature: [Signed Ben Lucas] Date: [16 March 2011]

Name: Ben Lucas

Title: General Manager

Company: Lucas Earthmovers Pty Ltd.

60 Before Ben Lucas signed the Notice of Award, someone at Lucas (I find that it was Mr Doyle) struck out the dates of the tender clarification submissions in (e)(xi) and (xii). In relation to the former, Mr Doyle entered the date 11 March 2011. Mr Doyle also changed the dates for the Contract Award, Mobilisation, Work Commencement Date and Practical Completion to 14 March 2011, 25 March 2011, 25 April 2011 and 10 December 2011 respectively. Ben Lucas initialled each of these alterations. The signed Notice was then returned to Lycopodium.

61 On 15 March 2011, Ms Rudowski sent an email to Mr Ben Lucas, the substance of which was as follows:

We agree to the following to be stated in the Contract.

Practical Completion Date: 30 November 2011.

Liquidated Damages for completion of sub‑base will apply from 7 December 2011 (1 week grace period from Practical Completion Date).

Liquidated Damages for completion of wearing course will be as previously agreed (item 7 of the Clarification Schedule Rev 6).

Based on the above, please re‑sign the Notice of Award based on the dates stipulated in the Notice of Award.

62 Mr Ben Lucas did as asked and, on this occasion, the only dates which were altered were those in (e)(xi) and (xii) (the first was changed to 11 March 2011 and the second was deleted).

## The Contract

63 Vivienne Lucas executed the Contract on behalf of Lucas on 10 May 2011 and it was executed by Mr Ruggiero on behalf of Lycopodium on 13 May 2011. It provided for a total contract price of $35,016,992.60. Schedule A1 stated expressly:

This is a lump sum Contract. The Contractor shall execute such Work under the Contract for the lump sum amounts set out herein. The Schedule of Remuneration shall be read in conjunction with and include the requirements of all the documents contained in the Contract.

All of the works and all of the Preliminaries were priced in the Contract on a lump sum basis. Perhaps because the Contract had originally been prepared on a schedule of rates basis, the derivation of the lump sum was apparent in the Contract schedules.

64 Clause 1.1 defined the term “Contract” as follows:

“**Contract**” means Notice of Award (if any), this contract, including the Key Terms Schedule, Clauses 1 to 52, the annexures, the Scope of Work, the Schedules, the Drawings and all other documents annexed or attached which are intended to form part of the contract between parties.

65 Clause 1.1 of the Scope of Work provided that “[i]n general the Works include the construction of an average 10 m wide road formation with an unsealed 7 m wide running surface consisting of 150 mm sub‑base and 150 mm wearing course”.

66 Item 8 in the Key Terms Schedule identified the Date for Practical Completion as 30 November 2011.

67 Clause 8.6.2 of the Scope of Work contained the specification for the sub‑base:

8.6.2 Road Sub-base Course

Road sub-base material shall consist of in situ subgrade materials or excavated materials from the Works. The sub-base material shall be free from cobbles, stumps, roots, sticks vegetable matter or other deleterious matter. The Contractor shall take the necessary measures to see that a quality material meeting the grading requirements is obtained which may require selectively choosing materials from excavations, mixing the materials as they are excavated, or mixing the materials on the road surface prior to spreading and compacting. It shall be placed to the lines and grades as indicated on the Drawings. Road sub-base material shall, in general, have a gradation as specified in Table 8.1.

**Table 8.1**: Road sub‑base gradation limits

|  |  |  |
| --- | --- | --- |
| AS Sieve size (mm) | Percentage by mass of total aggregate passing test sieve | |
| Min | Max |
| 63.0 | 100 | 100 |
| 37.5 | 80 | 100 |
| 19.0 | 60 | 100 |
| 4.75 | 30 | 100 |
| 1.18 | 17 | 75 |
| 0.3 | 9 | 50 |
| 0.075 | 5 | 25 |

\*Note: Permissible proportion of fines (particles less than 0.075 mm) varies depending on fines plasticity. Refer to Table 8.2.

Sub‑base material plasticity indices and liquid limits as determined by AS1289 3.3.1 are specified in Table 8.2.

**Table 8.2**: Plasticity and liquid limits

|  |  |  |
| --- | --- | --- |
| Fines (%) | LL (%) | PI (%) |
| 5 – 15 | <35 | <18 |
| 15 – 25 | <35 | <15 |

68 In substance, this specification required that the sub‑base material be free from deleterious matter, meet particle grading requirements and satisfy plasticity requirements and liquid limits. Pertinently for present purposes, the specification contemplated that, in order to meet the grading requirements, Lucas may have to choose material selectively from the excavations, or mix them on the road surface before spreading and compacting.

69 In relation to the wearing course, cl 8.6.3 of the Scope of Work provided:

8.6.3 Road Wearing Course

The wearing course shall consist of durable, selected laterite/gravel or other suitable material approved by the Company Representative. The Contractor shall obtain the material from designated borrow areas, near the Works. The wearing course shall be free from cobbles, stumps, roots, sticks, vegetable matter and other deleterious matter. It shall be placed to the lines and grades as indicated on the Drawings. Wearing course material shall, in general, have a gradation as specified in Table 8.3.

**Table 8.3**: Wearing Course Gradation Limits

|  |  |  |
| --- | --- | --- |
| AS test sieve | Percentage by mass of total aggregate passing test sieve | |
| 37.5  19.0  9.5  4.75  2.36  0.425  0.075 | 100  80  58  42  32  15  4 | 100  100  85  72  60  40  21 |

In addition, the wearing course material should have a plasticity index of between 0 and 10% and a liquid limit of between 0 and 25%, as determined by AS1289 3.3.1.

70 This specification contemplated that Lucas would obtain the wearing course from designated borrow pits, that the wearing course material would be free from deleterious matter and would meet the grading, plasticity and liquid requirements.

71 The words “in general” in the last sentence of each of [8.6.2] and [8.6.3] did not appear in the Scope of Work issued with the RFT. They were added as part of a relaxation of the Specification.

72 As noted earlier, the parties contemplated that Knight Piésold would undertake regular geotechnical testing of the materials used in the road construction.

73 The Contract contained a number of schedules. Schedule A was entitled “Schedule of Remuneration” and comprised Schs A1 to A9 (but there was no Sch A5). Some of Schs A1 to A9 had their own sub-schedules.

74 Schedule A1 identified the Contract as a lump sum contract and indicated that the contract price of $35,016,992.60 was comprised as follows:

|  |  |
| --- | --- |
| **Description** | **Value** |
| Preliminaries | 11,869,998.06 |
| Lump Sum Works – Construction Water | 4,195,175.41 |
| Lump Sum Works – Site Access Road | 18,951,819.13 |
|  |  |
| **TOTAL CONTRACT PRICE ($)** | **35,016,992.60** |

75 Schedule A2 had the heading “Lump Sum Prices” and showed the derivation of the lump sum of $18,951,819.13 for the site access road.

76 Schedule A3 had the heading “Preliminaries” and showed the derivation of the sum of $11,869,998.06 for Preliminaries in the overall lump sum amount.

77 Schedule A6 provided for the rates at which variations would be paid. It contained within it another schedule, Sch 5, identifying the rates for variations of particular kinds.

78 Clause 18.1 of the Contract required Lucas to commence and execute the Works in accordance with the construction program contained in Sch D until such time as the “Initial Work Programme” was approved and, thereafter, in accordance with that program. Sch D showed the sequence and time allowed for each activity in the Works.

79 Mr Matthews said that Lucas had prepared and submitted a baseline program to be the “Initial Work Programme”, but it had been lost. Accordingly, he and Mr Hentschke had, in 2013, “recreated” that program. In cross‑examination, Mr Matthews acknowledged that there were differences between the “recreated” program and that in Sch D to the Contract.

80 This gave rise to some differences between the parties as to the appropriate baseline program or programs to be used in ascertaining delays and Lucas’ entitlement to an extension of time. I will refer to this later.

81 It will be necessary to return to other provisions in the Contract in due course.

## The performance of the works

82 Lucas commenced work in the performance of the Contract in April 2011.

83 Initially, Lucas had proposed establishing its Work Camp at about the midway point of the access road and working with two work fronts: one moving to the north‑east and the other moving to the south‑west. However, when mobilising, Lucas changed its approach as it realised that until the road had been at least partially constructed, it could not move equipment to the site of the proposed Main Camp. It established its Work Camp instead at Ponton Creek (about one‑third of the way along the proposed road alignment) and worked with a single work front, that is, moving to the north‑east.

84 One of Lucas’ first activities was carrying out repairs to two crossings over Ponton Creek on the Kurnalpi‑Pinjin road. The repairs were necessary in order that it could obtain access to the site (the crossings not being within the footprint of its Scope of Work). The repairs were carried out between 19 and 24 April 2011. They gave rise to one of Lucas’ claims in the proceedings.

85 Apart from the Ponton Creek crossings repair works, all of Lucas’ activities until 3 May 2011 were directed towards mobilisation. Those mobilisation activities also continued for some time after 3 May 2011.

86 Between 3 May 2011 and 10 May 2011, Lucas’ work activity on the road was, with one presently immaterial exception, directed to clearing and grubbing part of the road alignment. On 11 May 2011, Lucas commenced working on the sub‑grade. Although Lucas carried out a few hours of work on the sub‑base on 16 May 2011, it did not commence work in earnest on the sub‑base until 29 May 2011.

87 On 16 May 2011, issues arose concerning the compliance with the technical specification of the material which Lucas intended to use, or had used, for the sub‑base.

88 On 16 May 2011, Knight Piésold issued a Particle Size Distribution (PSD) report which showed that the PSD curve for material excavated from cut areas (including V‑drains) from Chainages 174 to 179 did not comply with the specification for sub‑base material contained in cl 8.6.2 in the Scope of Work. On the same day, Mr Hentschke sent Technical Query (TQ#16) to Lycopodium. He attached a copy of the Knight Piésold PSD report and said:

Tender Schedule 4, items 9‑15, indicated that approximately 240,000 m3of sub‑base material (75%) would be available “from cut areas (including v‑drains) along right of way, haul from 0km up to and including 2km to fill the areas along right of way, moisture condition & compact as sub‑base”, and the balance of sub‑base material, approximately 80,000 m3 would come from borrow pits en route.

From initial testing carried out by KP over the first 5kms of v drain material, the PSD Curve for this material does not meet the specified grading for sub‑base, namely the material is too fine.

…

We require advice from Lycopodium as to whether or not, the out of grade sub‑base material, will be approved for use, provided the specified compaction can be achieved.

89 Knight Piésold responded to TQ#16 on or about 24 May 2011. It did so verbally to Lucas personnel and then confirmed the position in a report to Lycopodium on the same day. Knight Piésold noted that it was expected that a significant portion of the material extracted from the V‑drains along the road alignment would not require “modification” before being used for the sub‑base. However, it remarked that, in those areas in which the V‑drains contained lesser quality material, that material would be combined with more suitable material from other locations as and when required. In relation to Chainages 174 to 179 (in which the material from the V‑drains had been found to be non‑compliant), Knight Piésold recommended that some trial sections be established using different blends of material (some from the V‑drains and some from borrow pits). The Knight Piésold letter said:

The results from the trial areas will give an indication of what will be required to achieve a sub‑base material, it will also give an indication of the amount of material that will be required from each borrow to achieve this.

90 On 24 May 2011, Mr McGregor from Lycopodium provided Mr Hentschke with a copy of Knight Piésold’s recommendation, describing it as the response to TQ#16.

91 Mr Hentschke said, and I accept, that he understood when he received this letter that it indicated that Lycopodium required some mixing of the material intended for the formation of the sub‑base if the material excavated from the cut areas and V‑drains was non‑compliant with the Technical Specifications, and that that was so even if it involved increased costs.

92 On 30 May 2011, Mr Hentschke asked Mr Haworth at Lycopodium to issue a site instruction for “the blending work required on subbase construction between Chainages 178‑175”.

93 Mr McGregor from Lycopodium responded on 24 June 2011 with Site Instruction LE‑005 (SI‑LE‑005). Mr McGregor’s covering email said:

Please find attached the site instruction that relates to the blending of the sub‑base material with the borrow pit material.

Could you please sign and return on receipt.

94 Mr Hentschke did sign and return SI‑LE‑005 to Lycopodium on 25 June 2011. I indicate now that I do not attach any significance to the evidence of Mr Hentschke that in hindsight he should not have signed the document.

95 Both the terms of SI‑LE‑005 and Mr Hentschke’s signature assumed some significance in relation to Lucas’ claim. Accordingly, I set out the terms of SI‑LE‑005. It is evident that it made use of a template form for site instructions. The italicised passages indicate those parts of the form which were added to the template by either Mr McGregor or Mr Hentschke.

To: *Lucas Earthmovers (Contractor)*

This instruction is issued under category (a) below.

(a) **Attend to the following matters in relation to your Contract/Works**

**(the completion date and contract price are not altered as a result of this instruction)**

(b) Submit a quotation by *24/6/11* for carrying out the following work

(c) Carry out the following work on a time and material basis and submit your claim

(d) Carry out the following work at your Contract Schedule of Rates

(e) Carry out the following work at your quoted price; S.I. No. \_\_\_\_\_

**FULL DESCRIPTION OF WORK TO BE PERFORMED**

***Recommendation to mix materials from borrow pit with in situ material from the drains.***

*Lucas Earthmovers are hereby requested to mix materials from the nominated borrow pits and the in situ material excavated from the drainage channels to construct the sub‑base layer as per the attached Knight Piesold site instruction.*

*Please note the following:*

*1. The operation of mixing and blending is at the Contractors expense as per the attached extract from the Site Access Road scope of works.*

*2. In the Contract schedule of remuneration, in the lump sum section, there are nominated line items 10‑15 that allows for 80,250m3 of imported material from borrow pits to be used in the construction of the sub‑base layer.*

Note 1 The site instruction number is to be quoted on all related time, material and plant hire sheets, and on all invoices. Only one claim can be made under each site instruction number.

Note 2 For time and material work (category c) the Contractor must have timesheets signed daily by Lycopodium Minerals and is required to submit weekly summaries for individual SIs for Lycopodium Mineral’s approval.

Note 3 Total final costs must be submitted within 7 days of completion of the work included herein.

Signed By: [*Mr Hentschke*] Signed By: [*Mr McGregor*]

for and on behalf of: [*Lucas*] for and on behalf of [Lycopodium]

Title: *Project Manager* Title: *Project Engineer*

Date: *25/6/11* Date: *22/6/11*

(The Emphasis by underlining and bolding of subpara (a) were added to the template form)

Mr Hentschke added in his handwriting “VO#5” at the top of SI‑LE‑005 but it is not clear whether he did that before sending it back to Mr McGregor.

96 As can be seen, by SI‑LE‑005 Mr McGregor requested Lucas to *mix* materials from the nominated borrow pits with the material excavated from the V‑drains to construct the sub‑base layer, in the manner suggested by Knight Piésold on 24 May 2011. He also emphasised, by the underlining of subpara (a) and by the first note, that the costs of mixing and blending the material were to be borne by Lucas. It is apparent that Mr McGregor considered that this was appropriate given that the Contract Schedule of Remuneration contemplated that some 80,250 m3 of imported material from borrow pits would be used in the construction of the sub‑base layer.

97 In his evidence, Mr Hentschke said that the content of subpara (b) of the instruction had created some doubt in his mind as to whether the instruction was of the subpara (a) type. However, I consider that, read as a whole, it is apparent that SI‑LE‑005 was issued under subpara (a), and that Mr McGregor’s underlining and bolding of that subparagraph made that plain.

98 AGA attached significance to the acceptance by Lucas, indicated by Mr Hentschke’s signature, that the mixing and blending operation required by SI‑LE‑005 was to be carried out at Lucas’ expense.

99 The issues arising from the circumstance that the V‑drain material did not comply with the Technical Specification for sub‑base material in cl 8.6.2 of the Scope of Work continued after 25 June 2011, resulting in Lycopodium issuing further site instructions as well as giving verbal directions. Ultimately, the material in the V‑drains along about 80% of the length of the access road did not meet the specification. In addition, some of the material sourced from borrow pits for the wearing course proved to be unsuitable.

100 On 30 August 2011, Lycopodium issued SI‑LE‑016 concerning the road between Chainages 160 and 164.5. This site instruction stated (relevantly):

Test results for material sourced from the borrow pit at Chainage 163 [have] failed the material specification for both wearing course and sub‑base grading as its clay content exceeds the maximum limits.

This material has been placed as a 225mm layer along the alignment between Chainages 160.0 and 164.5.

The Contractor is hereby instructed to scarify the top of the wearing course between these chainages and place 75mm of material, sourced from the borrow pits at Chainage 170 or 145, as a capping layer.

Material from the borrow pit at Chainage 170 shall be exhausted prior to utilising material from the borrow pit at Chainage 145.

101 Mr Matthews said, and I accept, that Lucas had laid the 225 mm of wearing course because of a verbal instruction from Lycopodium personnel. That instruction had been given when it was found that the wearing course initially laid was too slippery, having a high clay content. It is not clear when Lucas laid the additional wearing course.

102 Lucas signed and returned SI‑LE‑016 on 31 August 2011.

103 On 9 September 2011, Lycopodium issued two Site Instructions, SI‑LE‑020 and SI‑LE‑021, both dated 8 September 2011. SI‑LE‑020 provided (relevantly):

**Wearing Course Material Chainage 152.0 to 160.0**

Due to a shortage of suitable wearing course material, the Contractor is hereby instructed to place material won from Borrow Pit 159 as a 225mm layer between Chainage 152+000 and 160+000. This is to consist of a 150mm layer above the General Fill plus a 75mm depth of “tyning” into the layer below.

This material has a higher plasticity and therefore it is to be capped with 125mm of material from Borrow Pit 146, consisting of a 75mm layer above the ‘base wearing course’ plus a 50mm depth of “tyning” into the layer below. This material is to suitably compacted to wearing course specification.

104 SI‑LE‑021 provided (relevantly):

**Wearing Course Material Chainage 133.0 to 152.0**

Material from Borrow Pit at Chainage 140 is likely to return high clay content and will therefore not be suitable to be used as wearing course layer.

Therefore the Contractor is hereby instructed to place this material as a 225mm layer consisting of [a] 150mm layer above the General Fill plus a 75mm depth of “tyning” into the layer below. This layer is to be capped with 125mm of material from Borrow Pit at Chainage 146, consisting of a 75mm layer above the ‘base wearing course’ plus a 50mm depth of “tyning” into the layer below. This material is to be suitably compacted to wearing course specification.

Following a review of material quantities, and taking into account current site activities, this Instruction is relevant to the chainages listed below and the material from Borrow Pit 140 and 146 is be utilised in the following manner.

* Ch. 151 to 152 150mm + 75mm (“tyned”) material from Borrow Pit 140, capped with 75mm (+ 50mm tyned”) material from Borrow Pit 146,
* Ch. 146 to 147 150mm + 75mm (“tyned”) material from Borrow Pit 140, capped with 75mm + 50mm (“tyned”) material from Borrow Pit 146
* Ch. 133 to 145 150mm + 75mm (“tyned”) material from Borrow Pit 140, capped with 75mm + 50mm (“tyned”) material from Borrow Pit 146

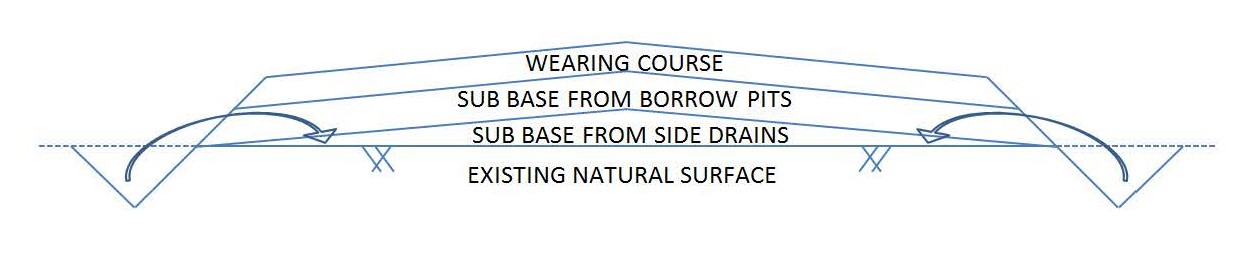
105 As can be seen, each of SI‑LE‑16, SI‑LE‑20 and SI –LE‑21 required Lucas to adopt a method of road construction which differed from that required by the Contract. Lucas did not sign either SI‑LE‑20 or SI‑LE‑21. It did, however, comply with the instructions contained in each of these site instructions.

106 Each of the site instructions issued on 30 August and 8 September 2011 indicated that it was under category (a) in the template for site instructions, and stated that it did not have the effect of altering the contract price or completion date.

107 On 16 September 2011, Lucas introduced a night shift for the haulage of material from borrow pits to the location on the road alignment at which it was to be spread and compacted. One of Lucas’ claims in the proceedings concerned the additional cost of performing work at night.

108 In [47] of the ASC, Lucas alleges that Mr Stuchbury from Lycopodium issued a verbal direction on 11 October 2011 and/or 27 October 2011 that:

(a) in respect of the 70 km of access road then constructed by Lucas between Chainages 106 and 178, it add a further 75 mm layer of sub‑base material from borrow pits to the existing 150 mm thick sub‑base layer formed from the material excavated from cut areas (including V‑drains) along the right of way. This would increase the thickness of the sub‑base layer from 150 mm to 225 mm, so that the road would have a profile depicted as follows:



(b) in respect of the balance of the access road not then constructed, it source material from borrow pits to construct a single 250 mm thick wearing course layer where the material excavated from cut areas (including the V‑drains) along the right of way was not suitable for use in constructing the sub‑base.

109 However, Lucas did not lead evidence to support the allegation that a direction to this effect had been given on 11 October 2011 although there was evidence of a non‑specific kind about verbal instructions given by Lycopodium personnel.

110 Nevertheless, by October 2011, it was apparent that the material in the V‑drains along the sections of the road still to be constructed which would be suitable for use as the sub‑base would be much less than the amounts indicated in Sch 4 to Sch A2 in the Contract (which showed the derivation of the lump sum price for the road construction activity). This led to discussions between the parties. Eventually, agreement was reached that the method of road construction should be modified.

111 The construction methodology was discussed at a meeting on 27 October 2011 between Ben Lucas, Mr Matthews and Mr Doyle from Lucas and Messrs Stuchbury, Ruggiero and Walker from Lycopodium. Three options were identified:

(a) Option 1 – In those areas in which material from the right of way including the V‑drains was suitable as sub‑base material without blending, the pavement design was to remain as a 150 mm sub‑base and 150 mm wearing course as per the technical specification in the Contract;

(b) Option 2 – In those areas in which the material from the right of way including the V‑drains was not suitable as sub‑base material without blending, the pavement design would be altered to consist of a 250 mm wearing course only (ie, no sub‑base would be constructed); and

(c) Option 3 – In those partially completed areas at which the level of material was already up to the 150 mm sub‑base level, testing would be conducted and appropriate directions would be issued by Lycopodium on a case‑by‑case basis.

112 In a second meeting on 2 November 2011, it was agreed that Options 1 and 2 would be applied between Chainages -9.5 to 0, Chainages 0 to 60 and Chainages 190 to 214. A decision as to the areas to which Option 3 would be applied was deferred pending the receipt of test information.

113 Subsequently, Mr Matthews (Lucas) and Mr Stuchbury (Lycopodium) conferred and reached agreement as to the locations at which the different methodologies were to be applied.

114 In effect, in relation to those sections of the road still to be constructed in which the material in the V‑drains was not suitable as sub‑base without blending, Lucas was to place a single 250 mm layer of wearing course using material obtained from borrow pits, instead of the two separate layers of 150 mm sub‑base and 150 mm wearing course.

115 On 8 December 2011, Lucas submitted a request for a variation pursuant to cl 29.2 of the Contract in respect of Site Instructions LE‑016, LE‑020 and LE‑021 on the basis that its compliance with those instructions had involved it hauling material for distances exceeding those contained in Sch 4 to Sch 2 in the Contract. It claimed a total amount of $41,418 (exclusive of GST). None of this amount comprised time‑related costs.

116 Another meeting occurred between Ben and David Lucas, and Messrs Matthews, Maiolo and Doyle from Lucas with Mr Massoudi (AGA) and Messrs Stuchbury, Walker, George and Beveridge (Lycopodium) on 19 December 2011. At this meeting, the Lucas representatives presented a written request for a variation order (VO#42) reflecting the difference between the volumes of in situ and borrow pit material contained in Sch 4 to Sch 2 in the Contract and the actual and anticipated volume needed to construct the road, in addition to amounts for the increased haulage distances involved. It claimed payment of these amounts at rates said to have been specified in Items 40‑43 of the Schedule of Rates attached to its Tender of 31 January 2011, but which appear to be those specified in Items 9‑38 in that Schedule. In addition, Lucas claimed $4,297,671.93 (plus GST) by way of Preliminaries. Lucas withdrew this request during the meeting on 19 December as part of the discussions directed to the resolution of the issues.

117 In a letter bearing the date 22 December 2011 addressed to Mr Stuchbury, Mr Matthews recorded the agreement reached at this meeting as (relevantly):

1. …

2. All in situ materials from side drains as per line items 40 & 41 will be paid as a lump sum. These items will be paid at a pro rata rate against the total km of these items of work that have been completed at the date of the claim or forecast for the estimated claim.

3. In areas where the in situ sub base material from side drains does not meet specification payment will be made for an additional 75mm of sub base imported from borrow pits as required.

4. Extra payment for material will be made for the additional volumes to sheet areas that were considered dangerous in wet conditions (approximately Chainage 166 to 160 at nominally 150mm in lieu of 75mm).

5. From Chainage 60 to Chainage -9.5 an assessment of the road alignment will be made by [Knight Piésold] and either 150mm or 250mm of wearing course will be installed from borrow pits. In the case where 150mm of wearing course is installed there will be no requirement for extra material. In the instance of 250mm of material laid. Lucas will be paid for only 75mm of imported material for savings made installing in one layer.

6. The above methodology as mentioned in point 5 [can] be ignored if Lucas continue with the 2 layer construction of 75mm imported material (paid against line item 42 of the progress claim schedules) mixed into the non conforming in situ material and capped with 150mm of wearing course.

7. Payment will be made in the next progress claim for all insitu side drain material that was deducted from previous claims.

118 It was not suggested that Mr Matthews’ letter was inaccurate in its recording of the matters agreed. In particular, when Lycopodium responded (at the prompting of Lucas) on 16 July 2012 to the Lucas letter of 22 December, it did not suggest that Mr Matthews had misstated the position.

119 It seemed to be common ground that the road‑making after 19 December 2011 was carried out in accordance with the revised methodology.

120 By Contract Variations 8 and 9 (CV‑8 and CV‑9) issued on 8 March and 17 April 2012 respectively, Lycopodium allowed Lucas variation claims of $1,580,272.24 and $49,605.83 respectively. This was a total of $1,629,878.07.

121 The substantive parts of CV‑8 and 9 were as follows:

|  |  |  |
| --- | --- | --- |
| **CV-8** | | |
| THE CONTRACT SHALL BE VARIED TO THE EXTENT SET OUT BELOW: | | |
| **Item** | **Description** | **Value** |
| 1 | Adjustments to Remuneration Schedule 4 Items 10.0 to 15.0.  Win from borrow, load, haul from 0km up to and including 6km, place, spread, moisture condition and compact as sub base | $808,386.12 |
| 2 | New items added to Remuneration Schedule 4 Item 15A to 15H.  Win from borrow, load, haul from 6km up to and including 14km, place, spread, moisture condition and compact as sub base | $836,955.04 |
| 3 | Adjustments to Remuneration Schedule 4 Items 16 to 28.0.  Win from borrow, load, haul from 0km up to and including 13km, place, spread, moisture condition and compact as wearing course | $(527,921.01) |
| 4 | New items added to Remuneration Schedule 4 Item 28A to 28G.  Win from borrow, load, haul from 13km up to and including 20km, place, spread, moisture condition and compact as wearing course | $340,436.76 |
| 5 | Adjustments to Remuneration Schedule 4 Items 51 to 60.0.  Win from borrow, load, haul from 0km up to and including 10km, place, spread, moisture condition and compact as wearing course | $122,415.33 |
|  | **Refer to the attached spreadsheet for specific details on each line item** |  |
| **TOTAL:**  Original Contract Price  Previous Contract Variation (No.001 to 006 (incl))  Amount of this Variation | | **$1,580,272.24** |
| $35,016,992.60 |
| $168,448.75 |
| $1,580,272.24 |
| **Varied Contract Price** | | **$36,765,713.59** |

|  |  |  |
| --- | --- | --- |
| **CV-9** | | |
| THE CONTRACT SHALL BE VARIED TO THE EXTENT SET OUT BELOW: | | |
| **Item** | **Description** | **Value** |
| 1 | New items added to Remuneration Schedule 4 Item 15A to 15H.  Win from borrow, load, haul from 6km up to and including 14km, place, spread, moisture condition and compact as sub base | $(2,421.12) |
| 2 | Adjustments to Remuneration Schedule 4 Items 16 to 28.0.  Win from borrow, load, haul from 0km up to and including 13km, place, spread, moisture condition and compact as wearing course | $28,707.37 |
| 3 | Adjustments to Remuneration Schedule 4 Items 51 to 60.0.  Win from borrow, load, haul from 0km up to and including 10km, place, spread, moisture condition and compact as wearing course | $23,319.58 |
|  | **Refer to the attached spreadsheet for specific details on each line item** |  |
| **TOTAL**  Original Contract Price  Previous Contract Variation (No.001 to 008 (incl))  Amount of this Variation  **Varied Contract Price** | | **$49,605.83** |
| $35,016,992.60 |
| $1,748,720.99 |
| $49,605.83 |
| **$36,815,319.42** |

122 As is apparent, CV‑8 and CV‑9 operated to amend the Contract itself, by amending the content of Sch 4 to Sch A2. The effect of CV‑8 was to:

(a) increase by $808,386.12 the amount to which Lucas was entitled for winning, hauling, spreading, conditioning and compacting sub‑base material from borrow pits located up to 6 km from the location on the road at which it was to be used;

(b) introduce into Sch 4 to Sch A2 an entitlement in Lucas to be remunerated for winning etc sub‑base material from borrow pits located between 6 km and 14 km from the places at which it was to be used and to indicate the entitlement of Lucas to $836,955.04 for that work;

(c) reduce by $527,921.01 the amount to which Lucas had been entitled under the Contract as executed ($6,056,904) for winning etc wearing course material from borrow pits up to 13 km from the place it was to be used;

(d) introduce into Sch 4 to Sch A2 a new entitlement of Lucas, namely, an entitlement to be paid for winning etc wearing course material from borrow pits located between 13 km and 20 km from the place it was to be used and to fix the entitlement of Lucas for that work at $340,436.76; and

(e) with respect to the work on the 9 km section of the road between the Tropicana Main Camp and the mine site, to increase by $122,415.33 the amount to which Lucas was entitled for winning etc wearing course material from borrow pits located up to 10 km from the locations on the road at which it was to be used.

123 CV‑9 varied the position affected by CV‑8 by reducing slightly the figure to which Lucas was entitled for winning, hauling and laying sub‑base material from distances between 6 km and 14 km, and increasing the amounts to which it was entitled for winning, hauling and laying wearing course material.

124 It was common ground that these contract variations did not include payment of Preliminaries or other time‑related costs. Mr Stuchbury confirmed that they had been calculated with reference to Lucas’ direct costs only. Nor was Lucas granted an extension of time with respect to the performance of the Additional Works.

125 Lucas alleges (and AGA did not dispute) that the revisions in the road‑making methodology meant that it had had to obtain a total of 163,013 m3 of sub‑base material from borrow pits, more than double the quantity of 80,250 m3 contemplated by Sch 4 to Sch A2 in the Contract and by the revised Sch 5 in the Schedule of Rates issued on 25 February 2011. It alleges that this meant in turn that it had had to open up new borrow pits, to extend existing borrow pits and to haul sub‑base material from borrow pits further than the maximum of 6 km referred to in the revised Schedule of Rates.

126 Lucas alleges that the additional quantities and additional haulage meant that it had had to spend time in grading and compacting the sub‑base layer, resulted in an increase in the total surface area which it had had to prepare and trim, increased the work hours required to complete the works (involving the introduction of nightshifts), required the deployment of additional plant, and had delayed its works program. The extended duration of the works meant that it incurred further time‑related costs.

127 These matters collectively comprise the “Additional Works” to which I referred at the commencement of these reasons.

128 An indication of the extent of the required revisions to the contemplated method of road‑making is seen in the following summary:

|  |  |
| --- | --- |
| Number of Chainages for which the in situ material and the material in the V‑drains did meet the Technical Specification for the sub‑base | 49 |
| Number of Chainages for which sub‑base material had to be imported | 176 |
| Number of Chainages in which 225 mm of sub‑base and wearing course were laid in one layer | 85 |
| Number of Chainages in which Lucas had to lay a 75 mm cap of wearing course material | 42 |

129 Lucas had to obtain sub‑base material from borrow pits located up to 14 km from the place at which it was to be laid and wearing course material from borrow pits located up to 17 km from the place at which it was to be laid.

130 Lucas did not achieve Practical Completion by 30 November 2011. Instead, Practical Completion was achieved on 9 April 2012. By letter dated 16 July 2012, Lycopodium indicated that, by reason of the grant of extensions of time of 25 days on account of inclement weather and the Christmas shutdown of 10 days, the date for Practical Completion had been extended to 4 January 2012.

131 By letter dated 8 May 2012 to Lycopodium, Lucas sought payment with respect to the revised Scope of Work incorporating the Additional Works. It asserted that the “revised contract value” was $44,213,372.44, excluding GST and exclusive of variation orders issued to that time which remained unresolved. In addition, Lucas claimed to be entitled to the full amount of $280,000 which AGA had retained on account of liquidated damages.

132 Lycopodium provided its substantive response to Lucas’ letter of 8 May 2012 on 16 July 2012. It rejected many of the claimed variations but indicated that AGA was prepared to make a payment in respect of some. However, the parties were unable to agree the terms upon which the payment (as “an act of goodwill”) of $1,070,208.98 was to be made. Further correspondence ensued concerning the claims and with respect to the terms which Lycopodium sought to attach to the *ex gratia* payment. Eventually, agreement was reached that Lucas could accept the *ex gratia* payment without prejudice to its ability to bring further claims.

133 On 9 March 2013, Lycopodium issued Contract Variation 14 (CV‑14) for payment of the *ex gratia* sumand Lucas claimed that amount in its April 2013 Monthly Progress Claim. It was common ground that Lucas had received the payment. The composition of the *ex gratia* payment can be inferred from Lycopodium’s response of 16 July 2012:

|  |  |
| --- | --- |
| **Description** | **Amount** |
| Clearing and grubbing vegetation from borrow areas and removing to designated stock piles | $27,801.00 |
| Stripping top soil (300 mm depth) from borrow areas and removing to top soil stock piles | $287,277.00 |
| Sediment control structures – create V‑drain and sediment control catchment structure | $93,100.00 |
| Rehabilitation of borrow areas | $614,462.00 |
| Clearing and grubbing vegetation from borrow areas and removing to designated stock pile on the 9.5 km section between the main camp and the Tropicana mine site | $2,304.00 |
| Stripping top soil (300 mm depth) from borrow areas and removing top soil stock pile on the 9.5 km section | $22,512.98 |
| Rehabilitation of borrow areas used for the 9.5 km section | $22,752.00 |
| **Total** | **$1,070,208.98** |

134 As is apparent, the *ex gratia* payment related to the work of Lucas in preparing, and later rehabilitating, borrow pit areas. It was common ground that the amounts which Lucas received pursuant to the so called *ex gratia* payment do not need to be brought into account in these proceedings.

## The baseline program and critical delay

135 Much of the evidence and submissions contained references to the “baseline program” and to delays being critical or non‑critical.

136 There was no difference between the parties as to the concepts of “critical path” and “critical delay”. It is accordingly convenient in this respect to adopt the definitions in the Delay and Disruption Protocol issued by the Society of Construction Law (2nd ed, 2017) at 62:

**critical path**

The sequence of activities through a project network from start to finish, the sum of whose durations determines the overall project duration. There may be more than one critical path depending on workflow logic. A delay to progress of any activity on the critical path will, without acceleration or re-sequencing, cause the overall project duration to be extended, and is therefore referred to as a ‘critical delay’.

### The Recreated Program

137 Lucas presented its case on the effects of the delay on its ability to achieve the date for Practical Completion by reference to a baseline program prepared by Mr Hentschke and Mr Matthews in mid‑2013. Mr Matthews and Mr Hentschke referred to this as the “recreated” program, as did Lucas in its submissions. Although I think that it would be more apt to describe the program as a “created” program, I will, for consistency, refer to it as the “Recreated Program”. In doing so, I am not intending to imply acceptance of the fact implicit in the use of that term.

138 Lucas instructed its programming expert, Mr King, to use the Recreated Program in providing his opinion and he did so.

139 AGA submitted that the Court ought not regard the Recreated Program as reliable and so should not base findings on it. This requires findings about the provenance and reliability of the Recreated Program.

140 Clause 18.1 of the Contract required Lucas to commence and execute the Works in accordance with the Construction Program contained in Sch D to the Contract until the Initial Work Program was approved and thereafter in accordance with the Initial Work Program.

141 In cl 1.1 of the Contract, the term “Initial Work Program” was defined to mean the draft work program submitted by Lucas pursuant to cl 14.1(a). Clause 14.1 provided:

**14.1 Contractor’s Initial Work Program**

(a) The Contractor must prepare a detailed program for the Works (which must be consistent with the draft Construction Programme contained in Schedule D) which sets out:

(i) weekly hours scheduled to be worked for each activity and weekly total labour scheduled for each trade or labour category;

(ii) major material requirements;

(iii) periods of use of Company supplied equipment, facilities and services (if any);

(iv) sufficient detail to demonstrate the timely acquisition of Equipment, materials and supplies; and

(v) the efficient utilisation of labour and Equipment,

and submit it to the Company Representative for approval no later than 21 days from the Date of Contract or any later time agreed by the Company Representative.

(b) The Company Representative must, within 14 days of receipt of the Initial Work Program, accept the Initial Work Program or give the Contractor Notice that it wishes to make comments, requests or propose amendments. If the Company Representative notifies the Contractor:

(i) of its comments, requests or amendments; or

(ii) that in its opinion the Initial Work Program submitted does not enable the Company Representative to readily evaluate the Contractor's performance,

the Contractor must prepare an amended Initial Work Program and resubmit such amended Initial Work Program within seven days of the Company Representative’s Notice.

(c) The Contractor will resubmit the amended Initial Work Program, and any revision to it, until the Company Representative approves the amended Initial Work Program. Upon the Company Representative’s approval, the amended Initial Work Program will be the Approved Initial Work Program.

(d) The procedure under this Clause 14.1 is intended to provide the Company with information to assess the Contractor's ability to perform the Works. For the avoidance of doubt, the Contractor’s obligations under this Clause 14.1 and the Approved Initial Work Program do not relieve the Contractor nor affect its obligations to comply with the Monthly Report.

142 The Construction Program contained in Sch D to the Contract bears the Lucas stylised heading and the date 18 February 2011. I infer that Lucas provided it to Lycopodium on, or shortly after, that date. It listed, in respect of each stage of the performance of the Contract, the tasks within each stage, the number of days required for each task, the commencement and finishing dates for the performance of the work on each task and enabled the identification of tasks which had to be completed before the next task could be commenced. The Program of Works was shown in both written and graphical form. The first listed “task” was the award of the Contract, which was then expected on 25 February 2011 and the last, the completion of the work by 21 November 2011. The Program was similar to a baseline program but, because it did not show separately the critical path for the Works, was not, strictly speaking, a baseline program. I will refer to this document as the Contract Program.

143 In the affidavits containing their evidence in chief, each of Mr Matthews and Mr Hentschke deposed that Lucas had prepared a “baseline program” for the work. It had done so in March 2011 and had revised it more than once as Lucas’ approach to the performance of the work changed.

144 However, in cross‑examination, after some differences between the Contract Program and the Recreated Program were pointed out, Mr Matthews conceded that the latter was a new program. He also acknowledged that the document presented by Lucas as the Recreated Program was not the baseline program on which Lucas had worked in carrying out the Contract.

145 Mr Matthews deposed that Lucas lost the baseline program on which it had settled when mobilising to the site. Accordingly, in 2013, he and Mr Hentschke engaged in the “recreation” of that program. Mr Matthews said that he considered the Recreated Program to record accurately how Lucas had intended to construct the access road before it became aware that the material along the road alignment and in the V‑drains was unsuitable for use in the formation of the sub‑base.

146 In his cross‑examination, Mr Hentschke said that he had thought that Lucas prepared a baseline program sometime after the Notice of Award but was unable to say when. Although both Mr Matthews and Mr Hentschke described the program prepared in 2013 as recreating a baseline program prepared in 2011, Mr Hentschke was not sure whether the 2011 version had been sent to Lycopodium and, ultimately, he acknowledged that he could not even recall seeing a baseline program in 2011.

