Neutral Citation Number: [2019] EWHC 565 (TCC)

Case No: HT-2016-000104

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
TECHNOLOGY AND CONSTRUCTION COURT (QBD)

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 11/03/2019

Before:

MRS JUSTICE O'FARRELL DBE

- -

Between:

(1) TRIUMPH CONTROLS – UK LIMITED	**Claimants**
(2) TRIUMPH GROUP ACQUISITION CORPORATION	
- and -	
(1) PRIMUS INTERNATIONAL HOLDING COMPANY	**Defendants**
(2) PRIMUS INTERNATIONAL INC.	
(3) PRIMUS INTERNATIONAL CAYMAN CO	

- -
- -

Rajesh Pillai & Nathaniel Bird (instructed by **Reynolds Porter Chamberlain LLP**) for the **Claimants**
Edward Pepperall QC & Helen Gardiner (instructed by **Harrison Clark Rickerbys Limited**) for the **Defendants**

Reading dates: 13th & 14th June 2018
Hearing dates: 18th, 19th, 21st, 22nd, 25th, 26th, 27th, 28th June 2018
2nd, 3rd, 5th, 9th, 10th, 11th, 12th, 13th, 17th, 18th & 19th July 2018

- -

Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

.....

MRS JUSTICE O'FARRELL

Part 1 - Background	**Paragraphs** 1 – 96
The Share Purchase Agreement	66 – 87
The Dispute	88 – 96
Part 2 – Notice of Claims	**Paragraphs** 97 – 128
Clause 20 Service	102 – 111
Proper notice of nature and amount claimed	112 – 121
Clause 6.6 claim	122 – 128
Part 3 – Nadcap Warranty Claims	**Paragraphs** 129 – 247
Nadcap Issues	177
Warranty 6.1	178 – 193
Accreditation at time of completion	194 - 199
Manipulation of the 2012 Audit	200 – 225
Reasons for the 2013 failure	226 – 237
Impact of loss of Nadcap accreditation	238 – 244
Warranty 6.2	245 – 246
Conclusion	247
Part 4 – Operational Warranties Claim	**Paragraphs** 248 – 356
Delivery and quality issues	251 – 252
Operational warranty claim issues	305 – 306
Material contracts	307 – 313
Knowledge for the purpose of clause 8.2	314 – 317
Breach of the warranties	318 – 326
Disclosure	327 – 352
Completion Accounts	353 – 355
Conclusion	356

Part 5 – FLP Claim	**Paragraphs** 357 - 482
FLP Issues	395 – 397
Documents forming the FLPs	398 – 399
Scope of the warranty	400 – 402
Were the FLPs carefully prepared?	403 – 463
What should carefully prepared FLPs have shown?	464 – 470
Would Triumph have walked away from the acquisition of Primus or would the purchase price have been lower?	471 – 481
Conclusion on FLPs	482
Part 6 – Clause 6.6 Claim	**Paragraphs** 483 – 485
Part 7 – Quantum	**Paragraphs** 486 – 496
Part 8 - Conclusion	**Paragraphs** 497 – 498

Mrs Justice O'Farrell:

1. The claimants ("Triumph") are subsidiaries of Triumph Group, Inc. ("TGI"), a multinational aerospace and defence manufacturer and service provider based in Pennsylvania, USA.

2. The defendants ("Primus") are subsidiaries of Precision Cast Parts Corporation ("PCC"), a multinational manufacturer of complex metal components.

3. On 27 March 2013 Triumph and Primus entered into a share purchase agreement ("the SPA") whereby Triumph purchased the share capital of three Primus companies. The purchased companies, based in Farnborough, UK, and Rayong, Thailand, manufacture composite and metallic components for the aerospace industry.

4. The purchase price paid by Triumph under the SPA was US$ 76,530,145.

5. In these proceedings Triumph claims damages limited to US$ 63,530,145 in respect of alleged breaches of warranty, namely:

    i) the loss of Nadcap accreditation in respect of the Farnborough facility ("the Nadcap Claim");

    ii) undisclosed delivery and quality problems at Farnborough ("the Operational Warranty Claim");

    iii) failure by Primus to prepare financial projections with care ("the FLP Claim"); and

    iv) failure by Primus to notify Triumph of the claimed breaches of warranty ("the Clause 6.6 Claim").

6. Primus disputes the claims on the grounds that:

    i) the alleged breaches of warranty are denied;

    ii) Triumph failed to give adequate notice of the claims;

    iii) it is denied that causation has been established; and

    iv) the basis and valuation of quantum is disputed.

The aerospace manufacturing industry

7. The design, testing and final assembly of aircraft for supply to ultimate customers is carried out by prime contractors ("Primes"), also known as Original Equipment Manufacturers ("OEMs"). The OEMs operate production lines on which aircraft are assembled in large hangars.

8. Tier 1 suppliers are responsible for integrating and delivering substantial components of the aircraft, such as engines, major structural parts and avionics systems to OEMs for final assembly.

9. Tier 2 suppliers manufacture and supply components to Tier 1 suppliers for further integration into major components but do not have design responsibility. The Primus companies in Farnborough and Thailand purchased by Triumph are Tier 2 suppliers.

10. Tier 3 suppliers manufacture and provide individual parts and components.

11. Tier 4 suppliers supply materials and processing services.

12. The aerospace industry is highly competitive and OEMs are required to meet tight delivery schedules to deliver completed aircraft to their customers. As a result, OEMs demand similar timescales from their supply chains. The tight schedules and lean manufacturing approach, under which limited stocks of parts are held, creates pressure on the supply chain to meet delivery schedules and achieve the required product quality.

Composite material production at Farnborough

13. Composite materials are a combination of two or more materials, usually a sheet of resin and a reinforcement matrix. In the aerospace industry, composites are used because they are stronger, stiffer, lighter, more durable and can be more easily moulded into different shapes than their metal equivalents.

14. The most common composites used in the aerospace industry are carbon fibre reinforced plastic ("CFRP") and glass reinforced plastic ("GRP"). Carbon or glass fibres are woven into fabric and impregnated with a polymer resin, commonly polyester or epoxy, which acts as the bonding agent (known as "pre-preg" material). The pre-preg material is moulded into the desired shape and cured to form a solid component.

15. The Farnborough composites division facility of Primus specialises in three types of processes for the production of composites: hand lay-up, metal bond and compression moulding. The key steps in the production of composite parts at Farnborough can be summarised as follows.

16. Uncured composite manufacturing raw materials, such as pre-preg material, film adhesives and compounds, are kept in cold storage pending requirement. Each material has a specified storage temperature, to avoid deterioration of the material affecting the cure or bonding process, and a specified maximum shelf life, typically between 6 and 24 months. When it is ready to be used, the composite material is defrosted. Once defrosted, the frozen shelf life is replaced by a maximum working life. Any unused material can be re-frozen or chilled as specified and the working shelf life is reduced accordingly.

17. The defrosted rolls of flat film adhesive, resin impregnated glass or carbon fibre fabric pre-preg material are rolled out on a cutting table and cut to the required shape for ply lay-up. The cut plies are then placed into heat sealed plastic bags and refrozen for storage. The cutting process must be carried out in a controlled contamination area ("CCA"). The CCA maintains a positive air pressure to ensure that particles of dirt are pushed out of the room and away from the exposed material. The entrance to the CCA is fitted with an airlock and there is a clean filtered air supply, controlling temperature and humidity, to maintain the integrity of the uncured materials.

18. Some component parts require thicker sections for strength, rigidity or acoustic attenuation requirements. Such composites are achieved by the use of a honeycomb material, normally metallic or Nomex, a paper honeycomb coated in resin, that is sandwiched within the composite structure. The honeycomb is machined using circular table saws or routing tools and tool block guides to trim and create the necessary profile of the material. This task must be carried out in an environmentally monitored area ("EMA"), an area where contaminants detrimental to adhesion and bonding may be restricted and where basic environmental conditions such as temperature and humidity may be monitored. In addition, segregation of the metallic honeycomb from Nomex is required in order to avoid contamination by foreign objects which could affect bond strength. Honeycombs are usually degreased after machining and placed in heat sealed bags.

19. At Farnborough some of the composite assemblies comprise aluminium alloy clad metallic sheet parts. These require anodising and priming before bonding in the composite structure. During the anodising process, a thin anodic layer is deposited on the aluminium surface through electrolysis in a bath of chromic acid. After anodising, the parts are sent to the priming booth for spray application of primer to the bonding surfaces. Following curing of the primer, the anodised and primed parts are placed in protective bags before delivery to the clean room for assembly.

20. Before honeycomb is laid up into the composite structure, a film adhesive is applied to the bonding surfaces (reticulation). This is performed in a CCA environment. Backing film is removed from the adhesive and laid on the honeycomb surface. Heaters on a beam are passed slowly over the honeycomb and resin film, placed on a wire frame support. The heated resin film flows into the ends of the core cells, ensuring a good deposit of adhesive around the honeycomb, ready for bonding into the composite assembly.

21. Special surface lining is produced by filling honeycomb material with a compound called 'Black Ice' or 'Blue Ice', mixed chopped fibres and resin that is combined with an activator to begin the cure process. This process is carried out within a CCA. The material is pressed by hand into the honeycomb and cured before incorporation into the next level of composite assembly.

22. Tool preparation must be carried out following extraction of the final moulded products from the mould tool but before lay-up. The mould tool must be cleaned to ensure removal of all traces of resin. The tool surface is then cleaned and degreased in an EMA area before application of mould release. This prevents the resin adhering to the mould tool surface. The tools are then covered with film to ensure no contamination after cleaning and before lay-up. The tools are then moved to the cleanroom for the lay-up process.

23. The lay-up mould assembly process must be carried out in a CCA cleanroom. Each ply is laid onto the mould tool's surface in the correct orientation and sequence as defined by the design. A controlled environment is required to minimise the degradation of bond strength by any particulates or other foreign objects. The pre-preg and film adhesive plies and foaming adhesives are protected by a backing film to minimise contamination. Before use, the backing films are removed in sequence of application to the mould tool, layer by layer.

24. At the end of lay-up or during the lay-up stages, bagging is used to consolidate the layers. A bag is placed over the tool mould and sealed around the tool face perimeter using a special tacky sealing tape. Usually at least two vacuum line connectors are placed on the bag. On one connector a gauge will be attached to measure the level and sustainability of the vacuum. To the others the vacuum is applied by attaching the vacuum pipe connected to the cleanroom vacuum supply. The air is vacated from under the bag, creating negative pressure on the tools face and lay-up, compressing the plies and other assembly components so as to consolidate layers and ensure the resin is evenly spread.

25. The tool is placed into an oven or autoclave (a positive pressure vessel with a heater and a circulator) for the curing process. Following cure, the tool and cured part is removed from the oven or autoclave and the part is extracted from the mould tool surface. The cured parts are machined to create definition profile, using a computer numerically controlled machine.

26. Non-destructive testing ("NDT") is used to verify the integrity of the moulded part. The component part is then finished to specification, marked, inspected, packaged and dispatched.

27. The process for compression moulding is similar to the process described above but instead of a single surface tool for hand lay-up, the mould tools have two halves designed to be pressed together to make the mould. The moulding material, a compound of resin and chopped fibres, is pushed by hand into the heated mould cavity, the mould tool is closed in the press and cured under the heated tool pressure. The parts are then released from the mould tool and may be sent for post cure in the oven to complete the cure cycle before the finishing process.

28. The instructions for manufacturing a part are set out in written Methods of Manufacture ("MoMs") prepared by engineering staff. These must be kept up to date with any changes to the specification made by the customer. Primus is required to complete a "route card" for each composites item that is produced, recording the operator that completed each step in the production process for the part.

NADCAP accreditation

29. The National Aerospace and Defense Contractors Accreditation Program ("Nadcap") is an industry managed special process and product accreditation programme for the aerospace industry.

30. European safety regulations prescribe that UK organisations wishing to carry out manufacturing and production of aircraft, or associated components that are used for commercial air transport, must obtain a production organisation approval ("POA").

31. POA holders are legally responsible for certifying and releasing airworthy aircraft to their airline customers.

32. POA holders must demonstrate control of their supply chains. One way, but not the only way, of demonstrating this is through the Performance Review Institute ("PRI"), which administers Nadcap.

33. In order to obtain Nadcap accreditation, a supplier must subscribe to the rules of the Nadcap programme and pass an audit assessed against detailed criteria. Suppliers are re-audited on an annual basis (unless the supplier achieves 'merit' status, in which case the audit interval can increase up to a maximum of 24 months).

34. The Nadcap rules require the supplier to comply with the Nadcap standards and regulations and to notify the PRI of any changes that would have an effect on its accreditation. Holders of Nadcap accreditation can be audited at any time to verify that the supplier is maintaining its operations in accordance with Nadcap standards. If at any time a supplier is found to be in violation of these rules, the PRI has the right to suspend or revoke its accreditation.

Background to the sale

35. In 1961 the Primus Farnborough company was founded, initially known as St Bernard Plastics and subsequently known as St Bernard Composites.

36. In 2007 St Bernard Composites was purchased by Primus International Inc.

37. At the time of sale to Triumph in May 2013, the Farnborough facility comprised six separate buildings spread across an industrial estate in Farnborough, with a total floor space of 89,620 square feet.

38. In 2010 Primus International Bangkok Limited ("Primus Thailand") was established in Rayong, Thailand. The Rayong facility was purpose-built for composites production and metal machining, with a total floor area of 149,316 square feet (with space for expansion to 260,000 square feet).

39. In December 2010 machining operations commenced at Primus Thailand.

40. In April 2011 composites production commenced at Primus Thailand and an office was opened in Bangkok.

41. On 12 May 2011 St Bernard Composites was re-named Farnborough Composite Division Limited ("FCD").

42. On 9 August 2011 PCC acquired Primus International Inc.

43. In March/April 2012 PCC decided to put the companies up for sale.

44. On 13 September 2012 an initial meeting took place between Jim Hoover (Former President and CEO of Primus International), Greg Delaney (Vice President, Special Projects at PCC), Doug Fletcher (Executive Vice President/CEO of Primus), Dave Kornblatt (Chief Financial Officer of TGI) and Jeff Frisby (CEO of TGI) at TGI's headquarters in Pennsylvania to discuss the potential sale of the Primus companies.

The Information Memorandum

45. On 19 September 2012 a summary memorandum ("the Information Memorandum") was sent by PCC to TGI. The executive summary stated:

> "The Business is a global Tier II supplier of small to medium-size, hand lay-up, propulsion and structural composite components and assemblies to original equipment manufacturers ("OEMs") and Tier 1 suppliers in the aerospace industry. The Business also machines and processes metal aero structure components in its Southeast Asian machining and processing centre; Primus Composites' metal processing operations are Nadcap accredited. The two legal entities that comprise the Business, Farnborough and Thailand, are each wholly owned indirect subsidiaries of PCC…"

46. The reasons for sale were stated as follows:

> "On August 9, 2011, PCC (NYSE: PCP) acquired Primus International. PCC is a worldwide, diversified manufacturer of complex metal components and products, serving the aerospace, power generation, and general industrial markets. Primus International is a leading supplier of complex components and assemblies to the global aerospace industry, including swaged rods, machined aluminium and titanium components, and advanced composites.
>
> While the majority of Primus International is an excellent fit with PCC's short and long-term business strategy, Primus Composites is not. The composites manufacturing process and materials do not align well with PCC's core competencies. Additionally, applications utilising composite materials are not among PCC's targeted aerospace markets. Therefore, PCC has made the strategic decision to divest the Business."

47. The point of contact was stated to be Greg Delaney of PCC. Potential bidders were not permitted to contact any employee, customer or supplier of Primus Composites. The structure of the potential sale would be by sale of the shares of the Farnborough and Thai composites facilities. The purchase and sale of the companies would be on a "debt free, cash free basis".

48. The Information Memorandum contained an unaudited financial summary and detailed statements for prospective purchasers. The Primus Composites income statements showed:

    i) a forecasted increase in gross revenue from US$ 39.9 million in 2011 to US$ 99.8 million in 2017;

    ii) actual gross loss of US$ 3.4 million in 2011 and a gross loss of US$ 1.4 million forecast for 2012;

    iii) a gross profit of US$ 9.2 million forecast for 2013 and a gross profit of US$ 28 million forecast for 2017.

49. The income statements provided the following information in respect of earnings before interest and tax ("EBIT"):

i) actual loss of US$ 12.4 million in 2011 (-31%) and a loss of US$ 8.5 million forecast for 2012 (-16%);

ii) EBIT of US$ 1.8 million forecast for 2013 (3%) and US$ 20.3 million (20%) forecast for 2017.

50. The income statements provided the following information in respect of earnings before interest, tax, depreciation and amortisation ("EBITDA"):

i) actual loss of US$ 10 million in 2011 (-25%) and a loss of US$ 6.7 million (-12%) forecast for 2012;

ii) EBITDA of US$ 4 million (6%) forecast for 2013 and US$ 23.6 million (24%) forecast for 2017.

51. The balance sheets in the Information Memorandum showed:

i) total assets of US$ 57.5 million in 2011, with negative equity of US$ 4.4 million;

ii) a forecast for 2012 of US$ 59.1 million assets with negative equity of US$ 11.1 million;

iii) Primus was forecast to achieve positive equity value by 2015 and equity of US$ 34.9 million by 2017.

52. The strategy for making the composites business profitable was stated as follows:

> "The Business's vision is to be the leading Tier II manufacturer of medium to small sized, hand lay-up, propulsion and structural composite components. Key elements of executing the vision include:
>
> - Invest significant capital to position the business for growth…
>
> - Transform Farnborough into a technical development center, focused on development programs and specialty production.
>
> - Transfer established programs to Thailand, evolving it into the Business's primary production facility.
>
> - Establish new program development capability in Thailand…
>
> Large in-production programs have been successfully moved from Farnborough to Thailand since Rayong's operations began in the second quarter of 2011. Over the next few years production programs in Farnborough will continue to be moved to Thailand, resulting in a reduced Farnborough manufacturing footprint by 2016. Additionally, new customer programs will be initiated directly in Thailand by the fourth quarter of 2012.

> Initially these new programs will require significant technical support from the Farnborough engineering staff. However, as noted above, the Business is in process of expanding its program development capability in Thailand, which will have fully independent development capability by 2014…"

53. Primus identified its largest customers as Rolls-Royce, Aircelle and Airbus and stated:

> "More than ninety five percent of the Business's composite sales are derived from long-term customer agreements …"

54. Regarding capacity, the Information Memorandum stated:

> "Farnborough has the capability to produce 400,000 hours of composite product annually… The Farnborough facilities are currently operating near capacity…
>
> Including 2012 investments, Rayong has 180,000 annual hours of composite manufacturing capacity. However the facility's existing composite footprint, with additional equipment, is capable of producing 350,000 hours of composite product annually.
>
> The current machining capacity at Rayong is 100,000 annual hours. The machining footprint, with additional equipment, is capable of producing 150,000 hours annually. Metal processing capacity is 30,000 hours…"

55. The Information Memorandum stated that quality accreditation and approvals held by Primus included Nadcap accreditation for composite manufacturing, chemical processing and NDT.

56. The financial statements in the Information Memorandum indicated that Primus was a loss-making business but it was projected to become profitable within a few years. Future profitability was dependent on success of the strategy to transfer the labour intensive work from Farnborough to Thailand.

57. On 1 October 2012 TGI submitted a non-binding indicative bid in the sum of US$ 60 million, on a "cash free, debt free" basis.

58. In October 2012 Primus made a presentation to TGI, setting out its corporate strategy, details of its long-term customers and potential new business opportunities. The presentation explained that the anticipated improvement in the profitability of the business was dependent on a successful transfer of the labour-intensive machining and composites processes from Farnborough to Thailand.

59. On 28 October 2012, Mr Delaney of PCC prepared and sent to Mr Wilkin of TGI the Long Range Plan ("the LRP"), providing financial projections for Primus up to and including 2017. The consolidated financial statements forming part of the LRP showed the EBIT margin for 2012 as -11.8%, rising to 20.3% in 2017. The EBITDA margin for 2012 was shown as -8.5%, rising to 23.6% in 2017.

60. On 9 November 2012 Triumph increased its indicative bid to US$ 65 million to secure exclusivity rights in respect of the proposed share sale.

61. On 26 November 2012 Triumph signed a letter of intent, granting it exclusivity until 1 January 2013 to allow it to carry out due diligence and pursue acquisition of the Primus companies. On 17 December 2012 this period of exclusivity was extended to 1 February 2013.

62. On 4 January 2013, Mr Fletcher of Primus gave a business update presentation to Triumph, identifying commercial issues, progress and delays to the forecasted business transfers to Thailand.

63. Triumph carried out its due diligence exercise. For that purpose, Triumph was provided with access to a virtual data room of documents selected by Primus. Timothy Wilkin, Manager of Corporate Development at TGI, had overall conduct of the due diligence exercise, reporting to Mr Kornblatt. Financial due diligence was carried out by Ernst & Young LLP ("EY"). Legal due diligence was carried out by Ashurst LLP. KPMG were engaged to provide tax advice on the purchase. Chandler & Thong-ek provided Thai legal advice and Fisher & Phillips LLP provided US legal advice.

64. On 7 January 2013 EY provided its financial due diligence report to TGI, including the following recommendations:

> "We recommend that operational due diligence covers the extent to which efficiencies are likely to be achieved and the timing of such effectiveness. The Group is at a critical point in turning from EBITDA loss to profit. In light of uncertainties surrounding the timing and quantum of the profit improvement, you may wish to protect yourself through either:
>
> - Deferring completion pending proof of Q4FY12 and Q1FY13 forecasts by actual results; or
>
> - Structuring the Transaction so that part of the consideration is contingent upon the FY13 forecast…
>
> …
>
> we recommend that Triumph include the following in the transaction terms:
>
> – Finalisation and signing of 31 March 2012 financial statements prior to deal closure;
>
> – Access to 31 December 2012 Management accounts to be provided. We understand that these should be available 2 working days post close.
>
> – Robust completion accounts process to measure completion net assets versus target Sep12A

> – Robust warranties and indemnities in relation to financial information provided…"

65. On 8 February 2013 TGI passed a resolution authorising the acquisition of the Primus companies for a purchase price not to exceed US$ 65 million.

The Share Purchase Agreement ("SPA")

66. On 27 March 2013 Triumph (as the Buyers) and Primus (as the Sellers) entered into the SPA.

67. Completion, which was subject to the novation of agreements and transfer of licences, was achieved on 3 May 2013.

68. Clause 3.1 of the SPA stipulated that consideration for the sale of the shares in the defendant companies was a total of US$ 33,530,145. Clause 3.2 provided that Triumph would pay the outstanding debt owed by Primus to PCC in the sum of US$ 30,000,000.

69. Clause 4 of the SPA provided for completion accounts to be prepared in accordance with schedule 7, from which the purchase price would be adjusted to reflect the actual net book value of Primus ("the Adjusted Purchase Price"). The Adjusted Purchase Price was agreed at US$ 46,530,145, requiring Triumph to pay an additional sum of US$ 13,000,000, a total purchase price of US$ 76,530,145.

70. Clause 6.2 of the SPA states:

> "Pending Completion the Buyers and any person authorised by it shall be given reasonable access to the books and records of each Target Company and the Sellers shall give all such information and explanations as the Buyers or any person acting on the Buyers' behalf may reasonably request."

71. Clause 6.6 of the SPA states:

> "Immediately prior to Completion, the Sellers shall deliver to the Buyers written confirmation notifying the Buyers of any breach of the Warranties or of the indemnity set out in clause 28 ("Breach Notice") which shall include the Sellers' estimate (acting reasonably and in good faith) of the likely value of any such breach ("an Estimate"). In the event the Estimate is:
>
> 6.6.1 less than or equal to US$ 1,500,000 the parties shall proceed to Completion in accordance with clause 7;
>
> 6.6.2 less than or equal to US$ 6,353,014 but in excess of US$ 1,500,000, the parties shall, subject to clause 6.7, proceed to Completion in accordance with clause 7;
>
> 6.6.3 in excess of US$ 6,353,014, either party shall be entitled to elect by notice in writing to the other not to complete the sale and purchase of the shares in accordance with clause 7, in which case this agreement shall

> automatically terminate save that the rights and liabilities of the parties which have accrued prior to termination shall continue to subsist including those under this clause 6.6 …"

72. Clause 8.1 of the SPA states:

> "The Sellers warrant to the Buyers in the terms of the Warranties as at the date of this agreement and the Completion Date."

73. Clause 8.2 of the SPA states:

> "Warranties qualified by the expression "so far as the Sellers are aware" (or any similar expression) are deemed to be given to the actual knowledge of the Sellers after they have made all reasonable enquiries of Doug Fletcher, Paul Jerram, John Merritt, Roger Day and Alex Beysen, who shall themselves have made due and careful enquiries in respect of the aspects of the business of the Target Companies for which they are respectively responsible."

74. "Warranties" are defined in clause 1 as the warranties in clause 8 and Schedule 3.

75. The Warranties in Schedule 3 include the following:

> "6.1 Each Company has, and has materially complied with, all licences, consents, permits and associated registrations and authorities ("Permits") necessary to the carrying on of its business in the places and in the manner in which its business is now carried on.
>
> 6.2 No notice has been received by either Company to suggest that any of the Permits referred to in paragraph 6.1 of this Schedule 3 should be suspended, cancelled, revoked or not renewed on the same terms and so far as the Sellers are aware there are no pending or threatened proceedings which might affect the Permits.
>
> 7.1 Neither Company is:
>
> (a) engaged in any litigation … or other proceedings or hearings …
>
> (b) the subject of any investigation, inquiry or enforcement proceedings …
>
> 7.2 So far as the Sellers are aware, no such proceedings, investigation or enquiry, as are mentioned in paragraph 7.1 of this Schedule 3, have been threatened or are pending and so far as the Sellers are aware no matter exists which might give rise to such proceedings, investigation or enquiry…

> 9.1 Neither Company has received written notice that there is, nor so far as the Sellers are aware are there any circumstances which may result in, any claim with a value in excess of £ 75,000 in respect of any goods or services supplied by the respective Company for which either Company is liable.
>
> 9.2 So far as the Sellers are aware, neither Company has supplied or agreed to supply goods which have been, or so far as the Sellers are aware will be, defective or which fail, or so far as the Sellers are aware will fail, to comply with the terms of sale …
>
> 10.3 Neither Company has defaulted under or breached in any material respect a Material Contract …
>
> 19.5 So far as the Sellers are aware, the forward looking projections relating to the Companies have been honestly and carefully prepared."

76. "Material Contract" is defined by clause 1 of the SPA as:

> "any contract or arrangement pursuant to which either Company is entitled to receive or is obliged to pay an annual amount in excess of US$ 500,000."

77. Clause 9 of the SPA states:

> "9.1 The Sellers shall not be liable for a Claim … (each a "Deductible Claim") unless the amount of all Deductible Claims when taken together exceeds US$ 1,500,000 in which case the Buyers shall only be entitled to recover the amount by which the limit in this clause 9.1 is exceeded. The liability of the Sellers shall absolutely determine and cease if legal proceedings have not been issued and served within nine months of the written notice given in accordance with clause 9.7.
>
> 9.2 Save in respect of … the aggregate liability of the Sellers for all Claims… when taken together shall not exceed US$ 15,000,000 …
>
> 9.4 Notwithstanding any other provision of this agreement, the aggregate liability of the Sellers for all claims made under this agreement … shall not in any event exceed US$ 63,530,145.
>
> 9.5 The Sellers are not liable for a Claim … to the extent that the matter the subject of the claim:
>
> 9.5.1 is Disclosed; or

9.5.2 is provided for in the Accounts …

9.7 The Sellers are not liable for a Claim … unless the Buyers have given the Sellers notice in writing of the claim, summarising the nature of the claim as far as it is known to the Buyers and the amount claimed…

9.7.2 … within the period of eighteen months beginning on the Completion Date… "

78. "Claim" is defined in clause 1.1 as:

"a claim for breach of any of the Warranties …"

79. "Disclosed" is defined in clause 1.1 as:

"fairly and clearly disclosed in writing in or under the Disclosure Letter (with sufficient detail to identify the nature of the matter disclosed)."

80. "Accounts" are defined in clause 1.1 as:

"the audited financial statements of each Company as at and to the Accounts Date, including the balance sheet and profit and loss account for each Company together with the notes on them and the respective auditor's and directors' reports."

81. "Accounts Date" is defined as 31 March 2012.

82. Clause 20 of the SPA states:

"20.1 A notice given under this agreement:

20.1.1 shall be in writing …

20.1.2 shall be sent for the attention of the person, and to the address specified in this clause 20 (or such other address or person as each party may notify to the others in accordance with the provisions of this clause 20) …

20.2 Any notice to be given to the Sellers under this agreement is deemed to have been properly given if it is given to any two of the persons named in clause 20.3 …

20.3 The addresses for service of notice are:

20.3.1 SELLERS

…

20.3.1.2 for the attention of: Roger A.Cooke, Senior vice President & General Counsel …

> 20.3.1.5 with copies to:
>
> (a) Greg Delaney, Vice President Special Projects, Precision Castparts Corp …
>
> (b) Paul Edelstyn, Precision Castparts Corp …
>
> (c) Alison Scott, Harrison Clark LLP …"

83. Clause 26 of the SPA provides that the governing law of the agreement is the law of England and the Courts of England have exclusive jurisdiction to settle any dispute or claim arising out of or in connection with the agreement.

84. On 27 March 2013 Primus issued its disclosure letter to Triumph:

> "This letter is the Disclosure Letter referred to in the Agreement and constitutes formal disclosure to the Buyers for the purposes of the Agreement of the facts and circumstances which are inconsistent with the warranties referred to in clause 8 and contained in Schedule 3 of the Agreement ("Warranties"). Such facts and circumstances, provided they are Disclosed, will be deemed to qualify the Warranties accordingly."

85. On 3 May 2013 the Knowledge Group (defined below) signed certificates relating to the warranties, each stating that they had carefully reviewed the warranties in the SPA and the related information in the Disclosure Letter and:

> "I further certify that, to the best of my knowledge, after due inquiry and investigation, those warranties and the related information in the Disclosure Letter are complete, accurate and true as of the date of this certificate."

86. On 3 May 2013 Completion under the SPA was achieved.

87. On 27 March 2014 the Completion Accounts were settled. The Adjusted Purchase Price was determined to be US$ 46,530,145, requiring Triumph to pay an additional sum of US$ 13 million.

The Dispute

88. Following the acquisition, Triumph discovered matters that it considered demonstrated that the contractual warranties were false. In September 2013, Mr Fletcher notified Marylou Thomas, Vice President Operations at TGI, that there was a significant shortfall in revenue, mainly due to operational issues at Farnborough. He identified delivery arrears at Farnborough with a value of US$ 3.1 million. In October 2013, financial performance of the companies was reported as significantly worse than forecast. Mr Fletcher explained that the poor performance was caused by shortfalls in production, driven by equipment downtime, excess employee turnover and quality issues, late approval of an agreed contract amendment with Rolls Royce, late approval for a product order from Spirit, and transfer delays from Farnborough to Thailand. On 18 December 2013 Farnborough lost its Nadcap composites accreditation.

89. Triumph considers that the long-term financial performance of the purchased companies has been disastrous, requiring substantial financial support and extra management input to turn the business around and avoid collapse. Despite Triumph's efforts and injections of cash (of approximately US$ 85 million), the companies are some US$ 120 million in debt and it is claimed that the shares that Triumph purchased are worthless.

90. Primus considers that this is a case of 'buyer's remorse'. Triumph knowingly purchased loss-making companies. They initially offered US$ 60 million on an asset-based valuation but increased their bid by US$ 5 million in order to obtain exclusivity. They proceeded despite disclosure of serious delivery arrears at the Farnborough site and more limited quality issues. Indeed, such disclosures did not even cause them to renegotiate the purchase price.

91. By letter dated 30 October 2014 Triumph gave notice to Primus of claims made for breach of warranties in the SPA. The claims identified included the Nadcap warranty claim (breach of Warranties 6.1 and 6.2), the Operational warranty claim (breach of Warranties 7.2, 9.1, 9.2 and 10.3) and the FLP claim (breach of Warranty 19.5).

92. On 23 February 2015 Primus submitted its response to the claims, disputing the allegations and raising issues of notice, exclusions of liability and limitation defences.

93. On 6 August 2015 proceedings were issued.

94. The claims for breach of warranty are capped at a value of US$ 15 million.

95. A separate claim is advanced under Clause 6.6 of the SPA. Triumph's case is that this is not a breach of warranty claim and the value is capped at US$ 63.5 million.

96. The parties have agreed a list of key issues in the case. The material areas of dispute can be summarised as follows:

    i) Did Triumph give adequate notice of its claims for the purpose of the SPA?

    ii) Was Primus in breach of warranty in respect of the loss of Nadcap accreditation on 18 December 2013?

    iii) Was Primus in breach of warranty in respect of delivery and quality issues with supplies to customers?

    iv) Was Primus in breach of warranty in respect of the FLPs prepared showing the financial forecasts based on anticipated rates of transfer of work to Primus Thailand?

    v) Was Primus in breach of clause 6.6 of the SPA by not delivering notice of breach and an estimate of loss to Triumph prior to Completion?

    vi) What recoverable loss and damage was sustained by Triumph by reason of any such breaches?

Notice of Claims

97. Clause 9.7 excludes liability for a "Claim" unless, within 18 months from Completion, Triumph gave Primus notice in writing of the Claim:

    i) summarising the nature of the Claim as far as it was known to Primus; and

    ii) the amount claimed.

98. The purpose of such provisions is to give commercial certainty to the parties, so that parties can know where they stand and act accordingly: *ENER-G Holdings plc v Hormell* [2012] EWCA Civ 1059 per Gross LJ at [58]; *Teoco UK Ltd v Aircom Jersey 4 Ltd* [2018] EWCA Civ 23 per Newey LJ at [22].

99. In *Senate Electrical Wholesalers Ltd v Alcatel Submarine Networks Ltd* [1999] 2 Ll.Rep.423, a case in which the notice provision required *"particulars of the grounds on which [a] claim is based,"* the commercial importance of certainty was emphasised by Stuart-Smith LJ at [91]:

> "Certainty is only achieved when the vendor is left in no reasonable doubt not only that a claim may be brought but of the particulars of the ground upon which the claim is to be based. The clause contemplates that the notice will be couched in terms which are sufficiently clear and unambiguous as to leave no such doubt and to leave no room for argument about the particulars of the complaint. Notice in writing is required in order to constitute the record which dispels the need for further argument and creates the certainty. Thus there is merit in certainty and accordingly, in our judgment the point taken by the [vendor] is not a matter of mere technicality and is not without merit."

100. By letter dated 30 October 2014 Triumph gave notice to Primus of claims made for breach of warranties in the SPA:

> **Nadcap warranty claim (Warranty 6.1 & 6.2)**
>
> "[14] In breach of Warranty 6.1, Farnborough had not been materially complying with either the quality management or composites manufacturing accreditation on a continuing basis before the Buyers' acquisition.
>
> [25] Further, the evidence… indicates that Farnborough had received notice at the material times to *"suggest"* that, as a result of the poor quality management at Farnborough (among other things), certain of the accreditations… should *"be suspended, cancelled, revoked or not renewed on the same terms"*. The fact of such notice was not disclosed…
>
> **Operational warranty claim**
>
> **Breaches of Warranty 7.2**
>
> [32] The Sellers knew at the date of the SPA and at Completion that Farnborough was persistently failing to meet its contractual

obligations to make on-time delivery to customers of products at the contractually required standard of quality.

[33] The scale of the problem is most readily demonstrated by the customer scorecards for Farnborough's major customers, namely Airbus, Aircelle, Rolls-Royce and Walden's in the months leading up to the acquisition of the Companies …

[35] Farnborough's failure to deliver orders to its customers in accordance with its contractual obligations put it at risk of claims and legal proceedings from those customers…

[37] Rolls-Royce informed Farnborough in 2012 that it intended to impose the Red Flag procedure on Farnborough as a result of the deterioration in Farnborough's OTD rate and a number of orders being delivered with quality defects…

[38] Paul Jerram held discussions with Rolls-Royce with a view to persuading Rolls-Royce not to implement the full Red Flag process and agreed that, as an alternative, Farnborough would appoint someone within PCC to carry out the COP. This alternative was implemented during the course of 2012 and continued as at the date of the SPA and Completion…

Breaches of Warranty 9.1

[46] The Buyers rely on the same examples and facts set out … in respect of the Sellers' breaches of Warranty 7.2 …

Breaches of Warranty 9.2

[49] … the Companies, in particular Farnborough, were regularly supplying their customers with products that did not comply with their terms of sale. The number of "escapes" or non-conforming / defective products supplied is documented in complaints from customers and in reports from the quality management team …

Breaches of Warranty 10.3

[54] As set out above in respect of Warranty 7.2, the Companies regularly failed to deliver orders to their major customers on time. This was in material breach of their contractual obligations to their customers Airbus, Aircelle, Rolls-Royce and Walden's. The contracts with these customers were Material Contracts, as confirmed by the Sellers' disclosures against Warranty 10.3 in the disclosure letter…

The FLP warranty claim

Breaches of Warranty 13.2

[61] The Sellers knew that there was insufficient stock to meet customer orders and allow for the suspension of manufacturing at the Farnborough site for the period of the transfer of the tooling equipment to the Thailand site. In other words the Sellers knew that the level of stock was not reasonable having regard to the anticipated demand for:

61.1.1 stock generated by existing orders; and

61.1.2 buffer stock generated by the need to effect the transfer to the Thailand site…

[63] The inability to move production to the Thailand site has had a serious effect on the Companies' profitability …

Breaches of Warranty 19.5

[67] As set out above, the forecast for the number of production hours to be transferred to the Thailand site was not being met as at the date of the SPA and as at Completion. These forecasts were disclosed by the Sellers to the Buyers in the forward looking projections included in the data room (the Long Range Plans) but were not updated, notwithstanding the fact that Paul Jerram and Roger Day (among others) knew that the forecasts were not being met. In those circumstances and at the very least, the relevant projections were apparently not prepared with reasonable and due care…

Quantum

[70] The Buyers have calculated their Claims by reference to the diminution in value of the Companies as a result of the breaches of the Warranties. They have adopted two alternative approaches to this calculation …

70.1.1 the reduction in the operation income of the Companies against the operating income forecast in the Memorandum (US$34,800,000) and

70.1.2 the sum of all losses identified to date caused by the breaches of the Warranties and the projected losses for Financial Year 2016 and Financial Year 2017 so caused (US$26,500,000).

[71] The diminution in value of the Companies under each method of calculation is considerably in excess of the US$15,000,000 limit under clause 9.2 of the SPA for all Claims in aggregate. Accordingly, the Buyers claim US$15,000,000 in aggregate for Claims under the SPA, but not including the Buyers' costs and all other Losses not limited by clause 9.2. The calculation of quantum may be subject to expert evidence should

> the Claims not be met by the Sellers and legal proceedings ensue …"

101. Primus's case is that the above letter failed to provide adequate notice of the claims now advanced as required by the SPA, in that:

i) notice was not given in accordance with the required contractual mechanism set out in clause 20;

ii) the letter did not constitute proper notice of the claims now pursued as required by clause 9.7; and

iii) no notice was given of a claim pursuant to clause 6.6.

Clause 20 service

102. Clause 20 stated that any notice under clause 9.7 must be sent:

i) as set out in clause 20.3.1.2, for the attention of Roger A. Cooke, Senior Vice President and General Counsel (or such other person as Primus notified to Triumph); and

ii) as set out in clause 20.3.1.5, with copies to (a) Greg Delaney, Vice President Special Projects of PCC, (b) Paul Edelstyn of PCC and (c) Alison Scott of Harrison Clark LLP.

103. In a letter dated 15 August 2013, Ruth Beyer, Senior Vice President and General Counsel of PCC, notified Triumph that Mr Cooke had retired, and requested that all notices and correspondence served pursuant to the SPA be directed to her. Such letter was notice for the purposes of clause 20.1.2 that Ms Beyer had replaced Mr Cooke as the necessary recipient of any notice, including any notice pursuant to clause 9.7.

104. Despite that notification, the letter of claim dated 30 October 2014 was sent for the attention of Mr Cooke, with copies to Mr Delaney, Mr Edelstyn and Ms Scott.

105. Mr Pepperall QC, on behalf of Primus, submits that such letter was not valid service of the notice under clause 20.1.2 because it was sent for the attention of Mr Cooke and not for the attention of Ms Beyer.

106. Mr Pillai, on behalf of Triumph, relies on clause 20.2 which provides that:

> "Any notice to be given to the Sellers under this agreement is deemed to have been properly given if it is given to any two of the persons named in clause 20.3."

He submits that Mr Delaney, Mr Edelstyn and Ms Scott are named in clause 20.3.1.5. Service of a copy of the notice on each of those individuals was valid service for the purpose of clause 20.

107. Mr Pepperall submits that clause 20.2 is limited to the position where there is a failure to provide copies to each of the three individuals named in clause 20.3.1.5. It does not

relieve Triumph from its obligation to serve the notice on PCC's General Counsel, namely, Ms Beyer. Properly construed, the minimum notice required by clause 20 was:

i) a notice sent for the attention of Ms Beyer; and

ii) a further copy to at least one of Mr Delaney, Mr Edelstyn and Ms Scott.

108. I am satisfied that the letter dated 30 October 2014 was served validly on Primus for the following reasons.

109. Firstly, the purpose of the clause 20 procedure was to ensure that any formal notice served by Triumph would come to the attention of senior members of PCC or its legal representative. Such purpose would be achieved by service of the notice on any one, or more, of the individuals named in clause 20.3. The requirement for the notice to be given to at least two of the named persons allowed for the possibility that one or more of those individuals might be unavailable or uncontactable when the notice was served and, therefore, increased the likelihood that the notice would be read promptly.

110. Secondly, on a plain reading of the words used, clause 20.2 did not limit its ambit to additional copies of the notice. The reference to *"any two of the persons named in clause 20.3"* did not draw any distinction between sub-clauses 20.3.1.2 and 20.3.1.5. The procedural requirements of clause 20 were satisfied by service on any two of the individuals named in clause 20.3.

111. The letter of claim was served on three of the individuals named in clause 20.3. Therefore, by reason of clause 20.2, it was deemed to have been given properly in accordance with the SPA.

Proper notice of nature and amount claimed

112. Primus's case is that Triumph failed to summarise *"the nature of the claim as far as it is known to the Buyers and the amount claimed"* as required by clause 9.7 of the SPA. Mr Pepperall submits that:

i) the nature of the claim notified under Warranty 10.3 was that Primus failed to deliver orders to major customers on time; no notice was given of any complaint that there were quality breaches;

ii) the nature of the claim notified under warranty 19.5 was that Primus failed to update the LRPs despite knowing that the number of production hours to be transferred to Thailand were not being met at the date of the SPA or at Completion but:

a) the case now pleaded is based on criticisms of the forecasts made in October 2012, not on an alleged failure to update the forecasts;

b) the case is no longer confined to the forecasted production hours but extends to labour costs, scrap costs, raw material costs, revenue from transferred programmes and revenue from new business; and

c) notice of a claim in respect of the LRP was given but this did not include any of the other documents now relied upon as comprising the FLPs;

iii) the nature of the claim for damages changed from the notified claim for lost income or trading losses to the pleaded claim for diminution in value of the shares.