147 The evidence did not indicate expressly whether a program, satisfying the description of the Initial Works Program in cl 14.1, was ever submitted to Lycopodium, nor whether such a program was ever approved. Mr Matthews thought that a construction program prepared when mobilising to site had been submitted to Lycopodium but acknowledged that he had not been able to locate evidence that that was so when preparing his affidavit. He explained that the original construction program may have been lost by reason of the incorporation into it of later modifications with the effect that original Microsoft project version was lost.

### Other construction programs

148 A number of construction programs were in evidence. Lucas had prepared and provided to Lycopodium updated construction programs on 30 March 2011 (the 30 March Program) and another on 6 April 2011 (the 6 April Program). The four construction programs had much in common but there were also differences. The Contract Program of 18 February 2011 divided the work into three principal segments, assumed Lucas having two work camps, two work fronts, mobilising to site on 15 March 2011 and work concluding on 21 November 2011.

149 The 30 March Program was based on a Contract Award on 16 March 2011, and divided the work into five principal segments. It contemplated Lucas mobilising to site commencing on 28 March 2011 and Practical Completion on 30 November 2011.

150 The 6 April Program was based on a Contract Award of 16 March 2011, mobilisation to site commencing on 28 March 2011 and Practical Completion on 30 November 2011.

151 The Recreated Program was based on the Contract being awarded on 14 March 2011, mobilisation to site commencing on the same day, and Practical Completion on 30 November 2011.

152 Mr Andrews, the programming expert called by AGA, referred to another construction program which he had been instructed had been issued by Lucas on 7 May 2011 (the 7 May Program). The evidence did not disclose the provenance of that program. On my understanding, the program of Works in the 7 May Program matches the program in the 6 April Program. Mr Andrews considered that the program of 7 May 2011 could be described as a baseline program (although it did not contain a critical path for the Works). He also considered that, because the Contract had been executed soon after 7 May 2011, the program bearing that date reflected the parties’ contracted intentions. In cross‑examination, Mr Andrews accepted that the fact that the Notice of Award of the Contract occurred at an earlier date would make it appropriate to select a construction program prepared at an earlier date.

153 Although the format of the five programs had much in common, only the Recreated Program was in the form of a baseline program, that is, by showing the critical path for the completion of the Works.

154 I summarise in the following table particular elements of the five programs:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Program Item** | **Contract Program** | **30 March Program** | **6 April Program** | **7 May Program** | **2013 Recreated Program** |
| Contract award | 25 February | 16 March | 16 March | 16 March | 14 March |
| Mobilisation  to site | 15 March – 15 March | 28 March – 11 June | 28 March –  1 October | 28 March – 1 October | 14 March – 25 May |
| Construction of Main Camp commencement | 25 February | 20 March | 28 March | 28 March | 14 March |
| Construction of Ponton Creek camp commencement | N/A | 4 April | 4 April | 4 April | 26 May |
| Road construction commencement | 15 April | 13 April | 27 April | 27 April | 28 March |
| Practical Completion | 21 November | 30 November | 30 November | 30 November | 30 November |

155 These comparisons do not reflect all the differences between the Programs because there were changes in the location of camps, some internal re‑organisations of categories of work and revisions of the period allowed for some tasks.

156 Both Mr Matthews and Mr Hentschke acknowledged that there are material differences between the Recreated Program and the Programs of 30 March and 6 April. Neither was able to explain the differences.

### Consideration of the Programs

157 Neither Mr King nor Mr Andrews considered it appropriate to make use of the Contract Program, although counsel for AGA did use it as the basis for some submissions.

158 I doubt that Lucas did prepare a work program in the form of a baseline program (that is, setting out a critical path for the completion of the Works) in March or April 2011. Instead, Lucas relied on the 30 March Program and the 6 April Program, with the latter replacing the former. Lucas did provide each of these Programs to Lycopodium. The evidence did not disclose whether either had been formally approved by Lycopodium pursuant to cl 14.1 of the Contract, but it seems probable that, in a practical sense, the parties worked on the basis of the 6 April Program, at least until the inadequacy of the materials for sub‑base became apparent. Mr Andrews said that the amended programs prepared by Lucas as the Works progressed were modified versions of the 7 May Program. That is a further matter making it inappropriate to use the Contract Program as the basis for the analysis.

159 On the evidence, I am not able to make a finding as to what, if any, use was made of the 7 May Program. The evidence does not disclose whether it was provided to Lycopodium.

160 I mention that there were other construction programs in evidence which had been prepared by Lucas from time to time during the course of the Works. It is not necessary to refer to them presently.

161 Mr King, the programming expert called by Lucas, was instructed to use the Recreated Program. He did so, but adjusted it to show construction of the sub‑base as having commenced on 29 May 2011. Given that the Recreated Program was not a true recreation, and differed from the construction programs actually used, this fundamental basis for Lucas’ claim is unreliable. As will be seen, this undermines its claim in significant respects.

## The breach of contract claims - general

162 As pleaded, the amounts claimed by Lucas are of three general kinds:

(a) the time‑related costs ($3,019,877.97 without allowance for profit; $3,170,871.87 including allowance for profit);

(b) Consequential Claims comprised of:

(i) $1,433,390.20 for additional water transfer and haulage costs;

(ii) $246,097.50 for the additional labour costs in working a night shift;

(iii) $280,000 being the sum retained for liquidated damages; and

(c) Other Variations Claims totalling $1,830,680.29 in respect of seven items of work which Lucas claims should have been paid as variations.

163 Lucas seeks to recover the amounts in all three categories as damages for breach of contract. It seeks, in the alternative, to recover the amounts in categories (a) and (b) as damages pursuant to s 236 of the ACL, on the basis of AGA’s alleged contraventions of s 18.

164 In [97] of the ASC, Lucas pleads that AGA breached the Contract by not treating several actions or events as variations to the Contract, or in not paying appropriate amounts in respect of matters which it had accepted as variations:

(a) the performance of the Additional Works, which AGA had accepted as a variation, but for which it had not paid Preliminaries (ASC [97.2]);

(b) the rectification works to the Ponton Creek crossings which it had carried out between 19 and 24 April 2011 (ASC [97.1]);

(c) a Stop Work Order issued by Lycopodium on 18 February 2012 pursuant to which it had been precluded from continuing work at the south‑western end of the road for six days (ASC [97.3]);

(d) the use of its graders for miscellaneous extra work (ASC [97.4]); and

(e) the time taken to resolve issues concerning the design of the bridge piles (ASC [97.5]).

165 Lucas pleads in [97] of the ASC that these five matters entitled it to payment of $6,301,822.33 (this sum was reduced during the hearing).

166 Lucas did not make a claim for damages for breach of contract in respect of the direct costs it incurred in performing the Additional Works. It may have recognised that Contract Variations 8 and 9, pursuant to which it had been paid an additional $1,629,878.07 by way of variation together with some or all of the *ex gratia* payment, satisfied its claims in that respect. Lucas claimed only an amount for Preliminaries in respect of the Additional Works. This was by far the largest of its claims.

167 Two of the breach of contract claims pleaded in [97] of the ASC need not be considered. They are the claims for the rectification work to the crossings at Ponton Creek on the Kurnalpi‑Pinjin road (ASC [97.1]) and for the use of its graders (ASC [97.4]).

168 With respect to the former, Lucas acknowledged that it had been paid for that work on day work rates under Sch A7 to the Contract and that those rates had included allowance for the time‑related costs which it claims in these proceedings. Accordingly, it did not at trial pursue the claim that that work constituted a variation. Lucas did, however, contend that the time taken on the rectification work on the Creek crossings entitled it to an extension of time for the date of Practical Completion, and it will be necessary to return to that claim.

169 With respect to the claim concerning the graders, Lucas pleads that directions by Lycopodium for it to use its graders for other tasks had constituted a variation for the purpose of cl 29 of the Contract. However, at trial Lucas accepted that any delays caused by the diversion of its plant to other uses had not been critical and, accordingly, it did not pursue the claim for time‑related costs made in ASC [97.4], nor the claim for an extension of time.

170 Next, Lucas claims that AGA had breached the Contract by not treating each of the seven items making up the Other Variations Claims as variations, or in not paying for them appropriately.

171 The third part of Lucas’ breach of contract claim is its contention that AGA breached a term implied into the Contract that it would act reasonably and in good faith in assessing extensions of time and requirements of variation, and would ensure that Lycopodium, as its agent, acted in the same manner (ASC [120]‑[125]). The breaches were constituted, Lucas alleged, by AGA’s failure to grant extensions of time in relation to variations which had delayed the critical path of the work. Lucas claimed that the breach of the implied terms caused it to suffer losses of $8,277,436.78 (being the aggregate of all of its Variation Claims) (ASC [122]).

172 In the ASC, Lucas sought the time‑related costs in respect of a period totalling 18.7 weeks (130.9 days), this being the length of time between the date for Practical Completion in the Contract (30 November 2011) and the date it achieved Practical Completion (9 April 2012). While Lucas maintained that period for its ACL claim, it recognised in the closing submissions that the period had to be assessed differently in its breach of contract claim.

173 For the breach of contract claim, Lucas asserted a period of accumulated delay of 121 days, made up as follows:

(a) delay caused by the performance of the Additional Works 68 days

(b) the time taken to resolve the bridge piles design 46 days

(c) the effect of the Stop Work Order 7 days

**Total** **121 days**

174 Lucas submitted that effect should be given to the reduction to 121 days by a pro rata adjustment to the figures sought in the ASC. For the time being, it is convenient to continue using the figures based on the claimed delay of 18.7 weeks.

175 Lucas quantified its claim for the time‑related costs by reference to the rates for Preliminaries set out in Sch A3 to the Contract in the following manner:

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Description** | **Weeks** | **Lucas’ revised claim** |
| 1 | Management/Supervision (Indirect Labour above Leading Hand) | 18.7 | $662,701.87 |
| 2 | Survey Personnel and Equipment | 18.7 | $286,173.09 |
| 3 | Temporary Site Facilities and Associated Services/Equipment | 18.7 | $111,275.45 |
| 4 | Traffic Management, Barricades and Signage | 16.7 | $104,970.99 |
| 5 | Operate and maintain Contractor’s water supply | 16.7 | $136,423.61 |
| 6 | Dust control measures and maintenance of the whole of the Work | 6.5 | $34,563.38 |
| 7 | Operate and maintain Contractor’s power supply | 17.7 | $302,887.60 |
| 8 | Health, Safety and Environmental Management | 17.7 | $217,312.53 |
| 9 | Personnel Transport | 17.7 | $335,310.04 |
| 10 | Accommodation and Messing | 9.5/11.2 | $734,151.66 |
| 11 | Serviceman and service truck | 16.7 | $245,101.66 |
| **Total** | | | **$3,170,871.87** |

Each of these figures in this table included a profit margin of 5%.

176 The 11 items in this table are the same 11 items appearing under the “Recurring Cost” category of the Preliminaries listed in Sch A3 to the Contract.

177 The manner in which Lucas formulated its claim for the time‑related costs made it plain that they are the costs which Lucas attributes to the additional time which it took to achieve Practical Completion (which Lucas alleges was caused by the matters identified earlier). This is evident in [93] of the ASC, in which, in the pleading of its misleading or deceptive conduct claim, Lucas quantifies its loss and damage in respect of these items in the sum of $6,301,822.33 calculated “in respect of the [pleaded] delays”. In [93.1] of the ASC, Lucas says, in relation to the claim with respect to the Additional Works, that it had calculated the sum of $4,342,334.63 by reference to the preliminary rates in Sch A3 “to account for the 18.7 weeks’ delay”. Earlier, in [50] of the ASC, Lucas alleged that the Additional Works had had a 38 day “delaying effect” and that the 38 day “delay” had affected the critical path of the Works by extending the time required for completion from 18 January 2012 to 25 February 2012.

178 AGA submitted that, in these circumstances, the claim for time‑related costs in respect of the Additional Works should be regarded as a claim for delay costs, that is, a claim for the indirect costs said to have resulted from a delay in the completion of the Works as a whole. Counsel made a like submission with respect to the other occurrences which Lucas claimed it caused it to incur additional costs by way of time‑related costs.

179 AGA submitted that cl 18.8 of the Contract had the effect of excluding altogether any entitlement in Lucas to recover delay costs. It is, AGA submitted, a complete answer to the claim of Lucas for the time‑related costs. Lucas denied that cl 18.8 has the effect for which AGA contends.

180 It is convenient to defer consideration of the effect of cl 18.8. Instead, I will address first the other issues bearing on the claim of Lucas to the time‑related costs.

### Identifying the documents constituting the Contract

181 An initial issue is to determine the documents which comprised the Contract.

182 As the trial concerned claims of both breach of contract and misleading or deceptive conduct, the Court received a good deal of evidence concerning the negotiation of the Contract and of its terms. Much of that evidence is not admissible with respect to the contract claim.

183 As already noted, cl 1.1 of the Contract contained a definition of the term “Contract”:

“**Contract**” means Notice of Award (if any), this contract, including the Key Terms Schedule, Clauses 1 to 52, the annexures, the Scope of Work, the Schedules, the Drawings and all other documents annexed or attached which are intended to form part of the contract between the parties.

184 This definition indicated that documents of two general types constituted the Contract:

(a) the Notice of Award (if any); and

(b) the Contract itself, which was specified to include the particular documents mentioned in the definition and all other documents *annexed or attached* which were intended to form part of the contract between the parties.

185 The difference between the parties arose from the reference to the “Notice of Award (if any)”. As previously noted, the only Notice of Award issued was that dated 14 March 2011 (and signed by Ben Lucas on 16 March 2011). Its terms have been set out earlier in these reasons.

186 AGA emphasised in its submissions that the Notice of Award was limited to Lucas’ pre‑mobilisation, mobilisation and early work activities to a value not exceeding $5 million and that it contemplated expressly that a Notice of Award for the total contract price would be issued later. It submitted that this meant that the Notice of Award issued on 14 March 2011 should not be regarded as a notice of award for the purposes of the Contract definition.

187 Counsel for AGA noted that the Contract had been sent by Ms Rudowski to Lucas for execution well after the issue of the notice of 14 March 2011. That being so, the inclusion of the words “(if any)” after the words “Notice of Award” in the definition of Contract should be regarded as objective evidence of a mutual understanding that the notice of 14 March was not a Notice of Award. Were it otherwise the words “if any” would have been superfluous. I do not regard this as a persuasive consideration. The inclusion of those words is just as consistent with the parties being uncertain as to the status of the 14 March Notice but intending that, if it be a notice of award, it should be part of the Contract.

188 AGA also referred to the definition of “Notice of Award” in cl 1.1 of the Contract:

“**Notice of Award**” means the notice of formal acceptance of the Tender signed by the Company, including any annexed memoranda comprising agreements between and signed by both Parties ...

189 Counsel for AGA pointed out that the Notice of 14 March 2011 was not, on its terms, a “notice of formal acceptance of the Tender” of Lucas. This was a further reason, it was submitted, why the notice should not be regarded as a Notice of Award for the purposes of the definition in the Contract.

190 The issue of whether the notice of 14 March is a Notice of Award for the purposes of the definition in the Contract is to be determined by an objective consideration, that is, by considering what a reasonable business person would have understood the definition to mean: *Mount Bruce Mining Pty Ltd v Wright Prospecting Pty Ltd* [2015] HCA 37; (2015) 256 CLR 104 at [47].

191 Severalfeatures support the conclusion that, considered objectively, the notice issued on 14 March 2011 was a Notice of Award for the purposes of the Contract definition. The first is that, by its heading, the document announced itself as “Notice of Award of Contract”. The second is the first sentence which states that AGA, in its capacity as agent and manager for the Tropicana Joint Venture, “issues this Notice of Award *and awards the Contract* to [Lucas]” (emphasis added). The third is that the notice required Lucas to confirm its program for the whole contract. The fourth is that, unless a contract can be divided into severable parts, there can be only one award of a contract.

192 I consider that a reasonable business person would have understood the notice to be a Notice of Award of the whole Contract, but with AGA at that time authorising Lucas to expend (and thereby limiting its exposure to) a maximum of $5 million until the Contract was executed. The evident purpose of the notice was to give Lucas some assurance so as to allow, at the least, pre‑mobilisation work to commence before the parties executed their formal contract.

193 Acceptance of AGA’s submission would be to prefer form over substance. On any reasonable view, the notice of 14 March 2011 served to notify Lucas formally that its Tender had been accepted, even though it did not say so in express terms.

194 I add that the Notice of Award appears to also have given rise to the first kind of agreement referred to in *Masters v Cameron* [1954] HCA 72;(1954) 91 CLR 353 at 360.

195 Accordingly, while the parties contemplated that a further Notice of Award would be issued, and no such notice was issued, the notice signed by Ben Lucas on 16 March 2011 should be regarded as a Notice of Award for the purposes of the Contract definition.

196 However, contrary to the submission of Lucas, this does not have the effect that the documents *referred to* in the Notice of Award were, like the Notice itself, *incorporated into* the Contract and became part of it. The Notice provided only that the contract to be executed by the parties would be *based on* the listed documents. It was in a nature of a statement of the documents on which the parties contemplated that the formal contract would be based. It cannot reasonably be understood as indicating in addition, that the RFT, the addenda and all the other listed documents were also part of the Notice of Award.

197 Two other matters are confirmatory of that view. The first is the definition of “Notice of Award” set out earlier. The second part of that definition indicates that the notice included any *annexed* memoranda comprising agreements between and signed by both parties. Documents to which reference is made in the Notice of Award, but which were not annexed to it, are not within that definition.

198 The second indication is contained in cl 3.1 of the Contract which sets out the order of precedence of the documents comprising the Contract for the purposes of resolution of any conflict or inconsistency between them. While the Notice of Award is listed, none of the documents to which reference was made in the Notice of Award of 14 March 2011 are included. To my mind, this is a further objective indication that the documents referred to in the Notice of Award were not intended to be part of the Contract.

199 I also record that Mr Doyle and Ms Rudowski had agreed, explicitly, that TCS 6 should not form part of the Contract. The Court may have regard to that evidence: *Codelfa Construction Pty Ltd v State Rail Authority of New South Wales* [1982] HCA 24; (1982) 149 CLR 337 at 352.

200 Accordingly, I am satisfied that the Contract between the parties was in writing and comprised:

(a) the Key Terms Schedule for Contract No. TGP‑001 and the Table of Contents;

(b) the document entitled “Tropicana Gold Project Site Access Road Contract” containing 51 clauses;

(c) Annexures A, B, C and D;

(d) the Listed Schedules to the Contract, including the Scope of Work; and

(e) the Notice of Award itself.

201 Contrary to the submission of Lucas, the Contract did not include the documents listed in the Notice of Award and, in particular, did not include TCS 6.

## The claim for time-related costs in respect of the Additional Works

202 Lucas asserted that it was entitled to the time-related costs in respect of the Additional Works because that work had constituted a variation to which cl 29 of the Contract applied and because the claimed costs were part of the remuneration to which it was entitled for that variation. That claim gave rise to a number of subsidiary issues.

### Clause 29 - variations

203 For the entitlement to payment which it claimed, Lucas relied on cl 29 of the Contract, which provided for variations. In [97.2] of the ASC, Lucas also sought to invoke the latent condition provision in cl 19.3 of the Contract, but at trial it did not persist with that claim.

204 By cl 29.1, Lucas was precluded from altering the Works (including the Scope of Work or timing of the delivery of the Works) in any way except as directed or permitted in writing by AGA’s Company Representative or in order to comply with an applicable law.

205 Clause 29.2 permitted AGA to give directions for variations:

**29.2 Directions by Company for variations**

(a) During the performance of the Works, the Company Representative may by Notice direct or permit the Contractor to vary any of the Works without prejudice to this Contract. The Contractor must comply with the Notice, and is bound as if any variation made by it were included in this Contract. A variation may:

(i) increase or decrease the quantity of any Works;

(ii) omit any Works;

(iii) change the character or quality of any Works;

(iv) require additional Works to be done;

(v) change the order in which Works are carried out; or

(vi) change the rate at which Works are carried out.

(b) If the variation requires the omission of work, the Company may have the omitted work carried out by others or not as it sees fit.

206 As can be seen, by cl 29.2, AGA’s Company Representative could, by notice, direct or permit Lucas “to vary any of the Works without prejudice to this Contract”. It then provided that Lucas was to comply with the notice and that it would be bound as if any variation made by the notice were included in the Contract. Lucas claims that the Additional Works were encompassed by cl 29.2(a)(i), (iii) and (iv).

207 Clause 29.3 provided for the pricing of variations:

(a) Subject to paragraphs (b) to (d), the Company will determine the adjustment to the Rates or the Contract Price (if any) resulting from any variation and any adjustment to the Date for Practical Completion. A variation will be valued:

(i) at the relevant rates in the Schedule of Remuneration to the extent that those Rates are applicable to the variation;

(ii) to the extent paragraph (a)(i) does not apply, by agreement between the parties; or

(iii) if the parties cannot agree the Company may, in its absolute discretion, determine a reasonable rate or price to direct that that variation be carried out as day work.

…

The remaining parts of cl 29.3 provided for the manner in which claims for variations were to be made.

208 As can be seen, cl 29.3(a) provided three alternatives in cascading style for the pricing of variations: at the relevant rates in the Schedule of Remuneration to the extent that those rates were applicable; if those rates were not applicable, valuation of the variation by agreement between the parties; and, if the parties were unable to agree, AGA could, in its absolute discretion, either determine a reasonable rate or price or direct that the variation be carried out as day work. The rates for day work were set out in Sch A7.

### Were the Additional Works a variation?

209 As already noted, Lucas contended that its performance of the Additional Works constituted an increase in the quantity of the Works as well as a change in their character and, accordingly, amounted to a variation under cl 29.2(a)(i), (iii) and (iv) of the Contract.

210 In [49] of the ASC, Lucas pleads that the Additional Works comprised:

(a) the placing of an additional layer of sub‑base on to the sub‑base it had already constructed, at [47.2], [49.3];

(b) the obtaining from borrow pits of more than double the anticipated amounts, at [49.4];

(c) the haulage of material from borrow pits located more than 6 km from the locations at which it was placed, at [49.5];

(d) the grading and compaction of the additional sub‑base layer, at [49.6];

(e) preparing and trimming an additional surface area by reason of having to install additional layers of material, at [49.7]; and

(f) the deployment of additional work and plant hours to carry out the work, and the deployment of additional plant to site, at [49.8]‑[49.10].

211 In its opening submissions, AGA accepted that all of this work was within the contractual description of variations and that it had paid for the work as a variation. Counsel said:

We’ve paid the variation amounts for the extra work. We probably didn’t have to, but we did. We are not so – I guess you would say bloody-minded – [that] we’re going to stand in front of your Honour now and say, ‘notwithstanding that we’ve paid these as variations, we’re going to sit there and argue that they shouldn’t be variations’. They’re probably not. But the real territory of the argument is do you get delay costs? That’s what the case is about.

212 Further, in his cross‑examination, Mr Massoudi acknowledged that the requirement for Lucas to haul material for distances greater than those specified in the Contract constituted a variation.

213 However, in the closing submissions, AGA withdrew in part from the position on which it had opened and submitted that not all of the work said to constitute the Additional Works constituted a variation within the meaning of cl 29 of the Contract. Counsel submitted that the work of Lucas in laying an additional 75 mm layer over the existing sub‑base was more properly characterised as rectification work, that is, rectifying work which had not been compliant with the specifications. In relation to the increased quantities from borrow pits, counsel submitted that the Contract had allocated the risk concerning quantities to Lucas so that the realisation of that risk could not be regarded as a variation. Whether or not all of the deployment of the additional work, plant hours and additional plant to carry out the work was a variation depended, counsel submitted, on whether the preceding two items were characterised as variations. Counsel acknowledged that the other components of the Additional Works were within cl 29.

214 Lucas accepted that it was necessary for the Court to make findings as to whether the Additional Works did constitute variations.

#### The mixing and blending

215 Lucas contended first that the Contract had not required it to do any processing of the material excavated from the cut or the V‑drains. For this submission, it relied on terms contained in its Tender of 31 January 2011 and in its revised Tender of 16 February 2011. Both documents contained the qualifications that “[n]o allowance for processing, crushing or screening of sub‑base or wearing course materials [has been made,] it is assumed that this material is suitable once placed on road”. Lucas submitted that the qualification with respect to “processing” meant that neither mixing nor blending was within the Scope of Work.

216 Lucas acknowledged that a provision in cl 8.6.2 of the Scope of Work forming part of the Contract which concerned the sub-base is inconsistent with the claimed qualifications. That acknowledgement was appropriate, as cl 8.6.2 provides (relevantly):

… The Contractor shall take the necessary measures to see that a quality material meeting the grading requirements is obtained which may require selectively choosing materials from excavations, *mixing the materials as they are excavated, or mixing the materials on the road surface prior to spreading and compacting*.

(Emphasis added)

217 Reference may also be made to cl 8.7.1 of the Scope of Work concerning “Fill Placement”, that is, the placement of material for the sub-grade, sub‑base and wearing course. That clause provides (relevantly):

Fill material shall be loaded, transported, placed and spread in such a manner *that excessive segregation is avoided*, as determined by the Company Representative. Any material placed that does not meet the specified requirements shall be removed *or remixed, blended or otherwise reworked* at the expense of the Contractor to produce a material which does satisfy the specified requirements as determined by the Company Representative, whether or not such material has been covered by other fill material.

(Emphasis added)

218 Lucas submitted that, despite those express provisions, the qualifications contained in the Tender of 31 January 2011 and the revised Tender of 16 February 2011 prevailed. This was so, it contended, because the terms of those Tenders had been incorporated into, and became part of the Contract, by reason of the Notice of Award. Accordingly, by reason of the document precedence provision in the Contract (cl 3.1), they prevailed over the provisions in cll 8.6 and 8.7 of the Scope of Work.

219 For the reasons given earlier, Lucas’ reliance on the terms of its Tenders and, for that matter, the TCS, to support its submission that mixing and blending material was not part of its Scope of Work is misplaced. Those documents were not incorporated into the Contract by the Notice of Award and it is not necessary to refer to them in order to construe the Contract. Mixing and blending were part of the Contract Scope of Work which Lucas was bound by cll 8.6.2 and 8.7 to undertake. Thus, the mixing and blending which Lucas undertook in compliance with SI‑LE‑005 issued on 22 June 2011 could not be regarded as a variation. I note that by his signing and returning of SI‑LE‑005 on 25 June 2011, Mr Hentschke had accepted that this was work which Lucas had to carry out at its own expense.

#### The requirement to comply with the Technical Specification

220 Lucas was bound to construct the sub‑base and wearing course in accordance with the Technical Specification in the Scope of Work. The Technical Specification in cll 8.6.2 and 8.6.3 (set out earlier in these reasons) did give Lucas some latitude by specifying:

Road sub-base material shall, *in general*, have a gradation as specified in Table 8.1.

(Emphasis added)

And:

Wearing course material shall, *in general*, have a gradation as specified in Table 8.3.

(Emphasis added)

221 The “gradation” to which these specifications referred is the gradation of particle sizes.

222 The words “in general” indicate that Lucas was required, for the most part, to comply with the Technical Specification and that some, albeit limited, departure from the required particle size grades would be acceptable. The words “in general” cannot reasonably be understood as indicating that Lucas was free to depart from the Technical Specification as and when the materials readily available to it for the road construction made it convenient for it to do so.

223 Accordingly, I find that any work carried out by Lucas which was in the nature of *rectifying* work which it had done other than in compliance with the Specification (taking into account the latitude just mentioned) could not be regarded as a variation for the purposes of cl 29 of the Contract.

#### Laying the additional layer of sub-base

224 However, it does not follow that the work of Lucas in laying an additional 75 mm of sub‑base material onto the sub‑base it had already constructed should be regarded as work of rectification. Account must be taken of the terms of Sch A2 in the Contract concerning lump sum prices. That Schedule commenced with the following:

**1. General**

The Contractor bears the risk associated with determination of the appropriate quantities for all aspects of the Lump Sum portion of the Works based on the requirements defined in the Contract.

**2. Measurement and Payment of Lump Sum Work**

…

**3. Conditions of the Lump Sum Price**

a) Haulage Distances

The lump sum price is based on the haulage distances indicated in the Schedule of Remuneration for sub‑base and wearing course. *Variance to the haulage distances will be subject to Contract variation based on the quantity of material hauled against the applicable unit rates in the Schedule of Remuneration*.

b) …

c) Pavement Layer (sub-base and wearing course)

The lump sum price is based on the pavement layer requirements indicated in the Schedule of Remuneration. *Variance to the pavement layer requirements will be subject to Contract variation based on the unit rates in the Schedule of Remuneration*.

(Emphasis added)

225 As can be seen, cl 3(c) in Sch A2 contemplated expressly that variations in the pavement layer requirements for the sub‑base and wearing course should be subject to the Contract variation provisions.

226 Schedule 4 to Sch A2 contains, in Items 16‑28, express reference to the wearing course being 150 mm in depth but no corresponding provisions with respect to the sub‑base. It could be said therefore, that there are no “pavement layer requirements indicated in the Schedule of Remuneration” in respect of the sub‑base to which cl 3(c) can refer. I doubt that this is the appropriate construction given the requirement in the Scope of Work for the sub‑base to be of a depth of 150 mm. Instead, it is appropriate to give practical content to cl 3(c) by regarding Sch 4 to Sch A2 as incorporating, implicitly, the requirement for that 150 mm sub‑base.

227 This means that any variance to the requirement for the 150 mm sub‑base was to be subject to Contract variation. That being so, the requirement to which [49.3] of the ASC refers, namely, that Lucas add an additional layer of sub‑base to the sub‑base already constructed, should be regarded as variation work.

228 Further, and in any event, it is apparent that Lucas was not, in terms, directed to *rectify* non‑compliant work. Instead, it was directed to do additional work by adding a further layer.

229 I conclude that the work of Lucas in laying an additional layer of sub‑base was properly regarded by AGA as a variation for the purposes of cl 29.3 of the Contract.

#### The risk with respect to the quantities of material

230 AGA’s submission concerning the allocation of risk with respect to the quantities of materials involves different considerations. Clause 1 in Sch A2 provided that Lucas was to bear “the risk associated with determination of the appropriate quantities for all aspects of the Lump Sum portion of the Works”. AGA submitted that this encompassed the additional amounts of material which Lucas had had to obtain and haul from borrow pits.

231 Lucas submitted that cl 1 in Sch A2 allocated to it only the risks associated with the *determination* of the appropriate quantities. This meant, it submitted, that it was only when the Contract required it to make the determination that it bore the risk. In turn, this meant that the clause was not to be understood as though it read “the Contractor bears the risk of their quantities”.

232 In my opinion, the determination to which the clause refers is the determination on the job of the amounts necessary to achieve the required outcome, irrespective of who it is who makes the determination. Clause 1 in Sch A2 means what it says. Lucas was to bear the risk that greater quantities may be required for the Works than those specified in Sch A2.

233 However, cl 1 in Sch A2 is to be understood as operating harmoniously with the other provisions in the Contract, including cl 29. Clause 29.2(a)(i) provided expressly that a variation may “increase … the quantity of any Works”. The term “Works” was defined in cl 1.1 of the Contract as follows:

“**Works**” means the things which the Contractor is obliged to do or cause to be done or achieved to comply with its obligations under this Contract, including performance of all works and services, supply of all Incidental Goods, provision of all Equipment, temporary works and rectification work.

234 Thus, the Contract contemplated that some increase in quantities could be a variation and that Lucas would be compensated for that increase as a variation.

235 Moreover, the precedence of documents clause in the Contract (cl 3.1) required, in the event of conflict between the various documents making up the Contract, that precedence to be given to cll 1 to 51 (and therefore cl 29) over the Schedule of Remuneration (which contained Sch A2).

236 As noted earlier, Lycopodium had issued Contract Variations 8 and 9 (CV‑8 and CV‑9) on 8 March and 17 April 2012 respectively, resulting in additional payments to Lucas totalling $1,629,878.07. Mr Stuchbury described these two variations as dealing with the difference between the haulage distance and the quantities set out in the Contract schedules, on the one hand, and the actual haulage distances and quantities used for the access road, on the other and, considered objectively, they do have that character. As noted earlier, Lucas did not in these proceedings make any further claim in respect of the direct costs of performing the Additional Works.

237 The evidence did not establish positively that all of the increased amounts of materials which Lucas won from borrow pits was attributable to the revised road‑making methodology. However, the inference that that was so is strong, especially in the absence of evidence suggesting some other cause.

238 For these reasons, I find, contrary to the final submissions of AGA, that the Additional Works on which Lucas’ claim for time‑related costs is based was variation work to which cl 29 applied. I accept, however, that not all the variations involved additional work or entitlements. Some involved a reduction, or at least a reduction in, the entitlement to payments to which Lucas was entitled. This is reflected in Item 3 in CV‑8 and in Item 1 in CV‑9 which were set out earlier in these reasons.

239 The additional volumes of sub‑base material used in the construction of the access road are seen in the following table:

|  |  |  |
| --- | --- | --- |
|  | **CONTRACT VOLUMES** | **AS CONSTRUCTED VOLUMES** |
| Sub‑base from road alignment and V‑drains | 240,750 m3 | 240,697.26 m3 |
| Sub‑base from borrow pits | 80,250 m3 | 163,013 m3 |

### Are time-related costs payable in respect of variations?

240 AGA contended that the Contract did not require it to pay time‑related costs in respect of the Additional Works, even if they are properly characterised as variations. It submitted that this was the effect of the contractual provisions concerning the pricing of variations and that, in any event, cl 18.8 meant that Lucas did not have an entitlement to the time‑related costs it claims.

241 Lucas contended that, when a variation affects the critical path of the Works with the consequence that the whole of the Works are delayed by the variation work, time‑related costs derived from the Preliminaries Schedule are appropriate, at least in a rate being determined pursuant to cl 29.3(a)(ii).

#### The Contract provisions

242 Clause 29.3 of the Contract which provides for the pricing of variations has been set out earlier. The cascading method of valuations of variations for which it provides requires attention in the first instance to “the relevant rates in the Schedule of Remuneration to the extent that those Rates are applicable to the variation”.

243 Schedule A to the Contract is the Schedule of Remuneration. As noted earlier, it comprises nine separate schedules (but Sch A5 was not used).

244 Schedule A1, headed “Contract Price and Preambles”, identifies the lump sum nature of the Contract and contains a number of clauses applicable to all the schedules. Clause 1 identifies the composition of the lump sum price:

**1. Contract Price Summary**

Compensation to the Contractor for full and complete performance of the Works in compliance with all terms and conditions of the Contract, and payment by the Company of all obligations incurred in or applicable to the Contractor’s performance of the Works, subject only to such additions and deductions as may be made under the Contract, shall be the Contract Price stated below.

|  |  |
| --- | --- |
| **Description** | **Value** |
| Preliminaries | 11,869,998.06 |
| Lump Sum Work – Construction Water | 4,195,175.41 |
| Lump Sum – Site Access Road | 18,951,819.13 |
|  |  |
| **TOTAL CONTRACT PRICE ($)** | **35,016,992.60** |

245 Clause 2 provides (relevantly):

This is a lump sum Contract. The Contractor shall execute such Work under the Contract for the lump sum amounts set out herein. …

The lump sum amounts and unit rates contained in the Schedule of Remuneration shall be the full inclusive cost of carrying out all of the Contractor’s obligations under the Contract and all matters, things and items of expense necessary for the proper performance of the Works, stated or implied, but exclusive of any GST.

All costs of complying with the requirements of the Contract shall be deemed to be included in the lump sum amounts and unit rates in the Schedule of Remunerations for the various items of Works including import duties and the like, but are exclusive of any GST.

Unless otherwise specifically stated, each lump sum amount and unit rate shall be complete and inclusive of all *direct* costs required for the supply and installation of complete units of the specified components of Works. *Prices and unit rates shall not include items included in preliminaries.*

(Emphasis added)

As can be seen, cl 2, and in particular its last paragraph, sought to draw a clear distinction between the pricing of the direct costs of the Work and of Preliminaries.

246 Schedule A6 in the Schedule of Remuneration contains rates for variations. It commences with the following clauses:

**1. General**

The unit rates contained in this Schedule and any applicable unit rates within the Schedule of Remunerations will be utilised in the valuation of variations to the Works in accordance with the Conditions of Contract.

The rates for variations in this Schedule shall:

(a) *be all inclusive* and shall cover the cost of the Contractor’s obligations under the Contract and *all* matters, things and items of expense (e.g. taxes, insurances, overhead and administration costs) necessary for the proper completion and maintenance of the Works. The rates shall also include *all* profit margins, mark‑ups *and costs associated with any extended or lesser period of time to perform the variation work*. The rates shall exclude GST.

(b) be in accordance with the Preamble to the Schedule of Remunerations.

…

(Emphasis added)

*Prima facie*, these clauses seem inconsistent with Lucas having a separate entitlement to Preliminaries in respect of variations for which Sch A6 provides the rates as they indicate that account has been taken of all of its expenses, including overhead and administration costs, in the specified unit rates. They also indicate that the rates include the costs associated with any extended time in performing the variation work.

247 A schedule (headed Sch 5) within Sch A6 contains the rates for variations in respect of some 86 items of work. The opening lines in Sch 5 are:

Pricing of variations, for the entire Scope of Work in this Contract shall be based, where applicable, against this schedule, in accordance with [the] terms and conditions of [the] Contract.

248 Schedule A3 contains the provisions concerning Preliminaries. Its opening paragraphs identify Preliminaries as follows:

**1. General**

Preliminaries are *all fixed and firm lump sum costs*.

The prices for preliminaries includes items such as cost of permits, fees and insurance particular to this Contract, provision of temporary works, provision of supervision and Site staff, provision of all the required tools, plant and equipment, cost of personnel transport to and from work, cost of providing and/or connecting, power, water and telephone, periodic and final cleaning of the Works, removal of rubbish and all other Site overheads required to perform the direct portion of the Works.

The preliminaries also reflect prices for deliverables which the Contractor is required to provide in accordance with the Contract. The deliverables include but are not limited to security, guarantees, Health, Safety and Environmental Management Plan, QA/QC Management Plan, Employee Relations Management Plan, method statement, Programme, as built drawings. A further break down of these preliminaries costs shall be provided by the Contractor on request from the Company.

…

(Emphasis added)

249 Schedule 2 to Sch A3 contains the pricing for Preliminaries in four categories: Deliverables, Mobilisation, Demobilisation and Recurring Cost. The total for these items is the sum of $11,869,998.06 shown in the Contract Price Summary set out earlier. It is the Recurring Cost category which is particularly pertinent presently. It provides:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Unit Rate** | **TOTAL** |
| **RECURRING COST** | | | | | |
| 20.0 | Management/Supervision (indirect Labour above Leading Hand) | Week | 39 | 38,434.21 | 1,498,934.00 |
| 21.0 | Survey Personnel and Equipment | Week | 39 | 16,765.87 | 653,868.93 |
| 22.0 | Temporary Site Facilities and Associated Services/Equipment | Week | 39 | 9,918.95 | 386,839.05 |
| 23.0 | Traffic Management, Barricades and Signage, and Miscellaneous Site Work | Week | 35 | 6,873.07 | 240,557.46 |
| 24.0 | Operate and maintain Contractor’s water supply | Week | 35 | 7,910.86 | 276,880.11 |
| 25.0 | Dust control measures and maintenance of the whole of the Work | Week | 20 | 17,639.99 | 352,799.85 |
| 26.0 | Operate and maintain Contractor’s power supply | Week | 37 | 18,874.32 | 698,349.99 |
| 27.0 | Health, Safety and Environmental Management | Week | 37 | 12,864.27 | 475,977.91 |
| 28.0 | Personnel transport | Week | 37 | 21,381,89 | 791,130.00 |
| 29.0 | Accommodation and Messing | Week | 39 | 79,551.21 | 3,102,497.19 |
| 30.0 | Serviceman and Service Truck for Fuel Distribution | Week | 35 | 15,636.47 | 547,276.57 |
|  | **Total** |  |  |  | **9,025,111.06** |

250 Clause 2 to Sch A3 included the statement:

The recurring costs shall be claimed monthly after mobilisation to Site in accordance with the Company approved payment claim.

The effect is that, while the Recurring Cost component of the Preliminaries comprised “fixed and firm lump sum costs”, it was to be paid progressively, and not by a lump sum payment.

#### AGA’s submission

251 AGA submitted that the combined effect of the provisions just summarised is that Lucas is not entitled to payment of time‑related costs in respect of variations. It submitted that cl 29.3(a)(i) required regard to be had, in particular, to Sch A6 which contained “rates for variations”; that this Schedule commenced with the statement that its rates and any applicable rates in the Schedule of Remuneration were to be used in the valuation of variations; and that Sch A6 also stipulated that the rates for variations were to be “all inclusive”, were to cover “all matters, things and items of expense”, and were to include “all profit margins, mark‑ups and costs associated with any extended … period of time to perform the variation work”. The effect, AGA submitted, was that account was taken of the costs in the nature of recurring costs in the rates fixed in Sch A6 for variation work. The payment which Lucas had received for the Additional Works should be understood as including payment in respect of those recurring costs.