113. *Odebrecht Oil and Gas Services Ltd v North Sea Production Co Ltd* [1999] 2 All ER 405 (TCC) concerned a claim for breach of contract where the relevant clause stipulated that written notice of the breach should be given, specifying its nature and an estimate of damages. Dyson J (as he then was) considered the requirements for valid notice of such a claim at p.412:

> "The purpose of the notice is to enable discussions to take place between the parties with a view to possible agreement or, more likely, to enable the inquisitorial process to be conducted by the expert. Either way, no more than a general description of the nature of the alleged breaches is needed to allow the process to begin."

114. The general principles to be applied when considering the adequacy of any notification of claims were set out by Gloster J in *RWE Nukem Limited v AEA Technology plc* [2005] EWHC 78 (Comm) at [10]:

> "i) Every notification clause turns on its own individual wording.
>
> ii) In particular due regard must be had to the fact that where such notification clauses operate as a condition precedent to liability (as in this case) it is for the party bringing a claim to demonstrate that it has complied with the notification requirement in that it gave proper particulars of its claims and did give those specific details as were available to it …
>
> iii) That wording must, however, be interpreted by reference to the commercial intent of the parties; that is to say, the commercial purpose that the clause was to serve. In a case such as this "the clear commercial purpose of the clause includes that the vendor should know at the earliest practical date in sufficiently formal written terms that a particularised claim for breach of warranty is to be made so that they may take such steps as are available to them to deal with it"; in other words "that the notice should be informative" …
>
> iv) Where the clause stipulates that particulars "of the grounds on which a claim is based" are to be provided: "Certainty is a crucial foundation for commercial activity. Certainty is only achieved when the vendor is left in no reasonable doubt not only that a claim may be brought but of the particulars of the ground upon which the claim is to be based. The clause contemplates that the notice will be couched in terms which are

> sufficiently clear and unambiguous as to leave no such doubt and to leave no room for argument about the particulars of the claim" ...
>
> v) In all cases it is important to consider the detailed claim being made in terms of both the breach complained of and the remedy being sought, to ensure that it was a claim which was properly notified."

115. In this case clause 9.7 stipulates that Triumph was required to summarise the nature of the claims as far as known and the amount claimed. This would not include full details or particulars of the claims, such as required in a pleading: *Forrest v Glasser* [2006] EWCA Civ 1086 per Ward LJ stated at [21] & [24]; *ROK plc v S Harrison Group Limited* [2011] EWHC 270 (Comm). However, the description and quantification of the claims should be such as to give formal, unambiguous notice as to the basis of the allegations, so that Primus could investigate, respond to and make financial provision for the claims.

116. In my judgment, adequate notification was given of the claims for breach of warranty for the following reasons.

117. Firstly, the letter of claim clearly identifies breaches of warranty based on quality defects and late delivery. Primus accepts that express notice was given as to the delivery issues causing breaches of Warranty 10.3 at paragraph [54] of the letter. Although that paragraph does not identify quality issues, it refers to the breaches of Warranty 7.2 identified earlier in the letter. The breaches of Warranty 7.2 are summarised at paragraph [32] as delivery and quality issues. The contemporaneous documents indicate that such breaches were linked in that the quality issues (defective components requiring re-work or concessions) caused many of the delivery issues. The letter also identifies breaches of Warranties 9.1 and 9.2 based on quality and delivery issues at paragraphs [46] and [49]. Triumph's case is that the delivery and quality issues affected its key customers. Triumph asserted in the letter that the key contracts affected were "Material Contracts". Therefore, reading the allegations under Warranty 10.3, 7.2, 9.1 and 9.2 together would notify Primus that the complaints extended to quality and delivery issues.

118. In any event, the fact that the quality issues were identified against some, but not other warranties, would not preclude pursuit of the claims, provided that the nature of the claims was sufficiently clear. In this case, the quality issues were fairly and clearly identified so as to give adequate notice that Primus was alleged to be in breach of its key customer contracts by reason of delivery and quality issues.

119. Secondly, adequate details were given as to the nature of the claim for breach of Warranty 19.5. Paragraph [67] of the letter alleged that the FLPs were not prepared with reasonable and due care. The thrust of the complaint was the lack of care in forecasting the transfer of business from Farnborough to Thailand, leading to reduced operating income and/or losses. Particulars were not given as to each and every inaccuracy in the forecasts. For the reasons set out above, that level of detail was not required. It was clear from the letter that Triumph alleged that the financial projections presented a false picture of the profitability of the Companies, the errors concerned the transfer of the business to Thailand and Primus was held responsible for the errors.

120. Reference was made to the forward-looking projections ("Long Range Plans") in the data room. Contrary to Primus's submissions, the allegation was not limited to the LRP provided by Mr Delaney to Mr Wilkin on 28 October 2012. The letter refers to more than one forecast. Mr Pillai makes a valid point that the phrase *"forward looking projections"* is not defined in the SPA and is not a term of art. It should therefore be given its natural and ordinary meaning, which is that it encompasses any projection as to the future performance of Primus. That includes the forecasts in the LRP, the documents identified as foreward looking projections in the Dataroom, the forecasts in the management presentation in October 2012 and the business update presentation in January 2013.

121. Thirdly, there was no material change to the nature of the claim for damages. The claim was identified in paragraph [70] of the letter of claim as *"the diminution in value of the Companies as a result of the breaches of the Warranties."* That forms the basis of the pleaded claims. The method of calculating the damages was stated to be subject to expert evidence, which would include opinion evidence as to the proper method of valuation. The quantum was expressly stated to be subject to the US$ 15 million limit set out in clause 9.2, as currently pleaded in respect of the warranty claims.

Clause 6.6 claim

122. It is common ground that no notice was given of a claim under clause 6.6 of the SPA. The claim was not advanced by Triumph until amendment of its Particulars of Claim dated 9 March 2016, increasing the value of the claim from US$ 15 million to US$ 63,530.145.

123. Mr Pillai submits that clause 9.7 does not apply to claims under clause 6.6 because a claim for breach of clause 6.6 is not a "Claim" as defined in clause 1.1 of the SPA. Mr Pepperall submits that the notice required under clause 6.6 is notice that Primus was in breach of warranty and therefore it falls within the definition of a "Claim".

124. Clause 6.6 obliged Primus to provide written confirmation to Triumph of any breach of the warranties, together with an estimate of the likely value of such breach. The purpose of a breach notice was to enable Triumph to determine whether it could withhold sums from the purchase price due under the SPA or walk away from the transaction, depending on the value of identified breaches of warranty.

125. Triumph's case is that it was deprived of the opportunity of walking away from the transaction because, prior to Completion, Primus failed to notify it of the breaches of the warranties now claimed in the litigation. Triumph must have been aware of that alleged failure by the date that it sent its letter of claim because it is common ground that Primus did not issue any breach notice to Triumph in respect of the breaches of warranty set out in the letter.

126. "Claim" is defined as *"a claim for breach of any of the Warranties".* The clear commercial purpose of the notice regime was to ensure that Primus should know the nature and value of the claims against it within 18 months of Completion so that it could respond to the allegations and make appropriate financial provision in its accounts. Construing those words having regard to that purpose, the parties must have intended that all claims in respect of breaches of the warranties would be properly notified, including the amount claimed.

127. The alleged breach under clause 6.6 is the failure of Primus to serve a breach notice prior to Completion. Failure to serve a notice of breach is different in kind from the alleged underlying breach of warranty. However, the clause 6.6 claim is dependent on, and arises out of, the alleged breaches of warranty. The commercial purpose served by clause 9.7 would be defeated if Triumph were required to give notice of the initial breach, but not the failure to disclose such breach, which would have the effect of increasing the value of the claim by nearly US$ 50 million. The intention of the parties must have been that a "Claim" under the SPA would include any direct claim for breach of warranty together with any claim arising out of a breach of warranty.

128. Properly construed, clause 9.7 obliged Triumph to give notice of all claims in respect of any breach of warranty within 18 months of Completion, including a claim under clause 6.6. Triumph failed to give notice of its claim under clause 6.6. Therefore, it is precluded from pursuing such claim in the litigation.

Nadcap Warranty Claim

129. Triumph's case is that in breach of warranty 6.1, at the material times and as at the date of Completion, Farnborough was not materially compliant with the 2012 Nadcap Composites Manufacturing accreditation. The pleaded case identifies and relies on the following facts and matters:

    i) Farnborough was not compliant with the Nadcap requirements in 2012, as evidenced by Richard Tye's email dated 24 September 2012.

    ii) Farnborough achieved re-accreditation in the 2012 Audit by manipulation. During the 2012 audit the auditor was not shown (i) clean room 2; (ii) the T700 glass panel and certain press moulding and/or welding activities; (iii) failed blocker door test pieces; and (iv) trainee staff members who ordinarily worked in the press shop.

    iii) The root causes of the non-conformance reports ("NCR") identified in the 2012 Audit were not properly addressed, no adequate or sustained corrective action was taken and no adequate action was taken to prevent recurrence of such systemic nonconformance. Farnborough failed the 2013 Audit. Two of the major NCRs issued were repeat failures identified during the 2012 Audit.

    iv) The NCRs issued in the 2012 and 2013 audits resulted from systemic non-conformances in Farnborough's manufacturing quality processes and policies and/or manufacturing environment. It is inferred by Triumph that the above failures continued between December 2012 and 25 November 2013.

    v) Farnborough had a history of non-conformance with Airbus's quality standards during 2011 to 2013, as set out in an email from a sub-contractor of Airbus dated 2 October 2014.

130. Primus disputes this claim on the grounds that:

    i) on a proper construction of the warranty, it did not cover Nadcap accreditation;

    ii) it had Nadcap accreditation at the time of the SPA and at Completion;

iii) it was in material compliance with its Nadcap accreditation; and

iv) Nadcap accreditation was lost under Triumph's control.

Nadcap procedural rules

131. The relevant Nadcap audit criteria is set out in AC 7118 Rev C. The audit criteria document instructs suppliers to complete a self-audit and correct any deficiencies in preparation for a formal audit. During a formal audit, the auditor carries out a survey of a facility, examines documentation and observes operations. At least 50% of the audited processes must be in operation during an audit. The auditor selects the particular areas or operations in the facility for review. Compliance with each of the Nadcap requirements is assessed against a checklist on a "YES/NO" basis.

132. A NCR is raised where an auditor identifies a breach of either the Nadcap rules governing the audited process or an applicable customer requirement. Where appropriate, closely-related breaches may be consolidated into a single NCR. An NCR will be graded as "major" if it reflects a systemic breakdown in the process control or quality management system (including multiple errors observed in the same area or process at different points in time) or may potentially impact upon the integrity of the end product. A breach which is an isolated incident, particularly where there is evidence that, although the procedures are inadequate, the operation is carried out correctly, and which does not have a potential product impact, will typically be graded as a "minor" non-conformance.

133. The Nadcap rules specify the maximum number of major NCRs and the total number of all NCRs that may be found on each day and over the course of the audit before the audit will be failed. In 2012 and 2013, composites re-accreditation stipulated an overall limit of 12 NCRs of which no more than 5 could be major NCRs. For a four-day audit, more than 4 major NCRs would result in failure.

134. Following the audit, the supplier must submit a corrective action plan for each NCR within 21 days, identifying the immediate action taken to resolve the discrepancy, the root cause of the non-conformance and the action to be taken to prevent a recurrence. The Task Group for the relevant process (a panel comprising voting members of Nadcap from subscribers and suppliers) reviews the audit, confirms or revises its findings, assesses the acceptability of corrective actions and determines accreditation.

135. If a facility fails the audit, a re-accreditation audit will not be carried out for a period of three months and such audit is treated as a fresh entry accreditation audit.

2012 Audit

136. In May 2012 Nick Bungey, a team leader at Farnborough, identified a number of improvements that would be required to pass the audit due at the end of the year ("the 2012 Audit"), including material storage systems, introducing time tagging and life sheets of materials, process environments and updating of the MoMs. Similar concerns were raised by Bob Goodyear, a quality engineer, in August 2012.

137. One of the difficulties identified by the team leaders, who were trying to address these issues, was that John Riddell, who had been responsible for preparations for the Nadcap audits, left Primus in mid-2012 and no replacement was appointed.

138. As required by Nadcap, Primus carried out an internal pre-audit process in preparation for the 2012 Audit. David Abraham, Engineering Quality Director at Farnborough, and Paul Thomas, Quality Manager at Farnborough, were responsible for the 2012 Audit preparation. On 17 September 2012 Dr Abraham sent an email to Mr Thomas, stating:

> "I need you to lead us through this Nadcap Audit. I would like to bring the Quality Engineers up to speed for which we can use John [Riddell] for training. Chris [Stiff] will support in specific readiness projects but overall we need to ensure the wider business knows what to expect and is prepared. I see the following as necessary points:
>
> 1. Identify key stakeholder teams and prepare training pack to allow team leads to understand the Nadcap requirements and checklists for their areas.
>
> 2. Press shop - legalisation of current practices - happy to share the plan on this.
>
> 3. 10 minute quality counts - train the QEs on what to look for and have them do spot checks every date and identify NCRs to you and on the team board.
>
> 4. Formal Nadcap checklist audits.
>
> 5. Identify scope of audit and hence potential product where the process should be reviewed audited in detail …"

139. Mr Thomas replied the following day, explaining that Mr Riddell would carry out the internal audit but not preparation for the 2012 Audit, and that a qualified special process engineer should be appointed for that purpose. Unfortunately, it transpired subsequently that Mr Riddell would not be available to provide any assistance for the audit preparation.

140. On 24 September 2012 Richard Tye, the new Quality Manager at Farnborough, sent the following email to Messrs. Abraham, Thomas and Stiff:

> "We are time constrained and not well versed in either the requirements nor the location of our objective evidence. You have agreed that Paul will lead the audit process, supported by Chris. It is clear to me that we need some external resource to help us limit the exposure we have. Whilst it is unlikely we will be able to secure John Riddell's experience nor his Nadcap knowledge, we will need to secure the services of some outside resource to support our preparation – for as we know we have a large gap between our skill sets and those required by Nadcap …"

141. On 25 September 2012, Mr Tye made a request for authority to engage a qualified Nadcap auditor with composites experience. Primus appointed Dimple Matharoo, a Nadcap auditor, and Misha Suthichar Danchaiviroj, a quality systems specialist from Primus Thailand, to assist with the pre-audit preparations.

142. On 17 October 2012, Mr Tye reported that 70% of Farnborough's internal pre-audits had been completed against the Nadcap checklist and that approximately 70 non-conformances had been identified, *"many of which would be major if caught by NADCAP"*. Mr Tye also stated:

> "We are working on a series of day plans for the 4 days of the audit, and we are, of necessity going to have to limit the areas available for audit and the persons available - we will share the plans as we develop them."

143. The following day, Mark Meyrick, interim Operations Director at Farnborough, sent an email, stating:

> "Our pre-Nadcap audits have shown housekeeping to [be] a significant issue (in all areas of the business, not just manufacturing!) To address this we need to take immediate action to improve our working environment (for our customers and staff).…
>
> Good housekeeping and the 6S approach should be a normal part of our daily care of our employees' work environment and our customers' products – I think you all know we could do a lot better. We will be conducting audits on our housekeeping 6S performance starting tomorrow and I ask for your help making improvements in this area. Please don't wait for the audit but make a start ASAP…
>
> The point is that we must improve the standard and then maintain it. I appreciate that it will be a lot of work to reach a good standard but once we are there, the maintenance will be much easier…"

144. A register of the 72 non-conformances was compiled, identifying those responsible for implementing corrective action.

145. A further pre-audit was carried out by Ms Danchaiviroj between 29 October and 2 November 2012. She produced an internal report which identified 23 minor NCRs, including material storage, cross-contamination, CCA and documentation issues.

146. On 2 November 2012, Mr Tye sent an email to Dr Abraham, stating:

> "Misha did a great job, she has identified a further 21 nonconformances, some of which are of major significance – and we should talk thro' them. Progress has been made on many issues but the big hitters are HR/training records, plans etc,

> documentation and calibration, press shop and cleanroom disciplines – much as expected."

147. On 6 November 2012, Mr Bungey raised concerns about the timing and circumstances of the forthcoming audit:

> "Core shop
>
> … We currently have a project running with Eng that is updating all MOMs and the accompanying cutting trim templates as they are all incorrect. So far we have completed about 30% of these jobs… We picked up 5 NCRs on the internal audit, all 5 have been dealt with or assistance asked for today.
>
> Press Shop
>
> We have completely changed how we operate in the press shop. We have had a new KSP written up which is excellent but we are waiting for RR to sign off on it.
>
> During the Nadcap audit I will have 4 operators in the press shop, 3 of which are all trainees with a month training between them. They will not be present during the audit but will be deployed to other departments within #21 for the duration…
>
> I am also worried that the press shop has been designated an EMA area. I was under the impression, wrongly it seems that it had been downgraded. We comply with all areas of the EMA apart from forbidden substances. I'm struggling to see how we can separate aerosols, grease, oil and release agents from the work area…
>
> We have 20 outstanding NCRs in the press shop. I have returned 7 off to the audit team for review and the other NCRs are with Eng. I am reviewing the outstanding NCRs again today.
>
> Can all you please let me know your views, opinions and advice on the points and issue I have raised above please as the more help I get the more chance we have of being successful in this audit…"

148. This prompted a response from Dr Abraham, following which Mr Bungey confirmed that the floor plan in the press room had been reorganised to segregate release agents from the work area and protect uncured parts from contamination. He reiterated his concern that the MoMs were not all up-to-date.

149. On about 6 November 2012 the Quality Team issued a memorandum, explaining the preparations for the 2012 Audit, and stating:

> "The Nadcap program is part of the PRI (Performance Review Institute) and represents the interests of the various prime customers that we supply. The maintenance of our accreditation

> is crucial to both our ability to supply parts and to our continued growth."

150. Mr Thomas chased up responses to the NCRs identified in the pre-audit inspections, complaining on 12 November 2012 that 80% of the NCRs had not been answered.

151. On 13 November 2012 Mr Thomas gave a presentation, which set out areas of concern in respect of the Nadcap audit:

> "Training
>
> The process appears to be significantly fragmented and not complete. There is no standard approach, including recent additions to the team. If the auditor identifies a breach, he will drill down possibly revealing a systemic failure!
>
> TPM [preventative maintenance]
>
> A Nadcap fundamental, process now partially defined, but little to no history!
>
> Core shop
>
> MOMs and templates require updating modification, in the region of 70. This process needs to be carefully managed during the audit!
>
> Manufacturing practices
>
> Clean rooms and cutting implements, requirements defined in KSP C section 9.4, although requirements not fully implemented on the shop, work in progress."

152. The 2012 Audit took place over four days between 20 and 23 November 2012. The audit was performed by Jose Barral, an experienced auditor. Mr Barral raised two Major NCRs and seven Minor NCRs in respect of issues that he identified at Farnborough.

153. The two Major NCRs raised during the 2012 Audit were as follows:

i) NCR 2 identified a quality system systemic failure in respect of CCA/EMA requirements. The failures included the following:

a) there was no documented procedure for, or record of, the cleaning of the ceiling, lamps and hanging devices in the CCAs and the lay-up CCA ceiling was damaged with peeling paint;

b) compaction bags were re-used;

c) operators were observed not wearing mandatory protective shoe covers in the CCA;

d) the EMA workshop floors were found to be dirty;

e) in one of the EMA workshops, the same machine was used for the Nomex and aluminium honeycomb cores, creating a risk of cross-contamination.

ii) NCR 9 identified a discrepancy between the MoM for lay-up of B787 pylon fairing parts and the procedure adopted by the operator, who exceeded the manufacturing tolerances specified by the customer, based on verbal instructions by Farnborough's engineers that the deviation was acceptable.

154. Other non-conformances identified by the auditor included:

i) use of an unapproved pictorial reference document for the lay-up of dorsal fin parts without identification of the part number or other requirements (NCR 1);

ii) failure to calibrate properly the temperature of the mould tool (NCR 3);

iii) failure of the route card or MoM to state customer specifications for vacuum during debulking operations (NCR 4);

iv) manually changed calibration label on a heat gun (NCR 5);

v) incorrect expiry date calculation in respect of material removed from frozen storage (NCR 6);

vi) failure to update the MoM for lay-up of dorsal fin parts to reflect the applicable version of the customer's specification (NCR 7);

vii) no evidence of a verification method to ensure that ply backing papers had been removed prior to lay-up (NCR 8).

155. The results of the 2012 Audit were published on the eAuditNet website.

156. Following the audit, David Abraham of Primus gave a presentation on "lessons learnt". It was noted that cleaning of CCA and EMA areas needed to be improved by maintenance, training, cleaning schedules and records. It was also noted that operative knowledge of work instructions was inadequate and that further training was required. Similar comments were made in respect of areas that were not included in the audit.

157. On 5 December 2012 Mr Tye issued an action plan to address and respond to the NCRs:

> "As requested a simplified view of the tasks that must be achieved with evidence, so we can respond to audit c/a. Note, this list is not exhaustive and does not include actions that are not being tracked by NADCAP – there are other actions that we know need to be taken but are secondary to these. Please ask if in doubt. List for review at 07.30 am and 16.00 hrs each day to close."

158. On 7 December 2012 Mr Tye circulated an email to all team leaders at Farnborough in respect of the corrective action required to ensure proper documentation used for processes:

> "Following our NADCAP audit, we have been alerted to uncontrolled documents in use. With our continued growth of employees and the defined need to have an engineering baseline upon which we can rely, it is essential that we have visibility of our processes. So, please review your area, check for informal definitions, these may be sketches, black books, 'how-to' guides, or even drawings or process layouts. Please isolate any you find, copy them and pass to engineering. This action is urgent and needs to be confirmed (even if you find nothing) to me or Paul Thomas by email."

159. Primus produced and submitted to the Task Group an NCR response document, identifying the immediate containment action, root cause, and corrective and preventative action in respect of each NCR. Against NCR 2, the corrective and preventative action included a training regime for supervisors and cell leaders, proactive process control measures by segregating cutting and processing operations to minimise cross-contamination. Against NCR 9, the corrective and preventative action included modifications to documentation. In each case, Primus stated:

> "Furthermore, to facilitate the corrective action process, the external NCRs are adopted within the internal audit system, thus ensuring prompt and adequate closure. Moreover, to prevent recurrence, and to ensure that the NCRs are sustainable and effective, the previous findings are revisited through the quality audit system."

160. The Task Group accepted the responses from Primus and voted to renew its accreditation.

161. On 22 January 2013 the Nadcap accreditation certificate was issued, confirming accreditation of the Farnborough facility until 18 December 2013.

2013 Audit

162. The next Nadcap composites audit was shown on the Annual Audit Schedule for the last week in November 2013.

163. On 7 May 2013 an audit was carried out at Farnborough under AS9100 Rev C and ISO 9001:2008. There were no outstanding non-conformities to review from previous assessments. Farnborough was assessed as meeting the required standards. During the audit, eight minor non-conformities were identified. The non-conformities related to poor record keeping, lack of performance/quality reviews and one instance of the use of equipment that had not been calibrated. A minor non-conformity was defined in the report as follows:

> "A minor nonconformity relates to a single identified lapse, which in itself would not indicate a breakdown in the management system's ability to effectively control the processors for which it was intended. It is necessary to investigate the underlying cause of any issue to determine

> corrective action. The proposed action will be reviewed for effective implementation at the next assessment."

164. In September 2013 Mr Tye gave a presentation, explaining the forthcoming Nadcap audit. He stated:

> "Nadcap represents our prime customers interests on site. Instead of having separate audits for each customer we have just one.
>
> When: 25th – 28th November
>
> A good audit result is essential to sustain our approval, without which we will be unable to sell parts to our prime customers
>
> Audit data is transparent and visible to all our customers
>
> We **MUST** not fail!"

165. A timeline was prepared for the Nadcap audit, including a review of all NCRs from the last audit, a pre-internal audit and an internal audit. Mr Tye made enquiries to ascertain whether the actions identified against NCRs issued in the 2012 Audit had been carried out. On 12 September 2013 Mr Tye sent an email to Dee Crump, seeking information regarding NCR 2 – CCA maintenance and cleaning. Mr Bungey identified a number of actions that had been taken but noted that others remained outstanding, including updated MoMs still not approved on the system. In an email of 14 November 2013, Mr Tye expressed frustration that various items of corrective work remained outstanding.

166. Unfortunately, the staff at Farnborough failed to notify anyone at TGI that the 2013 Audit would take place in November 2013. Therefore, TGI did not have the opportunity to oversee preparation for the audit.

167. The 2013 Audit took place over four days between 25 and 28 November 2013. As before, the audit was performed by Jose Barral. Mr Barral raised six major NCRs and three minor NCRs in respect of issues that he identified at Farnborough. This resulted in failure of the audit.

168. The major NCRs were as follows:

i) NCR 2 identified non-compliance in respect of the handling of materials;

ii) NCR 3 noted that there was no evidence of a system in place to control the shelf life of flash breaker pressure sensitive tapes used, a deficiency that could have an impact on the end product;

iii) NCR 5 identified that the job cards and MOMs were not accurate or up-to-date in respect of tool details;

iv) NCR 7 identified discrepancies between the MOM and the procedures followed by the operator;

v) NCR 8 identified a failure to identify the correct shelf life of a material, a repeat finding of NCR 6 in the 2012 Audit;

vi) NCR 9 noted that corrective actions implemented to eliminate the root cause of NCR 6 in the 2012 Audit had not been sustained.

169. The minor NCRs were as follows:

i) NCR 1 identified material that was past its expiry date that had not been segregated;

ii) NCR 4 noted that the records did not include the expiry date of materials in the fridge;

iii) NCR 6 identified the inappropriate handling of materials by operators.

170. On 29 November 2013 Mr Tye of Triumph issued a quality alert, directing immediate action to improve material handling and processes. Although he attempted to distance himself from it in his written evidence, Mr Jerram accepted in cross-examination that he approved the quality alert. The instructions included:

> "Route cards/Method of Manufacture – Prior to commencement of layup or setting to work, the operator is to review MoM with supervisor, sign off on route cards to affirm both understanding and compliance. Any operator or supervisor who identifies a concern should NOT commence the job – instead, contact engineering or quality."

171. This instruction had the immediate effect of bringing production at Farnborough to a halt for a period of approximately four weeks. Ms Thomas considered that the quality alert was an overreaction and a mistake on the part of Farnborough managers.

172. On 18 December 2013 Nadcap notified Triumph that it had failed the audit and that current composites accreditation had been withdrawn.

173. Farnborough notified its customers of the audit failure immediately and sought authorisation for product shipment and acceptance in the absence of Nadcap accreditation. Customers demanded quality and corrective action plans (Rolls-Royce, Spirit), additional meetings, inspections and audits (Aircelle, Airbus and Boeing) before permission to ship goods was given. By 24 December 2013, Farnborough had received temporary authorisation to resume shipment of components to its major customers, albeit subject to agreed conditions.

174. At the beginning of January 2014, MaryLou Thomas travelled to Farnborough and prepared a Nadcap re-certification plan. She instigated a process for reviewing and updating the MoMs, so that production could re-commence as quickly as possible. She created recovery plans for customers. Ms Thomas introduced improvements to Farnborough's production tracking and schedule systems, putting in place training for the ERP software to replace the use of manual spreadsheets. She arranged for a 'gap analysis' to be prepared to identify the improvements necessary to obtain re-accreditation with Nadcap. Crucially, Ms Thomas brought in new directors and

managers with strong experience and leadership skills to oversee Farnborough's quality assurance functions.

175. In April 2014 Farnborough passed its AS9100 audit with no negative findings.

176. On 23 September 2015 Nadcap re-accreditation was issued, with effect from 10 August 2015.

Nadcap Issues

177. The Nadcap issues can be summarised as follows:

i) Was Nadcap accreditation a 'Permit' for the purpose of engaging Warranty 6.1?

ii) At the date of Completion, was Farnborough materially compliant with its 2012 Nadcap accreditation?

iii) Did Farnborough manipulate the 2012 Audit?

iv) What were the causes of the failure of the 2013 Audit?

v) What harm, if any, did Farnborough suffer as a result of the loss of accreditation?

vi) Was Warranty 6.2 false because Farnborough was on notice that it did not comply with its Nadcap accreditation?

Warranty 6.1

178. Warranty 6.1 states:

> "Each Company has, and has materially complied with, all licences, consents, permits and associated registrations and authorities ("Permits") necessary to the carrying on of its business in the places and in the manner in which its business is now carried on."

179. Mr Pillai submits that Nadcap accreditation falls within the concept of a *'Permit'* because it was a licence, consent or permit necessary for Farnborough to carry on its business in the manner in which it had been carried on at Completion. All of Farnborough's major customers required Nadcap accreditation as a matter policy and/or contract. Primus recognised the significance of Nadcap by its reference in the Information Memorandum. Triumph would not have been interested in Primus if it did not have Nadcap accreditation because it was a pre-requisite to winning and performing most aerospace business. In that context, Nadcap accreditation was essential to the continued operation of the business.

180. Mr Pepperall disputes that Nadcap accreditation is covered by Warranty 6.1. Nadcap is a third-party process accreditation scheme; it is not properly described as a licence, consent, permit or associated registration or authority. This distinction was made by Primus during the due diligence exercise. Nadcap documentation was not disclosed in section 6.7 of the data room as: *"registrations and licenses,"* or in section 7.7 as:

"permits" but rather in section 12 as: *"process accreditations."* There is no statutory or regulatory requirement to hold Nadcap and Nadcap accreditation does not authorise the holder to do something that it would otherwise not be able to do. It was not necessary for Farnborough to have Nadcap accreditation to carry on its business in the manner in which it was carried on at the date of Completion. Following loss of accreditation in 2013, Farnborough continued to manufacture and supply components to its customers.

181. The applicable legal principles of contractual construction are not in dispute. When interpreting a written contract, the court's task is to ascertain the objective meaning of the language which the parties have chosen to express their agreement. It does so, having regard to the meaning of the relevant words in their documentary, factual and commercial context. That meaning has to be assessed in the light of:

(i) the natural and ordinary meaning of the clause;

(ii) any other relevant provisions of the contract;

(iii) the overall purpose of the clause and the contract;

(iv) the facts and circumstances known or assumed by the parties at the time that the document was executed; and

(v) commercial common sense; but

(vi) disregarding subjective evidence of any party's intentions.

See: *Arnold v Britton* [2015] UKSC 36 per Lord Neuberger at paras. [15] to [23]; *Rainy Sky SA v Kookmin Bank* [2011] UKSC 50 per Lord Clarke at paras. [21] to [30]; *Chartbrook Ltd v Persimmon Homes Ltd* [2009] UKHL 38 per Lord Hoffmann at paras. [14] to [15], [20] to [25]; *Wood v Capita Insurance Services Ltd* [2017] UKSC 24 per Lord Hodge at paras. [8] to [15].

182. The starting point is analysis of the words used in Warranty 6.1. The warranty is applicable to: *"all licences, consents, permits…".* Each of these words indicates a formal written communication evidencing a form of permission. The words used are general and descriptive of the types of permission intended to be covered; they do not classify the permits covered by the warranty by reference to any specific purpose for which each permit might be issued.

183. The additional words: *"and associated registrations and authorities"* are ancillary to the foregoing words rather than stand-alone categories of permission. It is not sufficient to show that accreditation falls within the meaning of a registration or authority. It would not be covered by the warranty unless it could be linked to a relevant category of permission to which such registration or authority would attach.

184. Thus, on an analysis of the text, any relevant accreditation must be capable of being construed as a permission to fall within the ambit of the warranty.

185. Nadcap accreditation demonstrates that a facility has achieved consistency in the required standards of skills, materials, processes and environment used to manufacture components for the aerospace industry. Nadcap accreditation confers authority on, or gives permission to, a business, by the PRI to hold itself out as complying with those

required standards. As such, it falls within the ordinary and natural meaning of the word "permit" or "licence".

186. The categories of Permit that are covered by the warranty are limited to those: *"necessary to the carrying on of its business … in the manner in which its business is now carried on."* The purpose served by any particular permit must be assessed to determine whether it is sufficiently essential to the business to be covered by the warranty. There is no statutory or regulatory requirement to hold Nadcap. However, the warranty does not contain an express limitation, restricting the categories of permit to those that are legally required for operation of the business. Therefore, it is necessary to consider the factual context to determine what the parties must have intended by reference to such permissions.

187. In my judgment, Nadcap accreditation was necessary for Farnborough to continue its business in the manner carried out as at the date of Completion. Its major customers, namely, Airbus, Bombardier, Rolls-Royce, Boeing, Aircelle and Spirit, required Farnborough to hold Nadcap accreditation, either as a matter of policy or through contractual provisions.

188. Mr Pepperall correctly submits that the loss of Nadcap accreditation did not prevent Farnborough from continuing to manufacture and supply components to its customers. However, those customers became entitled to refuse to accept such components. Mr Jerram accepted in cross-examination that it was necessary for Farnborough to obtain express consent from each customer, subject to conditions, to enable it to continue shipping products. Ms Thomas explained in her evidence that Farnborough became subject to additional quality checks, inspections and audits from its customers as a direct result of losing Nadcap accreditation. Its ability to bid for, and win, new business was adversely affected by the loss of accreditation.

189. Both parties recognised at the time of the SPA that Nadcap accreditation was necessary for continuation of the business in the manner then conducted. Primus described Nadcap accreditation as required by the aerospace industry in the Information Memorandum. During its preparations for the 2012 Audit, Primus described accreditation as crucial to its ability to supply parts and to its continued growth.

190. In her witness statement, Ms Thomas described Nadcap accreditation as a commercial and operational necessity:

> "Nadcap accreditations are of critical importance in our industry, and Nadcap is a commercial and operational necessity. Major OEMs (Boeing, Airbus, etc.) require Nadcap certification as a basis of awarding manufacturing products suppliers who provide special products or processes (i.e. aerospace structural composites). Achieving and maintaining that Certification assures our OEM customers that suppliers have the ability consistently to provide products that conform to industry standards and all drawing and technical specification requirements…
>
> Having the appropriate Nadcap accreditation is usually a contractual "entry-level" requirement for our customers and for

> the composites parts that we build at Farnborough. It is, in effect, an accreditation needed to enable Farnborough (or any relevant manufacturer) to carry on this business with customers such as Rolls-Royce and Airbus…
>
> Customers will not usually engage with a manufacturer and request quotes or product offerings unless the manufacturer carries a Nadcap accreditation. It would not matter whether, as a matter of fact, the manufacturer was able to produce a perfectly adequate product without the accreditation. In my experience of the aerospace industry, a customer will not consider any suppliers who do not hold the relevant Nadcap accreditation when it is tendering new work…"

191. This was echoed by Mr Kornblatt. I accept Mr Kornblatt's evidence, in his written statement and in oral evidence, that Triumph would not have considered purchasing the Primus companies if Farnborough did not have Nadcap accreditation.

192. The organisation of the data room documents into folders is not evidence of any shared intention of the parties. The folders were indexed for convenience so as to enable Triumph to carry out efficient searches and find relevant documents. They were not categorised by reference to any particular warranty or other proposed contractual provisions. In any event, the organisation of the data room would not override the clear interpretation of the contractual warranty provision.

193. For the above reasons, on a true construction of Warranty 6.1, Nadcap accreditation was a Permit necessary to the carrying on of Farnborough's business in the manner in which its business was carried out at the material times up to and including 3 May 2013.

Nadcap accreditation at the time of Completion

194. It is common ground that Farnborough achieved Nadcap accreditation in 2009 and that, as at the date of Completion, Farnborough held Nadcap accreditation from the 2012 Audit.

195. Triumph's case is that Farnborough failed the 2013 Audit by reason of deficiencies that existed as at the date of Completion. It contends that Farnborough was not in material compliance with its Nadcap accreditation in May 2013. The 2012 Audit was passed largely by manipulation. Primus did not take proper corrective action to address the ongoing problems at the facility and the non-conformances identified in the 2012 Audit. The quality failures at Farnborough were widespread and systemic.

196. Primus asserts that it had, and was in material compliance with, Nadcap accreditation as at the date of Completion. It relies on the fact that Farnborough first achieved Nadcap composites accreditation in May 2009 and held it continuously until the sale of the companies. Farnborough held Nadcap composites accreditation at the time of the sale, having most recently passed an audit in November 2012. Farnborough failed its Nadcap composites audit in November 2013, months after the sale, whilst under the control of Triumph.

197. Triumph's claim in respect of the Nadcap warranty is an ambitious one. The best evidence as to whether Farnborough complied with the Nadcap requirements at Completion is the successful 2012 Audit. The 2012 Audit was an independent assessment of the facility, carried out by an experienced Nadcap auditor against the Nadcap criteria.

198. Further evidence that Primus complied with regulatory quality requirements is its AS 9100 Rev C and associated ISO9001:2001 accreditation, which confirmed that appropriate quality management systems for the aerospace industry were in place. Farnborough passed the AS9100 audit in May 2013, a few days after Completion. It also passed the AS9100 audit in April 2014.

199. Triumph relies on Richard Tye's email dated 24 September 2012 as evidence that Farnborough was unable to meet its Nadcap composite manufacturing requirements at that time:

> "We are time constrained and not well versed in either the requirements nor the location of our objective evidence … we will need to secure the services of some outside resource to support our preparation – for as we know we have a large gap between our skill sets and those required by Nadcap …"

The above email identifies concerns that additional resources would be required to prepare for the 2012 Audit so that Farnborough would be in a position to demonstrate its compliance by *"objective evidence"* but it does not evidence material non-compliance with Nadcap requirements at that time. The best objective evidence of Farnborough's compliance with the Nadcap standards by the end of 2012 was the auditor's independent assessment as part of the 2012 Audit that led to the renewal of Nadcap accreditation.

Manipulation of the 2012 Audit

200. Triumph's case is that the 2012 Audit was manipulated. It submits that in advance of the audit, Dr Abraham asked Farnborough team leaders to assess the suitability of some candidate parts to focus on for the audit. Christopher Stiff, the quality engineer, forwarded this list to Dee Crump, the cleanroom team leader, stating that Dr Abraham had selected these parts because he believed that they had the *"strongest routing"*, which Ms Crump understood to mean those with the best paperwork.

201. The email circulated by Dr Abraham on 12 November 2012 stated:

> "In preparation for next week's audit I would like to understand who you would propose as the shop floor person to speak with during the audit for the following jobs. Unless I have a name I will list the team leads but by all means you are also welcome to witness the audit. The intent is to pre-audit these jobs again ahead of next week's audit with the people identified by you…"

202. The following day, Mr Stiff sent an email to Ms Crump, cleanroom team leader:

> "We've got our Nadcap composite audit coming up next week ($20^{th} – 23^{rd}$). David's identified a number of parts that he believes have the strongest routing. I've highlighted the jobs that will likely pass through the Clean Room. Would you be able to identify which operators will be working on each of these parts? We'll be doing another pre-audit this week and will use it to give additional Nadcap training to the operators that will be exposed to it."

203. In cross-examination, Ms Crump accepted that the strongest routing could simply be a reference to the most relevant range of processes that needed to be made available during the audit. The focus of the email was a request to identify the operators who would be working on the relevant jobs during the audit so that they could receive additional pre-audit training. In the absence of any other evidence, the words used in the email do not indicate any attempt to manipulate the process.

204. Triumph relies on the removal from the audit of the T700 rear acoustic glass panel, which was selected initially to be included. Pieter Reuvers, an estimator, identified discrepancies between the MoM for this part and the operatives' practice, which followed a revised method sheet, and suggested that the part should be removed from the audit. In his email response on 20 November 2012, Dr Abraham stated that he would be happy for the new document to *"go live"* and the only action which was required was the updating of the MoM. Mr Tye responded:

> "I will do my best to steer the audit away from this panel, however as Pieter points out, we really need to fix the problem not hide it away."

The deliberate removal of a part from the audit could amount to manipulation of the audit process. However, Mr Tye's response did not go that far. He did not state that the part would be removed from the audit. Although he agreed to steer the auditor away from the panel, the auditor was entitled to select the parts and processes that he wished to inspect. As Mr Cowap noted in his witness statement, the Task Group who reviewed, and could revise, the audit report would notice if any important processes were omitted from the scope of the audit.

205. Triumph relies on Farnborough's failure to show the auditor cleanroom 2 as evidence of manipulation of the audit. The T700 Fan-Track Liner was selected for the 2012 Audit. Ms Crump was instructed by Mr Tye and Dr Abraham that the process should be moved from cleanroom 2 (which did not conform to CCA standards) to cleanroom 1 (which was CCA compliant) for the duration of the audit. Ms Crump's evidence in chief was that the liner was moved back to cleanroom 2 after the audit.

206. The auditor did not select, and therefore was not shown, any processes in cleanroom 2 during the course of the 2012 Audit. Cleanroom 2 was used for the metal bond work for Rolls Royce. Although it did not meet the requirements for a CCA as defined by Nadcap, it was approved by Rolls Royce for the lay-up of materials.

207. Following the 2012 Audit, Ms Crump sent an email to Dr Abraham, asking for clarification as to the status of cleanroom 2. On 12 February 2013 Dr Abraham responded that if the work were confined to the Rolls-Royce work, the cleanroom

would not need to comply with the Nadcap requirements for a CCA. However, it was agreed that it would be preferable to upgrade cleanroom 2 so that there would be flexibility to use it for other processes and to achieve higher standards within Farnborough.

208. In about June 2013 a capital expenditure request was raised in respect of the proposed upgrade of cleanroom 2 to conform to CCA standards:

> "The November 2012 NADCAP Audit raised concern and nonconformance that our cleanroom facility used for the manufacture of Rolls-Royce parts did not meet the recommended standards and will require significant improvement in order that manufacturing comply with the 2013 audit…
>
> We are also preparing for the increasing tool movement to cleanroom 2 as we move RR tools out of cleanroom 1 to accommodate the space requirements of the recent Waldens business uplift.
>
> Justification: In the event that we fail NADCAP the impact would be to stop RR production – value of £50k per day plus loss claims from RR which could be £100k per day if we stop engine built lines… The estimate is that the upgrade programme would take approx 6 weeks …"

209. Richard Tye was concerned that if Farnborough did not implement the corrective action set out in the Nadcap response, two NCRs would be issued in the forthcoming audit, as set out in his email of 25 July 2013. However, the application for funding was not approved and the work was not carried out by Primus or by Triumph. Eventually, in October 2014, all work required to be carried out in a CCA was moved from cleanroom 2 to cleanroom 1.

210. Triumph submits that the Nadcap rules imposed a strict requirement that all lay-up work must be performed in a CCA. Primus submits that Rolls-Royce could relax those requirements and did so, as evidenced by its acceptance of the audit carried out by Farnborough in May 2013.

211. Section 6.2 of the Nadcap audit criteria AH7118 Rev C states:

> "For processing, the documented procedure shall be in compliance with customer requirements or in the absence of customer requirements, Table 1 …
>
> Exception to processes that may be performed in or out of the CCA may be granted by individual customers as long as they do not violate other customer requirements ..."