252 AGA submitted that this conclusion is supported by the statements in the Sch A1 Preamble that the unit rates in the Schedule of Remuneration were complete and inclusive of the direct costs incurred by Lucas and that they were not to include items in the Preliminaries.

253 Next, counsel emphasised the statement in Sch A3 that the Preliminaries are “fixed and firm” lump sum costs, rather than being expressed as “rates”. Accordingly, cl 29.3(a)(i) meant that when the rates contained in Sch A6 were applicable to a variation, Lucas was not entitled to payment of Preliminaries.

254 Finally, counsel emphasised that cl 29.3(a)(i) stated that variations were to be valued at the “relevant rates” in the Schedule of Remuneration and not at those rates “plus Preliminaries” or “plus time‑related costs”.

#### Lucas’ submission

255 The submission of Lucas was to the following effect:

(a) the Preliminaries, in particular the category of Recurring Cost, are the product of a unit cost multiplied by a specified number of weeks and are therefore a form of time‑related cost;

(b) the fact that cl 2 in Sch A3 stipulated that “recurring costs shall be claimed monthly after mobilisation to Site in accordance with the Company approved payment plan” reflects their time‑related nature;

(c) clause 29.3(a)(i), which is the first stage in the cascading scheme for the valuing of variations, provides that use be made of the “relevant” rates in the Schedule of Remuneration to the extent that they are applicable. It does not direct that the valuation be made using any particular schedule in the Schedule of Remuneration and, in particular, does not direct that use be made only of Sch A6;

(d) further, cl 1 in Sch A6 does not limit the pricing of variations to the rates contained in that Schedule. It says expressly that its unit rates *and* “any applicable unit rates within the Schedule of Remuneration” will be used in the valuation of variations;

(e) when a variation is ordered which affects the critical path for the performance of the Works, it will inevitably involve some time‑related costs being incurred because the whole of the Works are delayed by that variation;

(f) in that circumstance, a rate which does not include allowance for the time‑related costs incurred by the variation will not be a “relevant” rate;

(g) instead, a rate which incorporates an allowance for the time‑related Preliminaries in the Schedule of Remuneration is appropriate; and

(h) the consequence is that regard may also be had to Sch A3 concerning Preliminaries in the pricing of variations.

256 Lucas submitted that the position is even clearer when a rate is to be fixed under cl 29.3(a)(iii). It contemplates the determination of “a reasonable rate or price”. Lucas referred to *Hudson’s Building and Engineering Contracts*, 12th ed, at 5‑070 in which the author suggests that a “reasonable” valuation should have regard to the contractor’s general level of pricing, disregarding any element of profitability or unprofitability. Counsel submitted that it would be appropriate to have regard to all elements of the pricing given that cl 1 in Sch A6 does not confine the pricing of variations to the rates in Sch A6 itself.

#### Consideration

257 Lucas is correct in submitting that the items in the Recurring Cost category of Preliminaries are a form of time‑related cost. The fact that the lump sum amounts are shown as having been calculated by reference to weekly units indicates that that is so. It was not suggested that some of the costs (for example, the provision of facilities and equipment) may be a fixed or one‑off kind but had been amortised over the expected duration of the Contract. Nevertheless, the parties agreed by their Contract that the Preliminaries were “fixed and firm lump sum costs”. That is to say, the parties eschewed an identification of the Preliminaries as time‑related or quantities‑related: cf Hudson, 11th ed, 7‑107.

258 Moreover, the parties addressed in the Contract, at least in part, the prospect that a variation may extend the time needed for the performance of the Works overall. Clause 1(a) in Sch A6 stipulated that the rates for variations set out in the Schedule were “all inclusive” and covered the costs of *all* of the matters “necessary for the proper completion and maintenance of the Works”, as well as the “costs associated with any extended … period of time to perform the variation work”. It is noteworthy in this respect that, to the extent that direct comparisons can be made between the unit prices for some items of work in Sch 4 to Sch A2, on the one hand, and in Sch 5 to Sch A6, on the other, the latter are higher. This tends to suggest that account has in fact been taken of the time‑related costs associated with the variations.

259 Another indication that time‑related costs have been included in the rates contained in Sch 5 to Sch A6 is that the rates in the latter for the winning etc of a 100 mm wearing course from locations between 0 and 11 km from the place at which it was to be laid are uniformly higher than those in Sch 4 to Sch A2 for a wearing course of 150 mm sourced from the comparable distances. A 100 mm wearing course is likely to involve less work and haulage than for a 150 mm wearing course. This suggests that the rates for a 100 mm wearing course take account of matters which those for the 150 mm wearing course do not. Time‑related costs are an obvious example.

260 It is significant to my mind that the parties seem to have gone to considerable care to provide for a detailed mechanism for the pricing of variations of the kind listed in Sch 5 to Sch A6. It is apparent that they sought to provide a means for the quantification of the price of variations which would be relatively straightforward. In doing so, the parties sought to anticipate many of the kinds of variations which may occur. In this context, the absence of express provision for the payment of time‑related costs seems significant.

261 Further still, it is not possible to discern in the Contract any intention that a distinction should be drawn, for the purposes of pricing variations listed in Sch 5 to Sch A6, between those which would have the effect of extending the time for the performance of the Contract and those which would not. The word “relevant” in cl 29.3(a)(i), on which Lucas relied for this submission, is to my mind, directed to *the selection* of the particular rate in the Schedule of Remuneration which is applicable to the class or category of work involved in the variation. That is, it is directed to *the selection* of the appropriate rate amongst the various forms of possible variation which the parties sought to anticipate in Sch 5 to Sch A6.

262 In my view, the Schedules to the Contract do not leave any scope for time‑related costs to be paid in addition to the rates set out in Sch 5 to Sch A6. Accordingly, I consider that AGA’s submission should be accepted with respect to the variations to which the rates listed in Sch 5 to Sch A6 are applicable.

263 However, the position with respect to variations for which no rate is specified in Sch 5 to Sch A6 is different. In those cases, the variation is to be valued by agreement (cl 29.3(a)(ii)) or a reasonable rate or price to be determined (except when there is a direction that the variation be carried out as day work) (cl 29.3(a)(iii)). The Contract does not preclude the parties from agreeing that time‑related costs be included in the pricing of a variation, and one would think that they may sometimes consider it appropriate to do so.

264 Part of the factual matrix in which the Contract is to be construed is that the parties contemplated that significant variations may be required. This is evident in the inclusion of 86 items in Sch 5 to Sch A6. The topic was discussed explicitly at TRM 2 on 28 February 2011, and issues concerning the potential unsuitability of the materials for use as a sub‑base had been addressed in the TCS process. Mr Massoudi had confirmed in TRM 2 that, if extra haulage was required, it would be paid as a variation. The potential for the additional work to require additional time for the performance of the Contract was obvious. In this context, had it been the parties’ intention that time‑related costs not be included in the pricing of variations under cl 29.3(a)(ii), it would have been easy for them to have said so.

265 In respect of any variation for which there is no applicable rate in Sch A6 and for which there was no agreement as to its value, the parties agreed that it is for the Court to decide, as if standing in the shoes of an assessor, as a question of fact, a reasonable rate or price for the variation: *WMC Resources Ltd v Leighton Contractors Pty Ltd* [1999] WASCA 10; (1999) 20 WAR 489 at [19]. It is said that this does not involve any question of discretion: *ibid*.

266 There are no fixed criteria for determining what is “reasonable”. *Prima facie*, in determining a reasonable rate or price, the Court is to have regard to all material circumstances. These will include the nature and complexity of the variation, the resources to be applied to giving effect to it and the costs to Lucas of performing it. The circumstance that the Contract provided that time‑related costs should not be paid in addition to the rates contained in Sch 5 to Sch A6 does not seem material as an adverse consideration. On the contrary, the fact that account was taken of the time‑related costs in fixing of the rates for those items of work tends to suggest that it would also be appropriate to take account of time‑related costs in pricing variations for which Sch 5 to Sch A6 does not provide.

267 In my view, the Contract should not be construed as indicating that time‑related costs may never be allowed for variations for which there is no relevant rate in Sch A6. Such a construction would confine, unduly, the reach of the concept of reasonableness. It would also mean, amongst other things, that the assessment could not have regard to the length of the extension of the Works necessitated by a variation. The Court should be slow to adopt a construction which has that effect.

268 That means that I do not accept AGA’s submission that, as a matter of construction of the Contract, Lucas may never be entitled to time‑related costs in respect of variations. On the contrary, it may have such an entitlement in respect of variations for which the rates specified in Sch A6 are not applicable.

269 Subject to the matter to be considered next, this conclusion is pertinent because Sch A6 did not include rates for some of the additional work carried out by Lucas. With respect to the sub‑base, Sch 4 to Sch A2 in the Contract as executed provided for the winning, loading, hauling, placing, spreading, conditioning and compaction of material from borrow pits within 6 km of the location where the material was to be formed into the sub‑base. Schedule 5 to Sch A6 contained only one rate for variations concerning the sub‑base. That was a rate for winning, hauling and laying sub‑base material from borrow pits, located more than 28 km from the location where it was to be formed into the sub‑base. No variation rates were given for the work of winning, hauling and laying sub‑base material for distances of less than 28 km and, as indicated, Sch 4 to Sch A2 did not provide any such rates in respect of distances exceeding 6 km.

270 Earlier in these reasons, I set out the terms of Contract Variations 8 and 9 (CV‑8 and CV‑9) and summarised their effect. As then indicated, these variations were in the form of amendments to the Contract itself, by the addition of some new items to Sch 4 to Sch A2, as well as adjustments to the amounts allowed for existing items. This may not have been a form of variation contemplated by cl 29.2 of the Contract. However, whether that be so is immaterial as it was not suggested that that method of variation had the effect, by itself, of precluding a claim for time‑related costs in respect of the new or adjusted items.

271 CV‑8 and CV‑9 indicate, at least with respect to the new items added to Sch 4 to Sch A2, that the variations were for work for which the Schedule of Remuneration did not provide “relevant rates”.

272 The position with respect to the additional volumes of materials and distances for which Sch A2 did provide a rate is the same, albeit for a different reason. Clause 1 in Sch A6 provided (relevantly) that “any applicable unit rates” within the Schedule of Remuneration should be used in the “valuation” of those variations. I accept the submission of Lucas that the “applicable unit rates” are not confined to those in Sch A2 but extend to any which may be applicable. This may include the rates in the Recurring Cost category in the Preliminaries Schedule (Sch 2 to Sch A3).

273 The effect is that I am satisfied, to this stage of the analysis, that Lucas may have an entitlement to time‑related costs both in respect of that part of the Additional Works for which the Contract did not provide a relevant rate and for that part for which Sch A2 provided a rate.

### Does cl 18.8 of the Contract preclude Lucas’ claim?

274 AGA contended that, quite apart from the matters just addressed, cl 18.8 of the Contract had the effect in any event of precluding Lucas from claiming a monetary sum. Clause 18.8 provides:

**18.8 Delay and disruption costs**

Notwithstanding any other provision of this Contract, the Contractor will not be entitled to claim any Liabilities resulting from any delay or disruption (even if caused by an act, default or omission of the Company or the Company’s Personnel (not being employed by the Contractor)) and a claim for an extension of time under Clause 18.3 will be the Contractor’s sole remedy in respect of any delay or disruption and the Contractor will not be entitled to make any other claim.

275 AGA noted the emphatic terms in which cl 18.8 is expressed and, in particular, that its opening clause indicates that its provisions override any other provision in the Contract. This includes any inconsistent provision. Counsel also emphasised the width with which the term “Liabilities” is defined in cl 1.1 of the Contract, namely, to mean “any damages, Claims, losses, liabilities, costs and expenses of any kind”. “Claim” is defined to mean “any action, suit, proceeding or demand of any kind”. The effect, counsel submitted, is that Lucas has no entitlement to recover losses, costs or expenses of any kind resulting from delay or disruption (and no entitlement to bring a proceeding to recover such losses, costs or expenses) and that that is so even if AGA was responsible for the delay or disruption. An extension of time under cl 18.3 is to be its sole remedy.

276 AGA submitted that, properly characterised, the claim for time‑related costs with respect to the Additional Works (as well as others brought by Lucas) is a claim for loss resulting from “delay or disruption” and, accordingly, one to which cl 18.8 applies.

277 Clause 18.8 is to be construed in the context of the Contract as a whole and, so far as is practicable, so as to have a harmonious operation with other provisions in the Contract: *Australian Broadcasting Commission v Australasian Performing Right Association Ltd* [1973] HCA 36,(1973) 129 CLR 99 at 109; *Wilkie v Gordian Runoff Ltd* [2005] HCA 17, (2005) 221 CLR 522 at [16].

278 The heading to cl 18 is “Time and Progress”. Clause 18.1 bound Lucas to commence and execute the Works in accordance with the Construction Program contained in Sch D and, when the Initial Work Program was approved, in accordance with that program, and to ensure that it reached Practical Completion by 30 November 2011.

279 The clause then addresses delay, disruption and their consequences. The terms “delay” and “disruption” are not defined in the Contract and may be taken to be used with their ordinary meaning.

280 Clause 18.2 required Lucas to give notice in a timely way when it became aware of any event which would, or was likely to, cause delay or disruption. Clauses 18.3 to 18.5 provided that, in the event of a “Qualifying Cause of Delay”, Lucas would be entitled, subject to satisfying some conditions including the provision of notice, to an extension of time for Practical Completion. The term “Qualifying Cause of Delay” is defined in cl 1.1 as follows:

**“Qualifying Cause of Delay”** means:

(a) any act, default or omission of the Company or the Company’s Personnel (not being employed by the Contractor);

(b) a variation under Clause 29;

(c) a change in Law after the Date of Contract which could not have been reasonably anticipated by an experienced and competent contractor as at the closing of tenders;

(d) a direction by a Government Agency but not where the direction arose from the failure of the Contractor or the Contractor’s Personnel to comply with Law;

(e) delay by a Government Agency not caused by the Contractor or the Contractor’s Personnel and in respect of which the Contractor took all reasonable steps to avoid or could not have reasonably anticipated;

(f) an event of Force Majeure;

(g) inclement weather; or

(h) a Latent Condition.

281 Pertinently for present purposes, a variation under cl 29 may be a Qualifying Cause of Delay (subpara (b)).

282 Clause 18.7 provided for the payment by Lucas of liquidated damages in the event that it did not achieve Practical Completion by the scheduled date. Lastly, cl 18.8 indicated that Lucas’ only entitlement in respect of any delay or disruption was an extension of time.

283 Lucas submitted that cl 18.8 is inapplicable to its claim for the time‑related costs because:

(a) it is claiming the time‑related costs of the variation work and not for losses, costs or expenses resulting from delay or disruption. Put slightly differently, it is a claim for remuneration for work performed and not a claim for delay; and

(b) the purpose of cl 18.8 is to preclude double recovery. That is, if Lucas is paid for the variation work, cl 18.8 ensures that it cannot also be paid for the delay to the program occasioned by its performance of the variation work.

284 Lucas also submitted that cl 18.8 applies only to critical delays. This was said to be so because an extension of time for which cl 18.3 provides can be obtained only with respect to critical delays.

285 Lucas sought to draw support for its submission that cl 18.8 does not apply to the time‑related costs associated with variations by reference to other events within the definition of “Qualifying Cause of Delay”, in particular, events of force majeure (subpara (f)) and latent conditions (subpara (h)). It noted that, as with variations, the Contract contains specific provisions with respect to these events, including provisions with respect to the compensation entitlements of Lucas when they occurred. These included the costs of delay. The submission of Lucas, as I understood it, was that it was not to be expected that the entitlements expressly granted by these provisions would be undercut by cl 18.8. On the contrary, cl 18.8 should be construed to avoid that effect.

286 On analysis, however, I doubt that the clauses to which Lucas referred support the position for which it contended.

287 Clause 42 of the Contract provided that either party could give notice of an event of force majeure affecting it and that, in that event, the obligations under the Contract of the party giving the notice were suspended. In relation to termination of the Contract by AGA by reason of an event of force majeure, cl 37.5 of the Contract provided for four forms of payment to Lucas. Only the fourth is material presently. It would have obliged AGA to pay:

[S]ubject to Clause 42(c), an amount calculated by [AGA] to compensate [Lucas] for any *loss or damage* it can prove was *directly attributable to the termination*.

(Emphasis added)

288 Clause 42(c) qualified that obligation in a way which does not have to be noted presently. The effect of these clauses is that Lucas had an entitlement to payment if an event of force majeure occurred only with respect to loss or damage which was *directly* attributable *to the termination*. That is to say, cl 37.5(b)(iv) contemplated compensation being paid only when there was a direct nexus between the claimed loss or damage, on the one hand, and the *termination* of the Contract, on the other. It is not readily apparent that the time‑related costs would be of that character. Accordingly, the provisions with respect to force majeure seem inconsistent with the position for which Lucas contends, as there is no provision for payment with respect to a period of delay caused by an event of force majeure.

289 Clause 19.3 of the Contract, which I will set out in full later in these reasons, provided for the effects of a latent condition (as defined) to be a “deemed variation” and that such a deemed variation would be “priced” having regard to additional costs incurred in a defined period. As deemed variations, latent conditions were to be compensated in the same way as variations and so the same matters as presently being considered apply to them also. Accordingly, the provisions concerning latent conditions do not assist Lucas presently.

290 The submission of Lucas that cl 18.8 is to be construed so as not to undermine entitlements granted elsewhere in the Contract may derive greater support from the provision with respect to suspension of work in cl 31. By cl 31.1, AGA was empowered to give a notice to Lucas requiring it to suspend the Work, or any part of it, for any reason. Clause 31.2 required Lucas to comply with the notice. It is apparent that a suspension could be indefinite or for a period estimated in the notice.

291 Subject to some qualifications which are not presently material, cl 31.3 required AGA to pay to Lucas “all reasonable and direct expenses and costs” arising from a suspension of works of more than 12 hours. It may be arguable that the incurring of time‑related costs in respect of the delay resulting from a period of suspension is a cost and/or expense caused directly by the suspension. If that be right, the incongruity on which Lucas relied would be present as, on the construction of cl 18.8 for which AGA contends, it would preclude an entitlement granted expressly by cl 31.

292 In my opinion, when cl 18.8 is construed in the context of the Contract as a whole, it is to be understood as making it plain that Lucas was not to have any claim for losses, costs and expenses which *result from any delay or disruption*. The word “any” is significant. It indicates that cl 18.8 is directed to delays or disruptions of all kinds.

293 This means that cl 18.8 should not be understood as applying only to critical delays. In addition to its use twice of the word “any”, the stipulation that an extension of time will be Lucas’ only remedy seems implicitly to contemplate that there may be delays other than those which are critical and for which Lucas is not to have a remedy. Further, cl 18 as a whole is not concerned only with critical delays. Clause 18.2, for example, indicates that it is concerned with delays of any kind.

294 For similar reasons, I do not consider that cl 18.8 can be construed as being inapplicable to the costs of delays (critical or otherwise) resulting from variation work. There is nothing in its language, or in the context more generally, to support such a conclusion. On the contrary, the circumstance that a variation is a defined qualifying cause of delay which would entitle Lucas to an extension of time is an indication that the parties addressed the effect of a variation in delaying practical completion. They dealt with that question by providing that, apart from payment for which cl 29.3 provides, the only remedy Lucas should have would be an extension of time.

295 I am unable to discern any indication in cl 18.8, or in the Contract more generally, that its purpose is the preclusion of double recovery. On its face, its purpose is to address the entitlements of Lucas in the event of delay or disruption to the Works.

296 However, on its own terms the limitation imposed by cl 18.8 is directed to losses, costs and expenses “resulting from” delay or disruption, that is, losses, costs and expenses *caused by* delay or disruption. It addresses a consequence of delay or disruption.

297 Moreover, cl 18.8 is concerned with only one form of time‑related costs. Many of the costs incurred by a contractor in the performance of a contract are time‑related. The remuneration for labour is usually time based. So are many of the costs associated with the supply of plant and equipment. Costs of this kind are usually taken into account in one way or another in the pricing of the work or in the fixing of the remuneration. Clause 18.8 is not concerned with these costs *per se*. It is only when costs are the consequence of delay or disruption that cl 18.8 has application to them.

298 When that ambit of cl 18.8 is understood, it can be seen that the clause is not concerned with the pricing of the work to be performed under the Contract and, of present relevance, with the pricing of variations.

299 The parties may be understood to have appreciated that the performance of variations involving additional work may, and in most cases would, involve Lucas incurring time‑related costs. By providing for the way in which variations are to be priced in cl 29.3(a)(i), the parties agreed that Lucas should not have a separate entitlement to time‑related costs for the variations to which it referred. But the Contract did not preclude the parties from agreeing, pursuant to cl 29.3(a)(ii) that account be taken of time‑related costs, including costs under the heading “Recurring Cost” in Sch 2 to Sch A3, in the pricing of variations to which that subclause is applicable. Further, the fixing of reasonable costs for a variation pursuant to cl 29.3(a)(ii) in the manner described earlier may include allowance for time‑related costs, again including costs listed in the Recurring Cost category in Sch A3.

300 When the agreement or determination of an appropriate price for a variation is made in advance of the performance of additional work, it would not, at least ordinarily, involve payment for a loss, cost or expense caused by delay or disruption. It would simply be the fixing of the price for the work. The distinction becomes less clear when the fixing of the price is done in retrospect, as there is an obvious tendency to have regard to the extra time actually taken in the performance of the variation work. That is especially so when there is a related claim for an extension of time for practical completion. In this context, the use of the term “delay” and its cognates is understandable and perhaps inevitable. But that does not deny the reality of the distinction between the pricing of a variation, on the one hand, and a loss, cost or expense caused by a delay, on the other.

301 This construction of cl 18.8 allows the Contract to operate in a practical way. Considered objectively, it is not readily to be supposed that the parties intended, when making the Contract, that AGA should be able to direct a variation requiring additional work to be performed over an extended period involving necessarily Lucas incurring significant additional time‑related costs without it have any recourse to remuneration for those additional costs. Instead, on a proper construction of the Contract, the parties contemplated that, while Lucas would have no claim with respect to losses, costs or expenses resulting from delay or disruption, the pricing of variations pursuant to cl 29.3(a)(ii) and (iii) could take account of time‑related costs.

302 This means that I do not accept AGA’s submission that cl 18.8 necessarily provides a complete answer to Lucas’ claim for time‑related costs. It will do so only if Lucas’ claim is for the costs of delay or disruption of the Works rather than a claim with respect to the pricing of the variations.

303 Before addressing that issue, it is appropriate to make findings about the remaining two matters on which Lucas relies for its claim for time‑related costs.

### The Stop Work Order

304 In [97.3] of the ASC, Lucas claims that a Stop Work Order issued by Lycopodium on 18 February 2012 constituted a variation under cl 29.2(a)(v) of the Contract (“a change in the order in which the Works are carried out”).

305 In its closing submissions, Lucas also submitted that the Stop Work Order was within cl 29.2(a)(vi) (“a change [in] the rate at which the Works are carried out”) and that the Stop Work Order imposed a suspension of work to which cl 31 of the Contract had applied. Counsel for AGA objected however that Lucas had not pleaded reliance on cl 29.2(a)(vi) or cl 31. Lucas did not seek to amend the ASC in the light of that objection. That being so, this claim should be determined by reference to cl 29.2(a)(v) only.

306 It was common ground that Mr Nicholls, Lycopodium’s Construction Manager, had at 5.26 pm on 18 February 2012 instructed Lucas to stop all work in the immediate vicinity of Pinjin Station and that the Stop Work Order remained in place until 25 February 2012. Lycopodium had on 23 February instructed Lucas to recommence work “as of Saturday 25th February 2012”. Mr Nicholls gave the Stop Work Order because of some difficulties being caused by the caretaker of Pinjin Station.

307 Lucas complied with the instruction and did not perform work in the immediate vicinity of Pinjin Station between 18 and 25 February 2012. However, its evidence of how the Stop Work Order impacted on the performance of work was not detailed.

308 As noted at the commencement of these reasons, Pinjin Station is towards the south‑western end of the access road. At the time the Stop Work Order was given, Lucas had completed construction of the majority of the road. The sections remaining were at the south‑western (Pinjin Station) end (between Chainages 189 to 214) and at the north‑eastern end (Chainages 28 to -9.5). It was the work on the former section which was affected by the Stop Work Order.

309 It is not altogether clear that Mr Nicholls’ Stop Work Order of 18 February 2012 required the cessation of all work between Chainages 189 to 214, as he had requested Lucas to “redeploy [its] workforce to other works back towards Ponton Creek”, which was to the east of Pinjin Station. Further, the request which Lucas made on 20 January 2012 for an extension of time identified the activities directly affected by the Stop Work Order as being “Earthworks at Chainages 196 to 199 and clearing between Chainages 210 to 214”, this being only some of the uncompleted work.

310 On the other hand, the Construction Weekly Progress Report issued by Lucas on 23 February 2012 indicated that all work “towards West (Pinjin) [was] on hold”. Further, in refusing Lucas’ request for an extension of time, Lycopodium did not rely (at least explicitly) on Lucas’ ability to perform some work between Chainages 189 to 214 between 18 and 25 February 2012. Instead, Lycopodium refused the request because it was not satisfied that the Stop Work Order had affected the critical path for completion of the Works.

311 Lucas submitted that the Stop Work Order had changed the order in which it carried out the work because it had deployed its workforce to other tasks instead of continuing with the work of laying the sub‑base and the wearing course in the Chainages adjacent to Pinjin Station. I am willing to accept that that was so, as it is probable that Lucas sought to make productive use in an alternate way of the labour and plant which would otherwise have been engaged on the road near Pinjin Station.

312 However, for that redeployment to have a consequence which is presently material, Lucas must establish that it incurred a cost in making it (for example, in moving its workforce and plant to the other work front) or (subject to the operation of cl 18.8) that it was thereby delayed in completing the Works. Lucas did not seek to establish the first of these alternatives. As already indicated, the evidence did not establish in any detail what it was that Lucas did by way of redeployment. It seems that Lucas did not redeploy all its labour and plant away from Chainages 189 to 214, because its Daily Force Reports for the days 19 to 24 February 2012 indicate that work was performed on Chainages 192 to 195. This was work on the critical path, and so that particular redeployment cannot have contributed to a delay in the completion of that path.

313 If Lucas did redeploy labour and plant to the other work front, then presumably its use in a productive manner meant that that work on that part of the road was completed more quickly than would otherwise have been the case.

314 The loss of time involved in moving the labour and plant up the road to the second work front is not likely to have been great and, in any event, Lucas did not attempt to quantify it.

315 Thus, Lucas’ own evidence left the position in a state of uncertainty.

316 Mr King and Mr Andrews, the programming experts, agreed that the Stop Work Order had caused a critical delay, but disagreed on its length. Mr Andrews considered that the delay was only one day, 19 February, whereas Mr King considered that it was seven days.

317 I am not willing to act on Mr King’s opinion on this topic. He appears to have understood the Daily Force Reports for 19 to 25 February 2012 to indicate that no work at all was performed between Chainages 189 to 214. That is not my understanding of the Force Reports. Nor (as already indicated) was it the understanding of Mr Andrews. No witness from Lucas made the assertion that no work at all had been performed on these Chainages and, as noted, the Stop Work Order had contemplated that some work at least could be performed near Ponton Creek.

318 Mr Andrews considered that the critical delay was for only 19 February because Lucas’ Work Force Reports indicated that it had engaged its staff on productive work such as “Wearing Course Works, Culvert Installation, Guide Post Installation” etc on the other days. In his cross‑examination, Mr Andrews acknowledged that the program of works on which he based his analysis showed that, as at 16 February 2012, these three forms of work were on a critical path.

319 Given the unsatisfactory state of the evidence, I am not willing to find that the Stop Work Order caused more than the one day of critical delay to which Mr Andrews referred.

320 Lucas’ claim in respect of that one day is subject to the operation of cl 18.8 to which I will return shortly. As will be seen, it is also subsumed by Lucas’ claim for an extension of time with reference to the design of the piles for the Ponton Creek bridge.

### The Ponton Creek bridge pile design work

321 In [97.5] of the ASC, Lucas claims that the “pile design work” associated with the Ponton Creek bridge constituted a variation of its work within the meaning of cl 29.2(a)(iii) of the Contract.

322 As part of its Scope of Work, Lucas was to construct a 66 m bridge for the road over Ponton Creek. This required 14 precast concrete piles to be driven into the creek bed, precast reinforced concrete headstock to be attached to the piles (six spans of 11 m each) with beams then attached to form the bridge structure, as well as other work.

323 Lucas was to supply, but not to design, the componentry for the bridge. Clause 12.2.1 of the Scope of Work specified that the precast, reinforced and prestressed piles were to conform with the dimensions and details shown on drawings to be provided to it by Lycopodium. Schedule 4 to Sch A2 indicated that the piles were to be 22 m in length and to incorporate “Millennium Joints”.

324 The parties contemplated that Lucas would place the procurement orders for the major bridge componentry early in the Project so as to allow for manufacture and delivery timeframes.

325 Lucas alleges that Lycopodium did not provide its final design for the piles until 23 August 2011. It contends that its procurement of the bridge componentry was thereby delayed, with the consequence that, in accordance with the Recreated Program, the date for Practical Completion should have been extended to 6 May 2012.

326 In its filed Defence, AGA denies that Lucas is entitled to any extension of time with respect to delays in the bridge design. I will address the matters on which it relied for this purpose later in this section of the reasons, but indicate now that I do not accept them. AGA’s programming expert, Mr Andrews, considered that Lucas was entitled to an extension of time of only 10 days in respect of delays in the finalisation of the bridge design. A good deal of the parties’ submissions were directed to that issue.

#### The provision of the drawings

327 It was common ground that Lucas had not been able to commence procuring the concrete piles for the bridge until it was provided by Lycopodium with drawings approved for that purpose. I make the following findings with respect to the provision to Lucas of the drawings and of approval for the design of the piles.

328 At the time of issue of the RFT, AGA and Lycopodium had only two drawings for the Ponton Creek bridge. They did not have drawings finalised until 6 May 2011 even though the Construction Program in the Contract contemplated that Lucas would commence procuring the components on 25 February 2011.

329 It is evident that Lucas had been seeking the drawings before 6 May 2011. The minutes for the “Kick Off Meeting” held on 25 March 2011, recorded with respect to the Issued For Construction (IFC) Drawings:

IFC Drawings including Ponton Creek Bridge is currently under Lycopodium review, will be issued to Lucas next week.

The minutes also indicated that Mr McGregor was to provide those drawings by 1 April 2011.

330 Likewise, the minutes for the site meeting between Lucas and Lycopodium held on 8 April 2011 recorded:

IFC drawings are currently under Lycopodium review and will be issued to Lucas next week. [Brad McGregor] to send Ponton Creek Bridge drawing ASAP.

The accompanying note indicated that Mr McGregor was to provide those drawings by 15 April 2011.

331 On 15 April 2011, Mr McGregor sent an email to Mr Hentschke at Lucas saying:

With respect to the bridge on the Site access road, please proceed with the procurement of bridge components based on *preliminary* drawings.

(Emphasis added)

332 The drawings issued on 6 May 2011 comprised 13 IFC Drawings. They called for the use of a proprietary Rocla “M‑Lock” product. Accordingly, Lucas subcontracted the construction of the components for the bridge, including the piles, to Rocla and provided it with both the Tender Drawings and the IFC Drawings.

333 The minutes for the site meeting held on 2 June 2011 between Lucas and Lycopodium recorded:

Precast elements have been procured based on tender drawings as agreed with Lyco (8 week lead time) – will arrive on site as per current schedule.

334 On 7 June 2011, Mr Trew from Rocla raised with Mr Blenkarn (one of Lucas’ Project Managers) some issues concerning the design of the piles. His email said:

Can you provide a contact name and number in relationship to the design of the piled foundation.

Currently our pile Engineers have concerns that the location of the Millennium Joint half way up the 22m pile may not be the best option. All information provided to date is vague; construction drawings do not make any specific reference to Millennium Joints.

335 Mr Maiolo forwarded the email to Mr Robertson at Knight Piésold the same day and, on the following day, issued TQ#19 to Mr McGregor at Lycopodium. The substantive part of TQ#19 was follows:

To allow construction of the 66m span bridge over Ponton Creek, detailed information regarding the pile design site is required. This information must be forwarded on *as soon as possible* to the piling installation subcontractor engaged by Lucas to complete the required works within the designated timeframe.

Current information requested onsite reflect that samples have been conducted for borrow pit suitability (Test Pit Nos: KP‑ARTP‑089, KP‑ARTP‑090 and KP‑ARTP‑091) and have only been completed to a range of depths between 0.6 and 2.6m and are geographically isolated from the piles.

Furthermore, all other information issued by Lycopodium to Lucas seems vague as our subcontractor engineers are unable to establish a suitable design to comply with the construction drawing; specifically the location of the millennium joints.

Lucas *requires an urgent response* incorporating additional information to allow suitable planning for the installation of piles over Ponton Creek.

(Emphasis added)

336 Mr McGregor responded to TQ#19 on 9 June 2011 (although the formal reply was drafted by Mr Sceresini):

BGE’s (bridge sub-consultant) Senior Structural Engineer Ian Hudson, discussed the matter directly with Chris Carter of Rocla regarding the piles for the proposed bridge on Wednesday 8th June 2011.

The proposed piles can be provided up to 24m in length. Pile joints were included in the quantities in order to ensure that the Contractor had allowed for the possibility that it may be necessary to join the piles.

Since the design was issued it is understood that Rocla’s proprietary joint does not provide a full moment connection, so joints are only recommended towards the toe of the piles, where the moments on the pile have diminished sufficiently.

As a result we consider providing piles as long as possible (24m). If this length is not sufficient, install an in-situ column above with a full moment connection to the pile, similar to the detail at the pile-headstock connection.

As can be seen, Lycopodium now contemplated piles 24 m in length instead of the 22 m which the Scope of Work required.

337 The Lucas personnel were concerned by the imprecision in this reply and sent a further request (TQ#20) to Lycopodium on 12 June 2011. The substantive part of the request was as follows:

Lucas are in receipt of your response to TQ#19 and note your prompt reply, however we have not been provided a response but rather 2 options of considering longer piles or in-situ columns. We can have discussions with the precast provider regarding both options, but as the design of the bridge elements is not in Lucas scope of works we require a firm position from Lycopodium to move forward with the procurement of the precast elements.

Can you please provide the preferred solution for the design of the bridge piles *as soon as possible to minimise any potential delays to the procurement of the precast elements*.

(Emphasis added)

338 Mr Hentschke followed up this request in an email on 19 June 2011:

Hi Brad [McGregor],

Pile installation is programmed to commence at the end of July.

Could you please provide a response to TQ#20.

At tender time an allowance was made for 14 x 22m long Piles (308m) per tender schedule & in the absence of detail, it was assumed the pile joint would be at mid‑height (11m) ie to minimize transportation costs to site.

The 13 No IFC Drawings (distributed 6 May) for the Bridge Construction are silent with respect to Pile design & Pile Jointing.

We require Lycopodium / [Knight Piésold] (as the designers) to provide this information *as soon as possible to minimise delays associated with the Bridge Construction*.

Regards

Ian [Hentschke]

(Emphasis added)

339 Mr McGregor (Lycopodium) responded on 20 June 2011. The substantive part of the response to TQ#20 was as follows:

As per your TQ response, *we should not use the Millennium pile joints at all*, and instead provide 24m long piles.

*Installing the Millennium joints may lead to problems*, as there is a risk that we could install the joint 5m from the toe, then find that we can only drive the pile a further 10m, ending up with the joint in a location with large bending moments.

24m long piles should be sufficient and not require a joint/splice. However, in the event that the length is inadequate, we could design an in-situ extension to the pile. This would have a similar set-up to the Headstock to Pile Connection Detail shown on drawing P10127‑S06, with a reinforced concrete plug cast inside the upper portion of the pile and an in-situ column constructed to the level of the underside of the headstock.

*The item in the BoQ for Millennium Pile joints should be deleted and replaced with a provisional item for an in-situ pile extension*.

(Emphasis added)

340 This response from Mr McGregor replicated almost exactly advice given to Lycopodium by Mr Hudson, from BGE Pty Ltd, to whom Lycopodium had subcontracted the bridge design. Mr Hudson had been emphatic in the advice he provided to Lycopodium on 14 June 2011 that Millennium Joints should not be used at all. As is apparent, Mr McGregor was then instructing Lucas to use 24 m long piles, without any joints, thereby addressing the concerns about the use of the Millennium Joints.

341 Mr Hentschke then sought a site instruction addressing the change in design to 24 m piles contemplated by this response:

As previously mentioned our Tender was based 14 no x 585mm dia precast concrete piles in 11m lengths & driven to a total depth of 22m.

Please refer attached quotation received on 2nd Feb, verifying this assumption.

There will be cost implications associated with producing, transporting & driving 24m single piles, per TQ#20 instruction.

Prior to organizing manufacture of these precast piles we request a Site Instruction addressing this issue.

342 Mr Hentschke followed up this request with a reminder to Mr McGregor on 26 June 2011. Mr Walker (Lycopodium) responded on 29 June 2011. The written response requested Lucas to submit a quotation by 1 July 2011 for carrying out the following work:

**FULL DESCRIPTION OF WORK TO BE PERFORMED**

**Repricing of Piles on the Ponton Creek Bridge**

Lucas Earthmovers are hereby requested to provide repricing of the Ponton Creek Bridge Piles with respect to response to TQ#20 (see attached).

In accordance with Schedule 4 of the lump sum work – site access road, repricing is required for:

**Piles**

Line item 73 – 585 diam Duraspun piles

A provisional sum item for in situ pile extensions.

Note – Line item 74 – shall be deleted

343 Lucas then sought the requested information from Rocla. On 9 July 2011, Mr Hentschke informed Mr Ruggiero at Lycopodium that the long (24 m) piles would cost $1,548,359.54 compared with the figure of $574,201.32 which Lucas had allowed in its Tender for the piles with Millennium Joints.

344 This seems to have caused Lycopodium to review its decision as Mr Hentschke noted in an email of 10 July 2011 that, in relation to the bridge piles, “Lycopodium will meet with the designers on Monday & by COB Tuesday we will have a determination re what option will be adopted”.

345 On 14 July 2011, Mr Stuchbury sent an email to Mr Hentschke and others saying:

Lycopodium are still reviewing the piling requirements for the Ponton Creek Bridge.

Can you please advise the latest date for a final decision on piling, before it begins to impact on your schedule?

346 Mr Hentschke responded the same day, saying:

The Program shows a 4 month construction period with construction originally planned to commence mid July.

*The Piles are now on the critical path* given there is *at least* an 8 week lead time for Manufacture + 4 Months construction, which will see completion Mid January 2012.

(Emphasis added)

347 Mr Trew, from Rocla, confirmed his concerns about the original design in an email to Mr Hentschke on 15 July 2011 in which he said (relevantly):

The only problem I have is the initial concerns, you will be ordering Type 7 piles; the millennium joint is only rated as Type 2, there will be a significant week (sic) spot in the pile.

348 On the same day, Mr Hentschke then sought confirmation from Mr Sceresini as to whether Lucas should proceed with the Type 2 Millennium Joint and said that Lucas “need this clarification before we proceed with the order”.

349 Mr McGregor provided Site Instruction LE‑006 the same day, saying:

Lycopodium’s Designers have confirmed the suitability of the original pile design, namely equal length piles joined using the Millennium joint. It is imperative the piles are driven to the design embedment depths as stated on the drawings, i.e., finished pile length 22 metres below the headstock.

The Contractor is hereby instructed to proceed with the Construction of the Bridge as originally intended.

Furthermore, the Contractor is encouraged to become familiar with the pile preparation requirements at both the Millennium joint and at the headstock connection prior to ordering the required pile lengths.

350 As can be seen, this Site Instruction involved a reversion to the design contained in the Scope of Work in the Contract. The evidence did not disclose the apparent inconsistency between Mr Hudson’s advice on 14 June 2011 that Millennium Joints should not be used, and the statement attributed to the bridge designers in SI‑LE‑006.

351 Lucas then asked Rocla to proceed with the manufacture.

352 However, Rocla and at least one pile driving subcontractor approached by Lucas continued to raise concerns about the use of the Millennium Joint. Exchanges of correspondence concerning this continued in late July and in August 2011. On 9 August 2011, Mr Hentschke provided Mr Stuchbury with a email chain evidencing the continued concern:

Rocla still have concerns regarding the NM Joint & have offered an alternative proposal below.

Could you please get Rob from [Knight Piésold] to review the proposal & if need be speak directly with Mike Trew from Rocla.

353 Not having received a response, on 17 August 2011, Mr Maiolo sent an email to Mr Stuchbury attaching TQ#25. The substantive part of the request was as follows:

The structural integrity of the bridge pile New Millennium joint (NM joint) has been the subject of many queries since Lucas Earthmovers first raised the issue back in May.

Both the manufacturer (Rocla) and numerous potential pile driving contractors have continually raised their hesitance in using the NM joint given the design of the piles.