212. Section 6.2 permitted customers to specify their requirements in respect of work that the rules would otherwise require to be carried out in a CCA. Cleanroom 2 was used for Rolls-Royce lay-up work. Rolls-Royce was entitled to specify or accept that certain

parts of its lay-up processes could be carried out in areas that were not CCA compliant. Therefore, if cleanroom 2 had been included in the audit, an NCR would not have been issued based on lack of CCA compliance.

213. I accept Mr Jerram's evidence that there was no instruction given to keep the auditor away from cleanroom 2. No documentary evidence has been produced that contains such an instruction. The auditor had power to select the areas and processes for the audit and there is no evidence that Farnborough prevented him from inspecting cleanroom 2. He did inspect cleanroom 1, no doubt because that was the CCA where a number of key processes were carried out.

214. Triumph submits that welding operations were suspended in the Press Shop for the duration of the 2012 Audit so as to avoid the possibility of a major non-conformance being raised. On 6 November 2012, Mr Thomas sent an email suggesting that welding in building 21 should be suspended during the 2012 Audit:

> "The Nadcap audit scheduled for November will now encompass the Press Shop. There is a concern that the current location of the welding apparatus with regard to the EMA, and a possibility of a major nonconformance being issued. Therefore it has been proposed that any welding activity in Building 21 shall be suspended during the dates identified above. However this proposal does not prevent welding activity from being carried out in an alternative location…"

215. Daryl Munt responded:

> "We can suspend welding in this area but this will have a definite impact on our output and should be agreed with Mark Meyrick. You mentioned that we can now weld elsewhere but as this area is our base with all required equipment in place, moving will not be easy. Plus, if this request is to eliminate a major nonconformance for the press shop then I have to assume this concern would be the same whatever we are manufacturing parts!"

216. Mr Tye responded, stating:

> "Quite apart from the obvious health and safety issues, the proximity of the welding and specifically the weld spatter to the manufacture of composite test pieces is unacceptable. The risk of airborne contamination is too high. The cutter rig appears to be below the extraction equipment. The welding 'booth' (I use the term loosely) is adjacent the HV switch gear (on the wall) and the proximity to the press shop is just too great. Apart from that – the area looks great!! I am sure we can find another area where the welding can be done, without potential impact upon [our] processes or products."

217. In cross-examination Ms Crump accepted that Mr Tye's concern was that welding should be removed permanently from the Press Shop for health and safety reasons. Welding was moved permanently to the exterior of the building.

218. Triumph relies on the fact that failed blocker door test pieces were removed from Farnborough for the duration of the 2012 Audit. However, they were prototypes that were outside the scope of the audit as explained by Mr Jerram in his third witness statement. Therefore, they could not have any effect on the outcome of the audit. I accept Jitesh Randeria's evidence that there was no instruction given to hide any particular location, piece or type of work from the auditor.

219. Triumph relies on the fact that trainees were removed from the Press Shop during the audit and re-deployed to another area of the facility. However, they remained at the Farnborough site. Therefore, they remained subject to a potential assessment, in the event that the auditor chose to inspect those other parts of the facility, as he was entitled to do. Mr Cowap suggests in his witness statement that there may have been issues with trainees that Farnborough wanted to hide from the auditor but there is no evidence to support such speculation.

220. In his witness statement, Adrian Free, interim Operations Director at Farnborough from August 2012 for three months, alleged that he was instructed by Brandon Turk, the supply chain director, to place the press moulding operations on hold during the audit. He suggested that the reason for the decision was potential concern for the Nadcap audit. However, the emails sent to him on 7 November 2012 clarified that Farnborough should continue to manufacture the press moulded parts but not deliver them to Rolls-Royce until they paid the agreed increased price. Therefore, contrary to Mr Free's evidence, there was no decision to suspend the press moulding operations. Also, contrary to Mr Free's evidence, the reason for the decision to suspend delivery was a commercial dispute that was unconnected to the audit. In cross-examination, Mr Free accepted that he was aware of these emails and he retracted his allegation of manipulation.

221. There is clear evidence of an attempt to manipulate the 2013 Audit. Annika Whitford, the recently appointed quality systems administrator, carried out internal audit training. On 21 November 2013 she circulated the following email to engineers and the quality teams:

> "I have now collated the red/green job list for next week… So for the relevant area, if the box is red we need to avoid production during the audit. If green, then production is normal...
>
> We anticipate the auditor to be in cleanroom 1 on Tuesday or Wednesday morning… We will confirm the planned audit route on Monday morning once the auditor is here, and we can then confirm when we plan to start in each area. We will also notify the area once we have finished so they can resume any jobs on hold…"

222. If followed, this plan would have amounted to an unacceptable manipulation of the audit process. This was recognised by Mahmoud Ewas, lead manufacturing engineer.

This was his first involvement in a Nadcap audit at Farnborough. He raised his concerns in a confidential email to Roger Day and Amanda Fizpatrick the following day:

> "I'm growing extremely concerned with the way in which we seem to as a business be preparing for the NADCAP audit next week. We are being asked as engineers to highlight parts that we are concerned may not be good enough for the auditor so that we do not produce during the audit, which to me equates to deliberately hiding non-compliance from the auditor in order to mislead.
>
> Whilst I have reluctantly forwarded (to engineers) some of the emails asking us to highlight any such parts instructing them to inform Quality (Richard Tye / Annika) of any such parts, I feel *extremely* uncomfortable now. This being especially so that although we have some emails instructing us to do so (with managers copied in), we have not had any non-verbal communication directly from management to give this instruction. This makes me more concerned and upset that we seem to be allowing young engineers to appear to be making these decisions, whilst this is obviously not the case.
>
> It is now common knowledge in the business that this is our tactic for the audit and was even discussed at the planning meeting as well as openly at the TOC meetings. Since the email yesterday to all engineers I have either been approached or overheard several engineers very uneasy about this, some of them in absolute disbelief that this is happening, however more concerning some other fresh graduates who do not know any better and assume that this is the norm which it is not…
>
> I urge you to please take action to address these concerns, and whilst I will not retract any of the instructions I have passed on (as to avoid confusion/chaos amongst the engineers) – I do not wish to be a party to what is currently going on. I realise that there is little time between now and the audit next week, but I'm sure that you share my view in that this is an urgent matter that needs addressing sooner rather than later…"

223. A few hours later, Dr Abraham circulated an email which made clear that production should not be halted during the audit as suggested by Ms Whitford:

> "Please find attached next week's Nadcap audit agenda. As you will see the NADCAP agenda only gives a schedule for the process description and not the part to be audited. The parts to be audited will be defined by the auditor based on the composite processes covered by the scope of our composite approval and the jobs we are planning to manufacture for next week and therefore we will be not able to communicate this until next Monday once agreed with the auditor...

> The attached list of parts planned for next week identifies a red or green status based knowledge for job audits and closed actions. This list is for awareness only and the production plan must still continue to meet customer demand."

224. Triumph has not identified any direct witness or documentary evidence of a similar attempt to manipulate the 2012 Audit. Ms Whitford was not involved in the 2012 Audit. The evidence of Mr Ewas and Ms Crump of "a Nadcap week mentality" shows that Farnborough went to great lengths to prepare for the audit and present the facility in the best light but it is not evidence of any deliberate action to manipulate the process.

225. For the above reasons, I reject Triumph's case that Primus achieved Nadcap re-accreditation in the 2012 Audit by manipulation. It is a serious allegation of dishonesty against Primus that is not supported by the evidence.

Reasons for the 2013 Audit failure

226. Triumph's case is that the root causes of the non-conformances identified in the 2012 Audit were not adequately addressed prior to Completion. The 2013 Audit failure resulted from systemic non-conformances present as at Completion.

227. Reliance is placed on Mr Cowap's evidence of the underlying root causes of the NCR issues that were common to both the 2012 Audit and the 2013 Audit, as summarised in Schedule 2 to the Claimant's Opening. Mr Cowap's evidence and Schedule 2 indicate that the same, or similar issues arose in both audits, namely:

i) inadequate material handling and storage procedures;

ii) inadequate records and control of materials in cold storage;

iii) failure of document control and revision; and

iv) inadequate tooling control.

228. Mr Cowap was critical of Farnborough's root cause analysis in response to the NCRs issued at the conclusion of the 2012 Audit. However, his view was not shared by the Task Group at the PRI. The Task Group considered and accepted Farnborough's response, and voted to re-accredit the facility following the 2012 Audit.

229. A key part of Farnborough's response to the 2012 Audit was the adoption of the NCRs within the internal audit system to ensure that effective corrective action was taken and sustained. The documents show that steps were taken by Farnborough in early 2013 to address some of the issues raised by the 2012 Audit, such as documentary control and revision. Other issues were identified as requiring attention, such as the improvement of training and cleaning. Not all of the issues raised in the NCRs were resolved by the date of Completion but they were identified on the internal audit schedules and would have been apparent to Triumph as ongoing/outstanding matters that must be addressed.

230. Mr Jerram explained in his witness statement that:

> "When undertaking the audit, the auditor would review the previous audit findings and review any corrective actions listed

> by the facility. If the corrective action has not been sustaining or has not been followed then the auditor could issue an NCR in the current audit. Also if any minor items from a previous audit are repeated then they automatically become major findings. When the facility is preparing for an audit it is therefore essential to review the previous audit's findings and ensure that all of the NCRs have been addressed."

231. Mr Cowap accepted in cross-examination that adequate preparation for the 2013 Audit required internal audits and checks to ascertain whether any corrective action against NCRs issued in previous audits had been implemented and sustained. He accepted that the NCRs issued in the 2013 Audit were matters that could and should have been identified and corrected during pre-audits, such as segregation of out-of-date material (NCR 1), material handling (NCR 2), use of out-of-date flasher break tape (NCR 3), records of expiry dates of materials in cold storage (NCR 4), tooling records (NCR 5), material handling by operatives (NCR 6) and updating of MoMs (NCR 5).

232. NCR 6 issued in the 2012 Audit concerned a failure to calculate correctly the shelf life of material. The corrective action identified by Farnborough included the introduction of an additional operator stamp to verify the manual calculation and an electronic material life calculator to avoid mistakes. Unfortunately, although the revised policy was written and the electronic calculator was available, it was not implemented. This resulted in two major NCRs in the 2013 Audit (NCRs 8 & 9) because it was a repeat failure. Mr Cowap agreed in cross-examination that this should have been picked up and corrected during the internal audit process by Triumph.

233. I reject Primus's case that Triumph could have engaged with the auditor to reduce or eliminate the NCRs by negotiation. Primus has not produced expert or other evidence to challenge the findings of non-conformity. Once the non-conformities had been discovered by the auditor, there was little that could be done to avoid the NCRs. However, I accept Primus's case that Triumph could have instigated a proper internal pre-audit process that could and should have avoided such findings. In those circumstances, it is likely that Nadcap accreditation would have been renewed.

234. Triumph relies on Mr Cowap's evidence of the systemic non-conformities identified when he arrived at Farnborough, summarised in the Claimant's Schedule 3 to its Opening. However, Mr Cowap did not arrive at Farnborough until April 2014, almost one year after Completion. He did not participate in the 2012 Audit or the 2013 Audit. He made one visit to Farnborough on 2 February 2012 for a one-hour tour of the facility. Therefore, he has no direct knowledge of the state of the facility, or the extent of its compliance/non-compliance with Nadcap requirements during 2012 and 2013 beyond the evidence set out in the documents.

235. There is evidence of systemic non-conformity in parts of Farnborough's quality processes and policies. Training and cleaning practices needed to be improved. Materials handling, tool control and record keeping needed to be improved. The MoMs needed to be reviewed and updated. These issues were reflected in concerns raised by customers, including Airbus and its sub-contractors. Those underlying weaknesses do not lead to the conclusion that Farnborough must have been in breach of its Nadcap accreditation at the date of Completion. The terms of the warranty were that Farnborough had, and was materially compliant with, Nadcap accreditation. Material

compliance did not require strict compliance. Nadcap accreditation allowed for both major and minor non-conformities to be present, within prescribed limits. Material compliance required sufficient conformity to retain accreditation. Farnborough satisfied that test as at the date of Completion.

236. Ms Thomas explained in her witness statement TGI's approach to acquisitions:

> "TGI's strategy was to acquire operationally successful aerospace businesses whose continued growth would benefit from Triumph's ability to provide investment capital. With minimal corporate overhead and support functions, TGI would seek to acquire operationally successful businesses and retain the acquired company's existing senior management team. In doing so, the existing leadership team of the acquired business would continue leading the existing operations, managing local customer relations and coordinating business development efforts. This strategy is a crucial part of TGI's approach to acquisitions."

237. When Ms Thomas flew in to Farnborough in January 2014, she recognised that the underlying problem was the absence of effective leadership and management. TGI had assumed that Farnborough had a successful existing senior management team. That assumption proved to be wrong. The failures of the Farnborough management, under Triumph's control, to prepare adequately for the 2013 Audit, and to ensure that NCRs from the 2012 Audit had been resolved, were the causes of the 2013 Audit failure.

Impact of loss of Nadcap accreditation

238. Triumph's case is that the immediate consequence of that failure in 2013 was that Farnborough could not undertake its core commercial operations; it could not ship products to customers. The facility's then Managing Director, Paul Jerram, quite properly informed all customers of the failure. Without Nadcap accreditation, separate approvals and quality plans had to be agreed with each customer by way of an interim solution (because the customers needed the products and in most cases Farnborough was the exclusive supplier). This had a negative impact both on the existing relationships and on the likelihood of Farnborough winning new business.

239. Primus disputes the consequences claimed by Triumph following loss of accreditation and contends that Triumph failed to mitigate its loss as required by Paragraph 2.1 of Schedule 8 of the SPA. Its position is that the temporary cessation of supplies was unnecessary, as evidenced by recommencement long before accreditation was regained. In practice, any loss was limited to the modest, additional costs of re-accreditation.

240. Provided that an innocent party acts reasonably in adopting remedial measures to mitigate the impact of a breach of contract, it will not be disentitled to the costs of such measures merely because an alternative course of action can be identified by the party in breach: *Man Nutzfahrzeuge AG v Freightliner Ltd* [2005] EWHC 2347 (Comm) per Moore-Bick LJ at [285] & [286]; *Banco de Portugal v Waterlow* [1932] AC 452 (HL) per Lord Macmillan at 506.

241. I accept Triumph's submission that the Quality Alert was a reasonable response to the loss of Nadcap accreditation. A more prudent reaction would have been to take the measures implemented by Ms Thomas. However, it was not unreasonable for Farnborough to respond to the shock of failing the 2013 Audit by suspending production until it could assess the full scale of the problem and identify the solution.

242. In any event, as submitted by Triumph, the Quality Alert did not add significantly to the disruption caused by the audit failure. It would have been necessary to suspend production and shipments for a period following the audit failure whilst alternative arrangements were agreed with customers. The temporary suspension of production and shipments extended such period but did not last for more than about 4 weeks.

243. The long term impact on the composites business was profound. The level of arrears rose steeply, significant resources were required to improve quality procedures within Farnborough, re-accreditation was not achieved until 2015 and the arrears were not eliminated until October 2016.

244. Subject to the above determination on liability, Triumph would be entitled to damages to reflect the loss caused by the immediate suspension of production, the additional conditions imposed by customers, the disruption to business and the additional costs of regaining accreditation.

Warranty 6.2

245. Warranty 6.2 states:

> "No notice has been received by either Company to suggest that any of the Permits referred to in paragraph 6.1 of this Schedule 3 should be suspended, cancelled, revoked or not renewed on the same terms and so far as the Sellers are aware there are no pending or threatened proceedings which might affect the Permits."

246. The difficulty for Triumph is that it has been unable to identify any such notice. Its case is based on allegations that various individuals at Farnborough were 'on notice' at the date of Completion that the facility was not in material compliance with Nadcap requirements. But that is not what the warranty covers. The warranty refers to a notice received by Primus. No breach of Warranty 6.2 has been established.

Conclusion on Nadcap warranty claim

247. For the reasons set out above, the Nadcap warranty claim fails.

Operational Warranties Claim

248. Triumph's claim is that, contrary to Warranties 7.2, 9.1, 9.2 and 10.3, as at the date of the SPA and Completion, Farnborough had ongoing operational failings which meant that Primus was in material breach of its key or *"Material"* contracts and might face claims in respect of such breaches. Triumph relies on the following matters:

    i) customer scorecards for Airbus, Aircelle, Rolls-Royce and Walden's indicated serious delivery arrears between January 2013 and April 2013;

ii) during 2012 Rolls-Royce became severely dissatisfied with Farnborough's failure to comply with its supply agreement in terms of delivery and quality of its products and Farnborough was required to agree to the implementation of a Customer Over-check Process ("COP"), whereby a third-party inspector was stationed at Farnborough to perform additional quality control over production.

249. Triumph's case is that these operational issues were known to Messrs Jerram, Day, Merritt and/or Donegan at Primus. As such, they should have been, but were not, disclosed in the Disclosure Letter.

250. Primus admits that there were significant and ongoing issues in respect of deliveries and quality at the time of the SPA and Completion. Its defence is that such matters were fairly and clearly disclosed in the Disclosure Letter. Unrecorded liabilities were settled by adjustments in the Completion Accounts.

Delivery and quality issues

251. The contemporaneous documents demonstrate that Farnborough had significant delivery and quality issues with each of its key customers. The problem was summarised by Mr Baily in his memorandum of August 2011:

> "Attention to quality – poor quality is costing us money and is also causing us to be late on our deliveries to our customers.
>
> Fix our recurring quality problems – we often reject the same parts over and over. Some of these parts our customers give us approval to ship anyway but it takes a lot of effort on our part as well as our customer to deal with each rejection. We must get to the root cause and fix it so we stop the rejections from happening."

252. The documents in the electronic trial bundle are voluminous; indeed, the parties (rather cheerfully) informed the Court that it would take months to read them all. Having insufficient time to embark on such an exercise, and having decided that such an exercise would be unnecessary to determine the matters in dispute, I set out below the material documents, which have been referred to in written and oral evidence and submissions, and which give an overview of the key customer issues at Farnborough at the time of the SPA and Completion.

Airbus

253. Following a site visit to Farnborough in September 2011, Airbus expressed concerns regarding Farnborough's performance. Delivery issues stemmed from a discrete dispute between Farnborough and its supplier, Gurit, but separate quality issues were raised by Airbus.

254. In an email dated 17 February 2012, Airbus complained about deliveries:

> "The situation with the [A350] sewing angles is not acceptable at all…Primus is now jeopardising the production plan for the first aircraft…"

255. On 22 March 2012 Airbus sent the following email to Farnborough:

> "Overall I have to admit that I am currently very unhappy with the performance of Primus. We have had severe painting issues on both SA and LR parts during the last couple of weeks, even impacting the FAL. This is not what I expect from a reliable supplier. I would appreciate your support to secure that those painting issues and non-recognition during quality check processes do not happen again in the future. The recognition of Primus has really decreased in the Airbus system in the past weeks."

256. An internal Primus email on 12 April 2012 recorded the following concerns:

> "During our weekly telecom with Airbus yesterday, Airbus expressed real disappointment about the deterioration in delivery performance over the past 4-6 weeks. We have not been delivering product in line with their POs and arrears have been slowly increasing. In addition to this … we have not been delivering good quantities of critical parts which is causing disruption to the assembly line. There is also a real struggle to give clear visibility on delivery plans and accurate forecasting. As a result of all this Airbus is giving us the next three weeks to improve (month of April) or this situation will be escalated within their organisation and we will be expected to attend a weekly report meeting in Stade."

257. A few weeks later, Airbus complained that the delivery situation at Farnborough was causing a risk of a line stoppage, which would be unacceptable.

258. At a presentation on 3 August 2012, Airbus identified a number of quality issues that were causing unacceptable disruption to its assembly line.

259. On 5 October 2012 Airbus sent an email to Farnborough, complaining that late deliveries had stopped the A350 production line:

> "I need to emphasise the criticality of the today situation. The assembly line has been stopped on Wednesday evening due to the missing sewing angles. We need to communicate some messages to the relevant level of management as soon as possible in order to agree on a recovery plan."

260. On 30 October 2012 Airbus sent an email to Farnborough, expressing concern about late delivery of the SA fairings:

> "The delivery situation is absolutely not satisfying and very close to [an] assembly stop in Stade. With the latest forecast received, where the delivery of 18 parts per week was postponed by 4 weeks and now not even 10 AC per week are met anymore, we are running in a very critical delivery situation, which is not acceptable from my side!

> Our internal stock in Stade is currently down to few parts and with only 2 deliveries planned for this week and further 13 next week we will not be able to fulfil the current needs of 11 AC per week in the assembly line!
>
> Please put actions in place to improve the deliveries to minimum 10 per week …"

261. In an internal email from Mr Merritt to Doug Fletcher and Paul Jerram dated 11 December 2012, he reported that, if performance did not improve, Airbus *"will consider an exit"*.

262. On 23 January 2013 Airbus gave a further presentation to Primus, in which it noted improvements in Farnborough's delivery performance (as recorded by Susan Corotana of Primus in her email the following day):

> "LR and A100 rudder nose parts
>
> - incomplete deliveries on LR improved rudder nose parts
> - tough delivery situation due to machining capacity at Primus
>
> A320 and A321 flaps
>
> - no current issues with deliveries on A320 flaps
> - no current issues on the A321 flaps
>
> Transfer projects
>
> - Delivery performance … performance improved, no more arrears!!!"