Additional information was supplied to Lycopodium with respect to an alternative design, namely a 5-lug system lug and stud joint in lieu of the NM joint, recommended by the manufacturer.

Lucas Earthmovers requires an immediate response in regards to the design that will be undertaken, *as further delays to design confirmation will inevitably lead to delays in production, mobilisation, installation and commissioning of the bridge over Ponton Creek*.

(Emphasis added)

354 On 19 August 2011, Mr Stuchbury gave an oral instruction to Mr Maiolo to proceed with the Rocla 5‑lug joint system. He provided written confirmation of that advice on 23 August 2011. The substantive part of his instruction was as follows:

While the Millennium joint is considered acceptable, we hereby confirm acceptance of the alternative Rocla pile joint (standard lug and stud system) for use in splicing the Ponton Creek Bridge Piles. The piles shall be installed at the lengths indicated on the drawings, i.e. the joint will be approximately 11m from the underside of the headstock.

Based on the pile interaction data provided by Rocla, for the various pile load assessed for the Ponton Creek Bridge, the alternate 5‑lug joint system proposed has approximately 10‑20% higher bending capacity than the previously approved Millennium Joint System.

355 Lucas then confirmed the order with Rocla.

#### The period of the delay caused by the late confirmation of the pile design

356 The piles arrived at site on 1 December 2011, the crane and hammer arrived on 2 December 2011 and the pile driving commenced on 3 December 2011. Construction of the bridge was completed on 31 March 2012.

357 Mr King, the programming expert called by Lucas, noted that the Recreated Program had contemplated the pile installation commencing on 14 July 2011. This meant, he concluded, that there had been a delay of 140 calendar days before Lucas was able to commence the pile driving on 3 December 2011.

358 Mr King considered that none of the lapse of time between 23 August and 1 December 2011 could be attributed to Lucas because the Recreated Program had allowed 118 working days for Lucas to procure the piles and have them delivered to site, and Lucas had achieved that delivery in 101 days.

359 Mr King then noted that the Recreated Program had allowed Lucas 104 days from the commencement of piling to the completion of construction of the bridge. When the 10 day period for the Christmas shutdown and the six days inclement weather in February and March 2012 (about which I will make findings later) are added, this meant that Lucas was entitled to a period of 120 days in which to complete the construction of the bridge, that is, to 30 March 2012. On this basis, Mr King opined that, independently of any other cause of delay, the earliest that Lucas could have completed the Works was 30 March 2012, compared with its actual achievement of Practical Completion on 9 April 2012.

360 There was no suggestion that the construction of the bridge had been affected by the Stop Work Order of 18 February 2012.

361 Mr Andrews, the programming expert called by AGA, reached a different concluding date, assuming the correctness of Mr King’s methodology. This was 9 March 2012 comprising 88 days for the planned duration of the bridge construction, 10 days for the Christmas shutdown and one day for inclement weather. It is apparent that Mr Andrews excluded four days from the 92 day period for the bridge construction shown on the baseline program for a site survey and allowed only one day of delay for inclement weather (compared with Mr King’s six days). No reason was shown in the evidence for the four days for the survey being excluded from the necessary work in the bridge construction. It was not suggested that this work could have been carried out before the arrival of the piles. This means that Mr Andrews was in error in allowing 88 days rather than 92 days.

362 Mr Andrews considered that the delay associated with the bridge pile design commenced on 9 June 2011, when Lycopodium issued its response to TQ#19, which included details of 24 m long piles and concluded on 15 July 2011 when Lycopodium issued Site Instruction LE‑006 that Lucas should revert to the original design in the Contract. He did not regard the delay resulting from the further queries in August as attributable to Lycopodium, taking the view that the alternative suggestion by Lucas had been raised “to suit its subcontractor under TQ#25”.

363 In my view, Mr Andrew’s assessment of the circumstances which arose in June‑August 2011 is erroneous. Lucas was not raising the matters of concern concerning the design of the piles in order to meet the convenience of Rocla. Rather, as Mr Maiolo’s email of 17 August 2011 indicates, it was communicating to Lycopodium the concerns about the structural integrity of piles with Millennium Joints which were being communicated to it by Rocla and by pile driving contractors. In doing so, it acted in a responsible manner and in the interests of AGA and Lycopodium. That the concerns which Lucas was communicating were meritorious is evidenced by the advice given by Mr Hudson to Lycopodium on 14 June 2011. I conclude therefore that the time which elapsed to 23 August 2011 should be included in the period of the delay.

364 Mr Andrews also considered that the period of delay should be assessed at 68 days. He based this on the estimate given by Mr Hentschke on 7 August 2011, namely, a manufacturing period of eight weeks and 12 days for delivery (68 days).

365 I consider that Mr Andrews’ reliance on Mr Hentschke’s estimate on 7 August 2011 is misplaced. As previously noted, Mr Hentschke had referred to a lead time for manufacture of *at least* eight weeks. Considered reasonably, he was conveying an indicative position only. It is unrealistic to regard Mr Hentschke as having intended to contract the time available to Lucas under its Contract in which to have the piles delivered to site. There was no suggestion that the time which elapsed between 23 August 2011 and the delivery of the piles to the site on 1 December 2011 (100 days) was inappropriate, and it was in fact less than the 118 days contemplated by the Contract Program.

366 Accordingly, I do not consider it appropriate to rely upon Mr Andrews’ assessment of the delay caused by the delay in the finalisation of the bridge pile design.

#### Other submissions of AGA concerning the bridge pile design

367 Counsel for AGA sought to attach significance to the statement of Mr Maiolo in TQ#25 of 17 August 2011 that “further” delays to design confirmation would lead to delays in the production, mobilisation, installation and commissioning of the bridge. The submission, as I understood it, was that Mr Maiolo was to be taken to have been indicating that the time which had elapsed to 17 August 2011 had not yet had the effect of delaying the bridge work. I do not accept that, viewed objectively, Mr Maiolo’s statement could have been construed as conveying such a meaning. Read in context, Mr Maiolo was doing no more than urging Lycopodium to provide an immediate response to TQ#25. As at 17 August 2011, Lucas had been granted an extension of time only until 11 December 2011. Given the timeline for the procurement and construction of the bridge set out in the Contract Program (182 days) and in the 6 April Program (204 days), no one on 17 August 2011 could sensibly have thought that Lucas could procure and complete the bridge installation by 11 December 2011. It is pertinent that Mr Stuchbury, Lycopodium’s Project Engineer, did not depose to having had such a belief.

368 Next, counsel for AGA submitted that the email from Mr Stuchbury to Mr Maiolo of 23 August 2011 did not amount to a variation for the purpose of cl 29.2. Instead, it gave Lucas a choice as to whether to use the Millennium Joint system or the Rocla lug system on the piles.

369 An objective consideration of the email exchange indicates that this submission cannot be accepted. Lucas had been insisting on being given a direction as to the particular design to be used, not on being given a choice as to the design to be used. It had communicated to Lycopodium the concerns being conveyed to it by Rocla and pile driving contractors about the use of the Millennium Joint system for the bridge. By his email of 17 August 2011, Mr Maiolo sought a direction as to *the* design to be used. In my view, the only reasonable construction of Mr Stuchbury’s email of 23 August is that he gave that instruction. It is evident that Mr Stuchbury sought to do so without making any concession that Lycopodium had been wrong in previously directing the use of the Millennium Joint system but that does not indicate that he was not giving the instruction which Mr Maiolo had sought. A further consideration is that it is not readily to be supposed that Lycopodium had been content to leave the decision on such an important piece of componentry to the discretion of Lucas.

370 Counsel for AGA also submitted that the evidence did not support a conclusion that Lucas had in fact used the Rocla lug system, rather than the Millennium Joint system. This was a surprising submission, given the content of [88(e)] of the Second Further Amended Defence of AGA and the absence of any cross-examination of the Lucas witnesses on the topic. Ultimately, counsel seemed not to press the submission. To the extent that this submission was pressed, I reject it.

371 Finally, counsel for AGA was inclined to question whether the change to the bridge design constituted a variation for the purposes of cl 29. This submission overlapped with another submission to the effect that the claim of Lucas with respect to the bridge pile design was not a claim with respect to variations, but a claim with respect to delay. I am satisfied that the change in the bridge pile design on 23 August 2011 did constitute a variation for the purposes of cl 29. It could not reasonably be characterised otherwise.

#### Consideration

372 There are some aspects of Mr King’s assessment which cannot be accepted. First, he relied on the Recreated Program and, as already indicated, I do not regard that as reliable.

373 Secondly, and in any event, Mr King’s calculation of the 104 days he considered had been allowed for the construction of the bridge seems to involve some double counting as he has included in that figure the period of 12 days for the delivery of the piles which occurred before 1 December 2012. Accordingly, even accepting his method of assessment at face value, the period should be 108 days, with the adjusted earliest date for completion of the Project, 18 March 2012.

374 In my opinion, the extent of the delay caused by the issues concerning the bridge pile design can be assessed using Mr King’s logic, but applying it to the program in the 6 April Program. I note again that the 7 May Program which Mr Andrews considered appropriate matches the 6 April Program.

375 The 6 April Program allowed 204 days in total for the construction of the bridge (as did the 30 March and 7 May Programs). It contemplated Lucas having a total of 112 days to procure the pre‑cast elements (including the piles) and to have them delivered to site. Allowing Lucas that same period from 23 August 2011 meant that it had until 13 December 2011 to achieve delivery of the bridge componentry to the site. Lucas achieved the delivery within that time.

376 The 6 April Program allowed Lucas a total of 88 days from the commencement of piling for the construction of the bridge, with construction to commence within four days of delivery to the site. Lucas commenced the construction on 3 December 2011. This means that Lucas should have had until 16 March 2012 to complete the bridge construction (3 December 2011 + 88 days + 10 days (for Christmas shutdown) + six days (for the inclement weather in February and March 2012) = 104 days, or 16 March 2012).

377 Lucas completed the construction of the bridge on 31 March 2012, 15 days later.

378 Like Mr King, I consider that, by reason of the delay in finalising the design of the bridge piles and irrespective of any other cause, Lucas could not have achieved Practical Completion before 16 March 2012. It has shown an entitlement to an extension of time to that date. That entitlement subsumes the period of one day extension in respect of the effects of the Stop Work Order.

#### Conclusion on the bridge pile design issue

379 I am satisfied that the change in the design of the bridge piles was a variation. The delay by Lycopodium in providing the final design meant that Lucas could not have completed construction of the bridge, and therefore have achieved Practical Completion, before 16 March 2012.

### Is Lucas claiming delay costs or variation costs?

380 Having diverted to consider the other claims for which Lucas claims time‑related costs, I return to the issue of the nature of the claim being made by Lucas.

381 As already noted, in the ASC Lucas claims $4,342,334.63 for time‑related costs in respect of the Additional Works as well as the extra time necessitated by the inclement weather, the rectification of the Kurnalpi‑Pinjin road crossings, the Stop Work Order, the diversion of its graders to other uses, and the delay in the resolution of the bridge pile design. This figure is the aggregate of the figures for 11 categories of cost, being the categories making up the Recurring Cost section of Preliminaries in Sch 2 to Sch A3 to the Contract.

382 Lucas calculated the time‑related costs by multiplying the weekly unit rates for each item of Recurring Cost by the total number of weeks for which that cost was incurred, and then deducting the aggregate figure of $9,025,111.06 shown in Sch A3 for those items. The calculation in the ASC is as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **TENDER PROGRAM** | | **AS‑BUILT PROGRAM** | |
| **DESCRIPTION** | **RATE/ WEEK $** | **LENGTH (WEEKS)** | **TOTAL $** | **LENGTH (WEEKS)** | **TOTAL $** |
| Management/Supervision (Indirect Labour above Leading Hand) | 38,434.21 | 39 | 1,498,934.00 | 57.7 | 2,217,653.64 |
| Survey Personnel and Equipment | 16,765.87 | 39 | 653,868.93 | 57.7 | 967,390.70 |
| Temporary Site Facilities and Associated Services/Equipment | 9,918.95 | 39 | 386,839.05 | 57.7 | 572,323.42 |
| Traffic Management, Barricades and Signage | 6,873.07 | 35 | 240,557.46 | 51.7 | 355,337.73 |
| Operate and maintain Contractor’s water supply | 7,910.86 | 35 | 276,880.11 | 51.7 | 408,991.48 |
| Dust control measures and maintenance of the whole of the Work | 17,639.99 | 20 | 352,799.85 | 30.7 | 541,547.77 |
| Operate and maintain Contractor’s power supply | 18,874.32 | 37 | 698,349.99 | 54.7 | 1,032,425.53 |
| Health, Safety and Environmental Management | 12,864.27 | 37 | 475,977.91 | 54.7 | 703,675.45 |
| Personnel transport | 21,381.89 | 37 | 791,130.00 | 54.7 | 1,169,589.49 |
| Accommodation and Messing | 79,551.21 | 39 | 3,102,497.19 | 57.7 | 4,590,104.82 |
| Serviceman and service truck | 15,636.47 | 35 | 547,276.57 | 51.7 | 808,405.68 |
|  |  | **Sub-total** | **$9,025,111.06** | **Sub-total** | **$13,367,445.71** |
| ***Difference of $4,342,334.65*** | | | | | |

383 AGA submitted that a number of matters indicate that Lucas is seeking the additional time‑related costs, not as part of the price of a variation, but because of the additional time (delay) in completing the Contract overall. That meant that it is claiming delay costs to which cl 18.8 of the Contract applies, and not the costs of variations. The matters on which AGA relied for this submission included:

(a) Lucas’ own characterisation of its claim:

(i) in [93] of the ASC, Lucas pleads that it claims $6,301,822.33 in damages in respect of “the delays” caused by the Additional Works, the rectification work to the Ponton Creek crossings, the February Stop Work Order, the diversion of its graders to other tasks, and the time taken for the finalisation of the design of the bridge piles;

(ii) in [93.2] of the ASC, Lucas particularises its claim for the additional water haulage costs by reference to the pleaded “18.7 weeks delay”;

(iii) in [93.3] of the ASC, Lucas pleads its entitlement to the additional labour costs as an expense it had incurred to minimise “the extent of the delay”;

(b) Lucas had instructed its programming expert, Mr King, to prepare a “Delay Analysis Report” of the impact of six matters on “the progress of the Works” and, in respect of the Stop Work Order and bridge pile design issue, “the period of the delay”;

(c) Mr King complied with that request by undertaking a “Time Impacted Delay” analysis to address the “delay claims” of Lucas. He identified the “delay impact” of each matter, identifying Lucas’ entitlement to an extension of time in respect of it. Mr King’s approach was to assess separately the “delay” in resolving the design for the access road after it was found that the material in the road alignment and in the V‑drains was unsuitable for use as the sub‑base, and the “delay” resulting from the Additional Work associated with the change in the method of construction of the road. I will refer to that analysis in more detail later. For the moment, it is sufficient to record that Mr King calculated that the “delay” associated with the resolution of the design of the road had been 18.75 days and that the “delay impact” of the Additional Works had been 48 days. Mr King also assessed the periods of “critical delay” caused by the Stop Work Order, the inclement weather, and the bridge pile design issue. All of these matters suggested, AGA submitted, that Lucas was approaching the claim by seeking to quantify the effects of “delay” rather than seeking to price variations;

(d) Lucas instructed its quantity surveyor (Mr Bolt) to assess the costs of the extension of time identified by Mr King. Mr Bolt was instructed that Lucas “seeks to recover its entitlement to costs relating to certain variations of the works and the consequential delay associated with undertaking those variations”;

(e) Lucas’ lay evidence was also directed to the issue of delay in the completion of the Works; and

(f) when Lucas submitted its claim for variation costs to Lycopodium in October 2011, it did so by providing a schedule in the form of Sch 5 to Sch A6 to the Contract. Lucas had thereby indicated the costs of the variations which it sought. That supports the view that its later claims for time‑related costs are in the nature of delay costs and not for the cost of the variation; AGA noted in this respect that the rates which Lucas was ultimately allowed for the variations in CV‑8 and CV‑9 were slightly higher than those claimed by Lucas in the October 2011 claim.

384 To these matters may be added others. The structure of Lucas’ case was that it sought to prove its damages by reference to the time taken to complete the work as a whole. In doing so, it assumed that the additional time required by each variation involved the same costs. The approach of Lucas is seen in [36.6]‑[36.8] of its closing submissions. In [36.6], Lucas contended that the Additional Works constituted a variation causing a critical delay of 68 days, the Stop Work Order a variation causing a critical delay of seven days and the bridge pile design issue a variation causing a critical delay of 46 days, a total of 121 days. The submission then continued:

[36.7] The period of critical delay over which time-related costs are claimed is 121 days.

[36.8] Mr Bolt has assessed the time-related costs for the whole of the Works as $3,266,958.90 (not including profit). This is based on an extended construction period of 18.7 weeks (or 130.9 days). Because the critical delays in relation to Variations is a far shorter period, this amount needs to be reduced to reflect the 121 days. This is achieved by multiplying $3,266,958.90 by 0.92 (being the 121 days divided by 130.9). This provides a total for time-related costs for 121 [days] of $3,019,877.97. Profit is added back by multiplying $3,019,877.97 by 1.05, which gives a total for time-related costs of $3,170,871.87.

385 As is apparent, this approach did not seek to differentiate between the costs occasioned by each individual variation. That is confirmed by the Lucas submission that a “per diem” rate can be obtained by dividing the gross figure by 121 days.

386 The case presented by Lucas did not seek to take account of other causes for the delay in the completion of the Works, despite their existence being apparent. An approach which sought to price a variation would have excluded costs occasioned by independent causes of delay.

387 Although it may have involved some complexity, it may have been possible, for example, for Lucas, with expert assistance, to make an assessment of the time (in labour and plant) required to carry out the activities making up the Additional Work and to provide a costing of that time. An analysis of that kind, which would not have been necessarily linked with the time needed to complete the whole of the Contract Works, would have provided at least some evidence of the time‑related costs associated with variations.

388 With respect to the Stop Work Order, Lucas made no attempt to quantify the costs of the effects of the Stop Work Order by reference to the actions it had taken, for example, by showing costs it had incurred in redirecting its labour and plant to other work, or by showing the effect which its inability to engage in work in the vicinity of Pinjin Station have had on its ability to complete the work between Chainages 189 to 214. Instead, its approach was global, by adducing evidence of the overall costs it had incurred by an extension to the time taken to complete the Contract Works as a whole.

389 This point is illustrated even more starkly by the bridge pile design issue. Lucas made no attempt to separate out the additional costs it had incurred by reason of the delay in finalising the bridge pile design. It cannot reasonably be supposed that, had the bridge design issue been the only cause of delay in achieving Practical Completion, Lucas would have needed to keep all of its labour and all of its plant on site until the completion of the bridge construction. Instead it is likely to have been able to reduce its costs by removing some of the labour and plant from the site. Mr Matthews acknowledged that it would be usual on a project such as this to have a “ramp up” period and a “ramp down” period. In the case of the latter, as the activities on site conclude both the labour and plant are reduced. Despite this, Lucas made no attempt to link particular costs and expenses it had incurred to the additional time it took Lycopodium to finalise the bridge pile design.

390 The manner in which Lucas’ claim was presented did not make clear whether all of the Additional Works it pleaded in the ASC was encompassed by CV‑8 and CV‑9 and it is not easy to discern the relationship between the two. My impression, however, is that there is some work in the description of the Additional Works which was not encompassed by either of those variations, for example, the mixing and blending work. On my earlier findings, this was part of Lucas’ Scope of Work. The fact that Lucas did not seek to separate work within the Additional Works which did comprise a variation from that which did not, or to separate out that variation work about which there was a dispute, tends to support the inference that it is claiming the costs of the delay to the completion of the Contract as a whole, and not just variation costs.

391 All these matters indicate that, while Lucas characterised its claim as being for the time‑related costs of variations, it is in fact seeking to recover delay costs, comprised of those costs which it incurred by the delay to the completion of the Contract as a whole. Clause 18.8 of the Contract operates to prohibit a claim of that kind, and for this reason, the claim for the time‑related costs in respect of the Additional Works, the Stop Work Order and the bridge pile design issue must fail.

392 There are other reasons why the claim for time‑related costs fails which I will address in the sections which follow.

### Mr King’s methodology

393 There is a difficulty for Lucas in relying upon the assessment of Mr King of the extent of the delay to the completion of the Works overall. That arises from the fact that Mr King was instructed to use the Recreated Program. At the time that Mr King was given those instructions, it was not appreciated that the Recreated Program was not a true recreation of the Program or Programs to which Lucas had worked. Both Mr Hentschke and Mr Matthews acknowledged that the Recreated Program departed from the program actually used by Lucas in material respects.

394 As previously noted, Mr King adjusted the Recreated Program to show the commencement of sub‑base construction on 29 May 2011. By making the adjustment to 29 May 2011, Mr King assumed, inappropriately, that none of the delays which had occurred before that date were attributable to Lucas.

395 Mr King also overlooked the impact of other matters causing a delay in the completion of the Works. I will refer to these matters shortly.

396 Accordingly, even if an approach based on determining the delay to the completion of the Works overall was otherwise appropriate, I would not be satisfied that Mr King’s approach gave an appropriate assessment.

397 AGA submitted that, even if Lucas is entitled to payment of time‑related costs in respect of its performance of the Additional Works, there is another shortcoming in its claim.

398 That is that, while the Recurring Cost items in Sch 2 to Sch A3 of the Contract are described as recurring costs and are time‑related, it is inappropriate to regard them as incurred evenly over the life of the project. On the contrary, the extent to which those costs are incurred depends upon the level of activity on the site at any one time. The fact that the expenses for those activities have been averaged over the anticipated 39 week construction period does not mean that they are incurred at a constant rate over that period, or would be incurred at a constant rate over any extended period. This makes it unsound to use average figures for any period of extension. Instead, regard should be had to the level of activity during the period of any extension, and to the costs for those items actually used or incurred during that period.

399 The statement in Sch A3 that “[t]he recurring costs shall be claimed monthly after mobilisation to Site in accordance with the Company approved payment claim” is not an indication to the contrary. It should be inferred instead that the provision for weekly units in Sch 2 to Sch A3 is simply to aid the presentation of monthly claims.

400 I accept those submissions.

### Other causes of delay in the completion of the Works

401 AGA contended that there were a number of causes for the delay in the completion of the Works as a whole, which were independent of the performance by Lucas of the Additional Works and, for that matter, of the Stop Work Order and of the bridge pile design issue. These other causes meant that Lucas would not in any event have achieved completion of the construction of the access road by 4 January 2012 (the extended time for Practical Completion after the allowance for inclement weather which had occurred during 2011 and the Christmas shutdown).

402 For the reasons which follow, I consider that several of the submissions of AGA on this topic have considerable force and should be accepted.

#### The tightness of the Construction Program

403 It is very apparent that Lucas agreed to a program for the achievement of Practical Completion which left it with very little leeway for delays or interruptions. The very tightness of the program made it probable that there would be a delayed completion of the Works.

404 The Tender submitted by Lucas on 31 January 2011 contemplated a Contract Award on 14 February, mobilisation to site on 15 March and completion of the Works by 17 November 2011. The revised Tender submitted on 17 February 2011 contemplated a Contract Award on 25 February, mobilisation to site on 15 March and completion of the Works on 19 November 2011. The Notice of Award which Ben Lucas signed on 16 March 2011, provided for mobilisation to site commencing on 20 March 2011, work commencing on 20 April 2011 and Practical Completion on 30 November 2011.

405 The date for Practical Completion in the Contract signed on 10 May 2011 also provided for a Practical Completion date of 30 November 2011 (although the Contract provided that the liquidated damages of $5,000 per day in respect of completion of the sub‑base would not apply until seven days after the date for Practical Completion and that the liquidated damages of $5,000 per day in respect of the wearing course would not apply until 42 days after the date for Practical Completion).

406 Thus, although Lucas had in its Tenders suggested a date for Practical Completion at the end of November 2011 on the basis of a Contract Award in mid or late February 2011 and this did not occur until mid‑March, the Contract still required Practical Completion within (apart from nine days from 21 November to 30 November 2011) the originally proposed timeframe.

407 Senior personnel within Lucas were conscious that it may be difficult for Lucas to achieve Practical Completion by 30 November 2011. Ben Lucas said that, at the time of TRM 2, he had been concerned about the time allowed for the completion of the Works, and for that reason, had negotiated the deferral of the times at which the liability for liquidated damages would commence.

408 Mr Hentschke said that he regarded the Construction Program dated 18 February 2011 on which Lucas and AGA had agreed (and which became Sch D in the Contract) as “unrealistic and unachievable because it was too tight”. In fact, Mr Hentschke had voiced his concerns regarding the tightness of the Program in an email which he sent to Mr Lucas and Mr Matthews on the evening of 27 February 2011 (that is, the night before TRM 2). In that email, Mr Hentschke said (relevantly):

My biggest concern with this job is the time period: From 15th April to 21 November = **221 days** (inclusive of PH’s & WE’s).

Which is less than the originally programmed 39 weeks (273 days).

To complete **223 kms** of Road in this time means we must complete **1 km** of finished road per day for every day of the contract, commencing immediately.

Or another take on this: **7 km** of Finished Road per week for every week of the contract.

This time frame also includes Culvert Works, Clear & Grub, Mobilisation, Water Supply Set‑up, Bridge Construction etc …

I’m up to a challenge but in my opinion the program is unrealistically tight & we should certainly not get locked into [liquidated damages].

(Emphasis in the original)

409 Mr Matthews said that he had thought at the time of TRM 2 that the program for placing the sub‑base and wearing course was “very tight”. He had thought that a Practical Completion date of 30 November 2011 may not be achievable.

410 In my view, these concerns of Messrs Lucas, Hentschke and Matthews were well‑founded. The work required to construct the access road and the Program of Works meant that, realistically considered, it was improbable in mid‑March 2011, when Lucas was given the Notice of Award of the Contract, that it could achieve Practical Completion by 30 November 2011. Lucas had undertaken an obligation which it was unlikely to be able to fulfil.

#### Late mobilisation to site

411 The difficulties created by the tightness of the Construction Program were compounded by the slowness of Lucas in mobilising to site. The Notice of Award provided for Lucas to mobilise to site on 20 March 2011. The 30 March and 6 April Programs contemplated that Lucas would be mobilising to its two camp sites on 12 April 2011. It did not achieve either. As noted earlier, the rectification works to the Kurnalpi‑Pinjin road crossings which Lucas had to undertake in order to gain access to the site, were not carried out until 19 and 24 April 2011. In effect, it was not until either the very end of April 2011 or the first week of May 2011 in which Lucas could carry out activities on the site.

412 Mr Matthews acknowledged that it was not until 16 May 2011 that Lucas commenced actual construction of the sub‑base. Before then it had been engaged in other mobilisation activities and in some activities involving preparation of the sub‑grade.

413 In my opinion, this late start in conjunction with the tightness of the Construction Program, made it inevitable that Lucas would not achieve Practical Completion by 30 November 2011.

#### The initial resourcing of plant was inadequate

414 A comprehensive list of the plant required for the job prepared by Lucas on 18 April 2011, including the equipment required for the actual road‑making such as graders, bulldozers, excavators, water carts, dump trucks and scrapers, indicated that much of that equipment was currently at remote locations and was not expected to be available until the end of April or mid‑May 2011. In addition, Lucas had to transport the plant to the site.

415 As at 18 April 2011, Lucas had on site only one grader, one articulated water cart, one bulldozer, one excavator, one wheel loader, one Holden utility and one truck. This quantity of equipment compares with Mr Hentschke’s statement in an email on 15 March 2011 that the minimum plant required for the first two weeks on site was:

LT Service Truck

3 LV’s + 1 x 22 Seater Bus

2 Dozers to commence Clear & Grub

1 Trencher, Grader & Excavator for Pipe line/Dam Construction

2 Loaders cw Forks/Bucket & Float for Plant & Unit shift from Siding

1 Skid-steer/8t Excavator for Camp Set‑up

1 Grader, 2 ADT WC’s & Roller for Sub‑grade Prep.

Just on three weeks later, the amount of plant on site had increased only a little because, as at 6 May 2011, Lucas had on site only one grader, one articulated water cart, two bulldozers, two excavators, two wheel loaders and seven utilities.

416 In a report bearing the date 18 July 2011 (but which appears to have been written 18 May 2011), Mr Hentschke said:

Progress is still a bit slow due to waiting arrival of key plant (ie DZ10 Dozer, SC01, SC02, GR18) & not yet having occupancy of the Main Camp, all be it very close.

417 Even as late as 13 September 2011, Mr Matthews was reporting a lack of adequate plant on site:

We need approximately 5‑6 more road train side tippers which we are trying to source onsite as we are not getting enough material to the workfronts for the graders to keep up, we had 3 x scrapers down this morning along with 2 x dozers and 2 x ADT watercarts.

418 In his cross‑examination, Mr Matthews acknowledged that mobilising equipment and plant to site in accordance with the Construction Program had been “difficult”.

419 I am satisfied that the slowness of Lucas in getting the necessary plant to the site was yet another cause of delay.

#### Change in the construction methodology

420 As noted earlier, Lucas had initially planned to construct the road using two work fronts commencing from the Main Camp located at about the mid‑point along the access road: one working towards the north‑east and the other working towards the south‑west. Mr Matthews explained that Lucas changed that methodology at the time it began to mobilise to site. It realised then that it would not be able to move its machinery to the midway point on the road until the road had, at least, been partially constructed. Accordingly, Lucas changed the methodology so as to start the road construction at Ponton Creek, about one‑third of the way along the access road. In his cross‑examination, Mr Matthews acknowledged that this change in methodology meant that the rate of road construction had been slower in the early stages of the Contract than originally planned. This was necessarily so because Lucas was working on one work front rather than two.

421 This was yet another cause of delay in the progress of the Works.

#### Difficulties in labour resourcing

422 It is apparent that Lucas experienced difficulties in getting sufficient labour to the site and in organising the labour it did have.

423 One of the difficulties Lucas experienced in getting sufficient labour on site was the shortage of accommodation. Mr Hentscke referred to this in the passage in his report bearing the date 18 July 2011 quoted above. Mr Matthews acknowledged that, at the end of May, Lucas had diverted some of its work force to completion of the construction of the fly camp at Ponton Creek because it was behind schedule in relation to the construction of that camp. It had recognised that it needed to construct more accommodation in order to get more people on site with which to build the road.

424 In an email of 25 June 2011, Mr Hentschke informed the company from which Lucas was hiring side tippers that “[t]he commencement of Base Course laying … is very much dependent on the establishment of the 2nd camp to accommodate people and this camp at the very earliest will not be ready until the end of July. Therefore the commencement date has slipped back to early August”. The wearing course to which Mr Hentschke was referring was that on the road in the vicinity of the Main Camp rather than the laying of the wearing course in the vicinity of the Ponton Creek camp.

425 In his report of 13 September 2011, Mr Matthews referred to problems with the roster and to not having sufficient operators on site:

The roster is woeful and we had 4 x graders parked with no operators and 4 x grader operators coming in tomorrow, scraper operators all bunch up together and the surveyors seem to be all out of whack.

426 In the Knight Piésold Weekly Progress Report for the week ending 17 September 2011, Mr Robertson reported:

Progress this week has remained slow due to the low number of personnel on site, though [the] situation improved as of Wednesday as incoming personnel were more than outgoing.

#### Reduced productivity

427 Mr Andrews, the programming expert called by AGA, undertook an analysis of the plant which Lucas had planned to have on site, the plant it actually had on site, and the utilisation of that plant. He noted that in the period between April and November 2011, the actual plant hours engaged in the road construction were less than the planned plant hours; and that Lucas under‑utilised the plant actually available to it by some 32.5%. Lucas did not challenge Mr Andrews’ analysis. While there may have been a number of reasons for the under‑utilisation of the plant, I infer that one of the reasons was the shortage of labour, namely, that Lucas did not have a sufficient number of operators on site at material times.

428 Mr Andrews’ report also identified other matters impacting on the productivity of Lucas. In my view, it is not necessary to mention them separately as their effects appear to have been marginal.

### Conclusion on entitlement to time-related costs in respect of the Additional works

429 For these reasons, I consider that Lucas has not shown an entitlement to the claimed time‑related costs in respect of the Additional Works, the Stop Work Order or the bridge pile design issue. First, the costs which it claims are, properly characterised, costs in the nature of delay costs to which cl 18.8 of the Contract refers. Secondly, and in any event, there are other matters for which Lucas was responsible which meant that it would not have achieved its Practical Completion by 4 January 2012 (this being the extended time for Practical Completion). A number of other matters indicate that Lucas would have been delayed in any event. Thirdly, the methodology adopted by Lucas to identify the delay and the costs is not sound.

430 Given that I am satisfied that Lucas has not proven an entitlement to delay costs, it is not necessary to consider the evidence and submissions of the parties concerning the quantification of the time‑related costs claimed with respect to the Additional Works, the Stop Work Order and the bridge pile design issue.

## The extension of time claims

431 As already seen, cl 18.3 of the Contract entitled Lucas to an extension of time for carrying out the Works and in achieving Practical Completion if it was delayed by a “Qualifying Cause of Delay”. Clause 18.3 also attached procedural requirements to the entitlement to an extension to which it will be necessary to return.

432 Lucas alleges that a number of matters had the effect of causing delay in its performance of the Works. These can be summarised in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Cause of delay** | **Period** | **No. of days** | **ASC reference** |
| The performance of Additional Works | 18 January – 25 February 2012 | 38 | [50]‑[51] |
| Inclement weather | Various days between 6 June 2011 and 21 March 2012 | 25 | [68] |
| Rectification works to Ponton Creek crossing | 19‑24 April 2011 | 6 | [70]‑[71] |
| Stop Work Order | 28 February – 6 March 2012 | 8 | [73]‑[76] |
| Diversion of graders to other uses | Various | 22 | [77] |
| Delay in confirmation of Ponton Creek bridge pile design | Not confirmed until 23 August 2011 |  | [79]‑[87] |

433 As already noted, Lucas did not pursue in the trial the claim for an extension of time in respect of the diversion of its graders to other uses.

434 Of the remaining matters, Lucas pleads that all but the inclement weather are variations, and for that reason a Qualifying Cause of Delay. As previously seen, both variations under cl 29 of the Contract and inclement weather were defined Qualifying Causes of Delay.

435 In the ASC, Lucas pleads that the effect of the pleaded causes of delay is that the date for Practical Completion should have been adjusted to 6 May 2012. However, at trial, it accepted that, as it had in fact achieved Practical Completion on 9 April 2012, it required an extension of time only until that date.

436 The claims by Lucas for extensions of time in respect of the identified events involve different considerations from those bearing on its claim for time‑related costs. The significance lies in particular in its claim to recover the deducted liquidated damages.

437 For reasons which will become apparent, it is convenient to defer consideration of the claimed extension of time in respect of the performance of the Additional Works until the effect of the other delay events has been considered.

### Inclement weather

438 Lucas claims that it had been delayed by rain, and its effects, as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Period** | **No. of days** | **ASC Reference** | **Extension of Time Request** |
| 6‑16 June 2011 | 11 | [68.1] | EOT#001 |
| 3‑4 October 2011 | 2 | [68.2] | EOT#004 |
| 11‑12 October 2011 | 2 | [68.3] | EOT#005 |
| 26‑27 October 2011 | 2 | [68.4] | EOT#006 |
| 1‑4 November 2011 | 2 | [68.5] | EOT#007 |
| 28‑29 February 2012 | 2 | [68.6] | EOT#009 |
| 18‑21 March 2012 | 4 | [68.7] | EOT#010 |
| **Total** | **25** |  |  |

439 By [74] in its filed Defence, AGA admits that there had been inclement weather on 17 of the 25 days claimed by Lucas. However, it also admits that its Contract Representative had granted Lucas the extensions of time totalling 25 days on account of inclement weather which Lucas had sought in its Extension of Time requests. This is evidenced by the extensions of time approvals issued by the Contract Representative.

440 Lucas’ case was that the effect of the inclement weather in 2011 had impacted on the critical part of its Works by extending the programmed completion from 30 November 2011 to 19 December 2011. The inclement weather in February and March 2012 had delayed the completion of the Works still further. The extension of time letter issued by Lycopodium on 11 April 2012 in respect of EOT#004, EOT#005, EOT#006, EOT#007, EOT#009 and EOT#010 indicated that the total extension of time granted was 14 days which, together with the 11 days granted by EOT#001, changed the date for Practical Completion to 4 January 2012 (including the Christmas shutdown period from 23 December 2011 to 2 January 2012).

441 Despite this, the entitlements of Lucas to the extensions of time for inclement weather were an issue in the proceedings and were addressed by the programming experts.

442 Mr King, Lucas’ programming expert, had regard to Lucas’ claims for an extension of time on the basis of inclement weather, the weather reported by Lucas’ Project Managers and Site Supervisors in the Daily Force Reports and the rainfall reported by the Bureau of Meteorology at weather stations to the west, northwest and southeast of the access road. He concluded that these indicated that a total of 23 days had been lost on account of inclement weather, but nevertheless considered that Lucas should be allowed the 25 days awarded by the Company Representative.

443 Mr Andrews, AGA’s programming expert, considered that the weather stations to which Mr King had referred were too distant from the access road to provide reliable information of extent of rainfall. Accordingly, he attached greater significance to the weather reports contained in the Daily Force Reports and of the descriptions of the effect of that weather on the performance of work in those Reports. On that basis, he considered that Lucas had been delayed by 17 days. Despite that 17 days not extending into the Christmas shutdown period (commencing on 23 December 2011), Mr Andrews also considered that Lucas should be entitled in addition to the 10 day Christmas shutdown period.

444 Mr Andrews also made an analysis of the plant use data. On the basis of that analysis, he concluded that Lucas had been delayed by only 12 days by inclement weather. He acknowledged the inconsistency between that analysis and his analysis based on the weather reports.

445 I consider that there is some merit in Mr Andrews’ view that limited reliance only can be placed on the rainfall reported at weather stations located approximately 200 km away from the access road. Common experience indicates that some variability in rainfall at locations so far apart is to be expected.

446 However, I also consider that Mr Andrews’ reliance on the content of the Daily Force Reports is misplaced. At least insofar as the descriptions of the daily weather are concerned, some of the relevant entries appear to have been made at the commencement of the day rather than at its completion. That is to say, the entries upon which Mr Andrews relies appear, at least in several instances, to be a record of the anticipated, rather than actual, weather.

447 Moreover, I consider that Mr Andrews’ approach has been unduly narrow in having regard only to periods of actual rainfall as this does not take account of the effects of rain after it ceased, that is, until there had been sufficient drying out. Mr Maiolo said, and I accept, that when there was wet weather, Lucas was unable to continue construction of the road because of safety and productivity issues. This was because rain made the road slippery in places and trucks moving along the road before the wearing course had been completed caused damage to it. Other witnesses too spoke of the road becoming slippery after rain. Mr Maiolo also said, and I accept, that when there was heavy rain, the resulting surface water interfered with Lucas’ ability to resume working even after the rain had ceased.

448 Mr Andrews’ analysis based on plant hours involved elements of the theoretical. He assumed that Lucas was affected by inclement weather only if the plant hours on a given day were less than 100. This figure seems to have been selected arbitrarily. It was not, for example, based on a comparison with the plant hours on those days when Lucas had not been affected by inclement weather, or on a comparison of the work planned for the rain‑affected day and the work actually able to be performed. Nor did Mr Andrews compare the hours actually worked with the hours available to be worked by reference to each item of plant, or each category of plant.

449 These matters, together with the wide divergence between the estimate of 12 days, Mr Andrews’ own estimate of 17 days based on the weather reports and the 25 days actually allowed by the Lycopodium Contract Representative, suggest that this aspect of Mr Andrews’ plant hours’ analysis is unreliable. I am not willing to attach weight to it.

450 Inevitably, some practical judgments would be involved in assessing the extent of the rainfall and in determining the duration of the effects. That being so, I see no reason not to have regard to the assessments made by Lucas’ on site representatives and by the Lycopodium Contract Representative. They were in a better position to make the relevant assessments and their assessments are more likely to be reliable than a retrospective reconstruction based on the Daily Force Reports or plant hour analyses.

451 Accordingly, I consider it appropriate to proceed on the basis that Lucas was entitled, by reason of the inclement weather, to an extension of time of 35 days (25 days plus the 10 day Christmas break) which was fixed by Mr Ruggiero, the Contract Representative, as extending to 4 January 2012.

### The repair of the Kurnalpi-Pinjin road Ponton Creek crossing

452 In April 2011, before Lucas commenced its work, heavy rain caused the Ponton Creek to overflow resulting in damage to the Kurnalpi‑Pinjin road crossing. The effect of the damage was to restrict access to the site and to necessitate remedial works to be undertaken. Lycopodium instructed Lucas to undertake that work and it did so between 19 and 24 April (both dates inclusive). This work was carried out at the time that Lucas was mobilising to site as, on 21 April 2011, Lycopodium had granted Lucas conditional site access so that, amongst other things, it could bring plant onto the site, commence the installation of camp buildings and engage in clearing and grubbing activities of the road alignment between Chainages 124 and 180.

453 On 27 April 2011, Lycopodium issued Site Instruction LE‑001 in respect of the work. The substantive part of SI‑LE‑001 was as follows:

Remedial Works to 2 x Creek Crossings

[Lucas] is hereby requested to complete the remedial works, as agreed with the AGA representative, at Lake Rebecca and the Ponton Creek crossing shown on the attached photos.

Total amount $15,504.00

Shire of Menzies component $5,168.00

**GRAND TOTAL $10,336.00**

Quote daywork rates in claim.

454 As I understand it, the Shire of Menzies’ component is the amount which that Shire agreed to contribute to the remedial works.

455 The Site Instruction LE‑001 was amended on 6 May 2011 with the effect that, while the Shire of Menzies’ portion remained constant, AGA was to pay $8,042 to Lucas. Mr Hentschke, as Project Manager, signed and returned SI‑LE‑001 to Lycopodium on 6 May 2011.

456 On 10 May 2011, Lycopodium issued a Contract Variation (CV‑1) in respect of the Ponton Creek crossing remedial work for an amount of $8,042 (in addition to the sum of $5,168 to be paid by the Shire of Menzies). Mr Hentschke signed and return CV‑1 to Lycopodium on 11 May 2011.

457 Although Lucas claims to be entitled to further payment with respect to this Variation, its evidence did not articulate any basis upon which an additional amount could be awarded. I have taken this claim to be implicitly abandoned.

458 Lucas did, however, rely on the repair work carried out on the Ponton Creek crossings in relation to its extension of time claim. In that respect, it claims six days.

459 Both programming experts (Mr King and Mr Andrews) agreed that the Ponton Creek works were critical in the sense that the commencement of other work was dependent on their completion. They disagreed, however, about the length of the extension to which Lucas was entitled. Mr King considered that it should be the whole of the six days, whereas Mr Andrews opined that it should be only 1.8 days (in effect 2 days).

460 Mr Andrews obtained the figure of 1.8 days by calculating, by reference to Lucas’ Daily Site Records, the proportion of the overall plant and labour hours recorded by Lucas on mobilisation in the period between 19 and 24 April constituted by the plant and labour hours recorded for rectification work to the Ponton Creek crossings.

461 In my opinion, this approach by Mr Andrews has some shortcomings. The evidence did not suggest any necessary relationship between the overall hours which Lucas did in fact expend on mobilisation in the period between 19 and 24 April 2011 and the extent to which it was delayed by the rectification work on the Ponton Creek crossings. For example, if Lucas would in any event have been able to engage in its other planned mobilisation activities contemporaneously with its planned work after having crossed Ponton Creek, then it seems immaterial that it remained able to engage in those activities while diverted to the Creek repair work. It is the effect of the diversion to the Ponton Creek repair work which in that circumstance would impact on the progress of its mobilisation once the Creek had been crossed. That is to say, if Lucas’ continued mobilisation, establishing the camp, bringing plant on to the site and commencing the clearing and grubbing was delayed by it having first to work on the means of access to the site, then it seems immaterial that it was, at the same time, able to engage in other mobilisation activities not requiring access to the site in which it would have been able to engage contemporaneously in any event. Both Mr Andrews and Mr King accepted that some forms of mobilisation activities were more critical than others. Mr Andrews had not investigated these matters, nor assessed the criticality of delay to the progress of the mobilisation caused by the diversion of resources to the Creek repair works. Accordingly, I am not willing to accept his analysis.

462 The evidence which Lucas provided concerning the extent to which it had been delayed by carrying out the rectification work to the Ponton Creek crossings was not detailed and, in some respects, the conclusions are left to inference. However, the evidence is sufficient to indicate that Lucas’ ability to gain access to the site was prevented, or at least inhibited until the rectification works were completed. In particular, Mr Hentschke said that the rectification works “were necessary in order to gain access to the site”. It seems that Lucas had not been able to cross the Creek until 24 April 2011 because it was not until that date that some work by a grader (one hour) was recorded for clearing the scrub for the fly camp. To my mind, that tends to confirm that the rectification works had delayed Lucas because, on the previous days, the grader had been engaged in Creek repair work and on the road leading to the crossings.

463 I referred earlier to Lucas having been slow in mobilising to the site. However, it did have some plant available with which to commence camp construction and the road works.

464 In the circumstances, I am satisfied that Mr King’s analysis of the effect of the diversion of plant to the Ponton Creek rectification work should be accepted. Accordingly, I am satisfied that Lucas was entitled to an extension of six days in respect of the Ponton Creek repair work.

### The Stop Work Order

465 I have previously found that Lucas has proved an entitlement to an extension of time of one day in respect of the Stop Work Order.

### Diversion of graders to other uses

466 As previously indicated, Lucas did not pursue a claim for an extension of time in respect of the diversion of its graders to other uses. It accepted that that diversion had not caused any critical delay.

### Delay in confirmation of the bridge pile design

467 I have previously found that the delay by Lycopodium in providing confirmation to Lucas of the design of the bridge pile meant that it could not achieve Practical Completion before 16 March 2012. This took account of the six days of inclement weather in February and March 2012, as well as the 10 day Christmas break.

468 The extension of time to 16 March 2012 means that account does not have to be made separately for the delays occasioned by the inclement weather in 2011, the Ponton Creek rectification works and the Stop Work Order. They impacted on a different critical path and their effects are in any event subsumed in the extension to 16 March 2012.

### The Additional Works

469 Both Mr King and Mr Andrews agreed that the variation requiring Lucas to undertake the Additional Works caused a critical delay. They disagreed as to the extent of the critical delay.

470 Mr King considered that the delay totalled 68 days (20 days caused by the loss of productivity until the road design issues were resolved at the meeting on 19 December 2011 and 48 days in the winning, haulage and laying of additional material from borrow pits and for longer distances).

471 Mr Andrews, on the other hand, assessed a critical delay of only nine days.

472 Mr Kings’ approach was to consider separately the delays which he attributed to the uncertainty which existed until 19 December 2011 in the design of the road which Lucas was to construct, and the time taken for the Additional Works.

473 Mr King reached his estimate of the time by which Lucas had been delayed by reason of the lack of resolution of the road construction methodology by calculating the volume of material which Lucas had scheduled to win, haul and lay between 29 May 2011 and 19 December 2011 and comparing it with the volume of work which Lucas had, on his calculations, achieved in the same period. His analysis involved the following steps:

(a) identifying, by reference to the Recreated Program, the total quantity of both sub‑base and wearing course material which was planned to be placed by 19 December 2011 (the date of the meeting at which agreement was reached on the road design). Mr King calculated this at 631,732.5 m3;

(b) calculating the amount of sub‑base and wearing course material which Lucas had in fact placed by 19 December 2011. After some revisions made in the course of his evidence, Mr King calculated this to be 574,650 m3;

(c) the difference between these two figures (9%) represented Lucas’ loss of productivity until the road design issue was resolved on 19 December 2011; and

(d) applying the figure of 9% to the 205 days between 29 May and 19 December 2011 meant that Lucas had been delayed by 18.5 days.

474 Mr King revised some of the inputs to his calculations at the commencement of his evidence. When doing so, he attempted to indicate the revisions to each part of his report affected by the adjusted calculations. However, on reflection, it appears that Mr King did not achieve that aim completely as, in other parts of his second report, he maintained his original estimate that Lucas had been delayed by 30.75 days on account of the delay in resolution of the road construction design. Ultimately he opined that Lucas had been delayed by 20 days by the uncertainty resulting from the road design issue. This means that there is some uncertainty as to the precise effect of Mr King’s opinion.

475 In relation to the additional material which Lucas had to obtain from borrow pits and from longer distances, Mr King calculated that Lucas had to win, haul and lay an additional 64,733 m3 of material from borrow pits. I did not understand AGA to dispute that calculation. At the planned productivity rate of 1,351 m3 per day, this meant that Lucas required a further 48 days.

476 In my view, there are a number of reasons why Mr King’s analysis cannot be accepted in full.

477 First, Mr King was instructed to use, and did use, the Recreated Program. For the reasons given earlier, that was not a true recreation and departed in significant respects from the program(s) which Lucas was in fact using and which it had provided to Lycopodium at the time.

478 Secondly, Mr King’s analysis did not make allowance for the fact that, for a large of part of the Works, Lucas had two work fronts. Accordingly, even if Mr King’s methodology be otherwise correct, the reduced productivity had to be apportioned over the two work fronts. Another way of expressing this is to say that, even if the lack of resolution of the road‑making methodology resulted in an overall delay of 20 days, Lucas had been able to mitigate the delays by working from two fronts for part of the period between 29 May and 19 December 2011. Apportioning the delays over the two fronts equally suggests that each front was delayed by 10 days.

479 Thirdly, Mr King’s allocation of the whole of the 20 days which he attributed to the delay in resolving the road making design issue from 29 May until 19 December 2011, took no account of delays occurring in the same period caused by other events, including events or matters for which Lucas itself was responsible. Mr King acknowledged that that was so. He said that he had not been able to take account of this because he had not had any empirical way of quantifying delays of that kind. That may be so, but it does not follow that delays attributable to Lucas’ own conduct, of the kind to which I referred earlier, should be ignored.

480 However, there are also shortcomings in Mr Andrews’ analysis. First, it is evident that, at least initially, he misunderstood the use which Mr King had made of a measured mile analysis, as he overlooked that Mr King had relied on it only as a cross check of the reasonableness of his calculation of the planned productivity.

481 Secondly, Mr Andrews prepared a “Time‑Chainage Diagram” in which he plotted the planned and completed progress of Works against time. Mr Andrews then included a “trend line” which seemed to be in the nature of a line of best fit. He explained his approach in this respect as follows:

[193] On the Time Chainage Diagram the productivity of the works is represented by the slope of each section of the Time Chainage Diagram. A steeper slope indicates that the work has been completed over a longer period. In this case this indicates reduced productivity. I have included trend lines for the actual construction works. A review of the Time Chainage Diagram shows the slopes of the planned and actual works are generally similar, which indicates their productivity is similar. This suggests there has not been a reduction in productivity as claimed by Lucas.

[194] Based on the Time Chainage Diagram, I consider that there was no significant difference between the planned and actual productivity rates and no delay to the project due to reduced productivity. Based on my analysis I disagree with Mr King’s conclusion that there was “*a loss in productivity*”.

(Emphasis in the original)

482 In my view, Mr Andrews’ conclusion based on the comparison of the slope lines for the planned and actual work is of dubious validity. It depended on the way in which the diagram was drawn, as both Mr King and Mr Andrews recognised that there could be distortions brought about by the choice of the length of the X axis in the diagram. Further, Mr Andrews acknowledged that his trend line of best fit had not been drawn in accordance with recognised statistical methodology. Further still, there seems to be some inconsistency between Mr Andrews’ opinion that there had been little difference between the planned and actual productivity of Lucas with the opinion in his second report that Lucas’ productivity had been low. I referred to that evidence earlier. If it was low, then it is difficult to see that Lucas’ planned and actual productivity had been similar. Mr Andrews did not explain how this inconsistency was to be reconciled.

483 Quite apart from these difficulties, Mr Andrews did not take into account the different methods of road‑making employed by Lucas from time to time. In particular, he did not take account of the fact that Lucas had not, originally, planned to operate a night shift for the winning and haulage of material from borrow pits but had done so from 16 September 2011. That was a step which it took to minimise the effect of the slowness with which it was performing the work.

484 These matters undermine my confidence in the reliability of Mr Andrews’ assessment and I am not prepared to place weight on it.

485 Mr King and Mr Andrews gave their evidence concurrently. In that evidence, they explained in some detail how an expert programmer uses a baseline program to take account of the impact of delay events. Put very generally, this involves the identification of the baseline program adopted at the time of contract for the commencement of the work, and then making a series of adjustments to accommodate the extent to which a delay event impacts on the critical path of the works. This is done in a progressive way so that account is taken of the work already completed (which would be unaffected by a later delay event) and of the work yet to be completed. In this way account is taken of the cumulative impact of concurrent and independent causes of delay. It avoids the double counting of the effect of multiple causes of delay.

486 There are a number of respects in which Mr King and Mr Andrews disagreed about the application of this approach in the present case. In the view I take of the matter, it is not necessary to make finding about these matters.

487 I have identified above the matters which indicate that Mr Kings’ approach should not be accepted without qualification and the matters which undermine my confidence in the assessment by Mr Andrews. In the view I take, it is not necessary to engage in a more detailed analysis. The reasons for that are essentially pragmatic.

488 Earlier, I found that, by reason of the delayed resolution of the bridge pile design, the earliest date upon which Lucas could have achieved Practical Completion was 16 March 2012. That was the date on which construction of the bridge was completed. It is possible that Lucas needed even more time after that date in which to construct the road over the bridge, but Lucas did not point to evidence indicating that that was so.

489 The difference between 16 March and 9 April 2012 (the date upon which Lucas did achieve Practical Completion) is 24 days. Earlier, I made findings that Lucas had been unlikely to achieve Practical Completion by 30 November 2011 in any event and moreover that it had itself been responsible for some of the delays. The precise extent of the delays for which Lucas itself is responsible cannot be quantified with any precision. Nevertheless, on any reasonable view, they must exceed 24 days. Further, the periods of extension to which I have found Lucas was entitled (and which were on a different critical path) are subsumed in the period of the extension of time allowed for the construction of the Ponton Creek bridge. Accordingly, I consider that it is unnecessary for the Court to make findings in detail about the respective delay analyses of Mr King and Mr Andrews. Even if those findings were made, they could not, reasonably considered, result in Lucas having an entitlement to an extension of time for Practical Completion beyond 16 March 2012.

### The time bar defence

490 AGA pleads that each of the breach of contract claims of Lucas in respect of the Ponton Creek rectification works, the Additional Works, the Stop Work Order, the diversion of the use of the graders and the bridge pile design is time barred by reason of cl 30 of the Contract. On my findings, this defence need be considered only in relation to the claim for an extension of time arising from the delay in the finalisation of the bridge pile design.

491 Clause 30 of the Contract provides:

**30 CLAIMS**

(a) The Contractor acknowledges that all Claims by the Contractor in connection with this Contract including the Works (other than a claim for payment of any part of the Contract Price) are subject to this Clause 30.

(b) Any Claim made by the Contractor must be in writing and must specify:

(i) the legal basis for the Claim, and if based on a term of this Contract, the specific term must be clearly identified;

(ii) the facts relied on in support of the Claim in sufficient detail to permit verification;

(iii) the amount or likely amount of the Claim and the manner in which the amount has been calculated; and

(iv) any measures taken by the Contractor to minimise the costs, loss, damage, delay or disruption incurred or sustained by the Contractor as a result of the circumstances the subject of the Claim.

(c) Subject to any other provision of this Contract which provides a time limit in which to bring a Claim, the Contractor will have no right to submit any Claim against the Company whether in contract or tort (including negligence) or unjust enrichment or insofar as legally possible pursuant to any other principle of law in respect of any matter, fact or thing whatsoever arising out of or in connection with or under this Contract, or the Works, unless:

(i) the Contractor has given to the Company notice in writing not later than 30 days after the first occurrence of the events or circumstances on which the Claim is based; and

(ii) the form of the Claim complies with paragraph (b).

492 As is apparent, cl 30 contains two principal requirements with respect to the bringing of claims by Lucas. Clause 30(c)(i) required Lucas to give AGA notice in writing within 30 days after the first occurrence of the events or circumstances on which the claim is based. Clause 30(c)(ii) required that Lucas present a claim with the content stipulated by cl 30(b).

493 Clause 30 did not contain any stipulation as to the content of the notice to be given pursuant to subcl (c)(i). As it is apparent that the giving of the notice, and the making of the claim, are separate requirements, it can be inferred that the notice need not have the content required by cl 30(b). The requirement for the notice to be given within 30 days after the first occurrence of the events or circumstances on which the claim is based suggests that it may be given even before the full extent, or the precise content, of the claim is known.

494 AGA’s pleading alleges only that Lucas’ claims are time barred by reason of cl 30(c). It did not indicate the manner in which Lucas was said not to have complied with cl 30. However, AGA’s closing submissions indicated that it was an alleged failure by Lucas to give the notice within the prescribed period of 30 days upon which AGA relied.

495 Counterparts of cl 30 have been considered in a number of the authorities. In *Jennings Construction Ltd v QH & M Birt Pty Ltd* (1986) 8 NSWLR 18, Smart J said at 24:

The purpose of clause 47 is to ensure that notice is given at an early stage so that the contractor can inspect and investigate promptly the events or circumstances and consider his position. He may wish to issue a variation. …

Unless notice is given the contractor may not be alerted to the proposed claim and given the opportunity to investigate and check. The requirement of written notice, which is so common in construction contracts, puts the matter on a formal and readily identifiable basis.

496 In *Australian Development Corporation Pty Ltd v White Constructions (ACT) Pty Ltd* (1996) 12 BCL 317 at 339, Giles CJ Comm D said:

The contract called for practical completion by particular dates subject to extensions of time. Any extension of time was for specified cause, cause which had to be beyond the control of ACT, and for a period equal to the delay to ACT. The time by which the date for practical completion should be extended was to be determined by ADC, and it was therefore necessary that ADC be in a position rationally to access the existence of a cause of delay, whether it was a cause of delay of one of the specified kinds, whether it was beyond the control of ACT, and what the extent of the delay to ACT was. Imposing the notification requirement upon ACT was a deliberate and important part of the mechanism for determining the time by which the date for practical completion should be extended.

497 The parties did not address any submissions to the issue of onus of proof with respect to the time bar imposed by cl 30. However, I proceed on the basis that Lucas carried the burden of showing that it had given notice of the kind required by cl 30(c). That is because cl 30, properly construed, makes the giving of the notice an element of the entitlement to claim, rather than a defence which AGA can invoke at its discretion. See in this respect *Jennings Construction v Birt* at 24; *Wormald Engineering Pty Ltd v Resources Conservations Co International* (1988) 8 BCL 158 at 162‑163; and *Opat Decorating Service (Aust) Pty Ltd v Hansen Yuncken (SA) Pty Ltd* (1994) 11 BCL 360 at 364.

498 Accordingly, the issue for determination is whether Lucas has established that it gave notice within 30 days of its claim for an extension of time for Practical Completion, by reason of the delay in the finalisation of the design of the bridge piles. There is of course a question as to when the time commenced to run but, for reasons which will become apparent, that question does not require detailed consideration in the circumstances of this case.

499 Earlier in these reasons, I reviewed the communications between Lucas and Lycopodium with respect to the design of the bridge piles. It is apparent from those communications that Lucas put Lycopodium on notice from an early stage that the delay in the finalisation of the pile design would lead to a delay in Practical Completion and that it would be seeking an extension of time on that account.

500 In TQ#19 which Mr Maiolo provided to Mr McGregor at Lycopodium on 8 June 2011, Lucas informed him that the information concerning the bridge design should be forwarded “as soon as possible”, in order that Lucas could “complete the required works within the designated timeframe”. Mr Maiolo requested “an urgent response”.

501 When Lycopodium responded on 9 June 2011 with a direction that Lucas install piles up to 24 m in length, Lucas responded asking Lycopodium to provide the “preferred solution” for the design of the bridge piles “as soon as possible to minimise any potential delays to the procurement of the precast elements”. Mr Hentschke made the same request in his email to Mr McGregor on 19 June 2011, as well as reminding him that the pile installation was programmed to commence at the end of July 2011.

502 Lycopodium was aware of the potential for the delay in providing the final design to impact on Lucas’ program. Mr Stuchbury from Lycopodium indicated as much in his email to Lucas of 14 July 2011 in which he asked Mr Hentschke to advise “the latest date for a final decision on piling, before it begins to impact on your schedule”. Mr Hentschke responded to Mr Stuchbury on the same day by telling him that the piles were “now on the critical path”, given that the lead time of at least eight weeks for manufacture and the time for construction of four months meant that Practical Completion would not be achieved until about mid‑January 2012.

503 As noted earlier, discussion about the appropriate pile design continued with both Rocla, and at least one pile driving subcontractor, raising concerns about the use of piles with the Millennium Joint. Lucas brought these concerns to the attention of Lycopodium and, not having received a prompt response, Mr Maiolo sent an email to Mr Sutchbury on 17 August 2011 attaching TQ#25. In that request, Mr Maiolo said:

Lucas Earthmovers requires *an immediate response* in regards to the design that will be undertaken, *as further delays to design confirmation will inevitably lead to delays in production, mobilisation, installation and commissioning of the bridge over Ponton Creek*.

(Emphasis added)

504 Earlier, by its letter of 7 August 2011 to Lycopodium, Lucas had given formal notice in accordance with cl 18.2 of the Contract of the delay to Practical Completion (together with supporting details) by reason of the delay that had occurred to that date because of the changes in the bridge pile design from 11 m piles to 22 m piles and then back to 11 m piles with Millennium Joints. Lucas indicated then that Practical Completion should be extended to 2 January 2012.

505 Moreover, by letter dated 22 August 2011 addressed to Lycopodium, Lucas detailed its “Recovery Program and Resourcing Plan”. In that letter, Lucas referred to delays in the work from a number of causes, including delays in obtaining the design for the bridge piles. With respect to the construction of the bridge, Lucas said:

The current program shows that the completion of the bridge will be after the practical completion date for the works which is due mid December. Lucas will attempt to accelerate the program but due to the delays in design and subsequent manufacture, this may be unavoidable.

506 I have not been able to identify the document by which Lucas sought, formally, a further extension of time for Practical Completion by reason of the time taken by Lycopodium after 7 August 2011 to finalise the design of the piles. In my view, it is not necessary to do so. The correspondence and notices which Lucas did give constituted notice in writing to Lycopodium that an extension of time for Practical Completion by reason of the delay in the finalisation of the bridge pile design would be sought. This was notice of the kind required by cl 30(c)(i).

507 Quite apart from the communications to which I have referred, it must have been obvious to AGA and Lycopodium that the time taken for the design of the bridge piles to be finalised had had the effect of delaying Lucas in the construction of the bridge so as to entitle it to an extension of time for Practical Completion. As Mr Henstchke had reminded Lycopodium, Lucas had been due to commence that construction in July 2011 but, in the events which happened, did not commence doing so until 3 December 2011. It was accordingly obvious to all that it would not be able to achieve completion of construction of the bridge by 4 January 2012, that being the extended date for Practical Completion known to the parties at 30 November 2011.

508 In my view, the communications to which I have referred above did constitute adequate notice for the purposes of cl 30(c). They served the purposes of such notices, as discussed in the authorities referred to earlier.

509 Accordingly, I conclude that Lucas’ claim with respect to the time for Practical Completion is not defeated by the time bar defence raised by AGA.

## The Consequential Claims

510 Lucas made three claims in this category. They are the claims with respect to additional water haulage, the costs of the night shift, and the retention of liquidated damages. I will consider each in turn.

### Additional water haulage

511 Lucas claims, that during the claimed period of delay of 18.7 weeks, it incurred additional costs in transferring and hauling water for use in the road construction.

512 Lucas had four sources for the substantial volumes of water required for the conditioning of the material in the road construction and for dust suppression: one at Kamikaze at the north eastern end of the road alignment; one at South Minigwal (approximately midway along the alignment); and two at Ponton Creek at the south western end of the alignment. It constructed dams at each of those sources and then transferred that water to satellite dams, referred to as “turkey nests”, which it constructed along the road alignment about 5 km apart. The transfers were made by tankers. Large volumes of water were transferred in this way. Lucas seeks to recover the costs of doing so in respect of the Additional Works.

513 Lucas quantified its claim at $1,433,390.20 and did so by reference to the additional 18.7 weeks it claimed for the Additional Works. It derived that figure by a pro rata calculation based on the figure of $2,989,423.41 shown in Sch 3 to Sch A2 of the Contract for “Water Transfer and Haulage to Satellite Dams”. Lucas adjusted that figure to a weekly rate which it then multiplied by the number of weeks in the extended period it claimed for the completion of the Contract (57.7 weeks).

514 It was common ground between the parties that the Additional Works had required Lucas to engage in additional water haulage. That is because, as already indicated, water is required for the conditioning of the material in the road construction, as well as for dust suppression.

515 The difference between the parties concerned the quantification of Lucas’ claim.

516 Mr Bolt, the quantity surveyor called by Lucas and Mr Gardiner, the counterpart engineer called by AGA, agreed that the Contract allowance of $2,989,423.41 for water haulage was reasonable. By analysis of the derivation of that figure, both calculated that Lucas had estimated a total of 12,289 hours for water haulage for the Works originally programmed would be required and both considered that to be a reasonable assessment.

517 While Mr Bolt accepted that these hours had been determined by reference to the quantity of water required, he considered that the allowance for water haulage was time‑related. On this basis, Mr Bolt considered it appropriate to use the derived weekly rate of $76,651.88 for each of the additional 18.7 weeks before Lucas achieved Practical Completion on 9 April 2012. In addition, he calculated a per diem rate of $10,950.27.

518 Mr Gardiner said that he did not regard the methodology applied by Mr Bolt to calculate the additional costs for water transfer and haulage to be appropriate. He gave the following reasons:

(a) the methodology assumes that water usage along the road is linear when that is not so. The amount of water required is determined by the quantity of fill required in each Chainage and that quantity varies along the road. Areas of large fill require greater volumes of water than do areas which involve just the laying of sub‑base and wearing course;

(b) the methodology assumes that Lucas maintained average road work crews in the transport of water for the duration of the Works;

(c) the methodology assumes that, with an increase in the duration of the Works, there is a similar linear increase in the volume of water required. That assumption is not sound because, as indicated, the volume of water required is determined principally by the quantity of fill and the pavement material, and not by the duration of the work;

(d) the methodology does not assess the actual costs incurred *at the time of* the claimed delays; and

(e) the methodology does not take account of the fact that water haulage to satellite dams could not be undertaken during the periods of inclement weather, during the Christmas shutdown period and during the period of the Stop Work Order.

519 Mr Gardiner went on to say that the method which he would use to calculate additional haulage costs would involve, by use of contemporaneous records, the identification of the dates or period during which the Works were delayed, the identification of the number of water tankers on site during the periods of the delay, the assessment of the hours worked or stood down against the relevant cost code and, to the extent necessary, a review of the hire agreements and invoices to assess the costs actually paid in respect of those periods. Mr Gardiner had not been instructed by AGA to undertake that task.

520 Mr Bolt agreed that Lucas was not entitled to water haulage costs during the periods of inclement weather, the Christmas shutdown period or the period of the Stop Work Order.

521 In my opinion, some of Mr Gardiner’s critique has force, and some does not. Mr Gardiner’s critique overlooked the fact that Lucas was working in a remote location making it impractical for it to move water haulage plant off the site at times of low demand. This meant that the costs which Lucas incurred in relation to such plant tended to be constant.

522 Further, it does not seem sensible to expect precision in the calculation of the additional water costs. One may accept that the amount of water required at any individual Chainage may vary according to the circumstances encountered at different locations along the road, and from time to time. No doubt, as counsel for AGA submitted, the demand for water may also be less after periods of rain. On the other hand, the effects of evaporation may make it higher at times of extreme heat. However, these matters do not mean that some averaging costs is inappropriate. On the contrary, reasons of practicality suggests that it may be appropriate in the assessment of damages, or in the assessment of the costs of a contractual variation. Not all damages assessments are capable of being undertaken with precision.

523 Earlier, I accepted Mr King’s estimate that the additional borrow material (sub‑base and wearing course material) was of the order of 64,733 m3. Mr King calculated that, at the rate of 1,351 m3 per day, this equated to 48 days.

524 Applying the average per diem rate of $10,950.27 to the period of 48 days produces a result of $525,612.96.

525 I accept that there is necessarily some imprecision in this figure. Nevertheless, I consider it appropriate that Lucas be allowed this amount. As noted, it was not in dispute that Lucas did incur additional costs for water haulage by reason of having to lay additional quantities of sub‑base and wearing course material. Nor was it in dispute that the amount allowed for the haulage costs in the Contract was reasonable for the quantities then contemplated. The difficulties in quantification should not mean that Lucas should be denied altogether an allowance of those costs, when some reasonable estimate of the costs can be made.

526 In summary, Lucas has shown an entitlement pursuant to cl 29.3(a)(iii) of the Contract to the sum of $525,612.96 in respect of the cost of additional water haulage resulting from the variations to its work.

### Additional labour costs

527 In [93.3] of the ASC, Lucas claims $246,097.50 by way of additional labour costs resulting from its introduction on 16 September 2011 of a night shift for the importing of sub‑base and wearing course material from borrow pits. It pleads that the night shift had involved 1,329 supervisor hours and 15,521 labour hours. It claims the additional cost of night work compared with day work. That was an additional $10 per hour in the case of supervisors and an additional $15 per hour in the case of operators/labourers. Accordingly, Lucas claims:

|  |  |  |
| --- | --- | --- |
| The additional cost of night shift supervision | 1,329 hours | $13,290.00 |
| The additional cost of night shift labour | 15,521 hours | $232,807.50 |
| **Total** |  | **$246,097.50** |

There is an inaccuracy in Lucas’ arithmetic for the second of these items, but it is immaterial and can be ignored.

528 The submissions which Lucas made in support of this claim were, it is fair to say, brief.

529 Mr Matthews deposed that Lucas had operated a night shift from 16 September 2011 until 4 March 2012. He said that Lucas had commenced the night shift as part of a “recovery plan … to recover lost time incurred to date”. The impetus for the recovery program appears to lie in Mr Matthews’ email to others within Lucas on 8 September 2011 in which he said:

To date we have constructed approximately 100 km of roadway … to sub‑base level and have only laid 20‑30 km of wearing course material.

We have a further 120 km of full road construction ahead of ourselves which is over half of the total distance.

The only way that we are going to achieve this target will be through the introduction of more machinery and operators to bolster numbers.

In preparation of our recovery program it was indicated that we require 4 work crews to complete the project on timeframe.

2 x earthworks & sub‑base and 2 x wearing course crews.

530 Both Mr Matthews and Mr Maiolo deposed to the hours logged for the night shift being recorded in the Daily Force Reports.

531 Neither the Lucas evidence nor the Lucas submissions explained the derivation of the night shift supervisor hours of 1,329 and night shift labour hours of 15,521. All Lucas did by way of submissions was to refer the Court to the Daily Force Reports and to the “Master Analysis Spreadsheet” prepared by Mr Maiolo in 2013 in connection with the preparation of claims by Lucas.

532 Lucas did not request Mr Bolt, its quantity surveyor, to substantiate, by reference to primary records, the number of hours worked on night shift. Mr Bolt gave the following evidence in cross‑examination:

Q: Now, at paragraph 137, you identify that the basis of the claim appears to relate to actual hours of night shift worked and you’ve sought to assess that. Is that right?

A: … I haven’t spent time analysing it in detail. I’ve just noticed that the total hours they have claimed, I haven’t done any adjustments to the hours that the contractor claimed.

…

Q: … [I]n terms of the substantiation of the actual hours you’ve not been provided with any information that would allow you to do that?

A: I haven’t. That’s correct.

Q: No. So you’re just relying upon what Lucas has told you is the number of hours they’ve worked?

A: Yes, absolutely – that’s correct. Yes.

Q: And you’ve, in effect, accepted their own assessment of $246,097.50.

A: That’s correct. Yes.

…

Q: But without that substantiation [of the hours worked], you can’t make that assessment, can you?

A: I can’t – no, that’s right.

533 This is not a circumstance in which the Court should be expected itself to undertake the substantiation by reference to Lucas’ primary records. It has not in any event been provided with the means of doing so. That is sufficient by itself to indicate that Lucas has not proved this claim.

534 There are other reasons why I consider the claim for the additional labour costs claimed by Lucas should not be allowed. First, as Mr Matthews said, Lucas introduced the night shift to recover the position resulting from the slowness of its progress in the road‑making. On the basis of my findings earlier, there are a number of reasons for that slow progress. These include Lucas’ slowness in mobilising to site, and its provision of inadequate plant and inadequate labour in the early months of the Contract performance. Lucas made no attempt to differentiate out the effect of these causes on the need for the introduction of the night shift. It cannot be wholly attributed to the Additional Works given that Lucas introduced the night shift before there was resolution of the Additional Works required.

535 Lucas characterised this claim in the ASC as a cost incurred in mitigating its loss. However, the submissions of Lucas did not refer to any of the principles bearing upon contractual mitigation of loss. The application of those principles would, in any event, have required Lucas to demonstrate that the loss whose effects were being mitigated was a loss resulting from AGA’s breach of its Contract. Lucas made no attempt to do so.

536 For these reasons, the claim of Lucas with respect to the additional labour costs must be rejected.

### The liquidated damages

537 In the monthly payment claim determination for April 2012, Lycopodium deducted liquidated damages of $280,000. The relevant entry in the payment claim was:

Liquidated Damages 13/02/2012 to 9/04/2012 = 56 days @ $5,000/day.

538 Lucas protested at this deduction and sought payment of the amount deducted. AGA and/or Lycopodium did not agree.

539 By [93.4] of the ASC, Lucas seeks payment of the retained sum of $280,000 contending that, by reason of the extensions of time for Practical Completion to which it was entitled, Lycopodium had not been entitled to deduct liquidated damages.

540 Clause 18.7 of the Contract provided for the payment of liquidated damages:

**[18.7] Liquidated Damages for Delay**

(a) Subject to Clause 18.7(b)(1), if the Contractor does not complete the Works by the Date for Practical Completion, the Contractor must pay the Company, as pre‑estimated and liquidated damages, a sum calculated at the appropriate rate specified in Item 9A of the Key Terms Schedule for every calendar day after the Date for Practical Completion, subject to any conditions specified in Item 9A of the Key Terms Schedule, to and including:

(i) the date that the Works is completed; or

(ii) the date that this Contract is terminated,

whichever first occurs.

(b) The Company and the Contractor agree that:

(i) the total cumulative amount which may become payable under Clause 18.7(a) is limited to the percentage of the Contract Price specified in Item 9B of the Key Terms Schedule; and

(ii) that amount is the limit of the Contractor’s Liability to the Company for any delay in the completion of the Works.

(c) The Contractor acknowledges that all sums payable to the Company under Clause 18.7(a) represent the Company's genuine pre-estimate of the damages likely to be suffered by the Company if the Works is not completed by the Date for Practical Completion and those sums ought not be construed as nor are they intended to be a penalty.

541 Item 9A in the Key Terms Schedule identified the quantum of the liquidated damages:

**Item 9A: Liquidated damages rate (Clause 18.7(a) 18.7(b))**

The liquidated damages of $5,000 per day in respect to completion of sub-base shall apply 7 days after the Date for Practical Completion.

The liquidated damages of $5,000 per day in respect to completion of wearing course shall apply 42 days after the Date for Practical Completion.

Liquidated damages shall be limited to $5,000 per day in the event that both amounts outlined above are operating concurrently.

**Item 9B: Maximum amount of liquidated damages (Clause 18.7(b))**

5% of Contract Price

542 The parties did not make any submissions as to the manner in which cl 18.7 and Item 9A are to be applied. Although the position is not entirely clear, their effect as I understand it, is that Lucas became liable to pay liquidated damages only in the event that it did not achieve completion of the sub‑base and the wearing course in a timely manner. In relation to the former, Lucas became liable to pay liquidated damages at the rate of $5,000 per day if it had not completed the sub‑base seven days after the date of Practical Completion. If Lucas had completed the sub‑base, but had not completed the wearing course within 42 days after the date for Practical Completion, it became liable to pay liquidated damages of $5,000 per day.

543 On my earlier findings, the date for Practical Completion was 16 March 2012. Lucas had completed the sub‑base by that date but had not completed the laying of the wearing course. This means that Lucas had no liability for liquidated damages because it did complete the laying the wearing course within the period of 42 days after 16 March 2012.

544 Accordingly, I am satisfied that Lucas has shown an entitlement to payment of the $280,000 deducted by Lycopodium from the April 2012 payment.

## The Other Variations Claims

545 In this category, Lucas claims payment for seven items of work which it contends should have been paid as variations. Originally, it had made claims with respect to another 11 items, but the parties compromised those claims shortly before the trial.

546 It was common ground that it was for the Court, as if standing in the shoes of an assessor, to fix a price pursuant to cl 29.3(a)(iii) of the Contract for the variations in this category to which Lucas is entitled, in the event that cl 29.3(a)(i) and (ii) are inapplicable.

### The mark-up of 39% for Preliminaries

547 Before addressing the seven claims, it is convenient to address a matter which is common to four of the claims. That is the inclusion of a mark‑up of 39% for Preliminaries on the assessed amount of the claim.

548 Mr Bolt, the quantity surveyor called by Lucas, said that in his experience a contractor who is delayed by factors outside its control is usually entitled to the additional time‑related costs for on‑site overheads such as the provision of “indirect” personnel, facilities and equipment. The “indirect” personnel are those not engaged directly in the carrying out of work and include persons such as a Project Manager, Site Engineer, Supervisors and the Site Administrator.

549 Mr Bolt also opined that the valuation of variations using rates derived from the rates in Sch 4 to Sch A2 of the Contract (the Lump Sum Prices) should be adjusted to include Preliminary costs, which are not included in those rates. He then noted that the aggregate of the Recurring Cost items in the categories making up the Preliminaries in Sch 2 to Sch A3 amounted, when rounded off, to 39% of the aggregate of the other two items listed in Sch A1 ($23,146,994.54) making up the total Contract price of $35,016,992.60. He then applied the percentage mark‑up of 39% to all variations calculated using the Lump Sum Prices from Sch 4 to Sch A2 to the Contract.

550 Mr Bolt gave the following explanation:

[154] It is my opinion that work undertaken as a variation to the original scope of work will attract the same percentage in respect of preliminary costs as the original preliminary items in the builder’s tender. The work is similar in nature to that originally specified and is undertaken under the same conditions. The calculated percentage is comparable with the percentages I have experienced on similar projects where the work is geographically spread over a vast area where an alignment extends through a remote region. The preliminary items are the same as those on similar projects and as a consequence I am satisfied that 39% is representative of a reasonable allowance for such costs.

551 In his cross‑examination, Mr Bolt also explained the practical difficulties in identifying every time‑related cost associated with a variation. Those practical difficulties made it appropriate, he considered, to adopt a percentage loading approach. Mr Bolt acknowledged, however, that doing so may produce an allowance which is either too high or too low.

552 AGA submitted that Mr Bolt’s approach was not appropriate. In my opinion, this submission of AGA should be upheld.

553 First, there is some arbitrariness in the figure of 39%. As Mr Bolt acknowledged, it does not reflect the actual time‑related costs of a variation. Further, it cannot be assumed safely that all of the items in the Recurring Cost category in Sch 2 to Sch A3 were incurred at all, or in the same way, in relation to each variation. As will be seen, Lucas calculated its claimed entitlements in respect of some items by reference to quantities or volumes of material, and not by reference to time. There is accordingly no necessary relationship between the figure of 39%, on the one hand, and the time actually required for the extra work, on the other.

554 Secondly, the amount of a mark‑up for time‑related costs, if any, should be calculated by reference to the actual time and cost occasioned by a variation. It ought not to be assumed that those costs will be the same with respect to each variation.

555 Thirdly, Mr Gardiner, the engineer called by AGA, said that, while it may be difficult, it is possible to determine from the records the additional recurrent costs occasioned by a particular variation, whether it be an item or items of equipment or the time of a particular supervisor. I accept that evidence. Mr Gardiner himself engaged in such an exercise in relation to the claim with respect to the increased borrow pit footprint.

556 Finally, it is not the case that the Recurring Cost items listed in the Contract were derived as a percentage of the other items of Lump Sum Prices. They were, as I understand it, derived by reference to the underlying circumstances, namely, by identifying the items of Recurring Cost required for the job as a whole.

557 In short, in most cases in which time‑related costs should be taken into account in the valuing of a variation pursuant to cl 29.3(a)(iii), that is not to be done by applying the mark‑up of 39%. They are instead to be assessed by reference to the actual costs incurred by Lucas in carrying out the variation. Lucas did not seek to identify those costs.

### Culvert fill quantities

558 The Contract required Lucas to construct 11 culverts along the access road to allow water to pass underneath the road. It contemplated that concrete pipes 1200 mm in diameter would be used for this purpose (Item 33)and that, once the pipes had been positioned, Lucas would backfill over and around them. With respect to the backfill, Items 34 and 35 in Sch 4 to Sch A2 in the Contract provided:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Unit Rate** | **TOTAL** |
| **CULVERT STRUCTURES** | | | | | |
| 34.0 | Win from borrow, load, haul from 0km up to and including 2km, place, spread, moisture condition and compact select backfill surrounding culvert | m3 | 3,100 | $19.05 | $59,055.00 |
| 35.0 | Win from borrow, load, haul from 0km up to and including 2km , place, spread, moisture condition and compact general backfill to culvert | m3 | 83,703 | $14.05 | $1,176,027.98 |

559 Lucas did not in fact install concrete pipes of 1200 mm in diameter. Instead, it installed corrugated iron pipes of varying diameters. I will refer to the circumstances in which it did so shortly.