263. However, by letter dated 23 January 2013, Airbus raised the following issues of concern:

> "• Deliveries: Saint-Nazaire plant assembly process was impacted twice by deliveries occurred a few days too late. Therefore we expect an immediate recovery of deliveries according the nominal planning. In addition and in order to protect from any new issue impact, we request PRIMUS to make up a buffer of one ship set of parts ready to be delivered at any time. This buffer shall be ready beginning of May.
>
> -Quality: Defects were detected on the Sewing Angles once delivered to Saint-Nazaire plant and some parts returned to PRIMUS. We expect the parts to be fully checked in your facilities and quality level as per Aeronautics standards to be insured. Further to our discussions and in order to be accurate in the expectation, some acceptance criteria were communicated to you and shall be fully met. Concerning the processes

> qualification, progress is not at expected level. 15% only are qualified, 55 % are under ATP. The subject needs to be considered with more priority…"

264. By letter dated 28 January 2013 Mr Jerram of Primus referred to recovery that had been made in performance and stated that Farnborough expected to be able to support on-going deliveries and have the buffer stock required.

265. On 20 February 2013 Mr Fletcher sent an internal email, stating:

> "I mentioned to Mike Voegtlin today that our position with Airbus continues to improve. He countered that Joe and he were in Hamburg 2 weeks ago and heard complaints about our delivery performance… We may be dealing with old or mis-information but it's clear to me that our reputation inside Airbus has a lot of room for improvement. I want you both to figure out how I can get a weekly update on customer performance and arrears by major program. Additionally, I want a quality metric by customer. I want these metrics as part of the weekly staff package…"

266. Paul Jerram responded:

> "I agree we have work to do … I'll try to find out who the source is, as it may be A350 as John & Oliver [Tiniard] received positive feedback on the other legacy product on their visit."

267. The scorecards issued by Airbus show that, from January 2013 to end of April 2013, on average, Farnborough failed to deliver between 17% to 28% of orders to Airbus on time across the various programmes.

Rolls-Royce

268. On 7 April 2011, Rolls-Royce sent Farnborough a letter warning that its delivery performance was unsatisfactory:

> "An evaluation of your Rolls-Royce supplier scorecard dated 5th March 2011 indicates a 'Substandard' Delivery Performance Score of 78%. This would normally trigger entry at Stage 1 of the Delivery Red Flag process. However on the basis of the current delivery plans being worked it has been decided that Primus will enter the process at Pre-Entry stage …
>
> It is imperative that Rolls-Royce and its supply chain work together to protect our end customers from late parts deliveries. I am sure you are supportive of this position. One strategy that can help with this is the generation of buffer stock on specific parts that are at risk of delivery failure…
>
> The process allows you 4 months to build this buffer, and to improve your delivery performance to >85% with the clear

> intention of improving this to >95% (class leading) within 6 - 8 AP's. However, in the event that your delivery performance does not improve during this time, Primus will enter the Red Flag process at Stage 1…
>
> We may then seek to hold this buffer stock on site at Rolls-Royce at Primus expense. Should the buffer stock be unavailable at that time, escalation to a higher Red Flag stage and a longer time to exit the process becomes more likely, which neither of us would want…"

269. Farnborough's performance did not improve, as evidenced by complaints from Rolls-Royce through the remaining months of 2011.

270. The scorecard produced by Rolls-Royce showed Farnborough's delivery and quality performance for 2011 as *"Unsatisfactory"*.

271. By letter dated 6 December 2011 Rolls-Royce stated that a claim for £84,000 would be made in respect of late deliveries.

272. Primus acknowledged that there were problems at Farnborough but identified one of the causes as the need for Rolls-Royce to refurbish tooling for their components.

273. On 8 February 2012 Rolls-Royce expressed its concerns regarding quality issues:

> "Given the current status of the Primus scorecard and red flag position, Rolls-Royce are seriously considering the [implementation] of a Rolls-Royce inspector to be resident at Primus (at the cost of Primus). To negate this RR have suggested that Primus put together a plan to put in place to establish an equivalent governance to a RR inspector…"

274. As a result, an additional layer of inspection for all Rolls-Royce parts was introduced at Farnborough, the Customer Over-check Process ("COP"). Farnborough engaged, at its expense, two independent quality inspectors whose sign-off was required before any part could be shipped to Rolls-Royce. An internal Primus presentation explained why the COP was required:

> "1. Poor Quality and Delivery Score 6 months running
>
> 2. Need to improve the [company's] credibility and perception by the customer.
>
> 3. Aim to improve quality score over the next 6 months.
>
> 4. How do we achieve this – No quality escapes, reduce concessions.
>
> 5. How do we do it – introduce / have CEOs Customer Eyes Only and develop the team so that CEO is not required."

275. In addition to the direct cost of engaging the inspectors, the additional COP inspection stage caused further delays in production and/or delivery and led to an increase in the number of parts being sent for engineering review.

276. In April 2012 Rolls-Royce expressed its concern at the number of parts inspected and rejected by the COP and the consequential delivery arrears.

277. On 4 July 2012 Primus wrote to Rolls-Royce, setting out its position in respect of commercial negotiations to attempt resolution of a price dispute that had arisen. One of the arguments raised by Primus was that variations to component specifications and standards of finish, including enhanced Nadcap requirements, resulted in longer production times, increased levels of rejections (MRB process) and higher costs.

278. A business review meeting took place on 5 July 2012 at which Rolls-Royce noted that Farnborough's performance was now classed as sub-standard.

279. In August 2012 an overview report by Primus noted that performance was unsatisfactory but that some improvement had been shown. However, in an email exchange on 21 August 2012 Rolls-Royce expressed concern that Farnborough's recovery plan was not being met and that late deliveries threatened to stop production.

280. In September 2012, Adrian Free prepared a report for a senior-level meeting between Rolls-Royce and Primus, in which Primus set out its plans for improvement. In its response presentation, Rolls-Royce stated:

> "Primus Composites are in top 20 Suppliers for poor delivery and it is getting worse …
>
> Primus delivery performance is reviewed at most senior levels in RR and its Customers. We are having to report repeated slippages in commitments and actions being taken…
>
> Do Primus & PCC understand the significance of the hurt being caused?
>
> We need a credible recovery plan across all parts that is delivered every week.
>
> Losses through scrap and rework are a significant cost and waste and also an opportunity.
>
> Actions taken to date by primus have not resulted in an improved position.
>
> We need a joint plan that recovers all aspects of business performance but delivery of commitments must come first."

281. By letter dated 18 September 2012 Rolls-Royce notified Primus that it intended to deduct damages for late delivery from sums otherwise due to Primus. The schedule attached showed more than 500 late deliveries for the period January to August 2012. The damages claimed were £74,730.59 and US$ 35,964.95.

282. On 8 October 2012, PCC noted that Rolls-Royce had raised concerns at Farnborough's poor performance with Mr Donegan, CEO of PCC:

> "Delivery performance poor and not improving:
>
> …
>
> 1. Many areas of waste including poor housekeeping (leading to handling damage), high levels of rework and scrap and poor communication issues. These are viewed by RR as a significant contribution to both delivery and financial performance of Primus.
> 2. We also see capacity and resource shortages/allocation decisions that lead to critical parts not being worked continuously and subsequent delivery failures.
> 3. Lack of engagement to ensure delivery commitments are achieved.
> 4. Recovery plans missed due to issues with parts flow, tooling, resource allocation, sub-tier management and yield at inspection.
> 5. Delivery commitments made which are subsequently found to be based on poor information."

> "What would help:
>
> 1. Remove delivery stop threats issued to RR if we do not agree to 100% price increase on compression moulded parts… We agreed previously to fix delivery before we reviewed commercial issues …
>
> 2. PCC to deploy resources and toolkit to address flow, planning, resource allocation and quality improvement.
>
> 3. Accelerate work started on agreeing/clarifying visul standard acceptance levels to get better flow and yield.
>
> 4. Accelerate Thailand ramp rate."

283. Following a high-level meeting, Primus issued a 90-day commercial plan to Rolls-Royce, including a plan for operational recovery at Farnborough.

284. In an email to Mr Jerram on 1 November 2012, Rolls-Royce set out their concerns regarding Farnborough's delivery performance and stated that arrears recovery was required.

285. In an email dated 5 December 2012 Adrian Free expressed his frustration that there were ongoing delays without adequate explanation from team leaders.

286. The Rolls-Royce scorecard for 2012 showed that Farnborough's delivery and quality performance was *"Unsatisfactory"* for every month in 2012.

287. In February 2013 there was discussion within Primus as to when it would be possible to lift the COP arrangement. It was recognised that if the COP had not been put in place Rolls-Royce would have imposed it as a result of Primus's red flag status.

288. By letter dated 15 February 2013, Rolls-Royce notified Paul Jerram of its intention to deduct damages for late delivery from sums otherwise due to Primus. The schedule attached showed more than 700 late deliveries for the period August 2012 to February 2013. The damages claimed were £83,730.18.

289. Mr Free produced a spreadsheet of the charges, noting that some of the product lines were manufactured under a legacy agreement ("Supply Agreement 7326"). Those lines were not covered by the relevant long term agreement with Rolls-Royce ("the LTA") and therefore should not be subject to the delay damages.

290. The scorecards issued by Rolls-Royce show that, from January 2013 to end April 2013, on average, Farnborough failed to deliver between 45% and 60% of orders to Rolls-Royce on time. Farnborough's delivery performance was repeatedly graded as unsatisfactory by Rolls-Royce during this time.

Walden's

291. The scorecards for Walden's show that Farnborough failed to meet its delivery targets through 2012.

292. The scorecards also show that from January 2013 to end April 2013, on average, Farnborough failed to deliver 95% of orders to Walden's on time and delivered orders an average of 36.5 days late in that time period. Four orders were rejected due to problems whose root causes were attributed to inadequate training.

Aircelle

293. On 12 October 2011, Mark Silsbury at Farnborough complained that Farnborough did not have sufficient resources allocated to meet the demands of the work:

> "• Aircelle are starting to ask questions about the lack of responses on quality issues.
>
> • OTD is being impacted
>
> • Concessions are not getting raised/processed.
>
> • Supplier quality issues are not getting resolved
>
> • Engineering issues are not being resolved.
>
> • Engineering are struggling to react to day to day issues."

294. On 30 January 2012 Aircelle sent an email to Farnborough, asserting a claim for delay damages for September 2011 through to December 2011.

295. On 21 March 2012 Aircelle demanded payment of € 200,000 in respect of parts that had been returned to Farnborough.

296. At a meeting between Aircelle and Farnborough on 18 April 2012, a recovery plan was agreed to address late deliveries. However, by August 2012, Aircelle complained that Farnborough was failing to meet its recovery plan, which was causing disruption to the assembly line.

297. On 7 January 2013 Aircelle sent an email to Primus complaining about delivery performance:

> "Your annual OTD [on time delivery] is less than 50.5. For the last 3 months, your OTD is decreasing to 37%. The logistic performance remains totally unacceptable."

298. Roger Day at Primus noted in January 2013 that the ongoing delivery issues suggested that a claim from Aircelle was likely. At a meeting with Primus on 25 January 2013, Aircelle stated that Farnborough was its worst supplier and that if performance did not improve, penalties would be imposed.

299. On 6 February 2013 Aircelle sent a letter to Primus, stating:

> "Beginning 2012, Aircelle have invested and paid to Primus the amount of 76 646 $ in order to support the production capacity at the level of rate 14 starting end May 2012.
>
> In 2012, despite of weekly recovery plan and extra invested capacity, Primus deliveries were far away from the expected level to support our assembly lines. Instead of recovery and improving delivery performance, the OTD was continually declining since July 2012, and end up at only 44% in December 2012 with a very poor year level at 47%.
>
> Aircelle have been impacted for this bad delivery performance in constantly re organising its production line to limit the assembly disruption.
>
> By this letter, Aircelle request Primus the reimbursement of 76646 $ (PO 4500075404) investment made for the Rate 14. Aircelle also reserve the right to claim the late delivery penalties in relation with the bad delivery performance of the period of September to December 2012 (calculation is on hold)."

300. On 29 March 2013 delivery shortages to Aircelle brought the A320 assembly line to a halt.

301. The scorecards issued by Aircelle show that, from March 2013 to end April 2013, on average, Farnborough failed to deliver 80% of orders to Aircelle on time and delivered orders an average of 14.5 days late.

General

302. Battleplan documents produced by Primus show that over the first quarter of the financial year for 2013 Farnborough delinquencies each week were between £996,000 and £1,412,000.

303. Battleplan documents also show that over the second quarter of the financial year for 2013 Farnborough delinquencies each week were between £1,275,000 and £1,760,000.

304. In the briefing notes for the second quarter of 2013, Primus noted:

> "We have successfully delivered our second quarter sales and EBIT (Earnings Before Interest and Tax) as part of our ongoing recovery plan, but we still have a journey in front of us to ensure we meet expectations…
>
> We currently have significant arrears with our key customers due to rate increases, new qualifications and material difficulties."

Operational warranty claim issues

305. Primus admits in its Re-re-Amended Defence that there were significant and ongoing issues in respect of deliveries and quality. In cross-examination, Mr Jerram accepted that there were many technical and operational issues that affected Farnborough's customers at the date of the SPA and Completion.

306. In the light of the admissions and the contemporaneous documents referred to above, the issues identified by the parties that are in dispute can be summarised as follows:

i) Were the contracts or arrangements with Airbus, Rolls-Royce or Aircelle Material Contracts for the purpose of Warranty 10.3?

ii) Did the Knowledge Group have actual or deemed knowledge of the operational failures referred to above for the purpose of clause 8.2 of the SPA?

iii) Did the operational failures amount to circumstances that constituted breach of the warranties?

iv) Were the delivery and quality issues disclosed by the Defendants within the meaning of clause 9.5 of the SPA?

Material Contracts

307. A 'Material Contract' is defined in the SPA as:

> "any contract or arrangement pursuant to which either Company is entitled to receive or is obliged to pay an annual amount in excess of US$500,000."

308. Farnborough was party to a number of long term agreements with Airbus, Rolls-Royce, Aircelle and Walden's, setting out the terms on which orders would be placed by the customer and accepted by Farnborough, including specifications and price. Individual purchase orders were issued by the customers, many, but not all, of which were subject to the terms in the long term agreements.

309. Triumph's case is that those long term arrangements amounted to Material Contracts for the purpose of Warranty 10.3. As at the date of the SPA, the annual value of orders placed with each of Airbus, Rolls-Royce, Aircelle and Walden's exceeded US$

500,000. Farnborough didn't have a contractual entitlement to a minimum volume or value of orders. However, based on their course of dealings, Farnborough and its customers had an expectation that the annual value of orders would be in excess of US$ 500,000.

310. Primus contends that the above arrangements were not sufficient to constitute Material Contracts because they did not give rise to any contractual entitlement to orders with a value in excess of UK$ 500,000.

311. Use of the words: *"contract or arrangement"* in the definition of 'Material Contracts' in the SPA expressly contemplated entitlement that did not fall to be categorised as a contractual entitlement. Farnborough was entitled to receive annual amounts exceeding US$ 500,000 under each of the arrangements with its key customers, based on its long-term agreements with those customers. As Triumph submits, Farnborough was the sole supplier of each component to the relevant customer. Because of the bespoke and legacy nature of most of the parts produced at Farnborough, customers were very unlikely to be able to source these parts elsewhere and Farnborough was the exclusive supplier. Farnborough's practical and commercial entitlement to supply the components was evidenced by long term forecasts of demand from Airbus and Rolls-Royce and binding purchase orders on a rolling 3-monthly basis from Aircelle and Walden's.

312. There is strong evidence that the above interpretation was shared by the parties at the time of the SPA. Both parties valued Primus based on its current and projected sales, largely to those key customers, as identified in the Information Memorandum and the FLPs. Significantly, in the Disclosure Letter, Primus made specific disclosures against Warranty 10.3 in relation to its supplies of components to Rolls-Royce, Aircelle and Airbus.

313. For those reasons, the agreements relied on by Triumph were Material Contracts for the purpose of Warranty 10.3.

Knowledge for the purpose of clause 8.2

314. Warranties 7.2, 9.1 and 9.2 were qualified by reference to: "so far as the Sellers are aware".

315. Clause 8.2 of the SPA states:

> "Warranties qualified by the expression "so far as the Sellers are aware" (or any similar expression) are deemed to be given to the actual knowledge of the Sellers after they have made all reasonable enquiries of Doug Fletcher, Paul Jerram, John Merritt, Roger Day and Alex Beysen, who shall themselves have made due and careful enquiries in respect of the aspects of the business of the Target Companies for which they are respectively responsible."

316. The effect of this provision is that Primus is deemed to have knowledge of the matters covered by the warranties if reasonable enquiries of and by the named individuals ("the Knowledge Group") would have disclosed such matters. The test is an objective one. The nature and level of enquiries made by Primus is immaterial. Any lack of knowledge

or lack of understanding by Primus as to the operational failings is immaterial. The deeming provision is concerned with what was known or should have been known to Primus from the reasonable enquiries stipulated in clause 8.2.

317. In any event, the Knowledge Group must have had actual knowledge of the operational failures at Farnborough, given the voluminous documentation setting out the customer complaints and concerns. A cursory reading of some of the correspondence would have been sufficient to inform the Knowledge Group of these issues.

Breach of the warranties

318. Primus submits that the operational issues were not such as to give rise to potential proceedings. In cross-examination Mr Wilkin agreed that threatened penalty claims were not unusual in the industry and formed part of the ordinary course of business. Mr Jerram suggested that he was confident that they would be able to manage the customer issues to avoid any formal claims. Mr Dunk, finance director at Farnborough from May 2015, confirmed in his witness statement that no delay damages claims were paid by Farnborough for delivery arrears that existed prior to Completion. Triumph has not identified any specific liabilities, claims or proceedings that Primus should have, but failed to, disclose.

319. However, that evidence does not provide a complete defence to the allegations of breach. The warranties were concerned not just with actual, but also with potential, claims and proceedings at the date of the SPA and/or Completion.

320. The issue is whether the circumstances of the customer complaints gave rise to a real, as opposed to a fanciful, risk of claims, litigation or other proceedings: *Aspen Insurance UK Ltd v Pectel Ltd* [2008] EWHC 2804 (Comm) per Teare J at [9].

321. In *HLB Kidsons v Lloyd's Underwriters* [2007] EWHC 1951 (Comm), the circumstances that might give rise to a loss or claim were considered by Gloster J at [73]:

> "… a 'circumstance . . . which may give rise to a loss or claim against' the assured … requires that the circumstance should be one which, objectively evaluated, creates a reasonable and appreciable possibility that it will give rise to a loss or claim against the assured. It is necessary to emphasise however, that a circumstance may give rise to a loss or claim when there is a possibility or perceived possibility that, at some stage in the future, it will do so. There need not be a certainty that it will do so; there need not be a probability or likelihood that it will do so. All that need exist is a state of affairs from which the prospects of a claim (whether good or bad) or loss emerging in the future are 'real' as opposed to false, fanciful or imaginary.

322. The test is, in part, an objective one, namely, whether the established circumstances could give rise to a claim or proceedings. However, not all such circumstances would be sufficiently serious to engage the warranties; the circumstances must be such that a reasonable person in the position of members of the Knowledge Group would recognise them as matters that might give rise to a claim or proceedings: *HLB Kidsons v Lloyd's*

Underwriters [2008] EWCA Civ 1206 per Rix LJ at [72] and Toulson LJ at [136] – [141].

323. I accept Mr Pillai's submission that the matters covered by the operational warranties were not limited to formal claims made against Primus or damages paid by Primus.

324. Further, the fact that Primus had opportunities to manage complaints or threatened claims would not detract from the risk of claims or proceedings. Confidence that customer issues could be managed would not be sufficient to eliminate the real risk that claims could be made and pursued in litigation or other proceedings.

325. The complaints and claims evidenced in the contemporaneous documents prior to the date of the SPA and Completion are summarised above. Those complaints and claims demonstrated that Farnborough faced chronic and serious delivery and quality problems. Primus did not dispute that it was responsible for many of those problems. Key customers made, or threatened to make, claims for damages in respect of those problems. Some of the claims were valued at more than £75,000. They were sufficiently serious to amount to matters or circumstances giving rise to a real risk of claims or proceedings. As such, the warranties were engaged.

326. It follows that, at the date of the SPA and/or Completion:

i) matters existed which might give rise to proceedings, investigations or enquiries (Warranty 7.2);

ii) Farnborough had received written notice of claims with a value in excess of £75,000 in respect of goods or services supplied by the companies for which they were liable and/or there existed circumstances which might have resulted in such claims (Warranty 9.1);

iii) Farnborough had supplied goods which were defective and or which failed to comply with the relevant terms of sale (Warranty 9.2)

iv) Farnborough was in material breach of its contracts with Airbus, Rolls-Royce and Aircelle (Warranty 10.3).

Disclosure

327. Triumph's case is that Primus knew, or was deemed to know, of the ongoing quality and late delivery problems at Farnborough but disclosed a very limited set of these matters against the contractual warranties. Had these matters been disclosed they would have given Triumph a proper insight into the depth of the underlying operational problems at Farnborough.

328. Primus's case is that the operational issues at Farnborough were fairly and properly disclosed, through the data room documents made available for the due diligence exercise, and through the Disclosure Letter of 3 May 2013.

329. Clause 9.5 of the SPA exonerated Primus from breach of the material warranties to the extent that:

> "the matter the subject of the claim … is …

> fairly and clearly disclosed in writing in or under the Disclosure Letter
>
> (with sufficient detail to identify the nature of the matter disclosed)."

330. The commercial purpose of such disclosure clauses is to afford a seller who wishes to avoid a breach of warranty the opportunity to give specific notice of a matter to the buyer: *Levison v Farin* [1978] 2 All ER 1149 (QBD) per Gibson J at 1157:

> "I do not say that facts made known by disclosure of the means of knowledge in the course of negotiation could never constitute disclosure for such a clause as this but I have no doubt that a clause in this form is primarily designed and intended to require a party who wishes by disclosure to avoid a breach of warranty to give specific notice for the purpose of the agreement, and a protection by disclosure will not normally be achieved by merely making known the means of knowledge which may or do enable the other party to work out certain facts and conclusions."