560 Lucas makes two claims with respect to the backfill required for the culverts. In [99] of the ASC, Lucas claims $759,166.55 in respect of the additional fill required for the construction of the culverts along the access road. As I understand it, not all of that material was backfill in the sense described above. Some of it was the amount of fill needed to achieve the desired road levels in the vicinity of the culverts. In [114] of the ASC, Lucas claims $370,293.26 in respect of the haulage of the culvert fill material from distances greater than those provided for in the Contract. These two claims can conveniently be considered together.

561 Lucas contends that, instead of backfill of 86,803 m3 (83,703 + 3,100) as contemplated by Items 34 and 35, it had in fact laid fill of 140,977 m3. Some of this additional fill had been used on the approaches to the Ponton Creek bridge rather than on culverts. There is a qualification to the figure of 140,977 m3. Lucas’ pleading in ASC [99.4] is that it had been required to use 139,568 m3 for backfill. That figure is the average of two other figures, one being the assessed volume of backfill from the place from which it was extracted (138,158 m3) and other being the “as‑built volume” (140,977 m3). However, the submissions and evidence at trial proceeded on the basis that Lucas was claiming 140,977 m3, and I will do likewise.

562 Although Lucas did not make it explicit, I understood it to contend that the requirement for additional culvert backfill material constituted a variation because it constituted an increase in the quantity of work and was therefore encompassed by cl 29.2(a)(i) of the Contract.

563 Lucas had sought a variation from Lycopodium in respect of the increased volume and haulage of culvert backfill material, but had been allowed only $25,736.70.

564 There had been some discussion about the nature and size of the pipes to be used for the culverts during the tender process. Lucas had pointed out that the use of corrugated iron pipes of smaller diameter than the concrete 1200 mm diameter pipes would be cheaper in both supply and transport costs. However, as noted, the Contract when executed called for concrete pipes of 1200 mm diameter. It seems that the parties contemplated that the actual choice of pipes would be made as the work progressed.

565 At the weekly site meeting on 2 June 2011, it was agreed that Knight Piésold and Lucas would assess each culvert site to determine the design parameters and that Lucas would submit its proposed culvert arrangement for approval by Lycopodium prior to procuring the components.

566 On 12 July 2011, Mr Hentschke submitted to Lycopodium Lucas’ proposal for the culverts at 11 locations. This involved the use of a combination of pipes varying from 600 mm to 1200 mm in diameter.

567 Lycopodium rejected that proposal because it considered that the proposed arrangement would not provide adequate capacity for the designed flow of water. At the same time, Lycopodium provided Lucas with a memo from Knight Piésold setting out two alternative options which would meet the flow requirements. On 29 July 2011, Mr Hentschke responded seeking further information and querying in some respects the Knight Piésold alternatives.

568 On 3 August 2011, Mr Stuchbury from Lycopodium responded informing Mr Hentschke that Lucas’ options were to construct the culverts using concrete pipes as contemplated by the Contract, to use one or other of the options suggested by Knight Piésold, or to suggest an alternative culvert design for consideration. Mr Hentschke then informed Mr Stuchbury that Lucas would adopt the Knight Piésold option B and that each run of pipes would consist of 2 x 12 m lengths. The Knight Piésold option B involved Lucas using corrugated iron pipes varying in diameter from 900 mm to 1200 mm.

569 On 28 October 2011, Mr Maiolo submitted a technical query to Lycopodium regarding the fill level over Culvert No 8. Mr Haworth from Lycopodium responded by saying that he would “cover this from site”. The next day, Mr Bastuba of Knight Piésold provided a recommendation that the road design be varied so as to increase the depth of fill above the culvert. This suggestion was formalised by a Site Instruction (SI‑LE‑032) issued by Lycopodium to Lucas on 29 October 2011 by which Lucas was instructed to place an additional 600 mm of fill material between Chainages 143.400 to 143.700 to achieve a minimum coverage requirement. The Site Instruction contemplated that this would involve an additional 600 m3 of material.

570 On 4 January 2012, Lucas sought a variation with respect to the additional fill material required for Culvert No 8. It noted that more than 600 m3 of material had been provided and that there had been a verbal agreement on site for the placement of the additional material.

571 On 28 January 2012, Lucas submitted a technical query (TQ#38) seeking confirmation of the total fill volume required at each culvert location.

572 Thereafter, there were a number of communications between Lucas and Lycopodium with respect to the quantum of fill material but without resolution of Lucas’ claims for additional payment.

573 By its letter of 8 May 2012, Lucas sought, amongst other things, payment with respect to:

The instructed use of general fill for culvert fill areas, inter alia, where the ground model was found to be in error, Lucas were, in the main, instructed to maintain the road alignment levels thereby increasing required fill volumes.

574 For its evidence of the additional fill required, Lucas relied upon a document prepared by a Mr Leo Antonio. Lucas did not adduce evidence from Mr Antonio directly, nor did it adduce much by way of evidence concerning his qualifications or the basis upon which he had conducted the survey. This gave rise to an issue to which I will return shortly.

575 In its filed Defence, AGA denies liability with respect to the culvert fill claim on a number of alternate bases:

(a) the culvert design had been discussed during the tender review process and the parties had agreed that each culvert crossing would be assessed on a case‑by‑case basis. Lucas had also proposed specifically that a change to a combination of pipe sizes would not constitute a variation and that the intent was to minimise the volume of earthworks required on the access road to provide a minimum of 600 mm coverage above each pipe;

(b) the material volumes mentioned in Items 34 and 35 were estimates only and, by cl 1 in Sch A2 to the Contract, Lucas had accepted that it carried “the risk associated with determination of the appropriate quantities for all aspects of the Lump Sum portion of the Works based on the requirements defined in the Contract”;

(c) Lucas had not in any event proven the additional volumes involved; and

(d) Lucas had not complied with the notice and making of claim requirements set out in cl 29.3 of the Contract.

576 The TCS 5 records the discussions between the parties concerning the culvert design. It is sufficient to refer to the Lucas proposal of 10 March 2011:

Further to our discussions we propose that each culvert crossing be assessed on a case by case basis and where the width of water course being crossed and approach grade of crossings is appropriate that 600 mm Culverts be permitted and where water course may be a deeper V type crossing that 1200 mm culverts may be required or a combination of sizes. *The combination of pipe sizes will not constitute a variation* and the intent is to minimise the volume of earthworks that is required to the road alignment to provide adequate coverage. The elevation of road at crossings shall be amended to provide generally a minimum 600 mm coverage to culvert pipe at each location. …

(Emphasis added)

577 TCS 6 records that Lucas responded to this proposal on 14 March 2011 as follows:

Accepted, subject to review and approval by AGA.

578 Consistently with that agreement, Lucas does not plead, and did not seek to prove, that the variation in pipe sizes itself constituted a variation. In fact, somewhat curiously, Lucas pleads that it had installed 1.2 m diameter culverts in accordance with the Scope of Work.

579 Lucas claimed, however, that it was the laying of the additional fill over the culverts which, by itself, constituted a variation. In support of that claim, counsel for Lucas submitted that Lucas had been “instructed to fill to original contract design levels, giving rise to a Variation” and that it was that variation which was the subject of the culvert fill claim.

580 The claim of Lucas breaks down at this point. That is because, apart from the instruction concerning the additional material for Culvert No. 8 to which I referred earlier, Lucas did not adduce evidence that it had been given any further direction with respect to fill over the culverts. Instead, its claim was only that it had laid more fill than contemplated by Items 34 and 35 in Sch 4 to Sch A2.

581 I also consider that AGA is correct in its submission that it was Lucas which carried the risk associated with the determination of the appropriate quantities of materials. Schedule 4, of which Items 34 and 35 form part, has the heading “Lump Sum Work – Site Access Road”. Items 34 and 35 are therefore subject to cl 1 with which Sch A2 commences.

582 Counsel for Lucas sought to avoid this conclusion by submitting that cl 1 of Sch A2 had the effect of allocating the risk with respect to the quantities of the Lump Sum portion of the Works with respect only to quantities determined by Lucas itself. It did not apply, counsel submitted, to quantities determined by AGA or Lycopodium.

583 I referred to this submission earlier. As indicated then, I am unable to discern in Sch A2 any indication that the application of cl 1 varies according to the identity of the person making the determination. Instead, it applies to the determination generally of the quantities needed to complete the Works, irrespective of who it is who makes that determination.

584 However, cl 1 applies only to a determination of the appropriate quantities for the aspect of the Lump Sum portion of the Works “based on the requirements defined in the Contract”. It does not apply to aspects of the Lump Sum portion of the Works the requirements for which are not defined in the Contract. This means that cl 1 does not apply to work which is the subject of a variation because, by definition, the subject of a variation was not a requirement “defined in” the Contract.

585 The submissions of Lucas did not explain satisfactorily why it was that the additional fill required for the culverts was not encompassed by cl 1 to Sch A2. In particular, Lucas did not seek to prove that it had been instructed by Lycopodium to construct road levels which it had previously been agreed were not required, or for some other reason to increase the amount of fill over the culverts over and above that required by the Contract.

586 Another difficulty with this claim is that the evidence adduced by Lucas in support of the quantities of fill which it said had been required was less than complete. As already noted, Lucas relied for this purpose on a spreadsheet said to contain the result of a survey performed by Mr Leo Antonio.

587 Lucas did not lead evidence from Mr Antonio and did proffer any explanation for him not having been called. AGA accepted that the document containing the result of a survey carried out by Mr Antonio was admissible as a business record of Lucas pursuant to s 69 of the *Evidence Act 1995* (Cth). It contended, however, that the Court should not rely on that summary because there was no evidence that Mr Antonio was a licensed surveyor; no evidence that he had personally undertaken the survey work; no evidence of the activities in which he had engaged in undertaking that work; and Lucas had not proved any of the workings from which the summary contained in Mr Antonio’s spreadsheet had been derived.

588 In my view, some of these objections are overstated. There are numerous references in the documentary evidence to Mr Antonio. These indicate that he was on site carrying out survey work for extended periods and that he engaged not infrequently in communications with staff from Lycopodium regarding aspects of the work. By reasons of those interactions, it is reasonable to infer that he was well known as a surveyor to AGA through Lycopodium.

589 On the other hand, some aspects of AGA’s critique are well made. Mr Maiolo said that Lucas had engaged three surveyors with Mr Antonio being “effectively the survey manager for the Project”. He did not know whether Mr Antonio personally had undertaken the survey of the culvert fill material on which Lucas’ claim was based. Mr Matthews acknowledged that he did not know what information Mr Antonio had based his findings on and could not say whether he had ever seen Mr Antonio’s workings. Mr Matthews acknowledged that he had not reviewed any of Mr Antonio’s workings.

590 The cross‑examination of Mr Bolt, the quantity surveyor called by Lucas, by AGA’s counsel pointed up the shortcomings in the evidence of Lucas:

Q: That is a volume [of as-built material] that you could have independently assessed if you had been asked …, couldn’t you?

A: Absolutely, yes. I could have done. That’s correct.

Q: And the normal position of an assessor during the performance of a contract would be to require from the contractor, when they produce an as‑built volume, some workings and information to substantiate that amount, is that right?

A: Absolutely, yes, that’s correct. Yes, you would need a lot of information. You would need all the original datum lines, you would need all the original set of drawings and then all the final as‑built drawings.

591 Mr Bolt did not undertake an independent assessment of the as‑built volumes of culvert fill material. He had instead simply assumed the correctness of the as‑built quantities pleaded by Lucas (which had in turn relied upon the summary spreadsheet provided by Mr Antonio).

592 Later, Mr Bolt acknowledged that he would need much more than the single page summary sheet from Mr Antonio if he was in the position of a company representative or superintendent assessing a variation claim.

593 In short, there are deficiencies in Lucas’ proof of the quantities of fill it required.

594 For these reasons, I consider that Lucas has not established either of the claims it makes with respect to the culvert fill material. Those claims fail.

### Increase in the borrow pit footprint

595 In [100] of the ASC, Lucas claims $188,097.92 for the increase in “the total footprint of borrow pits” from which topsoil had to be stripped and stockpiled. It referred to Site Instructions LE‑020, LE‑021 and LE‑023 for this purpose.

596 Schedule 4 to Sch A2 in the Contract as executed contained the following items concerning the stripping of topsoil from borrow pit areas:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Unit Rate** | **TOTAL** |
| 5.0 | Strip topsoil (nominal 300mm depth) from borrow areas and remove to topsoil stockpile area as directed | m3 | 38,323 | $3.10 | $118,800.00 |
| 47.0 | Strip topsoil (nominal 300mm depth) from borrow areas and remove to topsoil stockpile area as directed | m3 | 1,858 | $3.10 | $5,760.00 |
|  | **Total** |  | **40,181** |  | **$124,560.00** |

Item 5 related to 214 km of the access road from the southwest commencement to the Main Camp and Item 47 related to the 9.5 km from the Mine Camp to the mine site.

597 Lucas quantified its claim in the following manner. It claimed that it had had to remove a total of 200,790 m3 of topsoil from borrow pits (191,670 m3 along the 214 km stretch of access road and 9,120 m3 along the 9.5 km stretch of access road) and, from that figure, deducted the aggregate of 40,181 m3 for which Sch 4 to Sch A2 had provided. It then multiplied the balance of 160,609 m3 by the rate of $3.10 per cubic metre, producing the figure of $497,887.90. From that amount Lucas deducted the payment it had received ($309,789.98), leaving the balance which it claimed of $188,097.92.

598 AGA denied liability for this claim on the following bases:

(a) it was Lucas itself which had, during the Tender review process, provided the estimate for the amount of topsoil to be removed from borrow pits. Lucas had underestimated the full volume of material which would need to be stripped because it had not believed, at that time, that it would be necessary to perform all the stripping which ultimately proved necessary;

(b) Lucas had already been paid $31,005 pursuant to variation CV‑5 in respect of SI‑LE‑023, and that payment reflected the final entitlement of Lucas with respect to that particular variation; and

(c) Lucas had not in any event proved the volumes of topsoil which had to be removed.

599 The communications passing between the parties indicate that, as the Works progressed and the inadequacies of the road alignment and V‑drain material for use as sub‑base became apparent, all were aware that additional borrow pits were required. This was so both before and after 19 December 2011. Lucas could not open up a new borrow pit, or extend an existing borrow pit, as it pleased. Instead, it had to obtain an approval to do so through Ms Bastow, the Environmental Compliance Manager at AGA.

600 The evidence indicates that, from time to time, Lucas sought and was granted, approval to create new borrow pits, or to extend existing borrow pits. In addition to Ms Bastow, staff from Lycopodium were involved in the communication of these approvals.

601 On 21 September 2011, Mr Stuchbury from Lycopodium issued SI‑LE‑023 to Lucas requiring it to provide an excavator and operator to be used in the investigation of further borrow pits. The payment of $31,005 to which AGA refers in its filed Defence was paid in respect of Lucas’ provision of that excavator. I did not understand Lucas to be making any further claim with respect to that variation. Because the $31,005 was paid by AGA for that particular purpose, its payment cannot constitute a defence to the Lucas claim concerning the removal of topsoil from additional borrow pits. This ground of defence by AGA fails.

602 In my opinion, the defence of AGA that it was Lucas itself which had, during the Tender period, nominated the quantities of borrow pit topsoil which would need to be removed is misplaced. The determination of whether Lucas has shown an entitlement to a variation does not turn on the identity of the entity which nominated the quantities in the Contract. AGA did not dispute that Lucas had been directed to undertake additional borrow pit clearance and thereby to undertake additional work. The ground of defence also fails.

603 For its proof of the quantities involved, Lucas relied on a summary of another survey undertaken by Mr Antonio. AGA made the same critique of that summary as it made in respect of the summary concerning the culvert fill. If that was the only evidence available to Lucas, then this claim may face the same difficulty as did its culvert fill claim.

604 However, Lucas relied in addition on the letter of 16 July 2012 from Mr Ruggiero of Lycopodium, AGA’s Company Representative. By that letter, Mr Ruggiero responded to the claim of Lucas for variations made in its letters of 22 December 2011 and 8 May 2012. Mr Ruggiero noted Lucas’ claim for payment of $475,370.50 for clearance of additional borrow pits and said that, of that amount, Lucas would be allowed $287,277. He gave the following explanation:

The Company has directed the Contractor to utilise Borrow Areas which differ in location and size to what the Contract Price was based on, therefore the variation is valid in principle.

The Company Representative disagrees with the claimed amount on the basis of the Company not being liable for any errors in quantities used to determine the Lump Sum Contact Price.

The Contractor only allowed for 38,323 m3 of topsoil stripping whereas the original documentation clearly shows the requirement for 99,000 m3. The Contractor is only entitled to the quantity of instructed work carried out over and above what should have had originally been allowed for by the Contractor.

Therefore:

191,670 m3 – 99,000 m3 =92,670 m3 Extra Over

92,670 m3 x $3.10/m3 = $287,277.00

605 As is apparent, Mr Ruggiero’s methodology was to compare the amounts actually laid with the amount which, in his view, Lucas should have claimed in the Contract in respect of the 214 km stretch of road. For the reasons already given, this approach was misconceived. Mr Ruggiero did not deal separately with the claims with respect to the 9.5 km of road.

606 Lucas contended that Mr Ruggiero’s acceptance that 191,670 m3 had been laid constituted an admission on which it could rely to prove this aspect of its claim. Mr Bolt in making his assessment had relied upon that admission.

607 Counsel for AGA submitted that it was not open to Lucas to rely upon this passage in Mr Ruggiero’s letter as an admission. That was so, counsel submitted, because the letter was “part of the process by which AGA ultimately agreed to pay Lucas an ex‑gratiapayment in an attempt to close out the Contract”. That being so, Mr Ruggiero’s statements should not be regarded as an admission especially as AGA had, by its filed Defence, put Lucas to proof.

608 In my view, this submission of AGA ought not to be accepted. The terms of the letter of 16 July 2012 make it plain that Mr Ruggiero was responding, in a formal way, to the variation claims made by Lucas and was doing so by making determinations in his capacity as the Company Representative. Lucas had asserted in the schedule attached to its letter of 8 May 2012 that it had laid 191,670 m3 in the 214 km section of the access road and 9,120 m3 in the 9.5 km section of the access road. In indicating that, as Company Representative, he accepted that 191,670 m3 had been laid, and in doing so for the purposes of a contract variation, Mr Ruggiero was, in my view, acknowledging the truth of Lucas’ assertion and was thereby making an admission to which s 81 of the Evidence Act applies. AGA did not contend that Mr Ruggiero lacked authority to make an admission admissible against it.

609 Lucas is entitled to rely upon that admission as evidence in support of this particular claim. On the basis of Mr Ruggiero’s admission, I accept that Lucas has established that it removed a total of 191,670 m3 of borrow pit topsoil along the 214 km stretch of road.

610 However, Mr Ruggiero made no admission with a respect to the 9,120 m3 said to have been laid in the 9.5 km section of the access road. Accordingly, in my view, and for the reasons given with respect to the evidence of Mr Antonio’s survey of the culvert fill, I am not satisfied that Lucas has proven the additional quantities of topsoil which had to be removed from the borrow pit areas used for that section of the road.

611 The parties were also in disagreement as to the amount to be allowed to Lucas, in the event that it established an entitlement to some payment. This is an item for which Mr Bolt included the mark‑up of 39% for Preliminaries. Lucas has not shown an entitlement to a mark‑up of that order.

612 Although Sch A6 to the Contract which provides the rates for variations does not provide a rate for the clearing of topsoil from borrow pits, it is in my opinion appropriate to use the rate specified in Items 5 and 47 in Sch 4 to Sch A2. That is the rate of $3.10 per cubic metre (which was used by Mr Ruggiero).

613 Accordingly, Lucas has established an entitlement to an additional payment in respect of the borrow pit topsoil removal. I calculate that entitlement at $171,345.72 as follows:

|  |  |
| --- | --- |
| 214 km road | 191,670 m3 – 38,323 m3 = 153,347 m3 |
|  | 153,347 m3 x $3.10/per m3 = $475,375.70 |

614 From the figure of $475,375.70 should be deducted the amount paid to Lucas to date for the 214 km stretch of road. That is:

|  |
| --- |
| $309,789.98 – $5,760 = $304,029.98 |
| $475,375.70 – $304,029.98 = $171,345.72 |

615 Accordingly, I am satisfied that Lucas has established an entitlement to an additional $171,345.72 in respect of borrow pit clearance.

616 Lucas has not established by its own evidence a basis upon which it would be appropriate to add on to that amount a pro rata sum derived from the time‑related costs in the Preliminaries. Amongst other things, Lucas made no attempt to establish the additional time involved in the topsoil removal.

617 However, Mr Gardiner, called by AGA, did make such an assessment, making two assumptions: the first being the stripping of an additional volume of topsoil of 111,247 m3 as assessed by Mr Bolt and the second being the stripping of an additional 99,932 m3 as assessed by AGA. Neither of these assumptions is appropriate as Mr Ruggiero had accepted that an additional 153,347 m3 had been stripped. Applying Mr Gardiner’s methodology to that amount, the assessment is as follows:

(i) a D9 Bulldozer would move approximately 600 m3 per hour;

(ii) 153,347 m3 ÷ 600 m3 = 255.58 hours (say 256 hours);

(iii) assuming 10 hours per day, this is 25.6 days, say 26 days; and

(iv) assuming one hour of supervision per day, this is 2.6 days, say 3 days.

618 Therefore, on Mr Gardiner’s methodology, the additional time‑related costs are:

(a) accommodation and messing costs for the operator: 26 days x $81.05 per day = $2,107.30;

(b) accommodation and messing costs for supervisor: 3 days x $81.05 per day = $243.15

(c) supervisor costs: 26 hours x $90 per hour = $2,340;

(d) service truck and serviceman at one hour per day: 26 x $186 per hour = $4,836; and

(e) accommodation and messing costs for two servicemen: 3 days x $81.05 per day x 2 = $486.30

Total = $10,012.75

619 It is obvious that this assessment would seriously underestimate the time‑related costs. First, because it assumes that all of the topsoil clearing could be done in one continuous task, when that is not so. Lucas would not have been able to bring operators and supervisors onto the site just for a single period of topsoil stripping. By reason of having to keep operators on site until they could leave the site at the end of a work rotation, it would have incurred additional costs. Secondly, it is unrealistic to assume that the topsoil clearing could have been done at the constant rate of 10 hours per day, given the different sites of the additional borrow pits along the road to which Lucas had to move. However, Lucas did not lead evidence or make submissions about these matters. Therefore, only a modest additional allowance can be made. I allow $20,000.

620 This means that Lucas is entitled to a total of $191,345.72 in respect of the topsoil clearance of additional borrow pits.

### The hydrostatic filter mattress and concrete fill for the Ponton Creek bridge

621 By cl 1.1 in the Scope of Work in the Contract, Lucas was obliged to construct the access road in accordance with the Drawings and Specifications. Details of the required revetment or hydrostatic filter mattress at the bases of the piles of the Ponton Creek bridge were given in some of the drawings relating to the bridge and in a technical specification. Some reference was also made to these items in Sch 4 to Sch A2 (Lump Sum Prices). The section for the Ponton Creek bridge contained Items 79.0 and 80.0 with respect to abutment protection, is as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Unit Rate** | **TOTAL** |
| **ABUTMENT PROTECTION** | | | | | |
| 79.0 | Revetment Systems Type 200HF Hydrostatic Filter Mattress | m2 | 330 | $180.00 | $59,400.00 |
| 80.0 | Mass concrete fill | m3 | 25 | $1,328.80 | $33,220.00 |

622 In [101] of the ASC, Lucas claims that the area of the hydrostatic filter mattress and the volume of concrete for the fill exceeded the amounts of 330 m2 and 25 m3 respectively for these items and that the increased quantities constituted a variation in respect of which it was entitled to payment. Lucas pleads an entitlement to $156,307.20, being $64,620 and $91,687.20 for the fitter mattress and the concrete fill respectively. However, Mr Bolt, the quantity surveyor called by Lucas, assessed its entitlement at a much lower figure, namely, $57,114.35. This included a mark‑up of 39% ($16,022.06) for Preliminaries. In its final submissions, Lucas confined its claim to the sum of $57,114.35 assessed by Mr Bolt.

623 On or about 21 December 2010, Lucas was provided with a set of drawings that made up part of the RFT. Only two of these drawings concerned the Ponton Creek bridge. One of these drawings depicted the revetment mattress. A note adjacent to the diagram of the revetment mattress stated:

Extent of revetment mattress to be determined following detailed waterways design.

624 However, the Schedule of Remuneration issued with the letter of invitation indicated that the mattress would be 484 m2 and that 100 m3 of concrete would be required.

625 Before Lucas provided its Tender, Lycopodium issued Addendum No 7. This Addendum indicated changes to the design of the Ponton Creek bridge, including changes to the revetment mattress. Sch 5 (Schedule of Rates) indicated that the mattress size was now 330 m2 and that 25 m3 of concrete would be required. These were same amounts as set out above contained in Sch 4 to Sch A2 to the Contract.

626 As noted earlier, Lycopodium provided Lucas with 13 “Issued For Construction” Drawings with respect to the Ponton Creek bridge on 6 May 2011. It seemed to be common ground that these drawings contained (relevantly) further information in relation to the abutment protection for the Ponton Creek bridge.

627 As noted earlier, the drawings for the Ponton Creek bridge were finalised on 23 August 2011 following the concerns raised regarding the use of Millennium joints.

628 Lucas alleges that it installed 689 m2 of the hydrostatic filter mattress (359 m2 more than that contemplated by Item 79 in Sch 4) and that it installed 94 m3 of concrete fill (69 m2 more than that contemplated by Item 80 in Sch 4). It contends that these constituted variations for which it was entitled to payment.

629 In his Weekly Progress Report of 7 July 2011, Mr Hentschke recorded under the heading “Scope Changes”:

Review Ponton Creek Bridge IFC Drawings (Now 13 No Drawings with *extra Scope of Works*, including more Guard Railing, Concrete Spoon Drains, Cement Stabilised Fill etc …) …

(Emphasis added)

630 By 11 October 2011, it became apparent that Lucas would have to excavate footings for the revetment mattress. Lucas had not made any provision for footings as there had been no item in the Schedule of Remuneration for footings for the revetment mattress.

631 On 5 February 2012, Lucas made an (unnumbered) request for variation in respect of the “revetment mattress metres and mass concrete fill quantities” on the basis that “incorrect quantities [were] supplied for tender purposes”. This request was later given the number 54 (VO#54).

632 Lycopodium did not respond to Lucas’ VO#54 until 21 May 2012. The substantive part of Lycopodium’s response (by Mr Ruggiero) with respect to the filter mattress and concrete fill was as follows:

The Contract is a Lump Sum Contract and Schedule A2, Item 1 states “the Contractor bears the risk associated with determination of the appropriate quantities for all aspects of the Lump Sum portion of the Works based on the requirements defined in the Contract”.

Accordingly, the Company is not liable for any discrepancies between quantities used to determine the Lump Sum Contract Price and actual Works carried out unless the Company Representative, by Notice, directs or permits the Contractor to vary any of the Works (Clause 29.2).

Based on the above the Company Representative rejects the Variation Claim and any associated costs.

633 In his letter of 16 July 2012, Mr Ruggiero, as Company Representative, denied again the entitlement of Lucas to any further amount in respect of the filter mattress or the concrete fill saying:

The Company Representative has not directed the Contractor to vary the Works associated with [these items]. The Company is not liable for any discrepancies between quantities used to determine the Lump Sum Contract Price and actual Works carried out.

634 In the final submissions, AGA denied liability for any further amount in respect of the filter mattress or the concrete fill on two bases. First, AGA repeated the matter on which Mr Ruggiero had relied initially, namely, that cl 1 of Sch A2 in the Contract stated expressly that it was Lucas which carried the risk associated with the determination of the appropriate quantities. Secondly, AGA contended that Lucas had not, in any event, substantiated the as‑built volumes of concrete fill and filter mattress on which its claim is based.

635 As to the first of these, I repeat my earlier finding that cl 1 of Sch A2 did allocate to Lucas the risk associated with the determination of quantities for work for which the requirements were defined in the Contract. It did not have that effect with respect to the quantities resulting from variations of the kind to which cl 29.2(a) refers.

636 Accordingly, in relation to the filter mattress and the concrete fill, cl 1 of Sch A2 will not be applicable if Lucas establishes that the extra amount of filter mattress and the extra concrete fill were a result of variation directed by Lycopodium.

637 The evidence which Lucas led on this topic was less than complete. It did not, for example, make a direct comparison of the IFC Drawings with respect to the construction of the bridge issued on 23 August 2011 with those forming part of the Contract so as to show that there had been a change in the area of the filter mattress or the volume of concrete fill. In fact, some of its evidence suggested that there had been no change and that the extra area of mattress and the extra concrete fill were required because the amounts stated in the Contract had been underestimated. A letter from Mr Vilimec, a Lucas site engineer, to Lycopodium on 5 February 2012 which eventually became VO#54 suggests that this was so. By that letter, Lucas requested the Company Representative to direct a variation pursuant to cl 29.2 with respect to the filter mattress and the concrete fill. Mr Vilimec gave the following explanation:

Incorrect quantities supplied for tender purposes (Schedule 5, Item 94 and 95).

638 As is apparent, Mr Vilimec did not, at least explicitly, attribute the extra area or the extra volume of concrete required to a change in the IFC Drawings issued by Lycopodium on 23 August 2011. Instead, he was pointing out that the amounts for which Lucas had tendered (and which were incorporated in the Contract) had been underestimated. For the reasons given earlier, that is a risk which, by cl 1 of Sch A2, had been allocated to Lucas.

639 However, Mr Bolt compared the requirements for the filter mattress and the concrete fill contained in the drawing annexed to the Contract, and the IFC Drawings issued by Lycopodium on 23 August 2011. It was on the basis of that comparison that he concluded that Lucas had an entitlement to a further $37,105.89 for the filter mattress and $3,986.40 for the concrete fill. This suggests that there may have been some difference between the requirements of the two sets of drawings.

640 Counsel for AGA submitted that, as Mr Bolt had not explained his process of measurement so as to allow his reasoning to be scrutinized, the Court should not attach any weight to his opinion. Counsel referred in this respect to *Makita (Australia) Pty Ltd v Sprowles* [2001] NSWCA 305, (2001) 52 NSWLR 218 at [85] (Heydon JA); *Seven Network Ltd v News Ltd (No 14)* [2006] FCA 500 at [24]‑[28] (Sackville J); and *Hevi Lift (PNG) Ltd v Etherington* [2005] NSWCA 42 at [84]‑[86] (McColl JA). Reference may also be made to *Dasreef Pty Ltd v Hawchar* [2011] HCA 21; (2011) 243 CLR 588 at [32]‑[42].

641 In my view, this submission ought not be accepted. Mr Bolt is a well‑qualified and very experienced quantity surveyor and, amongst other things, a Fellow of the Royal Institute of Chartered Surveyors. There is no reason to doubt his expertise to undertake the measurements of the filter mattress and the concrete fill, nor reason to doubt that the opinion he expressed was based on that specialised expertise. Further, the matter which he has not disclosed is, in essence, the workings for his calculations. Workings or calculations of this kind are commonly exchanged between parties informally on request and/or can be reviewed in the discussion by the experts in their joint conclave before giving evidence. There is no reason to suppose that that could not have occurred in this case. In my view, regard should be had to these practicalities.

642 Further, and in any event, one matter which Mr Bolt did disclose in his report is that the concrete fill in the protection wall forming part of the abutment as required in the drawings issued on 23 August 2011 was 76 m in length, compared with 73 m in the original drawings. This was something which could have been checked and challenged by AGA if it chose to do so, and it did not.

643 Ultimately, the question is one of the weight to be attached to Mr Bolt’s opinion: *Sydneywide Distributors Pty Ltd v Red Bull Australia Pty Ltd* [2002] FCAFC 157, (2002) 234 FCR 549 at [7], [87]; *Australian Competition and Consumer Commission v Emerald Ocean Pty Ltd* [2002] FCA 740 at [6]‑[8]; and *Jango v Northern Territory of Australia (No 4)* [2004] FCA 1539 at [19].

644 As I have indicated, the evidence of Lucas is less than complete. However, I think it sufficient to establish that the IFC Drawings did require additional amounts of filter mattress and of concrete fill. Accordingly, this claim is not encompassed by cl 1 to Sch A2.

645 I conclude that Lucas has established an entitlement to $41,092.29. It has not established an entitlement to any additional amount in relation to time‑related costs.

### The Chainage 159 to 169 soft spots

646 By [102] of the ASC, Lucas seeks to recover the costs of rectifying 17 soft spots in the sub‑grade between Chainages 159 and 169. It was common ground that these soft spots were, at least in part, the result of the heavy rain between 5 and 15 June 2011. The rectification work involved the removal of the soft spots, allowing the material to dry out and then the replacement and re‑compaction of the material. This work occurred in the period 16 June to 31 July 2011.

647 There was relatively little difference between the parties as to the occurrence of the soft spots and as to the work undertaken by Lucas to rectify them.

648 The rain between 6 and 15 June 2011 had been heavy. In fact, because of the rain, Lucas had evacuated the site on 8 June 2011.

649 The rain affected some areas of the sub‑grade which had, before 5 June 2011, been proof rolled and approved.

650 By an email on 18 June 2011, Mr Hentschke requested Lycopodium to issue a variation notice or site instruction with respect to the remedial work, stating:

Due to Wet Weather over the period 5 June to 15 June (11 days), isolated areas of sub‑grade preparation previously proof rolled & and approved between Chn 179‑159, will require some remediation/rework to eliminate soft spots. The Client Geotechnical Supervisor (Mr Ken Robertson) & a Lucas Rep have driven this section of road and noted approximately 4 large & 13 small sections requiring rework.

**Please issue a Variation Notice or Site Instruction to undertake this work.**

(Emphasis in the original)

651 Mr McGregor from Lycopodium responded on 22 June 2011, saying that Lycopodium had not been informed of any remedial works. Mr Hentschke replied on the same day pointing out that the information sent on 18 June 2011 was the notification.

652 Mr Hentschke sent a follow up request for a site instruction to Mr Stuchbury on 6 July 2011 (providing a spreadsheet detailing the work which had been undertaken between 16 June and 1 July 2011).

653 Lycopodium provided its response to Lucas on 1 August 2011. Somewhat curiously, the letter containing the response bears the date 11 July 2011. The substantive part of Mr Ruggiero’s letter to Mr Hentschke was as follows:

Under Clause 22.1 of the Contract, the Contractor is responsible for the care of the Works from the Date of the Contract to and including the Date of Practical Completion and pursuant to Clause 22.2(a), if loss or damage occurs to the Works during the period of the Contractor’s care, the Contractor must, at its cost, rectify such loss or damage. Therefore, the cost of the remedial or rework of the specified areas must be borne solely by you and we are unable to issue a Variation or Site Instruction for such work.

654 By letter dated 6 August 2011, Mr Hentschke provided a revised submission for Variation VO#7. Amongst other things, Mr Hentschke contended that the soft spots had been caused by wet weather occurring before Lucas had mobilised to site and exacerbated by the rain which had occurred in early June 2011. This revised claim was also rejected by Lycopodium.

655 Lucas claims that the soft spots comprised a latent condition and, therefore, a “deemed variation” pursuant to cl 19.3 of the Contract. It claimed that the rectification of the soft spots constituted additional work to which cl 29.2(a)(iv) of the Contract applied. It therefore claimed payment pursuant to that subclause.

656 Lucas acknowledged that this part of its claim is made in respect of the extra time it said had been taken up by it having to perform the Additional Works in the construction of the access road.

657 AGA’s pleaded Defence denied liability in respect of the rectification of the soft spot works between Chainages 159 and 169 on four grounds:

(a) the soft spots were not latent conditions as defined in cl 19.1 of the Contract but were instead the effect of weather conditions;

(b) even if the soft spots were latent conditions, Lucas had not complied with the contractual notification requirements relating to latent conditions, and so was precluded from making a claim with respect to the costs it had incurred;

(c) the soft spots were a result of a breach by Lucas of obligations imposed by the Scope of Work requiring it to provide adequate drainage systems; and

(d) the risk associated with the soft spots was that of Lucas because, by reason of cl 22 of the Contract, it had responsibility for the care of the Works other than with respect to “Excepted Risks”, and the soft spots were not an “Excepted Risk”.

658 In its final submissions, AGA pressed only the first and fourth of these defences. Accordingly, I have taken the second and third matters not to be pursued.

659 Clause 19 of the Contract is concerned with latent conditions. It commences in cl 19.1 with a definition of latent conditions:

**19 LATENT CONDITIONS**

**19.1 Scope**

Latent Conditions are physical conditions on the Site and its near surrounds, including artificial things but excluding weather conditions or the effects of weather conditions (including its effects on any physical conditions on the Site), which differ materially from the physical conditions which should reasonably have been anticipated by a competent contractor as at the Date of Contract if the Contractor had inspected:

(a) all written information made available by the Company to the Contractor;

(b) all information influencing the risk allocation of this Contract and reasonably obtainable by the making of reasonable enquiries; and

(c) the Site and its near surrounds.

**19.2 Notification**

(a) The Contractor, upon becoming aware of a Latent Condition while carrying out the Works, must promptly and in any event no later than 14 days after becoming aware or should have reasonably become aware, and where possible before the Latent Condition is disturbed, give the Company Representative written notice of the general nature of the Latent Condition.

(b) If required by the Company Representative promptly after receiving that notice, the Contractor must, as soon as practicable, give the Company Representative a written statement of:

(i) the Latent Condition encountered and the respects in which it differs materially;

(ii) the additional work, resources, time and cost which the Contractor estimates to be necessary to deal with the Latent Condition; and

(iii) other details reasonably required by the Company Representative.

**19.3 Deemed variation**

(a) The effect of the Latent Condition will be a deemed variation, priced having no regard to additional cost incurred more than 14 days before the date on which the Contractor gave the notice required by Clause 19.2(a) but so as to include the Contractor's other costs for each compliance with Clause 19.2.

(b) The Contractor must do all it can to mitigate the effect of any Latent Condition.

660 As is apparent, a latent condition is a physical condition on the site and its near surrounds. Clause 19.1 requires an objective assessment. The existence or otherwise of a latent condition is to be determined objectively by a consideration of whether the physical condition in question differs materially from the physical conditions which could *reasonably* have been anticipated *by a competent contractor as at the date of contract* if the Contractor (in this case Lucas) had inspected three sources of information: *BMD Major Projects Pty Ltd v Victorian Urban Development Authority* [2007] VSC 409 at [24]; *Walton Construction Pty Ltd v Illawarra Hotel Co Pty Ltd* [2011] NSWSC 534 at [137]. The assessment is not to be made by an examination of the conduct of the contractor in question: *BMD Major Projects* at [24].

661 Neither party made any submission with respect to the burden of proof involved. Having regard to the structure and content of cl 19 and the fact that it is Lucas which is seeking to invoke it, I proceed on the basis that it is Lucas which carries the relevant onus of proof.

662 The evidence which Lucas adduced, and the submissions which it made in support of this claim, were relatively slight. In particular, Lucas did not address the elements of cl 19.1 nor seek to show how the evidence which it did adduce could satisfy those elements.

663 As already indicated, it was common ground that soft spots were located in the sub‑grade between Chainages 159 and 169. It was also common ground that these soft spots were the result of dampness.

664 For the conclusion that these soft spots were a condition existing at the time of contract, and not the result only of the heavy rain which had fallen in June 2011, Lucas relied upon a single passage in the affidavit containing the evidence in chief of Mr Hentschke. In [18.11], Mr Hentschke deposed that he had added photos to his revised submission to Lycopodium on 7 August 2011 which showed that the affected soft sub‑grade was, in places, up to 2 m deep. Mr Hentschke then continued:

That could not have been caused simply through a localised rain event but would have been [a] pre‑existing condition; the rain event just compounded the pre‑existing condition.

665 In my opinion, this evidence falls well short of establishing that the soft spots were a latent condition of the kind defined in cl 19.1 because:

(a) although Mr Hentschke is an experienced civil engineer and holds appropriate academic qualifications, Lucas did not seek to establish that he has any geotechnical or hydrological expertise which would enable him to express the opinion he did in [18.11];

(b) Lucas did not adduce evidence that Mr Hentschke had inspected the soft spots personally;

(c) Mr Hentschke’s statement in his affidavit sworn on 15 August 2017 is inconsistent with his contemporaneous statements. As already noted, in his email on 18 June 2011, Mr Hentschke attributed the soft spots to the wet weather which had occurred in the period from 5 to 15 June 2011. Further, in his revised submission to Lycopodium on 6 August 2011, Mr Hentschke did not make any suggestion that the soft spots were attributable to a pre‑existing latent condition. On the contrary, his letter attributed the soft spots to the rain which had fallen on the site just prior to Lucas commencing work and in June 2011:

*Just prior to the works commencing under this contract*, heavy Summer & Autumn rainfall fell over the Pinjin/Tropicana Area. In excess of 150 mm of rain was recorded causing the Ponton Creek & subsidiary water ways to flow & creating saturated ground conditions over much of the Site Access Road Alignment.

To facilitate site access for plant & personnel during mobilisation, a causeway had to be constructed over a creek on the Kurnapli‑Pinjin road.

During the period of 5 June to 15 June another 50 mm of rainfall fell over the work zone area, causing complete closure of the project.

The second rainfall event compounded the issues associated with soft subgrade and some areas that had commenced drying out were once again saturated.

(d) Lucas did not seek to adduce evidence from any geotechnical or hydrological engineer to establish that the soft spots were attributable to a condition of longstanding. In particular, Lucas did not seek to lead evidence on this question from the geotechnical engineer, Mr Grounds, from whom it did adduce evidence on other issues.

666 In these circumstances, Lucas does not discharge the onus of proof resting on it of establishing the existence of the latent condition. For this reason, its claim with respect to the soft spots between Chainages 159 and 169 must fail. It is accordingly unnecessary to consider the second basis upon which AGA denied liability for this claim.

### The Chainage 109 to 110 organic material soft spots

667 By [104] of the ASC, Lucas seeks to recover the costs of rectifying soft spots between 23 August and 5 December 2011 located at Chainages 109 to 110, which were attributed to the presence of organic material.

668 In the ASC, Lucas claims $134,445 for this item. However, in the final submissions, it revised that claim to $56,830, being Mr Bolt’s revised assessment.

669 The evidence that the soft spots at Chainages 109 to 110 were due to the presence of organic matter was relatively slight. However, it seemed to be common ground that that was the case, and I will proceed on the same basis.

670 On 10 August 2011, some soft spots were discovered in the sub‑grade between Chainages 108 and 109. By an email of the same date, Mr Robertson from Knight Piésold recommended some rectification work. That email was sent to Mr Hentschke and others at Lucas, and to Mr Haworth at Lycopodium. Mr Robertson repeated his recommendation in an email of 13 August 2011, addressed to the same persons.

671 On 14 August 2011, Mr Robertson sent a further email to the same addressees and in addition to Mr Hogno of Lycopodium. This email concerned soft spots between Chainages 108.850 and 110. Mr Robertson reported:

The initial inspection found that at around the 900 mm depth there is a clayey layer over lying sand. The soil above the clayey layer due to local strata/topography will hold and retain moisture, and does not allow it to [dissipate].

Hence heavy traffic has over time caused the ground to become mobile by capillary/pumping action.

Mr Robertson then went on to recommend remedial action.

672 By an email on 20 August 2011 addressed to Mr Hentschke and Mr Haworth, Mr Hogno confirmed matters discussed that morning. In relation to the soft spots, Mr Hogno said:

Failures in sub‑base/embankment are to be repaired prior to tipping wear‑course material, and where further damage occurs due to cartage, additional repairs are to be carried out. The established practice of “topping up” and achieving compaction with construction traffic is acceptable provided a sound surface is achieved. Where an area continues to heave, remove and replace will be required to an extent dictated by site conditions and determined by site inspection by Company Representative. To formalise this requirement and address the provisions of Section 21.1 of Contract Scope of Works, a work activity inspection form will be produced asap giving Lucas written approval of preceding work and authority to proceed with wear‑course.

673 Section 21.2 of the Contract Scope of Work to which Mr Hogno referred contains the requirements for inspection and testing of the work as it progressed. The evidence did not disclose whether a “work activity inspection form” as contemplated by Mr Hogno had been produced but, given the terms with which Mr Hogno expressed himself, I infer that it was. By its terms, this email from Mr Hogno amounted to a direction to Lucas to undertake repair of the soft spots before laying the wearing course.

674 The evidence did not describe in detail the action taken but it seems that it involved the making of a number of deep cuts into the sub‑grade, the excavation of material and its replacement with other material.

675 Mr Hentschke issued a direction to Lucas personnel to record the rectification and associated work as a variation, using the number VO#19 for that purpose.

676 Thereafter, by emails and at site meetings, Lucas sought the issue of a site instruction with respect to the rectification of the soft spots at Chainages 109 to 110.

677 Lycopodium issued only one formal Site Instruction with respect to Chainages 109 to 110. This was SI‑LE‑025 issued on 26 September 2011, which provided (relevantly):

**Unsuitable Material Chainage 109‑110**

The Contractor is hereby instructed to remove and replace unsuitable foundation material from nominal chainage 109 to 110 to the extents (sic) as directed by Lycopodium’s Representative on Site, Mr Will Haworth.

The anticipated volume of material to be removed is 450 m3. The actual bank volume of material shall be measured on site and the quantity agreed by Lycopodium’s Representative on site, Mr Will Haworth.

678 Lucas pleads that the rectification of the organic material soft spots constituted an increase in the quantity of the Works and/or Additional Works and amounted therefore to a variation under cll 29.2(a)(i) and 29.2(a)(iv) of the Contract.

679 AGA pleads four matters by way of defence of this claim:

(a) the rectification of soft spots caused by organic material did not constitute a variation to the Contract;

(b) by cll 8.4, 8.6.1 and 8.6.2 of the Scope of Work, Lucas was obliged to ensure that fill material and sub‑base material were free from organic vegetable and other unsuitable material;

(c) any work done in excess of that contemplated by SI‑LE‑025 was not work directed by Lycopodium with the consequence that Lucas was not entitled to payment for that work; and

(d) Lucas had not complied with the notification requirements for such a claim.

680 However, in its final submissions, AGA challenged only the quantification of Lucas’ claim. Accordingly, I took that its other grounds of defence not to be pursued. In any event, AGA would have faced difficulties in sustaining the pleaded grounds of defence.

681 In his report, Mr Bolt reviewed the timesheets relied upon by Lucas for this claim. There were several instances in which he was not able to reconcile the hours claimed by Lucas with the material in the timesheets.

682 Mr Bolt then made his own assessment using the daily job sheets completed by Lucas’ employees which had been attributed to “VO#19” and the day work rates in Sch A7 to the Contract. He concluded that Lucas was entitled to $124,477.50 for this claim.

683 Mr Gardiner, the civil engineer expert called by AGA, noted, however, that several of the daily job sheets marked as VO#19 indicated that the work to which they related had been performed at Chainages other than 109 and 110. In other cases, the daily job sheets indicated only “VO#19”, without any indication of the Chainages at which the work had been performed. On this basis, Mr Gardiner concluded that Lucas’ claim could not be substantiated.

684 Mr Bolt then reviewed further daily job sheets provided to him by Lucas before conferring with Mr Gardiner. He revised his assessment so, as he said, to exclude all the daily jobs sheets referring to Chainages other than Chainages 109 to 110. On that basis, he assessed Lucas’ claim to be $56,830. In making his assessment, Mr Bolt assumed that all of the daily work sheets containing the notation VO#19 related to work carried out between Chainages 109 and 110.

685 In my opinion, AGA’s submission that that assumption is not sound should be accepted. The fact that Lucas’ operators used the notation VO#19 on many occasions with reference to work carried out at locations other than Chainages 109 and 110, makes it unsafe to assume that, in all cases in which the operators used the notation without reference to a particular Chainage, they were intending to indicate that the work related only to Chainages 109 to 110. Lucas did not seek to answer that critique in its closing submissions.

686 For this reason, I consider that Lucas has failed to prove this claim. This makes it unnecessary to consider the further matters on which AGA relied in the closing submissions.

### The organic material/soft spots in the sub-grade at Chainages 151 to 159

687 By [105] of the ASC, Lucas seeks payment of $146,372.86 in respect of the excavation and replacement of organic material/soft spots in the sub‑grade along Chainages 151 to 159. This work was carried out between 11 and 21 September 2011.

688 Lucas contends that the rectification of the organic material/soft spots constituted an increase in the quantity of the Works and/or Additional Works and was therefore a variation under cll 29.2(a)(i) and 29.2(a)(iv) of the Contract. It claimed a total of $185,173.86. AGA has paid $38,801. Accordingly, (after adjustment for a typographical error) Lucas claims the balance of $146,372.86.

689 AGA’s filed Defence denies liability to Lucas for this item on several alternate bases:

(a) the rectification of the soft spots did not constitute a variation;

(b) the Scope of Work imposed the obligation on Lucas to ensure that all fill material and sub‑base material was suitable, free of organic matter and met grading requirements;

(c) by cl 29.3(a) of the Contract, it was for AGA to determine the adjustment of the Contract price and it had done so by CV‑10; and

(d) Lucas had not complied with the notice requirements for a variation.

690 In its final submissions, AGA accepted that Lucas had performed work between Chainages 151 to 159 by replacing organic material with fill. It accepted that it had paid Lucas $38,801 for that work pursuant to CV‑10, for which Lucas had submitted VO#26. AGA submitted, however, that Lucas had not proven an entitlement to any additional amount.

691 The communications between Lucas and Lycopodium commenced on 16 September 2011 when Mr Maiolo sent a request for a direction for variation (VO#26), giving a preliminary costing of $80,990.45. Mr Stuchbury at Lycopodium queried initially whether the soft spots were due to dampness or to organic material. By an email of 21 September 2011, Mr Matthews confirmed to Mr Stuchbury that:

The material in question has a distinctively strong odour of rotting vegetation, is black in appearance and different to the surrounding soils. It has been identified by [Knight Piésold] as organic material and unsuitable.

692 Thereafter, there followed a series of communications by which Lucas pursued its request for a variation. By letter dated 10 October 2011, Mr Maiolo renewed the request for the issue of a variation and provided a considerable amount of documentary evidence in support of the request. In particular, Mr Maiolo drew attention to the agreement between Lucas, Knight Piésold and Lycopodium personnel on site that the material was organic, and needed to be removed from *beneath* the sub‑grade layer. Mr Maiolo indicated that the total cost of the variation was $185,173.86. The material which he provided in support of the request included a detailed breakdown of the costing, and supporting timesheets.

693 Lycopodium did not address the request of Lucas until 21 May 2012 when it sent a letter to Lucas indicating that it would allow a variation of only $38,801 on the basis of advice from Knight Piésold that the total volume of organic material removed was 1,610 m3 (between Chainages 152 and 157).

694 Mr Bolt noted that Lucas’ own formulation of this claim was priced on a cost per cubic metre basis using pro rata rates extracted from the Rates for Variations in Sch A6 to the Contract. This contrasted with Lucas’ use of day work rates for the other soft spot rectification claims. Mr Bolt said that he was unable to make an accurate reconciliation of the Lucas loadsheets and timesheets and its cost breakdown. Accordingly, he made his own assessment using the day work rates in Sch A7 to the Contract and the timesheets detailing the number of hours worked by various items of equipment with reference to VO#26. On this basis, Mr Bolt assessed that Lucas’ entitlement was $115,799 (after making allowance for the $38,801 already paid and for a typographical error).

695 AGA submitted that Mr Bolt’s pricing of the variation using day work rates did not conform with the requirements of cl 29.3(a) of the Contract, as it was not open to Lucas to use those rates. Clause 29.3(a)(iii) permitted the determination of a reasonable rate or a direction that day work rates be used only when there was no relevant rate for a variation in (relevantly) Sch A6 to the Contract which provides for Rates for Variations. In relation to the excavation of the organic material, AGA pointed to Items 68 and 86 in Sch 5 to Sch A6 which provided a rate per cubic metre for:

Excavate, load, haul and stockpile in designated areas unsuitable material (nominal allowance).

696 AGA submitted that, as the parties had agreed upon a rate for this kind of work, it was not open to Lucas to invoke some other pricing mechanism. AGA also noted that Lycopodium had not issued a direction pursuant to cl 29.3(a)(iii) that the rectification work on the soft spots between Chainages 151 and 159 be carried out as day work.

697 Subject to one matter, Lucas did not in its final submissions seek to answer these submissions of AGA. It submitted only that the use of day work rates was reasonable.

698 I uphold the AGA submission. The rates in Items 68 and 86 in Sch 5 to Sch A6 should be regarded as the parties’ agreement as to the rate to be applied for the excavation and removal of unsuitable material.

699 The one matter which Lucas did submit in the final submissions was that the Knight Piésold report, on which Mr Stuchbury had relied for his assessment on 21 May 2012, had omitted any reference to material taken to, and from, Borrow Pit 159. Lucas submitted that, accordingly, the quantity removed from the site should have been assessed at 5,867.5 m3 and not 1,610 m3. Counsel derived the figure of 5,867.5 m3 from the summary by which, on 16 October 2011, Mr Maiolo had claimed $134,926.40 for the haulage of material from Borrow Pit 159 and $50,247.47 for the haulage of material excavated from the road to Borrow Pit 159.

700 Plainly enough, the amount of 5,867.5 m3 is not encompassed by the amount of 1,610 m3 allowed by Mr Stuchbury. But the Lucas submission did not really rise above bare assertion. In particular, Lucas did not seek to reconcile the volume to which the Knight Piésold report referred and its own workings, or to point to evidence indicating that the amount removed to Borrow Pit 159 came from Chainages 151 to 159. Much was left to surmise. I note again in this respect, that Mr Bolt who examined Lucas’ cost claim, loadsheets and timesheets, could not reconcile the quantity and number of loads claimed by Lucas in a way which reconciled with its own records. This suggests that surmises by the Court would be unsafe.

701 In these circumstances, Lucas does not discharge the onus of proof. Accordingly, its claim with respect to the organic material/soft spots at Chainages 151 to 159 fails.

### AGA’s defences of lack of proper notice

702 In relation to several of the Other Variations claims, AGA pleads that Lucas had not complied with the procedural requirements for such claims as set out in cll 29.3(b)‑(d) of the Contract. However, it did not make any closing submissions in support of those claims, and I have taken them to be abandoned.

### Summary of the Other Variations Claims

703 In summary, I uphold two of the seven Other Variations claims and find that Lucas is entitled to awards as follows:

|  |  |
| --- | --- |
| Increase in borrow pit footprint | $191,345.72 |
| Filter mattress and concrete fill | $41,092.29 |
| **Total** | **$232,438.01** |

## The breach of implied terms claims

704 In [120] and [121] of the ASC, Lucas pleads that the Contract contained terms implied (either by law or as a matter of fact) that AGA would act reasonably and in good faith in assessing extensions of time, requests for variations and the costing of variations, and that it would ensure that Lycopodium as its agent acted in the same way. Lucas alleges in particular that the implied term required Lycopodium to act reasonably when making an assessment of whether Lucas was entitled to an extension of time under cl 18, when making an assessment as to whether to direct or permit variations to the Scope of Work under cl 29.2 of the Contract and when making an assessment of the reasonable rate or price for variations under cl 29.3 of the Contract.

705 In [122] of the ASC, Lucas pleads, in effect, that AGA by its agent Lycopodium had breached the implied term by failing to act reasonably when making an assessment as to whether to direct or permit variations to the Scope of Work under cl 29.2 and when assessing a reasonable rate or price for variations under cl 29.3. It alleges that, had AGA by Lycopodium acted in accordance with the implied term, it would have granted Lucas the variations with respect to the performance of the Additional Works, the rectification of the Kurnalpi‑Pinjin road crossing, the Stop Work Order, the use of the graders, the bridge pile design issue, and with respect to each of the Other Variations. It alleges that by reason of the breaches of the alleged implied term, it had suffered loss and damage of $8,277,436.78.

706 Lucas also pleads that AGA, by its agent Lycopodium, had breached the duty to act reasonably when making an assessment of whether it was entitled to an extension of time under cl 18, and should have granted it extensions of time in relation to performance of the Additional Works, the inclement weather, the rectification to the Ponton Creek crossing, the Stop Work Order, the diversion of its graders to other work and the time taken for the bridge pile joint design to be finalised. Lucas claims that by reason of these breaches, it had suffered loss and damage, being the deduction of $280,000 on account of liquidated damages.

707 In support of the implication of the pleaded terms as a matter of law, Lucas referred to authority concerning the implied duty of contracting parties to cooperate in the doing of acts which are necessary to the performance by the parties or one of them of fundamental obligations under a contract: *Mackay v Dick* (1881) 6 App. Cas. 251 at 263; *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* [1979] HCA 51;(1979) 144 CLR 596 at 607.

708 AGA accepted that persons in the position of a certifier, such as Mr Ruggiero in his capacity as Company Representative, have an implied duty to act honestly and impartially when assessing claims for extensions of time, and that it is at least arguable that this includes an obligation to act reasonably: *Peninsula Balmain Pty Ltd v Abigroup Contractors Pty Ltd* [2002] NSWCA 211 at [79]; *Perini Corporation v Commonwealth of Australia* [1969] 2 NSWR 530; *Dante De Grazia t/as Sydney Building Services v Solomon* [2010] NSWSC 322 at [27].

709 The submissions of Lucas in support of the claimed breaches of the implied terms were, I think it fair to say, laconic. In its closing written submissions, Lucas submitted only:

[37.35.3] By failing to award extensions of time in circumstances where variations have been ordered, and which delayed the critical path, AGA [was] in breach of the implied term.

710 As is apparent, that submission was directed only to the failure of Mr Ruggiero to provide the extensions of time sought by Lucas.

711 In the closing oral submissions, counsel for Lucas addressed a different matter, namely, the decision of AGA not to pay Preliminaries on the variations it did allow. Counsel referred in this respect to Mr Massoudi’s evidence that, at the meeting on 19 December 2011, he had responded to Lucas’ claim for payment of Additional Preliminaries by saying words to the effect that “the contract is lump sum and Lucas were entitled to a variation for an increase in quantities, but not for preliminaries or an extension of time”. Counsel submitted that the fact that AGA had taken that attitude indicated, by itself, a breach of the implied term. Although not expressed in this way, the submission, as I understood, was that AGA had approached the question of payment of Preliminaries with respect to the variation work with a closed mind, and had thereby breached the implied term.

712 Counsel for AGA submitted that the evidence did not establish any failure by AGA, Lycopodium or Mr Ruggiero as Company Representative to act reasonably and in good faith.

713 In my opinion, Lucas does not make out a breach of either of the alleged implied terms. First, the mere refusal of an extension of time or a price adjustment for a variation does not establish unreasonableness or a want of good faith.

714 Secondly, Lucas did not point to any other matter establishing unreasonableness or a want of good faith. In particular, on the basis of my earlier findings, Mr Ruggiero as Company Representative, was justified in refusing a number of the claimed variations of Lucas.

715 Further, and in any event, on my findings Lucas does not establish an entitlement to an extension of time beyond 16 March 2012. Further still, on my findings, it will recover the amount of $280,000 deducted by way of liquidated damages, this being the loss which it alleged it had suffered by reason of the breach of the implied term by the failure to grant the extensions of time it had sought.

716 For these reasons, the claims made by Lucas based on the pleaded implied terms fail.

## Summary on the breach of contract claims

717 I summarise my findings on Lucas’ breach of contract claims as follows.

### The claim for time-related costs

|  |  |
| --- | --- |
| **Claim** | **Entitlement** |
| The principal claim for time‑related costs of $3,019,877.97 without allowance for profit or $3,170,871.87 with allowance of profits | No entitlement. |

### Consequential claims

|  |  |
| --- | --- |
| **Claim** | **Entitlement** |
| Additional water haulage | Entitlement pursuant to cl 29.3(a)(iii) in respect of cost of additional water haulage - $525,612.96. |
| Additional labour costs for nightshift | No entitlement. |
| Liquidated damages | Entitled to $280,000 deducted by Lycopodium from the April 2012 payment. |
| **Total for Consequential claims - $525,612.96 + $280,000 = $805,612.96** | |

### The Other Variations Claims

|  |  |
| --- | --- |
| **Claim** | **Entitlement** |
| The mark-up of 39% for Preliminaries | No entitlement. |
| Culvert fill quantities | No entitlement. |
| Increase in the borrow pit footprint | Entitled to $191,345.72. |
| The hydrostatic filter mattress and concrete fill for the Ponton Creek bridge | Entitled to $41,092.29. |
| Chainages 159 to 169 soft spots | No entitlement. |
| Chainages 109 to 110 organic material soft spots | No entitlement. |
| The organic material/soft spot in the sub‑grade at Chainages 151 to 159 | No entitlement. |
| **Total for Other Variations Claims - $191,345.72 + $41,092.29 = $232,438.01** | |

### The breach of implied terms claim

|  |  |
| --- | --- |
| **Claim** | **Entitlement** |
| Breach of implied terms claim | No entitlement. |

718 In summary, I consider that Lucas has established an entitlement to damages for breach of contract of $1,038,050.97.

## The claim of misleading or deceptive conduct

719 Lucas’ alternative cause of action is based on s 18 of the ACL. It alleges that, in entering into the Contract, it had relied on representations made by AGA and its agents and that those representations were misleading or deceptive. Lucas pleads that, had the representations not been made:

(a) it would not have entered into the Contract on its terms;

(b) it would have agreed to enter into a contract for the construction of the access road only on Schedule of Rates terms which assigned all risk and cost of any delay to AGA; and

(c) it would not have agreed to enter into a contract on the basis of a date for Practical Completion on 30 November 2011.

720 In the ASC, Lucas claims damages in respect of its reliance on the alleged misleading or deceptive conduct amounting to $6,301,822.33 comprised as follows:

|  |  |
| --- | --- |
| Additional Preliminaries | $4,342,334.63 |
| Additional water transfer and haulage | $1,433,390.20 |
| Nightshift labour | $246,097.50 |
| Retained liquidated damages | $280,000.00 |
| **Total** | **$6,301,822,33** |

721 In the final submissions, Lucas modified this quantification slightly, but for reasons which will become apparent, that modification does not need to be noted presently.

### The First Representation

722 The first statements on which Lucas relies for its misleading or deceptive conduct claim are alleged to have been made during the course of the site visit on 10 to 12 January 2011. Lucas alleges that two statements comprised the First Representation. It alleges in [13.1]‑[13.2] of the ASC, that the following interchange occurred at a stop along the proposed alignment of the access road:

Ben Lucas: Does the material in the borrow areas and along the road alignment require processing prior to use for the works?

Mr Sceresini: The material is suitable and the technical specification has been written with the geotechnical test results in mind. The side drain material is suitable as sub‑base and in areas adjacent the wearing course borrow pits, *the sub‑base and base course material could be installed in a single operation*.

(Emphasis added)

723 Next, Lucas alleges that, at the debriefing in Kalgoorlie at the conclusion of the site visit, Mr Massoudi or Mr Sceresini said words to the effect:

The material won from the side drains along the road will be suitable to use as sub‑base material with the exception of approximately 40 km of sand dunes where the sub‑base material will need to be imported from borrow pits.

724 I am satisfied that Mr Massoudi cannot have made a statement to that effect as the evidence indicates that he was not present at the debriefing. Having regard to his position in AGA, I think it unlikely in any event that Mr Massoudi would have made a statement to the effect alleged. Lucas’ case in final submissions was that it was Mr Sceresini or Mr McKean (also from Knight Piésold) who had said the pleaded words.

725 Lucas alleges that the effect of these statements was that Mr Sceresini and Mr McKean had represented that, other than in the sand dune areas, the material excavated from cut areas (including the V‑drains) along the road alignment would meet the specification in the Scope of Work to form the 150 mm thick sub‑base for the access road.

726 Lucas alleges that the First Representation was misleading or deceptive, or likely to mislead or deceive, in contravention of s 18 of the ACL in that:

[53.1] The material excavated from cut areas (including v‑drain) along the right of way of the Access Road contained particulate material which was too fine to meet the minimum limits set out in Table 8.1 on page 55 of the Scope of Work;

[53.2] The material sourced from excavated from cut areas (including v‑drain) along the right of way of the Access Road contained material which exceeded the plasticity limits set out in Table 8.2 on page 55 of the Scope of Work;

[53.3] As a consequence of the matters in paragraph 53.1 and 53.2 above, the vast majority of the material sourced from cut areas (including v‑drain) along the right of way of the Access Road did not comply with the specifications contained in the Scope of Work for the material to be used in forming the sub base. Full particulars of the areas in which the material sourced from in situ excavations from cut areas (including v‑drains) along the right of way did not meet the specification contained in the Scope of Work for the material to be used in forming the 150mm thick sub base are provided in paragraph 48 herein;

[53.4] Given the failure of the material sourced from cut areas (including v‑drain) along the right of way of the Access Road to meet the required specification in the Scope of Work to form the 150mm thick sub base, it cannot have been the case that the Technical Specification had been written by Knight Piesold with the geotechnical results in mind.

### The Second Representation

727 The second statement of AGA said by Lucas to constitute misleading or deceptive conduct arises from the content of the draft contract and scope of work attached to the Request for Tender (RFT). The Scope of Work provided:

1.2.30 Site Access Road …

The Contractor shall be responsible for construction of the Site Access Road … The construction of the Site Access Road will include, but not necessarily be limited to, the following activities:

…

* The Contractor shall construct an approved sub‑base course on the design surface and to a thickness of 150mm. The sub‑base shall comprise fill material won from local excavation or borrow areas designated by the Company Representative.

…

…

8.6.2 Road Sub‑base Course

Road sub‑base material shall consist of in situ subgrade materials or excavated materials from the Works. The sub‑base material shall be free from cobbles, stumps, roots, sticks, vegetable matter or other deleterious matter. The Contractor shall take the necessary measures to see that a quality material meeting the grading requirements is obtained which may require selectively choosing materials from excavations, mixing the materials as they are excavated, or mixing the materials on the road surface prior to spreading and compacting. …

728 Schedule 5 to the draft contract was entitled Schedule of Rates. It contemplated tenderers indicating their proposed rate for the performance of a number of segments of the Works, including site preparation and earthworks. Items 10 to 24 in the Earthworks segment were as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Supply Unit Rate** | **Install Unit Rate** | **Total Unit Price** | **TOTAL** |
| 10.0 | Excavate from cut areas (including v‑drain) along right of way, haul from 0km up to and including 2km to fill areas along right of way, moisture condition and compact as sub‑base | m3 | 240,750 |  |  | 0.00 | 0.00 |
| 11.0 | Win from borrow, load, haul from 0km up to and including 2km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 12.0 | Win from borrow, load, haul from 2km up to and including 4km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 13.0 | Win from borrow, load, haul from 4km up to and including 6km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 14.0 | Win from borrow, load, haul from 6km up to and including 8km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 15.0 | Win from borrow, load, haul from 8km up to and including 10km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 16.0 | Win from borrow, load, haul from 10km up to and including 12km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 17.0 | Win from borrow, load, haul from 12km up to and including 14km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 18.0 | Win from borrow, load, haul from 14km up to and including 16km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 19.0 | Win from borrow, load, haul from 16km up to and including 18km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 20.0 | Win from borrow, load, haul from 18km up to and including 20km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 21.0 | Win from borrow, load, haul from 20km up to and including 22km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 22.0 | Win from borrow, load, haul from 22km up to and including 24km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 23.0 | Win from borrow, load, haul from 24km up to and including 26km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |
| 24.0 | Win from borrow, load, haul from 26km up to and including 28km, place, spread, moisture condition and compact as sub‑base | m3 | 5,750 |  |  | 0.00 | 0.00 |

729 As can be seen, the volumes of material to be won, hauled and laid from each of the 14 distance increments (Items 11‑24) are the same. When those 14 Items are aggregated, it is apparent that the Schedule of Rates contemplated that 240,750 m3 (75%) of the sub‑base material may be excavated from cut areas, including the V‑drains, along the road alignment, and that a total of 80,500 m3 (25%) of sub‑base material may be obtained from borrow pits and hauled distances up to 28 km for placement as the sub‑base.

730 Lucas alleges that these Items in Sch 5 contained an express representation that:

(a) 75% of the material required to form the sub‑base would be excavated from cut areas, including V‑drains, along the right of way; and

(b) 25% of the material required to form the sub‑base would be won from borrow pits and hauled distances of 0 to 28 km.

This is the pleaded Second Representation.

731 Lucas alleges that the Second Representation was misleading or deceptive, or likely to mislead or deceive, in contravention of s 18 of the ACL in that, during the construction of the access road, 163,013 m3 (more than 40% of the total) of material required to form the sub‑base had to be imported from borrow pits.

### The Third Representation

732 The Third Representation is based on the response by Lycopodium on or about 11 February 2011 to the qualifications which Lucas attached to its Tender of 31 January 2011. In the page headed “Qualifications”, Lucas had said that no allowance had been made for:

* Treatment of unsuitable Subgrade material including the excavation, replacement, importing of material, backfill or compaction of the same within rates.

…

* … processing, crushing or screening of sub‑base or wearing course materials – it is assumed that this material is suitable once placed on road.

733 Lucas also stated that one of the assumptions which it had made in providing the Tender was that “[m]aterial from excavations and borrow pits meets the specification for the fill and pavement materials as per the schedule of rates”.

734 Lycopodium responded to Lucas on 11 February 2011 stating in relation to that assumption:

AGA will perform record tests on the nominated borrow pits and other locations to establish suitability of materials and the extents (sic) of borrow pits. Not all in situ excavations will be suitable for construction i.e. in the dune areas in particular it is anticipated that materials will be imported for pavement construction.

735 Lucas alleges that this statement by Lycopodium, taken in conjunction with the First and Second Representations, involved a further representation, namely:

(a) by using the words ‘not all’, that the majority of the material required to form the 150 mm thick sub‑base would be sourced from the material excavated from the cut areas (including V drains) along the right of way and [would] meet the required specification in the Scope of Work to form the 150 mm thick sub‑base; and

(b) by using the acronym (sic) ‘i.e.’ that, other than in the sand dune areas, the majority of the materials required to form the 150 mm thick sub‑base would be sourced from the material excavated from the cut areas (including V drains) along the right of way and would meet the required specification in the Scope of Work to form the 150 mm thick sub‑base.

This is the Third Representation.

736 Lucas alleges that the Third Representation was misleading or deceptive for the same reason that the Second Representation was misleading or deceptive. It also alleges that it was directed by Lycopodium not to use the vast majority of the material sourced from the cut areas (including the V‑drains) along the right of way in the construction of the pavement layers.

### The Fourth Representation

737 The Fourth Representation that Lucas pleads has its basis in the amended Sch 5 – Schedule of Rates for the whole of the work in the proposed contract provided by Lycopodium on 25 February 2011. In the amended Schedule, Item 10 set out earlier in these reasons remained the same. However, new Items 11a‑13b provided for the haulage of materials to make up the sub‑base coming from borrow pits up to 6 km away, rather than from borrow pits up to 28 km away, as in the original Sch 5, as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Supply Unit Rate** | **Install Unit Rate** | **Total Unit Rate** | **TOTAL** |
| 11a | Win from borrow, load, haul from 0km up to and including 1km, place, spread, moisture condition and compact as sub‑ base | m3 | 11,625 |  |  | 16.50 | 191,812.50 |
| 11b | Win from borrow, load, haul from 1km up to and including 2km, place, spread, moisture condition and compact as sub‑base | m3 | 21,375 |  |  | 17.80 | 380,475.00 |
| 12a | Win from borrow, load, haul from 2km up to and including 3km, place, spread, moisture condition and compact as sub‑base | m3 | 17,625 |  |  | 19.47 | 343,158.75 |
| 12b | Win from borrow, load, haul from 3km up to and including 4km, place, spread, moisture condition and compact as sub‑base | m3 | 14,250 |  |  | 20.20 | 287,850.00 |
| 13a | Win from borrow, load, haul from 4km up to and including 5km, place, spread, moisture condition and compact as sub‑base | m3 | 10,500 |  |  | 21.05 | 221,025.00 |
| 13b | Win from borrow, load, haul from 5km up to and including 6km, place, spread, moisture condition and compact as sub‑base | m3 | 4,875 |  |  | 22.00 | 107,250.00 |

738 Lucas alleges that this amounted to a representation that 80,250 m3 of the material to be used in forming the 150 mm sub‑base would be won from borrow pits up to 6 km from where it was to be laid.

739 Mr Matthews deposed that the statement of quantities in this Schedule to an accuracy of 5 m3 gave him confidence that the stated volumes had been precisely calculated.

740 Lucas alleges that the Fourth Representation was misleading or deceptive because, during the construction of the access road, the material won from borrow pits and used in forming the sub‑base had to be hauled distances of up to 14 km.

### An overall representation

741 Lucas alleges that the effect of the First, Second, Third and Fourth Representations taken collectively, or with any one or more of the other representations, amounted to an overall representation that:

[29.1] 75% of the total volume of material required to form the 150mm thick sub base would be sourced from the material excavated from cut areas (including v‑drain) along the right of way and would meet the required specification in the Scope of Work to form the 150mm thick sub base; and

[29.2] of the material to be imported from borrow pits to be used in forming the 150mm thick sub base, the haulage distance would not exceed 6km.

742 In effect, Lucas alleges that AGA and/or Lycopodium made representations as follows:

(a) 75% of the total volume of material required for the sub‑base would be obtained from material from the cut along the road alignment, including the V‑drains;

(b) the material obtained from the cut areas would satisfy the requirements for the sub‑base set out in the Scope of Work; and

(c) when Lucas did have to import material from borrow pits for the sub‑base, the haulage distance would not exceed 6 km.

743 Lucas alleges that it relied on the representations in the preparation of its final Tender and in deciding to enter into the Contract on 10 May 2011.

744 Lucas alleges that, had the representations not been made, whether individually or collectively, it would not have entered into the Contract on its terms; would have agreed to enter into a contract for the construction of the access road only on Schedule of Rates terms which assigned to AGA all the risk and cost of delay, including delays resulting from a failure of the excavated materials sourced from cut areas (including the V‑drains along the right of way) to meet the required specification in the Scope of Work; and would not have agreed to enter into a contract with a Date of Practical Completion of 30 November 2011. That is to say, Lucas advances a no contract case and, in the alternative, an alternative contract case.

### Was the First Representation made?

745 The Court heard evidence from seven of the persons who participated in the site visit between 10 and 12 January 2011. These were Ben Lucas and Mr Matthews from Lucas, Mr Bate from Macmahon Contractors Pty Ltd, Mr Massoudi and Mr Payne from AGA, Mr Walker from Lycopodium and Mr Sceresini from Knight Piésold.

746 The accounts of these witnesses of what was said during the site visit varied, sometimes in significant respects. This was unsurprising given the time which has elapsed, the fact that it was not until 2017 when preparing for this litigation that the witnesses were asked to recall what had been said, the usual frailties of human memory, and the fact that the potential significance of what was said has become apparent only in retrospect.

747 The making of a finding that an oral statement was misleading or deceptive requires close attention to the words actually used. In a case like the present in which no witness can state positively those words, the Court must have regard to accounts expressed as stating the effect of what was said. For each listener, that can often be a matter of impression, something which can vary according to the subjective position of each listener. These matters add to the difficulties for the Court in making factual findings.

748 Ben Lucas deposed that, on the first day of the site visit, when the parties stopped at a borrow pit, either Mr Sceresini, Mr Walker or Mr Payne said words to the group to the effect that “this is a typical borrow pit location”. After references to the borrow pit material being used to form the wearing course, either Mr Sceresini, Mr Walker or Mr Payne said to the group words to the effect that “in the areas adjacent to a borrow pit, you can use the V‑drain material to form the wearing course of the access road and in areas other than the sand dunes you can, and it is our intention to, use the material from V‑drains generally to construct the sub‑base”. Ben Lucas picked up a palm‑sized rock and asked “are we confident that the material will be compliant because, for example, this size rock clearly won’t meet the specification”. He said that Mr Sceresini then responded with words to the effect that the technical specification had been written with the nature of the materials found on site in mind and that it was the intention that the materials as found were to be used to construct the road. Ben Lucas then said that he sought confirmation that the material as found would not require processing, crushing or screening prior to use in the road. He said that Mr Sceresini responded with words to the effect that:

The material is suitable and the technical specification has been written with the geotechnical test results in mind. The side drain material is suitable as sub‑base and in areas adjacent to wearing course borrow pits the material from side drains would be suitable as wearing course.

749 When the difference between this account and that pleaded in [13.2] of the ASC (see the emphasised portion above) was drawn to his attention in cross‑examination, Mr Lucas said that his account was correct, and not that in [13.2]. No other witness testified that Mr Sceresini had spoken the emphasised words in [13.2] of the ASC set out above, and I am satisfied that Mr Sceresini did not make a statement to the effect pleaded by Lucas.

750 Mr Matthews said that, at a stop at a borrow pit site, either Mr Sceresini, Mr Walker or Mr Payne had said words to the effect that “this is a typical borrow pit” and that “the borrow pit material would be used as gravel to form the wearing course of the road”. Mr Matthews also said that he had heard Ben Lucas ask Mr Sceresini whether any material required processing to which Mr Sceresini responded by saying that all the material in the borrow pits was okay to form the wearing course and used words to the effect:

We have written the specification to account for the material found on site.

Mr Matthews also said that Mr Sceresini had responded to a further question from Ben Lucas by saying that the specification had also been written to account for the sub‑base.

751 Next, Mr Matthews said that Mr Sceresini or another representative had said words to the effect that not all the material would be suitable as 40 km of the road traversed sand dunes in which the in situ material would not be suitable.

752 Mr Matthews said that, after the debriefing he had had the clear impression that the material won from the V‑drains was to be used for the sub‑base with the exception of the 40 km through the sand dunes.

753 Mr Bate, from Macmahon Contractors, said that he had heard Ben Lucas ask about the suitability of the in situ material for use as sub‑base. He said that someone had given Ben Lucas an affirmative answer. He had been surprised at that response because he could see that material from V‑drains could supply only about 50% of the volume required for the sub‑base and because it had seemed to him from his own observation that the varying quality of the material along the road alignment made it unlikely that all of the material taken from the cut and V‑drains would be suitable for the sub‑base. To his observation, much of the material along the road alignment would not meet the specifications for use in the construction of the sub‑base.

754 Mr Payne said that someone (he could not remember who) had made a statement at one of the stops during the site inspection to the effect of:

In the areas adjacent to a borrow pit, you can use the V-drain material to form the wearing course of the access road, in areas other than the sand dunes it is our intention to use the material from the V‑drains generally to construct the sub‑base [and] the material won from the side drains along the road will be suitable to use as sub‑base material with the exception of approximately 40 km of sand dunes where the sub‑base material will need to be imported from borrow pits.

755 I indicate now that I had reservations about accepting Mr Payne’s account of the conversation. It is striking that his account (contained in his affidavit made on 2 December 2017) was almost identical with that of Ben Lucas (made in his affidavit of 17 August 2017). I do not regard it as credible that Mr Payne would give such a closely identical account of a conversation occurring nearly seven years earlier.

756 Mr Walker from Lycopodium said that he could not recall any discussion about the specification or the available material during the site visit.

757 Mr Sceresini’s account was as follows:

[40] I remember that Steve McKean said something like ‘*this is one of the borrow pits that we have identified for the access road*.’

[41] I recall Ben Lucas asking something like ‘*looking at this, what are you going to have to do to process this material?*’

[42] I remember saying in response something to the effect ‘*in my opinion, this material at this location, you would put it all in the formation, give it normal compaction and moistening, machine blending, whatever you’ve got to do as a contractor. I don’t believe you need to do anything. If you’re referring to crushing or screening of that material, I don’t believe you need to do that based on what I can see in this position, at this location*’.

[43] I then said something like, ‘*you can see that the material in this borrow pit and where the road is going to be are more or less the same. I wouldn’t be so bloody minded to tell you that you had to rip up all the material out of the borrow pit and then bring it back in as sub‑base if the material was available at the road. If I was in this location, if this material was consistent throughout in this location, I would form the road with what is here. There is no need to be bringing more materials in on top of material that looks to be good. At this location, I wouldn’t be doing anything more than just forming it up*.’

[44] I remember people nodding. I remember all of the tenderers were there at that stage.

[45] I did not say anything to the effect that, for the majority of the road, the side drain material could be used as sub‑base. I can say categorically that I did not say anything to that effect. I would never say that. I had been around in construction projects for long enough at that time to know that materials change in different locations.

758 A photograph taken during the site visit shows Ben Lucas holding a palm‑sized rock in his hand. I accept that Ben Lucas did ask, by reference to that rock, whether or not processing of the material would be required and that he received an answer to the effect that it would not. It is apparent, however, that Ben Lucas asked that question with respect to the necessity for processing by way of crushing or screening of the material to meet specification, rather than its suitability more generally.

759 I accept that Mr Sceresini or Mr McKean may have said that the borrow pit which was then being inspected was a “typical” borrow pit but, even if they did, a representation to that effect has not been shown to be misleading.

760 I also accept that Mr Sceresini did make a statement to the effect that, when the road alignment was immediately adjacent to a borrow pit, the material in the road alignment could be used as both sub‑base and wearing course. By that he conveyed that it would not be necessary to excavate material which satisfied the specification for wearing course, replace it with sub‑base and then lay separately a wearing course. In that circumstance, it made common sense for the material satisfying the specification for the wearing course to be used for both layers.

761 On the other hand, I am not satisfied to the requisite degree of satisfaction that either Mr Sceresini or anyone else made a statement to the effect that material won from the side drains and from the cut would be suitable as sub‑base along the length of the road with the exception of the approximate 40 km through the sand dunes.