331. In *Daniel Reeds Ltd v EM ESS Chemists Ltd* [1995] CLC 1405, the Court of Appeal held that an omission of a pharmaceuticals licence from a disclosure list was not sufficient to amount to fair disclosure of the fact that the licence had expired. As Beldam LJ stated:

> "… fair disclosure requires some positive statement of the true position and not just a fortuitous omission from which the buyer may be expected to infer matters of significance."

332. In *New Hearts Ltd v Cosmopolitan Investments Ltd* [1997] 2 BCLC 249 (Court of Session), Lord Penrose referred to Gibson J's comments in *Levison* and stated at pp.258-9:

> "The disclosure letter is distinguished, even in comparison with the agreement, by the obscurity of its language. It incorporates by reference a list of documents, including the last accounts and the management accounts and purports to disclose their content and terms…
>
> This repetitive and omnibus approach of an invitation to the purchasers and their representatives to make what they will of the documents with reference to which warranties have been given by the vendors cannot by any stretch of the imagination be considered fair disclosure, with sufficient detail to identify the nature and scope of any matter purportedly disclosed…
>
> Mere reference to a source of information, which is in itself a complex document, within which the diligent enquirer might find relevant information will not satisfy the requirements of a clause providing for fair disclosure with sufficient details to identify the nature and scope of the matter disclosed."

333. The case of *Infiniteland Ltd v Artisan Contracting Ltd* [2005] EWCA Civ 758 concerned the construction of a share purchase agreement under which the seller warranted that: *"the contents of the Disclosure Letter and of all accompanying documents … fully, clearly and accurately disclosed every matter to which they related".* The Disclosure Letter stated that matters previously disclosed to the purchasers' accountants and in the accompanying disclosure bundle were deemed to be disclosed. In finding that this satisfied the contractual warranty, Chadwick LJ made the following observations at [70]:

> "It would have been open to the Purchaser to refuse to accept disclosure made in general terms by reference to what had been supplied to its reporting accountants; and to insist that it would only accept disclosure which was specific to each individual warranty. But the Purchaser did not choose to take that course. It was content to rely on its reporting accountants to identify from the documents supplied to them – and to report on – the matters about which it needed to be informed. That is the effect of the terms in which disclosure was made under the disclosure letter; and, for whatever reason, those were the terms upon which the purchaser was content to accept disclosure. In those circumstances, as it seems to me, the disclosure requirement was satisfied in relation to such matters as might fairly be expected to come to the knowledge of the reporting accountants from an examination (in the ordinary course of carrying out the due diligence exercise for which they were engaged) of the documents and written information supplied to them (including board meeting packs and the contents of the Disclosure Bundle)."

334. The necessity of considering the material terms of the contract was emphasised in *Man Nutzfahrzeuge AG v Freightliner Ltd* [2005] EWHC 2347 (Comm). In that case, the relevant clause stated that *"any matter which is or should be revealed by inspection of the statutory registers and books…"* was disclosed. A submission that various VAT frauds were disclosed by reference to the financial records from which the fraud could be deduced was rejected by Moore-Bick LJ (giving judgment in a case heard in the commercial court) at [178]:

> "The natural meaning of the words the parties have chosen to use is that only matters that can be directly ascertained from an inspection of the relevant documents are to be treated as having been disclosed."

335. The following principles can be derived from those cases:

i) The commercial purpose of such disclosure clauses is to exonerate the seller from its breach of warranty by fairly disclosing the matters giving rise to the breach.

ii) The disclosure requirements of the contract in question must be construed applying the usual rules of contractual interpretation, by reference to the express words used, the relevant factual matrix and the above commercial purpose.

iii) The adequacy of disclosure must be considered by careful analysis of the contents of the disclosure letter, including any references in the disclosure letter to other sources of information, against the contractual requirements.

iv) A disclosure letter which purports to disclose specific matters merely by referring to other documents as a source of information will generally not be adequate to fairly disclose with sufficient detail the nature and scope of those matters. For that reason, disclosure by omission will rarely be adequate.

v) However, it is open to the parties to agree the form and extent of any disclosure that will be deemed to be adequate against the warranty. That could include an agreement that disclosure may be given by reference to documents other than the disclosure letter, such as by list or in a data room.

vi) Where disclosure is by reference to documents other than the disclosure letter, only matters that can be ascertained directly from such documents will be treated as disclosed.

336. The Disclosure Letter dated 27 March 2013 stated:

> "By way of general disclosure, the following matters are disclosed or deemed disclosed to the Buyers (but without prejudice to the question of whether they are fairly disclosed for the purposes of any warranty to which they might be relevant)."

337. The matters identified in the letter included:

> "All documents made available to the Buyers by way of an on-line data room facility … ("**Data Room**") as recorded on a CD-Rom to be sent within ten Business Days of the date of this letter … to the extent that such documents are specified in the Data Room index drawn up as at 25 March 2013 which has been initialled by or on behalf of us and by or on behalf of you and attached to this letter."

338. The Disclosure Letter also made specific disclosures against identified warranties but subject to an express statement in the letter that:

> "any of the disclosures ... are made against the Warranties as a whole. A disclosure or qualification made by reference to any particular paragraph shall be deemed to be made also in respect of any other paragraph to which the disclosure or qualification may be applicable."

339. Primus relies on the following specific and general disclosures regarding operational issues.

340. In respect of Rolls-Royce issues, the specific disclosure was:

> "The UK Company received a letter from Rolls-Royce plc ("RR") dated 7 April 2011 stating that the UK Company's delivery performance score had fallen below acceptable levels

> and requested that the UK Company establish a buffer of 3 weeks stock on certain products. Please refer to document 5.2.1 of the Data Room. No further correspondence has been received from RR regarding this."

In the letter of 7 April 2011 (see paragraph [268] above), Rolls-Royce stated that late deliveries, based on the customer scorecard, were sufficient to trigger its delivery Red Flag process and demanded a buffer to be implemented.

341. A further specific disclosure was made in respect of Rolls-Royce issues:

> "The UK Company received a letter from RR dated 18 September 2012 alleging various instances of late delivery and stating that RR would be claiming compensation from the UK Company. The UK Company responded on 25 September 2012 requesting further information from RR so that the allegations of late delivery could be investigated. A further letter dated 15 February 2013 has been received from RR. Please refer to documents 6.6.1 and 15.21.1 of the Data Room for copies of the latest correspondence."

342. The letters are referred to above and detail Rolls-Royce claims for damages of more than £150,000 for itemised late deliveries between January 2012 and February 2013.

343. In respect of Airbus issues, the specific disclosure was:

> "On 23 January 2013, the UK Company received a letter from Airbus relating to management of the A350 Sewing Angle work package and certain improvements that Airbus believes are required. Please refer to document 15.26.1 of the Data Room for a copy of the letter from Airbus. The UK Company is, as part of its ongoing ordinary course project management review process, liaising with Airbus in respect of the matters raised in its letter."

The letter of 23 January 2013 (see paragraph [263] above) raised delivery and quality issues as set out above.

344. In respect of Aircelle issues, the specific disclosure was:

> "Aircelle has written to the UK company claiming reimbursement of the sum of 476,646 which Aircelle paid to the UK Company to support production capacity at an increased rate. The UK Company does not believe that this sum is repayable to Aircelle and is currently liaising with Aircelle to resolve the matter as part of its ongoing ordinary course project management review process. Please refer to document 15.26.2 of the Data room for a copy of the letter dated 6 February 2013 from Aircelle."

The letter of 6 February 2013 (see paragraph [299] above) set out allegations of poor delivery by Farnborough throughout 2012, failure to comply with weekly recovery

plans, disruption caused to Aircelle's production line and the threat of late delivery penalties.

345. The general disclosure relied on by Primus by reference to documents in the Data Room includes:

i) Briefing Notes for the second quarter of 2013, identifying significant arrears with key customers – disclosed by way of upload on 11 January 2013 under the heading: *"QCB Briefing Notes Q213"*;

ii) Farnborough "Battleplan" documents, showing the increasing levels of delinquencies during 2013 – disclosed under the heading: *"Key Metrics by Facility"*;

iii) Correspondence setting out Rolls-Royce concerns regarding delivery and quality – disclosed under the heading: *"Rolls Royce Issues"*.

346. In my judgment Primus fairly and clearly disclosed the delivery and quality failings at Farnborough for the purpose of exonerating it from its operational breaches of warranty for the following reasons.

347. Firstly, clause 9.5 of the SPA permitted disclosure to be given *"in or under"* the Disclosure Letter. It did not require every breach to be set out expressly in the letter. Given the scale of the facilities, the number of components, processes and customers, and the period for which Farnborough had been operating, this was a sensible and practical approach.

348. Secondly, the parties agreed that disclosure could be given by the documents in the Data Room. Electronic access to those documents was provided online, the descriptive index was initialled by both parties and a copy was attached to the Disclosure Letter. Triumph reserved its right to dispute that the documents provided fair disclosure in respect of any particular warranty but, as a matter of principle, this mode of disclosure was accepted. Again, given the volume of documentation involved, this was a sensible and practical approach.

349. Thirdly, clause 9.5 required a relevant matter to be *"fairly and clearly disclosed … with sufficient detail to identify the nature of the matter disclosed"* but did not require details of the extent, or scope, of the matter. The specific and general matters disclosed by Primus, as set out above, revealed that there were significant and persistent quality and delivery issues affecting its key customers between 2011 and 2013.

350. Triumph complains that the customer scorecards for 2013 were not disclosed. Mr Jerram accepted in cross examination that the customer scorecards should have been, but were not, disclosed through the Data Room. However, the extent of the arrears was evident from the disclosed correspondence, showing penalty claims threatened or made by customers in 2012 and 2013, and from the disclosed battleplans, showing the escalating value of delinquencies in 2013.

351. Triumph complains that the COP process for Rolls-Royce products was not specifically disclosed. The COP process was introduced by Farnborough to avoid the imposition of the red flag process. Primus specifically disclosed the letter of 7 April 2011, stating that

poor performance had reached the level at which red flag status could be imposed. It also specifically disclosed the penalty claims for late deliveries throughout 2012 and the beginning of 2013. Therefore, it must have been apparent that the delivery issues had not been resolved.

352. Triumph's submission is that none of the documents referred to in the Disclosure Letter fairly and clearly disclosed the true and full extent of the operational situation at the Companies. But that is not the applicable test under clause 9.5. Clause 9.5 required the nature of the matter, the subject of the claim for breach of warranty, to be disclosed. The warranties breached by Primus did not cover the extent of underlying operational failings at Farnborough. Their scope was limited to claims, threatened claims and circumstances that might give rise to claims. The nature of the operational failings at Farnborough, constituting such circumstances, and the claims articulated by customers, were fairly and clearly disclosed.

Completion Accounts

353. Primus relies on the fact that a number of unrecorded liabilities were identified and valued for the purpose of adjustment in the Completion Accounts. The unrecorded liabilities were the Aircelle reimbursement claim, Aircelle late delivery penalties for 2012 and 2013, and Rolls-Royce late delivery penalties for 2011-2013. In respect of each claim, 50% of the claim value was deducted from the net assets value of the companies, a total sum of US$ 681,585.

354. The fact that the unrecorded liabilities were valued for the purpose of adjusting the net assets value in the Completion Accounts would not exonerate Primus from liability for any breach of the warranties. In any event, they did not cover the more widespread issues with Farnborough's key customers.

355. However, the treatment of the unrecorded liabilities in the Completion Accounts established an agreed value for those particular breaches for the purpose of any damages and for the purpose of any notice under clause 6.6 of the SPA.

Conclusion on the Operational Warranties claim

356. For the reasons set out above, the Operational Warranties claim fails.

FLP claim

357. Triumph's case is that, in breach of Warranty 19.5, the Forward Looking Projections ("the FLPs") were not carefully prepared. The pleaded case is that carefully prepared FLPs would have reflected the following matters in respect of the proposed transfer of production from Farnborough to Thailand:

    i) it was necessary to produce a three- or six-month buffer stock to allow production to be transferred at the stated rate;

    ii) Farnborough would have to eliminate or reduce the level of delivery arrears to secure approval from customers for the transfer of the proposed platforms;

iii) Farnborough would have to incur additional costs of premium shifts/additional staff and increased scrap costs to achieve the necessary production of a buffer stock and to burn down the arrears;

iv) Primus Thailand's staff required training to acquire the necessary skills and experience to produce the products proposed to be transferred;

v) the costs of raw materials in Thailand would be 3-10% higher than in the UK;

vi) Rolls-Royce would take 100% of the benefit of cost savings on its transferred products;

vii) the transfer of production hours from Farnborough to Thailand at the rates planned had not been, and would not be, achieved;

viii) there would be a delay of about 12 months from winning any new composites business and significant production.

358. Triumph's case is that carefully prepared FLPs would have reflected the above matters by showing a significantly reduced rate of transfer of work to Thailand, lower composites production at Thailand, increased costs of sales and significantly reduced forecasted revenues, income and profits.

359. Primus disputes the allegations of breach. Its case is that the FLPs were honestly and carefully prepared. There was no guarantee as to their accuracy. The Knowledge Group made due and careful enquiries in respect of the aspects of the business for which they were responsible and the assumptions on which the forecasts were made were well documented.

Transfer of production to Thailand

360. As set out in the Information Memorandum, when the Primus companies were offered for sale in 2012, they were loss-making. A return to profitability was dependent on the plan to transfer composites production from Farnborough to Thailand.

361. Paul Jerram, Managing Director at Farnborough and Vice President of the composites division, was responsible for the transfer of work programmes from Farnborough to the facility in Thailand. Mr Jerram explained in his first witness statement that the strategy was to transfer the labour-intensive, medium to high rate production from Farnborough to Thailand. This would provide additional manufacturing capacity at Farnborough and allow it to become a development centre for highly complex, low-volume products. Once established, the facility size, and therefore the capacity, of the Thai facility could be increased and production could be ramped up.

362. Although during the hearing a number of documents were identified, setting out varying plans or 'gateways' for transfer, it is common ground that the following steps were necessary to achieve a transfer of composites production from the facility at Farnborough to the facility in Thailand:

i) A feasibility assessment of the proposed transfer would be carried out, to ensure adequate tooling or buffer for the transfer and capacity to carry out production in Thailand.

ii) Customer approval was required for the transfer of each product, including approval of the Thai facility and process for each product.

iii) Before the manufacture of a part was moved from one facility to another, a Last Article Inspection ("LAI") would be undertaken. Measurements of the tool and manufactured part were recorded to verify compliance with the customer's specification.

iv) Existing, new or duplicate tools would be shipped and/or assembled in Thailand.

v) A First Article Inspection ("FAI") would be undertaken at the facility in Thailand and compared with the measurements recorded from the LAI to ensure compliance with the customer's specification before full production would be permitted.

vi) The first earned standard hours ("ESH") would be generated and production would be ramped up in the Thai facility.

363. In early August 2011 Patricia Thurman, Senior Operations Vice President of Primus International, prepared a decision matrix to assist Primus in determining the sequence of transfer of products to Thailand. The table included products under consideration for transfer for Rolls-Royce, Airbus, Spirit, Bombardier and Aircelle. A buffer requirement of 3 months was shown against each proposed transfer, with a note by Ms Thurman:

> "Zero if enough tooling to give a set to Thailand. Three months otherwise."

364. Mr Jerram's evidence was that in most cases there were multiple sets of tooling, which could be used in Farnborough and Thailand to effect transfer of production. However, in response to Ms Thurman's proposed table, it was noted by Oliver Tinard, a programme manager at Farnborough, that duplicate tooling was not available for the Rolls-Royce BR710 and 725 programmes and that there were outstanding quality issues that required resolution before transfer.

365. A Thailand Logistics Plan (dated 23 December 2012) set out the Primus methodology for transfers:

> "Each programme will be transferred in line with an agreed plan to ensure continuity of supply to customers during learning and ramp-up in BCD. Each programme has different quantities of tooling associated with the rate of production. For low rates with single tools, a healthy buffer will be built prior to transfer. For higher rate programmes or where tooling capacity does not permit buffer build, additional tooling [will] be bought and proven by FCD. Tooling will then be released to the transfer schedule."

366. In January 2012, a transfer plan was prepared, showing confirmed and unconfirmed production hours to be transferred to Thailand for FY 2013/14. The transfer plan indicated the transfer of 92,869 production hours in the calendar year 2012, including 80,782 production hours for the period April to December 2012. The key platforms for

transfer during this period were the Airbus A320 Leading Edges, the Rolls-Royce Trent 700 Panels and the Airbus VTP Package. Unconfirmed planned transfer programmes were Bombardier T700 and BR710, and Walden's Pylon Fairing platforms.

367. Risks identified in notes against the transfer plan included the requirement to build buffer, unresolved engineering issues (including "dirty engineering" issues in respect of the Rolls-Royce platform) and the need to obtain customer approval. In an email dated 29 January 2012, Fabian Geiger, programme director for Thailand transfers at Farnborough, noted that a buffer of 10 to 12 weeks was required for the Airbus VTP transfer.

368. In June 2012 Primus prepared a revised transfer plan, showing planned and actual transfers to Thailand. The revised transfer plan indicated the transfer of 93,351 production hours for 2012, including 88,670 production hours between April and December 2012 and 182,882 hours in 2013. The key platforms for transfer during 2012 were Airbus A320 Leading Edges, Airbus SA Fairings, Bombardier BR710, Spirit BR 725 and Bombardier T700.

369. At the end of June 2012 a further revised transfer plan was prepared, showing a reduced level of composite production hours in Thailand of 68,169 in 2012 (although this appears to be the transfers for April to December 2012 and not the full calendar year). There was also a reduction in the forecast for production in 2013 from 180,763 to 158,379 hours.

370. This revised transfer plan was used in the preparation of the October 2012 LRP, but subject to a manual changes made by Primus to reflect actual transfer figures during the course of 2012.

The Long Range Plan ("LRP")

371. The LRP was prepared by Mr Fletcher and Ms Thurman of Primus, assisted by Yelena Radostovets, based on an internal document used by Primus for budgeting purposes. The LRP comprised a number of linked spreadsheet workbooks, based on a set of model assumptions.

372. The LRP showed, for the calendar years 2012 to 2017, forecast financial statements for the facilities in Farnborough and Thailand, comprising forecast income statements, balance sheets and cash flow forecasts. Key metrics produced included EBIT as a percentage of gross revenue, and EBITDA as a percentage of gross revenue.

373. On 14 June 2012 Ms Thurman sent an updated version of the model, together with the stated assumptions, to Mr Fletcher and others. The model showed that the EBIT margin was -12.7% for the calendar year 2012, rising to 17.8% in 2017; and the EBITDA margin was -9.9% for 2012, rising to 21.4% in 2017.

374. The following day Mr Fletcher reviewed the draft LRP and produced the following comments:

- "We need to model a 20% EBIT and a 24% EBITDA by CY17. We can get there by improving the cost per hour in Thailand – see notes below.

- What can we do to improve EBITDA and cash flow in CY13 and CY14?

- We need bridges from CY11 to CY12 to CY13 for revenue, gross margin, SG&A, EBITDA and cash flow…

  Farnborough Composite Revenue Assumptions

- I want to revisit our per hour revenue assumptions of $186 for FCD and $155 for Thailand. I believe we will face competition in the out years and it will be difficult to hold to these levels…

  Thai Comp Tab

- Composite Hours

  - CY12 composite hours are too high. The budget for FY13 was 106K hours. This model has the same period at 134.5K hours. We will not make the 10^k that was in the budget – need the updated forecast in the model

  - The jump to 180K hours in 2013 is very aggressive; we should scale this back

  - Need to update the model to include the new business assumptions that are based on contracts won! …"

375. On 2 July 2012 Ms Radostovets circulated a revised LRP, showing that the EBIT margin was -10.7% for the calendar year 2012, rising to 21.2% in 2017; and the EBITDA margin was -8.1% for 2012, rising to 24.1% in 2017.

376. Forecasted composite production hours in Thailand and the level of new business were reduced (in line with Mr Fletcher's earlier comments). As set out above, the revised LRP forecast the transfer of composites production from Farnborough to Thailand as 68,169 production hours during April to December 2012 and 158,379 hours in 2013.

377. The data in the LRP was used in the unaudited financial summary provided in the Information Memorandum in September 2012, which included the following key metric forecasts:

i) an increase in gross revenue from US$ 39.9 million in 2011 to US$ 99.8 million in 2017;

ii) EBIT margins of -31% in 2011, -16% in 2012 and rising to 20% in 2017;

iii) EBITDA margins of -25% in 2011, -12% in 2012 and rising to 24% in 2017;

iv) US$ 59.1 million assets with negative equity of US$ 11.1 million in 2012, changing to a positive equity value of US$ 34.9 million by 2017.

378. On 10 October 2012 Ms Radostovets circulated a further revised version of the LRP, stating:

> "I have spoken to Doug and we agreed to change 2012 in LRP Base, LRP Stretch, and Historical File and leave 2013-2017 forecast the same as before. In order for me to do so, I had to do some creative tweaks in the LRP, but it is flowing and we can explain the reasoning if necessary. Attached are the updated LRP Base and Stretch and Historical file for your review and use ..."

379. The revised LRP included a forecast for Thailand's composites production for the calendar year of 2012 of 80,611 hours, lower than the January transfer plan which forecast 92,869 hours for the same period. The EBITDA margin forecast for 2017 was 23.6%.

380. On 28 October 2012 Primus prepared and sent to Triumph the LRP. The LRP provided projections up to and including 2017, including the following information:

i) the revenues, profits and incomes/earnings;

ii) the overheads and costs of goods sold, including labour costs;

iii) the total composites production hours at the Farnborough facility with base and stretch cases;

iv) the composites production hours, facility hours and capacity at the Thailand facility with base and stretch cases.