762 First, in my view, it is inherently improbable that Mr Sceresini (or Mr McKean) would have made such a statement, having regard to the variability of the materials along the road alignment. Ben Lucas acknowledged that he was able to see during the course of the inspection that the material along significant sections of the road alignment was of variable quality and would not meet specification. Mr Bate from Macmahon Contractors had made the same observation. This was because it was obvious to him that the material was sandy or sandy‑clayey in composition and would not be suitable. That circumstance must also have been obvious to the other potential tenderers, as well as to Mr Sceresini and Mr Walker. Furthermore, both Ben Lucas and Mr Matthews acknowledged that they had been aware that the composition of in situ material can vary within a very short distance, even within one borrow pit. To my mind, it is improbable in that context that Mr Sceresini, or anyone else, would have made a statement to the effect claimed by Lucas which was so obviously incorrect. I think it likely that some retrospective rationalisation has affected the recollections of Ben Lucas and Mr Matthews. For the reasons given earlier, I am not prepared to regard this aspect of the evidence of Mr Payne as reliable.

763 Secondly, it is pertinent that at the time of the site visit, AGA was seeking tenders with respect to the road construction on a schedule of rates basis. That meant, as Ben Lucas acknowledged, that variability in the quality of the material was not so important because it would be AGA, and not the successful tenderer, who carried the risk that the material from the V‑drains would not meet the specification.

764 Thirdly, minutes of the site visit prepared by Mr Sceresini and Mr McKean included the following as a matter discussed:

Road sub‑grade (and some sub‑base) to primarily comprise material excavated from roadside v‑ditches.

765 Counsel for Lucas attached some significance to this item as supporting the evidence of Ben Lucas and Mr Matthews that the use of material excavated from the road side V‑drain in the formation of the sub‑base has been discussed. Mr Sceresini accepted that there had been some such discussion.

766 However, I do not regard this entry as tending to confirm that the First Representation was made. Instead, it suggests that a statement was made that material excavated from the V‑drains could be used for the *sub‑grade*, that is, the layer below the sub‑base. The minutes suggest that, in contrast to the sub‑grade, the discussion had been that the V‑drain material could be used for only *some* of the sub‑base. That is inconsistent with the representation for which Lucas contends.

767 Fourthly, I consider it significant that, when on 3 July 2013, Lucas gave a formal notice of claim to Lycopodium setting out the background to its claim, the words it attributed to Mr Sceresini were different from those on which it relies for the First Representation. In that letter, Lucas said that Mr Sceresini had said:

The side drain material has been tested and conforms to the Technical Specification for the sub‑base.

768 Fifthly, Ben Lucas acknowledged that, when preparing the Tender, he had considered that the side drain material may not meet the specification along significant sections of the road. Lucas’ awareness that that was so is evidenced by the qualifications which it made to its Tender of 31 January 2011. Those qualifications formed the basis for the claimed Third Representation, which I will address shortly.

769 Finally, the alleged response of Mr Sceresini, as pleaded in [13.2] of the ASC, appears to have been non‑responsive to Ben Lucas’ question. That adds to my doubt concerning Mr Sceresini having made the statement for which Lucas contends.

770 For these reasons, I am not satisfied that the First Representation was made.

771 Given this conclusion, it is not necessary to address the submission of AGA that the representation said to have been made by Mr Sceresini cannot in any event be attributed to it, because it has not been established that either Knight Piésold or Mr Sceresini was acting as its agent at relevant times.

### Was the Second Representation made?

772 As already seen, for the Second Representation, Lucas relied upon the content of the draft contract and scope of work attached to the RFT of 23 December 2010. Its claim is that the cost Items 10 to 24 contained in the Schedule of Rates conveyed a representation that 75% of the material to form the sub‑base would be excavated from cut areas, including V‑drains, along the right of way and that the remaining 25% would be won from borrow pits, involving haulage of up to 28 km.

773 Schedule 5 provided the template for a Schedule of Rates. It was a request that the tenderers indicate their rates for the items of work listed. That is to say, tenderers were asked to indicate a per cubic metre rate on the basis that 5,750 m3 of material would be won, haul, spread and compacted as the sub‑base from each of the distances with the 2 km increments.

774 In my opinion, a number of matters indicate that the Schedule could not reasonably have been understood as conveying a representation of fact, namely, that 240,750 m3 and 80,500 m3 would be won from cut areas, including the V‑drains, and from borrow pits, respectively.

775 First, it is in the nature of a schedule of rates contract that the tenderer provides a rate in respect of a volume of material or a quantity of work which is uncertain. Lucas referred in this respect to the discussion in Hudson’s Building and Engineering Contracts, 11th Edition at 435‑6. There, the author notes that lump sum contracts are appropriate if the works have been designed in sufficient detail to enable them to be defined and priced by the builder whereas schedule of rates contracts are appropriate when the owner does not know, at the time of seeking tenders, precisely the work required of the builder. It is of the essence in a schedule of rates contract that the quantity or volumes of work are uncertain. Ben Lucas, David Lucas and Mr Matthews each knew that a schedule of rates is sought when the nature or full extent for the work is uncertain or difficult to foresee.

776 Secondly, the fact that identical volumes (5,750 m3) are nominated for each distance increment is, by itself, an indication that the Schedule could not sensibly be understood as representing that these were actual volumes. Instead, they are (and in my view would have been understood by reasonable contractors reviewing the RFT as) nominal or indicative figures which tenderers were asked to use in determining a cubic metre rate. No tenderer, acting reasonably, could have understood AGA to be representing that 5,750 m3 (or an amount approximately equivalent to it) would be available at each of the 2 km increments.

777 Thirdly, Lucas itself did not understand AGA to be representing that these were actual volumes or actual proportions. Ben Lucas said that he was aware that the figures shown in the Schedule of Rates were estimates only. Ben Lucas also confirmed that, when examining Sch 5 in the RFT he had not been concerned about variability in the sources of the material which Lucas would use in the road construction:

Q: [W]hen you made reference to a schedule of rates contract at that stage, do you mean to say that if, as it turned out, not very much material could be won from cut areas and the V‑drains because it didn’t meet specification, it would simply be a matter of being paid according to the volumes that you hauled from a borrow pit to meet specification?

A: Yes. That’s correct. We would be paid for material if it came from a borrow pit versus came from the V-drains.

Q: According to the volumes that were hauled?

A: Yes. That’s correct.

Q: So is your point that it didn’t really matter then – it wasn’t of vital importance to know what the in situ material was actually made up of and whether it was likely to meet specification because the risk was adequately covered by the schedule of rates basis upon which you were contracting?

A: Yes. …

778 Further, the Schedule of Rates in Sch A5 commenced with a statement that the quantities in the Schedule were estimates only:

**1. General**

The estimated unit quantities set forth herein *are estimates only*, and as such the quantities of units estimated are not guaranteed, as independent circumstances shall control actual quantities performed and measured.

The prices shall be obtained from multiplying *the stated estimated quantity* for each item by the applicable unit rate, and summing the amounts for each item. *The prices shall not be construed to represent the amount of Works that is actually required under the Contract*.

…

**2. Measurement and Payment**

…

*The actual quantities completed* will be multiplied by the unit rates for each item in the Schedule of Remuneration to determine the total amount payable for each item.

…

*Final quantities for payment* will be determined by the Company from the pre and post construction surveys and the as‑built drawings.

(Emphasis added)

779 A fundamental difficulty for Lucas’ claim with respect to the Second Representation is that the revised Schedule of Remuneration issued by Lycopodium on 12 February 2011 (the day after TRM 1) contained a revision of the estimated sub‑base quantities. Instead of showing sub‑base material being won from borrow pits up to 28 km away from the place at which it was to be laid, this Schedule showed sub‑base material being won from borrow pits up to 6 km from the place at which it would be laid, with rates varying according to 2 km increments. Mr Matthews acknowledged that this change had led him to think that the items in the Schedule of Rates issued with the RFT were no longer reliable. He also conceded that the volumes of material “didn’t really matter” because the issue “was not about the actual volume of material, [it] was just where it was coming from”.

780 For these reasons, I am not satisfied that Lucas has established that the Second Representation was conveyed.

### Was the Third Representation made?

781 As already seen, Lucas relies for this representation on Lycopodium’s response on 11 February 2011 to three of the qualifications which it had attached to its Tender of 31 January 2011.

782 In my opinion, the Lycopodium response cannot reasonably be regarded as conveying the representation claimed by Lucas.

783 First, by the statement that AGA would perform tests on the nominated borrow pits and other locations to establish the suitability of the materials, Lycopodium conveyed implicitly that not all materials would be suitable. Were it otherwise, testing would have been unnecessary.

784 Lycopodium then went on to make explicit in the second sentence what was implicit in the first by saying that “not all in situ excavations will be suitable for construction”. It described a situation in which the material from the cut and V‑drains would not be suitable, namely, the 40 km of road in the dune areas. Its use of the commonly used abbreviation “i.e.” for “that is” cannot, in my view, be reasonably understood as confining the exception to those 40 km. Instead, the abbreviation “i.e.” appears to have been used in the sense of “for example”. The use of the term “in particular” in relation to the sand dunes confirms the impression that the dune area was being given as but one example.

785 I am satisfied that that is how it would have been reasonably understood, and was in fact understood. That is especially so given how obvious it had been on the site visit that there were significant areas (away from the sand dunes) in which the cut and V‑drain material would not be suitable for use in the sub‑base.

786 Secondly, Lucas did not point to any objective circumstance or communication suggesting that, within the space of about one month from the site visit, AGA or Lycopodium had moved from a position that there were areas along the road alignment in which the cut and V‑drain material would not be suitable to a position that all the material from the cut and the V‑drains would be suitable, with the sole exception being the 40 km through the sand dunes. On the contrary, the initial entries in the TCS indicate a recognition that the material in the cut along the road alignment and in the V‑drains may not be suitable as sub‑base:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Party** | **Date** | **Non‑conformance/ Qualification/ Clarification/ Response** | **Status** |
| 1 | Lucas | 31/01/2011 | Sub‑base and cut as general fill to be done as one operation. |  |
|  | AGA | 11/02/2011 | Accepted, *if material is suitable* |  |
|  | Lucas | 16/02/2011 | Accepted | CLOSED |
| 2 | Lucas | 31/01/2011 | Materials in situ as sub base can be treated and compacted in place. |  |
|  | AGA | 11/02/2011 | Accepted, *if material is suitable* |  |
|  | Lucas | 16/02/2011 | Accepted | CLOSED |
|  | (Emphasis added) | | | |

787 In context, the word “suitable” in these items was to be understood as meaning that the material met the requirements of the specification. It could not sensibly have been understood at the time to mean “suitable for road‑making” even though non‑compliant with the specification. In my view, Items 1 and 2 in the TCS make it plain that Lucas understood, and accepted, that there would be places along the road alignment in which the in situ material would not be suitable as sub‑base.

788 Thirdly, an indication of Lucas’ contemporaneous understanding (which differs from that in the pleaded Third Representation) is seen in the exchange between it and Lycopodium concerning its request for a qualification concerning the limits of accuracy of the stated volumes. The following extract from the TCS illustrates the position:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Party** | **Date** | **Non‑conformance/ Qualification/ Clarification/ Response** | **Status** |
| 15 | Lucas | 31/01/2011 | That the existing ground survey and quantities in the schedule do not vary more than 10%. |  |
|  | AGA | 11/02/2011 | Tenderer is referred to item 1 of Schedule A5 where the following is stated “The Contractor shall not be entitled to any allowance above the unit rates and prices specified in this Schedule by reason of any or none of the work being required under such items or by reason of alteration in actual quantities or work carried out from the quantities specified in this Schedule. All Works shall be carried out at the unit rates specified in this Schedule regardless of its difficulty.”  Tenderer is requested to withdraw this qualification. |  |
|  | Lucas | 16/02/2011 | Accepted, this clarification was based on quantity variation not price variation. There is a mechanism for payment of volumes undertaken via the schedule of rates. Lucas withdraws this qualification. | CLOSED |

789 As is apparent, Lucas withdrew its qualification concerning a 10% limit of accuracy. It did so on the express basis that, on the Contract then proposed, it would be paid in the event of a variation in the required volumes. It accepted implicitly that the volumes may vary by more than 10%. That was its position as at 16 February 2011. It is a position which is contra‑indicative of it having understood the Lycopodium response of 11 February 2011 had conveyed the pleaded Third Representation.

790 In his cross‑examination, Mr Matthews did not agree that, having consented to the removal of the 10% variance qualification, he could no longer have assumed that the volumes in Sch 5 were likely to be the volumes to be experienced on site. He accepted, however, that he had appreciated that AGA was not making a commitment that the volumes on site would match the volumes listed in Sch 5.

791 Ben Lucas did not claim that he had understood the TCS response in the way for which Lucas now contends. Instead, his concern had been that Lucas would not have to purchase material with which to make the road from elsewhere. It had not been a concern for him that Lucas would have to haul material from borrow pits along the alignment.

792 In my opinion, Lucas’ acceptance of the removal of its proposed limit of accuracy qualifier is inconsistent with it having understood that the volumes in the revised Schedule of Rates provided on 25 February 2011 were reasonably accurate. To the extent that Mr Matthews gave evidence to the contrary, I do not accept it. Mr Matthews also accepted that he had understood that, if it turned out that there was “vastly more material” that had to be hauled from borrow pits, Lucas had to hold its direct rates. Ben Lucas said that he had understood at the time that AGA was not prepared to accept limits of accuracy on the volumes in the Schedule of Remuneration.

793 I consider that Lucas has fastened the Lycopodium response of 11 February 2011 only in retrospect as a way of bolstering its present claim.

794 Lucas’ claim with respect to the Third Representation fails.

### Was the Fourth Representation made?

795 Between 31 January 2011 and 25 February 2011, Lycopodium and Lucas had exchanged versions of the Schedule of Remuneration. It is not necessary to refer to every version. It is sufficient to note that, on 23 February 2011, Lucas had provided Lycopodium with a revised Schedule of Remuneration. With respect to the sub‑base, this Schedule provided:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Qty** | **Supply Unit Rate** | **Install Unit Rate** | **Total Unit Rate** | **TOTAL** |
| 10.0 | Excavate from cut areas (including v-drain) along right of way, haul from 0km up to and including 2km to fill areas along right of way, moisture condition and compact as sub-base | m3 | 240,750 |  |  | 14.05 | **$3,382,537.50** |
| 11.0 | Win from borrow, load, haul from 0km up to and including 2km, place, spread, moisture condition and compact as sub base | m3 | 39,900 |  |  | 16.50 | **$658,350.00** |
| 12.0 | Win from borrow, load, haul from 2km up to and including 4km, place, spread, moisture condition and compact as sub base | m3 | 26,600 |  |  | 19.47 | **$517,902.00** |
| 13.0 | Win from borrow, load, haul from 4km up to and including 6km, place, spread, moisture condition and compact as sub base | m3 | 13,300 |  |  | 21.05 | **$279,965.00** |

796 As is apparent, Lucas provided a Schedule of Rates based on provision of sub‑base material from borrow pits from distances up to 6 km and nominated the quantities to be obtained from each. It was not suggested that Lucas did so on the basis that the precise volumes nominated would be obtained from each distance.

797 There are other indications that any statement contained in the revised Schedule of Remuneration issued by Lycopodium on 25 February 2011 was not understood at the time as conveying a representation. Alternatively, if it did, that representation ceased to be operative by the time Lucas executed the Contract. Two provisions in Sch A2 to the Contract concerning the Lump Sum Prices indicate that that is so. First, as previously noted, cl 1 in Sch A2 provided that it was Lucas which carried the risk associated with determination of the appropriate quantities for *all* aspects of the Lump Sum portion of the Works based on the requirements defined in the Contract.

798 Secondly, the parties made express provision for the prospect that Lucas may have to haul sub‑base material and wearing course material from greater distances than indicated in the Schedule of Remuneration. Clause 3(a) in Sch A2 provided:

The lump sum price is based on the haulage distances indicated in the Schedule of Remuneration for sub-base and wearing course. Variance to the haulage distances will be subject to Contract variation based on the quantity of material hauled against the applicable unit rates in the Schedule of Remuneration.

799 Thirdly, cl 3(c) in Sch A2 provided:

The lump sum price is based on the pavement layer requirements indicated in the Schedule of Remuneration. Variance to the pavement layer requirements will be subject to Contract variation based on the unit rates in the Schedule of Remuneration.

800 In my opinion, Lucas’ agreement to these provisions in the Contract is inconsistent with it having had the understanding which it alleges in the Fourth Representation. First, it had accepted that generally it was it, rather than AGA, which carried the risk associated with the determination of the appropriate quantities. However, the parties had agreed that variance to the haulage distances would be subject to Contract variation as would variance to the pavement layer requirements. That is to say, the parties had recognised that there may well be variances in both the quantities of material and in the distances from which it had to be hauled and had attempted to put in place a pricing mechanism for the Contract variations which would follow. In my view, that is inconsistent with Lucas having understood that the revised Schedule of Remuneration communicated to it on 25 February 2011 that 80,250 m3 of material to be used in forming the 150 mm sub‑base would be won from borrow pits up to 6 km from the place at which it was to be laid.

801 That Lucas recognised that it may have to haul sub‑base material distances greater than 6 km is also evidenced by its Work Method Statement provided to Lycopodium on 14 April 2011 which Lucas said:

The tender schedule does not allow for haulage distances greater than 2 kms for Cut & Fill, however should haulage distances exceed 2 km this will be discussed with the client & approval sought to raise this work as a variation to contract.

802 For these reasons, I am not satisfied that Lucas had understood, at the time, the Schedule of Remuneration issued on 25 February 2011 to convey the pleaded Fourth Representation. In my view, Lucas’ reliance upon the Schedule of Remuneration issued by Lycopodium on 25 February 2011 involves a process of retrospective rationalisation.

### Was the overall representation made?

803 For the reasons which I have given in relation to the First to Fourth Representations, I am not satisfied that the overall representation was made.

## Reliance and causation

804 The issues of reliance and causation arise only if Lucas establishes that at least one of the pleaded representations was made and was misleading or deceptive. As Lucas has not done so, it is not strictly speaking necessary to consider these issues. However, there is a certain overlap between the evidence and the findings concerning the making of the representations, on the one hand, and the issues of causation and reliance, on the other. Accordingly, I will address the latter issues in this section of the reasons.

### Relevant principles

805 Section 236(1) of the ACL provides that a person who suffers loss or damage “because of” the conduct of another in contravention of a provision in Ch 2 or 3 (which includes s 18) may recover the amount of the loss or damage by action against the contravenor.

806 The counterpart provision to s 236(1) in the *Trade Practices Act 1974* (Cth) was s 82(1). It permitted a person who suffered loss or damage “by” contravening conduct to recover that loss or damage from the contravenor. In *Wardley Australia Ltd v The State of Western Australia* [1992] HCA 55; (1992) 175 CLR 514 at 525, the High Court said of s 82(1):

The statutory cause of action arises when the plaintiff suffers loss or damage “by” contravening conduct of another person. “By” is a curious word to use. One might have expected “by means of”, “by reason of”, “in consequence of” or “as a result of”. But the word clearly expresses the notion of causation without defining or elucidating it. In this situation, s 82 should be understood as taking up the common law practical or common‑sense concept of causation recently discussed by this Court in *March v Stramare (E. & M.H.) Pty Ltd*,except in so far as that concept is modified or supplemented expressly or impliedly by the provisions of the Act. Had Parliament intended to say something else, it would have been natural and easy to have said so.

(Footnotes omitted)

807 It was not suggested that the use in s 236(1) of the ACL of the term “because of” effected any practical difference.

808 The Court must be satisfied that there is a causal connection between the contravening conduct, on the one hand, and the loss and damage alleged, on the other: *Campbell v Backoffice Investments Pty Ltd* [2009] HCA 25; (2009) 238 CLR 304 at [102].

809 It is not necessary that a misleading statement be the sole or dominant cause of an applicant’s entry into a transaction. It is sufficient if it was a cause (in the sense of materially contributing to) the loss: *Henville v Walker* [2001] HCA 52, (2001) 206 CLR 459 at [14], [61], [163]; *I&L Securities Pty Ltd v HTW Valuers (Brisbane) Pty Ltd* [2002] HCA 41, (2002) 210 CLR 109 at [33], [57], [62], [90]. Nevertheless, common sense and practical experience may indicate that there is an insufficient connection between the contravening conduct and the loss as, for example, when a respondent’s conduct merely sets the scene, or provides the opportunity, for the loss to be incurred rather than being a cause of that loss in a meaningful sense: *Stone v Chappel* [2017] SASCFC 72; (2017) 128 SASR 165 at [354].

810 In some cases, it is helpful to consider the causal connection in two stages: first, whether the applicant relied on the misleading or deceptive conduct, and secondly, the sufficiency of the connection between the loss or damage claimed and the applicant’s reliance on the misleading conduct: *Stone v Chappel* at [353] and [354].

811 Counsel for Lucas emphasised that a person may be induced to act on a representation by reason of the overall impression it creates, rather than by reference to its individual integers, relying on *Reiffel v ACN 075 839 226 Ltd* [2003] FCA 194, (2003) 132 FCR 437 at [66]‑[69]. One may accept that that is so but, nevertheless, reliance as a fact must be established.

### No evidence from Vivienne Lucas

812 As previously noted, it was Vivienne Lucas who signed the Contract on behalf of Lucas on 10 May 2011. Mrs Lucas and her husband David were the only two directors of Lucas at the time.

813 Lucas did not adduce evidence from Mrs Lucas. Nor did it adduce any evidence as to why she was not available to be called to give evidence in the proceedings.

814 The evidence as to the matters on which Mrs Lucas relied in executing the Contract is limited. None of Ben Lucas, Mr Matthews or Mr Doyle, Lucas’ Commercial and Legal Manager, could recall discussing the Contract or its contents with Mrs Lucas before she signed the Contract. There is no evidence indicating that Mrs Lucas was aware, when she signed the Contract, of the representations which Lucas alleges. David Lucas said that he could not recall how it came about that Mrs Lucas signed the Contract. He said that it was common for her to sign contracts after relying on his input. In the case of the Contract with AGA, Mrs Lucas might have relied upon that input. Alternatively, she may have been privy to discussions about the content of the Contract and so was “pretty much all over it as well”. He could not say which of these alternatives was the more likely. Other evidence indicated that generally Mrs Lucas participated actively in the business.

815 AGA submitted that, by reason of Lucas’ failure to call Mrs Lucas to give evidence, it had not, for that reason alone, established that it had relied on the alleged representations when deciding whether or not to enter into the Contract.

816 I am not willing to accept submission. The evidence suggests that in this case, Mrs Lucas’ execution of the Contract was a formal step. It is reasonable to infer, and I do infer, that Mrs Lucas relied on what she had been told by others as to the appropriateness of signing the Contract, so that it is the state of mind of those persons, in particular, her husband and her son which is material.

817 However, that finding does not avail Lucas because I am not satisfied that either Ben Lucas or David Lucas relied upon any of the pleaded representations. As already found, Ben Lucas had appreciated from the time of the site visit that material along significant sections of the road alignment was of variable quality and unlikely to meet specification. He had discussed that at length with his father.

818 Despite that knowledge, Lucas proceeded on the basis that AGA would not insist on compliance with the specification (other than with respect to the wearing course). Although AGA gave Lucas the opportunity to propose amendments to the Technical Specification which could have reflected this, Ben Lucas did not request that it do so. In other words, the evidence establishes that Lucas, through David and Ben Lucas, made a conscious decision to enter into the Contract even though aware that the immediately available material would not meet specification.

819 I have not overlooked that Mr Matthews said that he had thought from the site inspection that the material along the road alignment and the V‑drains would comply with the Technical Specification. I am not willing to accept that evidence as reliable or to accept that Mr Matthews’ decision‑making was based on that view. It is inconsistent with the evidence of David and Ben Lucas and inconsistent with other the contemporaneous conduct by Lucas to which I have referred.

### A pleading difficulty

820 The case on reliance and causation which Lucas presented is inconsistent with its own pleading.

821 In [44] of its Second Further Amended Defence (the 2FAD), AGA denies Lucas’ allegation in the ASC that it had relied on the pleaded representations when entering into the Contract. AGA then alleges that Lucas had, before entering into the Contract, identified that the quantities of material suitable for the sub‑base and the haulage distances could differ materially from those set out in Sch 5 in the RFT, had negotiated with it how those risks were to be addressed, and had decided to contract with it on the basis that variations in the quantities or in the haulage distances would be treated as a variation and paid in accordance with the contractual terms for the payment of variations.

822 In the filed Amended Reply to the 2FAD, Lucas admits that it had communicated the risks concerning quantities and haulage to AGA, and admits that it had negotiated with AGA concerning the way in which the quantities risk and the haulage risk were to be addressed (Amended Reply [6.1], [6.2], [6.6] and [6.7]).

823 In [6.3] of the Amended Reply, Lucas pleads:

[6.3] In further answer to the allegations made in paragraph 44(a) of the Second Further Amended Defence, says that, to the extent that Lucas, acting as a prudent contractor, identified that the actual quantities of material and the haulage distances could materially differ from the quantities and distances set out in the RFT Schedule 5 (which subsequently became Schedule 4 of the Contract), it entered into the Contract on the basis that, if the representations (referred in paragraph 29 of the Amended Statement of Claim and reflected in the terms of the Contract) were not correct, then it would be compensated for the extra quantities and haulage distances.

824 As is apparent, by this plea Lucas accepted that it had, to an extent, identified that the actual quantities of material and the actual haulage distances could differ materially from the quantities and distances set out in Sch 5 of the RFT. It then pleads that, rather than entering into the Contract on the basis that the representations were true, it had done so on the basis of a belief that it would be entitled, under the Contract, to be compensated for the extra quantities and haulage distances involved. That plea is inconsistent with Lucas’ claim with respect to reliance and causation. The inconsistency is made more evident by the remainder of [6] of the Amended Reply in which Lucas pleads, in effect, a contractual entitlement to be compensated for the additional quantities and haulage.

825 Lucas may have been mistaken as to its contractual entitlements in the event that additional materials and additional haulage were required, but its entry into the Contract on the basis of such a mistake does not establish the elements of reliance and causation in relation to its misleading or deceptive conduct claim.

### Further evaluation

826 The evidence of Ben Lucas in particular indicates that Lucas did not rely on the pleaded representations. Instead, Lucas appreciated that the cut and V‑drain along significant sections of the road would not meet specification and that it may have to win and haul greater volumes of material and from greater distances than the Schedule of Rates in the Contract indicated. Lucas considered, however, that it could build an adequate road from the material which was available. Ben Lucas said:

Q: So when you say in the last sentence of [8.23]:

“I was of the opinion that the in‑situ material could be used to form the sub‑base, but I was also aware that it might not consistently meet the technical specification.”

That was an opinion that you held as you formulated the Tender and when you submitted it?

A: Yes.

Q: Yes. And that opinion was that the side drain material may not meet specification, but it would be good enough for an adequate road?

A: Yes.

Q: Right. So you weren’t relying on any statement by Mr Sceresini to the effect that the sub‑base material would meet specification?

A: Well I relied on the fact that that’s what their intent was and it was in line with the discussions we had had.

Q: Mr Lucas, you could see for yourself that the material in the side drains might not meet specification. You understood, if anything, that the specification might be relaxed to allow you to build an adequate road out of the material that was there if it didn’t meet specification. That was the impression you were left with, wasn’t it?

A: Either that it would be relaxed or some other – other thing might take place as it transpired that they would put more material on it.

Q: We might deal with it in some other way?

A: Yes.

827 The only relaxation of the specification which occurred after the site specification was the insertion of the words “in general” into cll 8.6.2 and 8.6.3, to which I referred earlier in these reasons.

828 Considered as a whole, the evidence indicates that Lucas proposed moving from a schedule of rates contract to a lump sum contract because it believed that it could build an adequate road using the available material, even though that material along significant sections of the road would not meet specification. The difficulty for Lucas is that it did not seek, when proposing a lump sum contract, some variation of the specification to reflect its intention to build the road out of the available material even if that material did not meet specification. That is to say, Lucas did not rely upon any of the pleaded representations to the effect that the material from the cut and the V‑drains would meet specification. It was aware that it would not but assumed that it would not be held to the Contract specifications.

829 Alternatively, if Lucas did rely on the representation, that reliance cannot be regarded as reasonable given that it was obvious to both Ben and David Lucas that the material along significant sections of the road would not meet specification.

830 There are other indications that Lucas did not rely on the oral representations made during the site visit. Both Ben Lucas and Mr Matthews said that it was Lucas’ general practice, when making a tender, to ensure that every material assurance, representation or statement on which the tender was based had been recorded in writing. Ben Lucas said that, coming away from the site visit, he had thought it important to make sure that the matters which influenced Lucas’ tender for the work had to be expressed in a tender qualification or in a tender assumption or otherwise recorded in writing between Lucas and AGA. Lucas had done that by attaching a page of qualifications to its Tender and, during the tender view process, had participated in the recording of every unresolved matter in the TCS. Both Ben Lucas and Mr Matthews accepted that the purpose of the TCS had been to document material matters influencing the price or the terms of the Contract. They accepted that the recording of the information in the TCS was done so as to avoid verbal misunderstandings. Lucas’ claim that it had relied on the representations is inconsistent with its participation in the TCS process.

831 The documents in the RFT included some reports of geotechnical testing. It was common ground, however, that these reports were of limited extent and had not been accompanied by any interpretative geotechnical analysis. Ben Lucas said that the geotechnical data provided as well as photographs suggested that the in situ material may not consistently meet specification. Mr Grounds, the geotechnical expert called by Lucas, and Mr Hillman, the geotechnical expert called by AGA, agreed that the test pit records provided to tenderers in the RFT suggested that the in situ material may not meet specification. Ben Lucas said, however, that despite his own assessment, he had relied upon the statement by Mr Sceresini that the specifications had been written with the in situ material in mind.

832 I am not prepared accept that evidence. First, Ben Lucas himself acknowledged that Lucas would not rely upon an oral representation of that kind without it being the subject of a qualification or assumption or having been confirmed in writing, and that question was addressed in the subsequent TCS. Secondly, Mr Lucas’ own observations on the site visit were that there were significant sections of the road in which the in situ material was unlikely to satisfy the specification.

833 A further indication that Lucas did not rely upon the pleaded representations is that, when it submitted its revised Tender on 17 February 2011, it said:

Lucas are prepared to convert this pricing schedule to a conditional Lump Sum price for the works *with the exception relating to haul distances for sub‑base material and wearing course material being as per the schedule*, any overhaul would be subject to additional charges and some other clarifications that could be discussed if this is considered an acceptable option.

(Emphasis added)

834 That is to say, while Lucas was prepared to tender on a lump sum rather than schedule of rates basis, it acknowledged expressly that there remained uncertainty about the distances it would have to haul sub‑base material and wearing course material. I am satisfied that that reflected Lucas’ awareness that the material in the road alignment and in the V‑drains along significant sections of the road would be, or was likely to be, unsuitable.

835 As noted earlier, at TRM 2, Lucas offered a lump sum tender price of $34,999,999. When Lucas confirmed the offer on 1 March 2011, it set out the conditions on which its proposal was based. These included the provision of “grace periods” with respect to liquidated damages, the extension of the definition of “qualifying cause for delay” to include inclement weather and the amendment of the specification to reflect savings identified through the tender process. Pertinently for present purposes, one of Lucas’ conditions was:

[13] The Lump Sum price will apply subject to the haulage distances for sub‑base and wearing course being as per Schedule TGP‑001 Sched of Rem 110224.xls as received from you on 25th February 2011. The Contractor and AGA will work together to ensure so far as practical that these are not exceeded, however any increase in these shall constitute a variation.

836 AGA accepted this qualification and asked Lucas to submit “the required variation rates as a basis for haulage distance changes”. Lucas submitted the requested variation rates on or about 3 March 2011. The Lucas proposal showed a rate only for the haulage of sub‑base material over distances greater than 28 km. AGA then responded on 4 March 2011 saying:

Haulage distance changes will be subject to contract variation based on the volume of material hauled against the applicable unit rate in the schedule of remuneration.

837 Lucas accepted that response.

838 I accept the submission of AGA that these exchanges reflect the understanding of the parties that the haulage distances for sub‑base material could well exceed 6 km and, if that occurred, that the distances above 6 km would be paid as a variation.

839 This conduct and these communications amounted to an express recognition by Lucas that the position may turn out to be different from that indicated by the Schedule of Rates. In that event, Lucas wanted the additional haulage involved to be treated as a variation.

840 In its lump sum proposal of 1 March 2011, Lucas included a condition that the “[s]pecifications be amended to reflect the savings identified through the tender process”. Thereafter, there were communications between Ms Rudowski and Lucas concerning the change in the specification. This concluded on 8 March 2011 when Lucas confirmed that the only items in the specification which it sought to have amended were those which it had listed in its response of 7 March 2011. Those amendments did not change the material requirements for the sub‑base and wearing course.

841 In his evidence, Mr Doyle said that Ms Rudowski had told him that Lucas could not amend the specification. I do not accept that evidence. The contemporaneous documentary evidence is to the contrary as it indicates that Lucas was invited to nominate the changes in the specification which it proposed and in fact had done so. The only specification which it was told it could not change was that concerning the wearing course.

842 Ben Lucas said that he had understood that Lucas could propose amendments to the specification, but had thought that there was a limit to the extent to which it could do so. He said that he had thought that the amendments which Lucas thought desirable would not be accepted by AGA and for that reason had not sought to request an amendment to the specification. Ben Lucas said that his thinking had been that Lucas would be permitted to build a road from the available material without regard to the specification. That is to say, Ben Lucas relied on a belief which was not induced by any of the pleaded representations.

843 Likewise, David Lucas said that he had discussed “at length” with his son Ben well before Ben Lucas signed the Notice of Award that a significant section of the material along the alignment would be unlikely to meet specification. He had thought that it was “a given” that, by reason of that circumstance, the specification in the Scope of Work would be relaxed. That is to say, David Lucas too proceeded on the basis of a belief which had not been induced by any of the pleaded representations.

### The warranties and acknowledgements

844 The warranties and acknowledgements which Lucas gave in the Contract present a further difficulty for its case on reliance and causation.

845 By cl 5.1(c) of the Contract, Lucas warranted that it had “entered into [the] Contract, relying solely on its own investigations, determinations, skill and judgment and not in reliance on any information [or] representation expressly or impliedly given by or on behalf of [AGA] other than to the extent that a relevant representation is expressly recorded in the terms and conditions of this Contract”. Lucas also warranted that it was satisfied that the Contract Price covered the costs of performing the Works in all respects and included sufficient contingencies (cl 5.1(b)) and that it had inspected and investigated the site and the surrounding conditions so as to satisfy itself that the Contract Price covered all risks, obligations and liability it may incur in performing the Works (cll 5.1(d) and 5.2(a)(ii)). Lucas also acknowledged expressly that AGA did not warrant the accuracy or sufficiency of any information it had provided and that it had not relied upon any express or implied representation made by or on behalf of AGA (cl 5.2(b)).

846 Lucas sought to avoid the effect of these warranties and acknowledgements by reference to the principles concerning the effect of disclaimers. In *Butcher v Lachlan Elder Realty Pty Ltd* [2004] HCA 60; (2004) 218 CLR 592, the plurality (Gleeson CJ, Hayne and Heydon JJ) considered that the disclaimers on a real estate brochure had some significance in assessing whether the brochure conveyed a misleading or deceptive representation. Their Honours said at [50]:

… If the “conduct” of the agent is what a reasonable person in the position of the purchasers, taking into account what they knew, would make of the agent’s behaviour, reasonable purchasers would have read the whole document, given its importance, its brevity, and their use of it as the source of instructions to professional advisers. …

847 McHugh J considered that a disclaimer as to the truth or otherwise of a representation does not, of itself, absolve the corporation from liability. His Honour continued:

[152] This is not to say that a disclaimer should be ignored for the purposes of assessing whether a contravention of s 52 has occurred. … [T]he conduct must be considered as a whole. This requires consideration of whether the conduct in question, including any representations and the disclaimer, is misleading or deceptive or is likely to mislead or deceive. If a disclaimer clause has the effect of erasing whatever is misleading in the conduct, the clause will be effective, not by any independent force of its own, but by actually modifying the conduct. However, a formal disclaimer would have this effect only in rare cases. …

848 Likewise, in *Campbell v Backoffice Investments*, French CJ said:

[31] Where the impugned conduct comprises allegedly misleading pre‑contractual representations, a contractual disclaimer of reliance will ordinarily be considered in relation to the question of causation. For if a person expressly declares in a contractual document that he or she did not rely upon pre-contractual representations, that declaration may, according to the circumstances, be evidence of non-reliance and of the want of a causal link between the impugned conduct and the loss or damage flowing from entry into the contract. In many cases, such a provision will not be taken to evidence a break in the causal link between misleading or deceptive conduct and loss. The person making the declaration may nevertheless be found to have been actuated by the misrepresentations into entering the contract. The question is not one of law, but of fact.

(Footnotes omitted)

849 In my opinion, a number of circumstances make it appropriate for the Court to have regard to the warranties and acknowledgements provided by Lucas in the present case. This was a commercial contract, negotiated over a period of time by two parties acting at arm’s length. Lucas was not in a “take it or leave it” position. Further, it had the assistance of its in‑house lawyer, Mr Doyle, throughout the negotiation process. Further again, Lucas participated in the TCS process with a view to ensuring that all oral representations, assumptions and qualifications were recorded, for the express purpose of seeking to resolve any uncertainties. Lucas had had the opportunity to identify the matters which were important to it and to have them clarified and, if necessary, incorporated into the Contract.

850 In that circumstance, the giving of the express contractual warranties and acknowledgements assumes additional significance. It is inconsistent with Lucas having relied on the pleaded representations. Alternatively, even if Lucas did rely on the pleaded representations, it makes it difficult for Lucas to establish that the loss it alleges was caused by that reliance.

### Conclusion on reliance and causation

851 For these reasons, I am not satisfied that Lucas relied in a material way on any of the pleaded representations. Instead, it made its own decision, for its own reasons, to enter into the Contract. Nor has Lucas established that the losses it alleges were caused by the alleged misleading or deceptive conduct.

## Has Lucas established any loss or damage?

852 Given my conclusions above, it is not necessary to address in any detail Lucas’ claim with respect to loss and damage. However, I will indicate briefly my views.

853 Lucas’ first claim was that had it not been for the pleaded representations, it would not have entered into the Contract at all. However, Lucas did not lead any evidence that it had suffered loss by reason of entering into the Contract. That claim must fail in any event on that account.

854 Lucas’ alternative claim is that it would have entered into a contract with AGA only on the basis that it would be fully compensated on a schedule of rates basis for all costs arising in respect of any delay in the Works. There are some difficulties with this contention.

855 First, even had Lucas been able to conclude a contract on a schedule of rates basis, it is by no means clear that such a contract would have included allowance for delays costs or even allowance for additional Preliminaries in respect of variations. In particular, there is no basis on which the Court could conclude that AGA would have been willing to contract on the basis that Lucas would be entitled to the cost of delay, however caused. The RFT issued by AGA contemplated that the Preliminaries would be fixed. It also included cl 18.8 precluding Lucas making a claim for delay costs. It is a matter of speculation as to how the parties would have negotiated the position with respect to these two matters, had the Contract proceeded on a schedule of rates basis.

856 Further, Mr Matthews gave evidence that it was not Lucas’ general practice to seek delay costs:

Q: Is it not important to you, when you’re formulating a tender, to understand how the principal proposes to allocate contractual risk?

A: Yes, it’s important.

Q: For example, if there’s only a very limited entitlement to claim extensions of time, wouldn’t you have to build that into the price of your tender?

A: Well, no. We’re still pricing it in a competitive marketplace. We can’t go and add money to our bid.

…

Q: So, for example, if you’re in a competitive bid situation, and you’re confronted with a proposed contract that doesn’t allow you to claim extensions of time, you can’t put extra money into the tender, more into your price, increase it, in order to protect yourself from the risk that the job will run over and you will have to incur the cost of delay yourself?

A: No. No, we do not build that price in.

857 This evidence adds to the uncertainty in identifying the terms of the Contract on which Lucas and AGA would have agreed if proceeding on a schedule of rates basis.

858 A pertinent matter bearing on this claim is that the evidence indicates that Lucas was keen to win the job as a way of gaining a toehold into the Western Australian market. It is evident that by reason of this desire, it was willing to accept a greater allocation of risk, than its formulation of its claim now supposes.

859 However, it is unnecessary to express a final conclusion about these matters, given my findings above.

860 It is also unnecessary to address other issues arising on Lucas’ misleading or deceptive conduct claim, including the issues of apportionability, and the AGA claim that the claim is, in any event, time barred.

## Summary and conclusion

861 For the reasons given above, Lucas’ claim based on an alleged contravention of s 18 of the ACL fails altogether.

862 Lucas’ claim with respect to breach of contract succeeds in part. It has established an entitlement to damages of $1,038,050.97 as follows:

|  |  |
| --- | --- |
| Additional water haulage | $525,612.96 |
| Deduction of liquidated damages | $280,000.00 |
| Increase in borrow pit footprint | $191,345.72 |
| Filter mattress and concrete fill for the Ponton Creek Bridge | $41,092.29 |
| **Total** | **$1,038,050.97** |

863 Lucas’ remaining breach of contract claims fail.

864 I will hear from the parties with respect to interest and costs.

|  |
| --- |
| I certify that the preceding eight hundred and sixty-four (864) numbered paragraphs are a true copy of the Reasons for Judgment herein of the Honourable Justice White. |

Associate:

Dated: 5 July 2019