381. The consolidated financial statements forming part of the LRP showed the EBIT margin for 2012 as -11.8%, rising to 20.3% in 2017. The EBITDA margin for 2012 was shown as -8.5%, rising to 23.6% in 2017.

382. The financial forecast assumptions for the LRP were set out in the Model Assumptions document and included the following:

> "REVENUE
>
> All customer revenue for the composite business flows through Farnborough
>
> **Farnborough Revenue (Customer Revenue)**
>
> Revenue is made up of six elements:
>
> 1. Rate Driven - existing or previously won work that is produced for rate programs. This is calculated at the work package level then summarized by platform.
>
> 2. Non-Rate - spares, primarily Rolls Royce

3. NRC - known non-recurring associated with previously won new business

4. Price-up - includes current price increase requests due to scope changes or contract extension. Amounts are probability adjusted from the current "ask".

5. New Business - unidentified future new business

6. Slower Build Rate Ramp Up - a reduction from the rate based revenue to adjust for new work coming in that is not yet ramped to the platform rates.

Rate driven revenue assumptions:

…

- Customer price is based on current contract prices, including any future contractual step downs. If the step down is tied to when the product is transferred to Thailand or number of units produced, the timeframe for the step down has been estimated based on production rate volumes and the existing Thailand transfer plan

…

Price increases assumed for Aircelle, Airbus and GKN which have been agreed to as of Sept 30, 2012. Additional assumed price increases on Rolls Royce in negotiation.

…

Thailand Composite Revenue (intercompany revenue)

Thailand revenue is based on assumptions of the transfer of exiting Farnborough work packages to Thailand and new business. Transfer percentages are entered by period for each program being transferred to Thailand based on current transfer plans and assumption of future transfer schedules.

…

WORKING CAPITAL

… Buffer stock is required when moving in-production work from Farnborough to Thailand…"

Delays to planned transfers

383. Primus recorded monthly progress of transfers from Farnborough to Thailand on the Thailand project master action list ("the Action List"). The updates to the Action List show that there were significant delays against the transfer plans during 2012.

384. Dr Matthew Fox was a production engineer at Farnborough and was appointed as Programme Lead Engineer for Bombardier, responsible for overseeing the transfer of Bombardier production to Thailand. Based on a review of the Action List, he summarised the following issues causing delay in Appendix 1 to his second witness statement:

i) The LAI at Farnborough for the T700 Rear Acoustic Panel was planned for 24 February 2012 but by December 2012 this item had not been completed due to manufacturing issues.

ii) Resolution of manufacturing variability issues with the T700 Fan Track Liner should have been completed by 21 February 2012 to meet the transfer schedule but the required changes to the design drawings were not completed until August 2012.

iii) Late completion of the buffer stock for transfer of a second tool for the VTP SA Fairings delayed transfer of production from 31 May 2012 to July 2012.

iv) Buffer stock for the VTP A100 Trailing Edge Panels was planned to be built by 23 March 2012 but was not completed until the end of October 2012, in part caused by the need to clear arrears before the buffer stock could be built.

v) Buffer stock for the VTP LR Fairings was delayed from May 2012 to the end of November 2012, in part caused by the need to clear arrears before the buffer stock could be built.

vi) Completion of the LAI and Spirit's qualification of the Thai facility for the Spirit BR725 were delayed by 3-4 months and by December 2012 Spirit had still not approved the tooling for the programme.

vii) As a result of delays to the Spirit BR725 transfer, no progress was made on the Spirit/Walden's 787 Pylon Fairings transfer in 2012.

viii) The LAI for the Bombardier BR710: was delayed from May 2012 to the end of October 2012, awaiting approval for the acceptance criteria and measurement.

Business Update Presentation

385. On 27 December 2012 Mr Beysen of Primus Thailand sent to Mr Fletcher a revised transfer forecast for 2013, showing that the transferred hours would be lower than those shown in the LRP for the first six months of 2013:

> "Please see my latest numbers. They are not good enough to beat the LRP for next Qtr. If we take the sum of the next 4Q, then we are slightly higher than LRP. Quite a few things need to happen still in order to make it…"

The revised schedule showed that transferred ESH for the last quarter of 2012 was 32,348 (slightly higher than the LRP of 29,211). But the forecast transferred ESH were:

Quarter 2013	**LRP**	**Revised Forecast**
Q1	33,575	27,602

Q2	37,541	37,037
Q3	41,441	49,649
Q4	45,816	49,002

386. Mr Fletcher's response was:

> "Let's discuss. We need to hit the LRP …"

387. On 3 January 2013, Brandon Turk, Operations Director at Farnborough, sent Mr Jerram a revised forecast, increasing the ESH for Q1 2013 and explaining:

> "Have tinkered with the model and increased the hours to 29,244 by:
>
> 1. Increasing A320 outers to 20 sets per month (still reduces inventory by 12 sets per month equiv. to 1.5 weeks)
>
> 2. Increasing A320 inners to 30 sets per month (still reduces inventory but only by 1 week in the quarter although inners are lower stocked)
>
> 3. Increased J12782 to 20 sets in March by transferring 3rd tool in Feb when we have some buffer in FCD.
>
> 4. Increased the A100 TEP to 8 sets in March....here is our biggest opportunity I think- we have material in FCD ready to ship, the WIP is healthy and Thai people are trained so we could push the ramp up faster on this - 127 hrs per SS.
>
> I haven't tweaked the next 2 RR potential transfers, the 2nd one (carbon seals) is low hours so it might be prudent to invest the time in Spirit BR725 instead which are more hours rich. I wonder if Thailand could increase their output on this earlier from 2 to maybe 4 shipsets? (371 hrs per SS) The 2 suggestions above could yield another 1-2k hrs getting them closer to the 32k mark. Hope this helps?"

388. On 4 January 2013, there was a flurry of exchanges by email prior to the update presentation. Mr Jerram sent an email to Mr Fletcher:

> "Alex & I spoke and he has sent though updated hrs and milestones. I believe there is still opportunity here to get to 30200hrs but would be better that you talk it. I need to set up a RR ramp up team on this."

Mr Fletcher responded:

> "Ok definitely. I am just sending a small change to the hours plan for q2 as Alex sheet misses the lrp. We were also talking br725

> with rolls to transfer , which has the cleanest engineering- I will add this. I will modify the words on the PowerPoint."

389. A few minutes later, Mr Jerram sent a further email to Mr Fletcher:

> "Updated word on the hours transfer I did not have chance to finalise this with Alex but the Q2 LRP number was low. David A was confident of BR725 move by q2 start but I have only added low hours in June. The hours table I will send in the next 30 minutes when brandon has updated…"

390. Shortly thereafter, Mr Turk sent Mr Jerram a further revised forecast, not making any further change to Q1 2013 but increasing each of the subsequent quarters by 620 ESH, explaining:

> "Just reviewed the numbers with Matt Fox, 3.1 hrs per BR725 sub assembly so I 've plugged in 200 per quarter (we sell 350 per quarter so number is reasonable) and it gives us the 600+ hrs per quarter. Hope this is OK."

391. The revised figures were included in the business update presentation given by Primus to Triumph.

Quarter 2013	**LRP**	**Revised Forecast**
Q1	33,575	29,244
Q2	37,541	37,657
Q3	41,441	50,269
Q4	45,816	49,622
TOTAL 2013	**158,373**	**166,793**

392. On 4 January 2013 Mr Fletcher gave a business update presentation to TGI, including the following:

> "**CY2012 Q4 Update**
>
> • Pricing actions
>
> - Retroactive 2012 assertions received from Rolls Royce & GKN …
>
> • Rolls Royce engaged in discussions to resolve commercial issues on Trent 700 and 800 programs. Appears more open to resolve commercial issues in exchange for higher production commitment from us.
>
> • Thailand composite production continues to ramp but lower than forecast due to Rolls Royce engineering issues and tooling supplier delays Issues
>
> • Delays in resolution of Airbus price assertions/claims significantly impacted quarterly results; to be recovered in current quarter.

- Tooling delays on Spirit program delayed expected NRC recovery until next quarter

- Equipment downtime in Farnborough caused increased maintenance costs and expenses to expedite shipments. Have advanced CAPEX requests to resolve machining constraints. Challenges for Current Quarter

- Increasing customer demand on key programs (Rolls Royce Trent 700 & 800, 787 Pylon Fairing) will strain Farnborough production in next few quarters. We continue to allocate resources to accelerate transfer to Thailand.

- Continued resolution of Rolls Royce engineering issues to expedite transfer. Situation is improving but results in high fixed cost investment.

- Increasing demand for tooling straining current tool suppliers. We are expanding our supply chain for tooling…

Recent Commercial Actions

- In negotiations with Airbus to close out a number of commercial assertions which have over $1 M in annual impact. Expected conclusion delayed to Q1 2013…

Thailand Work Transfer Update

Key accomplishments in the past 90 days

- Rolls Royce T700 J12782: Assembly is now good, ramping to 1,362ESH/month

- Airbus: VTP- SAF is at max built rate, Painting now at 90% of required capacity

- Airbus: Received preliminary approval to process machined parts

- Spirit in process of FAI production

Key Milestones in CY2013

- Rolls Royce: Complete ramp on Trent 700, provides 13,380 ESH and up to 18,000 ESH with increased parts to RR to meet higher commercial demand.

- Airbus: Ramp up LR fairing production

- Spirit: Complete all FAIs and ramp production. New DMS 5-Axis in May will eliminate constraints.

- Bombardier: Complete FAIs and ramp production.

New Work Transfers Planned for CY2013

- RB-211 carbon seals: 4.500 ESH/qtr
- RB-211 core segments: 4.300 ESH/qtr
- BR-725: 600 ESH+/qtr
- Additional potential transfers — 787 pylon fairing or A320 dorsal"

393. Following the presentation, in an internal email, Mr Fletcher expressed his concern that work would be needed to understand missed targets and meet the revised targets:

> "Attached is the final version of what I presented to Triumph today. Overall the call went as well as can be expected. They are impressed by our commercial successes – mainly price ups – and see that we have the potential to add further to that success in the next few months. I committed to getting them a Revenue and EBIT bridge by the end of next week – CY12Q4 actuals to LRP. There are a few key things that come out of the last few days of discussions:
>
> Financials (Roger will lead this effort) – we need to understand what happened in Q4 and what impact does this have on our LRP commitments for the next four quarters. We need as many of these answers by the end of next week but we need to dig into this further when we are together in Thailand.
>
> - Variable cost – higher overtime, shipping costs, maintenance expenses, scrap, inventory write-offs, etc. – How do we control these better and what is the going forward impact of what happen last quarter?
>
> - Slower ramp in Thai composite production – what is the financial impact in CY12Q4 and CY13Q1? - How do the price increases we have secured roll in to our ongoing performance? – it is not clear what happened in Q4 and what can we expect in Q1!
>
> - Fixed cost base – How does this compare to the LRP and what is our pipeline to improve? I believe analysis will show that we are substantially above what we have forecasted in the LRP. - What is our pipeline of NRCs and how will this roll into sales and EBIT?
>
> … Thailand transfer (Alex/Paul/David) – We now have a new forecast that pushes out the ramp again – but if we can believe it we will catch up and exceed our LRP CY13 forecast. Do we need to organize differently to ensure that we meet and exceed this

> plan. I want to start the discussion next week but get into this in detail when we are together in Thailand.
>
> If we can make meaningful headway on the above five categories in the next 30 days we will be set up well for FY2014…"

394. The revenue and EBIT bridge promised by Mr Fletcher was sent to TGI on 17 January 2013. It showed a negative financial impact on the EBIT of US$ 180,000 caused by the failure to meet the LRP forecast for transfer hours. The overall negative financial impact on the EBIT was US$ 2,450,000.

FLP Issues

395. Warranty 19.5 of the SPA provides:

> "So far as the Sellers are aware, the forward looking projections relating to the Companies have been honestly and carefully prepared."

396. There is no allegation of dishonesty. The allegation is that the FLPs were not carefully prepared. The key FLP issues can be summarised as follows:

i) What are the relevant documents forming the FLPs?

ii) What was the scope of the warranty?

iii) Were the FLPs carefully prepared?

iv) If not, what should carefully prepared FLPs have shown?

v) If carefully prepared FLPs had shown different key metrics, would Triumph have walked away from the acquisition of Primus or would the purchase price have been lower?

397. Both parties adduced expert evidence in respect of the FLP claim. Triumph rely on the evidence of John Fisher, a partner at PwC who heads its Global Disputes practice. PCC rely on the evidence of David Dearman, a partner in Mazars' Forensic and Investigation Services team.

Documents forming the FLPs

398. The 'forward looking projections' referred to in Warranty 19.5 were not a defined term in the SPA. Triumph relies on a number of documents as comprising the FLPs for the purpose of the warranty, namely, the forecasts in the Data Room, the historical financials, the management presentation in October 2012, the LRP sent to TGI in October 2012 and the business update presentation in January 2013. Primus's case is that the FLPs comprised or were derived form the LRP and the accompanying Model Assumptions.

399. There is no material difference between the parties on this issue. The experts agree that the relevant document for the purpose of assessing the allegations of breach of warranty is the LRP dated 15 October 2012, comprising the spreadsheet workbook named

"Primus Composite Financial Model 15.10.12.xls" together with the LRP Model Assumptions. In carrying out that assessment, it is necessary for the Court to consider other available information that might cast light on the reliability or justification for the content of the LRP, including the forecast documents identified by Triumph.

Scope of the warranty

400. The term 'carefully prepared' is not a defined term in the SPA. Dictionary definitions are of limited assistance. The plain and natural meaning of the words used is that the FLPs were warranted to have been prepared with care by those who had the required skills and knowledge. Primus did not warrant accuracy, only careful preparation. The test is an objective one. Careful preparation required that the FLPs should be credible and reliable, by reference to evidence-based assumptions or subject to expressly identified risks and aspirations.

401. The joint memorandum dated 19 January 2018 prepared by the experts includes the following agreement:

> "The Experts agree that "carefully prepared" is not a recognised accounting term and that there is no accounting standard or guidance that provides definitive information as to what would constitute a "carefully prepared" forecast. In the absence of any accounting definition, the Experts agree that the assessment of whether a forecast was "not carefully prepared" is a matter of judgement based on professional experience.
>
> The Experts agree that a forecaster would consider the following steps to produce a "carefully prepared" forecast:
>
> - Consider the latest available financial and operational information up to the date of finalisation of the forecast.
> - Consult with relevant members of management with appropriate operational and specialist knowledge.
> - Reflect the forecasting practice in that particular business and industry.
> - Document the basis of assumptions.
> - All assumptions should be subject to a process of review and challenge carried out by somebody independent of the preparer of the forecast."

402. The experts' attempts to expand on this test do not assist. I reject Mr Fisher's "higher standard of care" as going beyond the scope of the warranty. I also reject Mr Dearman's "hypothetical projections" as not engaging with the standard imposed by the warranty. There is no need to embellish the agreed test set out in the joint memorandum.

Were the FLPs carefully prepared?

403. Triumph's case is that the LRP was careless based on the failures by Primus to make adequate allowance for the time and costs involved in transferring production from Farnborough to Thailand and the delay in achieving production from new business. Such failures produced a financial model that overstated future revenues, income and profits.

Buffer

404. Triumph's case is that six months' worth (alternatively three months' worth) of buffer stock was required for most of the programmes that were intended to be transferred from Farnborough to Thailand. Primus's case is that buffer stock was not required because either there were multiple sets of tools available for the programmes scheduled for transfer or Farnborough had a contractual right to obtain duplicate tooling from customers. In any event, there was provision for US$ 1 million buffer in the LRP.

405. The experts have agreed in their Joint Memorandum that buffer stock was not required where there were duplicate sets of tools or where there was a direct transfer from a customer.

406. There is clear evidence in the documents that, absent duplicate tooling or direct transfers, a buffer stock was required to ensure continuity of production during the transfer period. The requirement for a buffer stock was identified by Primus in the transfer matrix prepared by Ms Thurman in 2011, in the transfer methodology dated December 2012 and in the Model Assumptions on which the LRP was based.

407. It was accepted by Mr Jerram in cross-examination that customers indicated that they would require a buffer when approving the transfer of production from Farnborough to Thailand. Presentations and applications for approval for transfer of platforms made by Primus to Airbus identified the need to build a buffer. The transfer plans for Airbus products included 2-3 months for building buffer stock. No buffer was required for transfer of the Rolls-Royce T700 panels because there were duplicate tools but buffer was required for the BR710 panels, the BR725 panels and the XWB panels. Spirit and Walden's pylon fairings required 3-months buffer stock. Bombardier platforms did not require any buffer as they comprised direct transfers from the customer, rather than from the Farnborough facility. Spirit BR725 panels were also direct transfers that did not need buffer.

408. The LRP did not include the time and cost of creating any buffer stock. The transfer of any platform from Farnborough to Thailand was shown by a reduction in production hours at Farnborough for that platform and a corresponding increase in production hours in Thailand. No overt provision was made in the LRP for a spike in overall production prior to transfer (indicating buffer build) or a reduction in overall production to reflect the transfer period.

409. Mr Fisher states in paragraph 3.41 of his supplemental report:

> "… the LRP did not model the creation of the remaining (or any) buffer stock required to complete the transfers. On the contrary, the LRP assumes that sales in a quarter are matched by

> production in that quarter (i.e. over the life of the LRP units produced = units sold). The LRP does not reflect the build-up of any additional finished parts, products or ship sets…"

410. Mr Randeria, a finance director within PCC, and Mr Delaney suggested in their witness statements that inventory turns (ratio of cost of goods sold to the level of inventory in a year) were calculated to provide buffer stock for the planned transfers to Thailand. In support of this suggestion, Mr Delaney points to the reference to inventory turns in the Model Assumptions for the LRP.

411. Their position is cautiously supported by Mr Dearman, who confirms that, on the basis of the evidence he has seen, the use of inventory turns to calculate the level of buffer stock in the LRP reflects forecasting practice in the composites business, including after Triumph purchased the business. However, there is no evidence in the documents that inventory turns were in fact used to calculate buffer stock for future transfers. As Mr Fisher explains in his supplemental report, the inventory turns figure in the LRP simply shows the turnover of finished goods.

412. Mr Dearman considers that there was provision for an inventory buffer with a value of US$1 million in the LRP, as recorded in the E&Y report and supported by information provided in response to inquiries included in the Data Room. Mr Fisher has identified a recorded finished goods inventory of US$ 2.381 million in the Battleplan dated 15 January 2013, of which US$ 1.847 million is described as buffer stock. However, US$ 1.715 million of this stock relates to the Airbus A320 Inner and Outer Flaps (Thailand) and US$ 132,000 relates to the Airbus trailing edge panels. Therefore, most of the 'buffer' was finished goods on platforms that had been transferred to Thailand during 2012; it did not represent buffer that could be made available for future transfers.

413. Mr Jerram suggested that material review board ("MRB") stock, quarantined for potential non-conformance issues, could be made available as buffer but there is no contemporaneous documentation showing that MRB was in fact used for buffer stock. In any event, as Mr Jerram accepted in cross-examination, MRB released by a customer would be used to burn down arrears. Therefore, in practice it would not be available to build buffer stock.

414. Dr Fox set out in his witness evidence his assessment that a six-month buffer (or more) was necessary. For the reasons set out above, I accept his evidence that a buffer was required for most transfers but his assessment of six months was based on a theoretical calculation of the time that might be required for a transfer, without any planning. It takes no account of the phased approach to transfers that could be taken and was planned by Primus, in some cases where there were no duplicate tools or limited ability to build buffer. Further, it is contrary to the buffer requirements set out in the contemporaneous documents, such as the applications for approval for transfer, customer demands, engineer assessments and transfer plans made by Farnborough. Those contemporaneous documents are the best evidence of what was necessary. They show an average buffer requirement of three months.

415. Drawing together the above evidence, I conclude that it was necessary for Primus to allow for a three-month buffer for production to be transferred from Farnborough to Thailand, save where there were duplicate tools.

416. I reject the submission by Primus that the buffer did not require any adjustment to the forecast. The absence of buffer had a direct impact on the ability to meet the transfer plan and, therefore, on production hours and revenue in Thailand.

417. A carefully prepared LRP would have included allowance for the time and cost of building a three-month buffer in respect of the platforms which Primus planned to transfer to Thailand, save where there were duplicate tools. The LRP did not make such allowance.

Arrears

418. Triumph's case is that a customer will not ordinarily approve a transfer where the transferring facility is in arrears on that customer's programmes. Primus's case is that customers were willing to, and did, approve transfers of production despite the existence of arrears.

419. Dr Fox's evidence was that generally customers would want arrears to be eliminated or reduced before giving permission for transfer of a product to Thailand. The customer would require production to be stabilised at a level sufficient to meet demand before permitting efforts to be focused on preparation for transfer. This would be the case particularly where there were arrears on a number of programmes for the same customer. Mr Delaney's evidence was that transfer of production to Thailand was seen by some customers as a potential solution to the arrears problem. Mr Randeria relied on evidence that transfers were made despite the existence of arrears; Airbus and Rolls-Royce approved transfers on products where there were arrears. However, Airbus required a buffer to be built before any transfer could take place and there were duplicate tools available to support the Rolls-Royce transfer.

420. Mr Dunk set out in a table in his first witness statement the value of arrears at Farnborough between the beginning of 2012 and May 2013, based on the Battleplan documents. This shows that arrears rose from US$ 1 million in March 2012 to US$ 1.6 million by April 2013. Dr Fox stated in his witness evidence that it would take about 6 months to burn down those levels of arrears.

421. Mr Fisher calculated that it would take 5,693 production hours to burn down the level of arrears at the time of the LRP. Mr Dearman makes a valid point that the value of arrears is not necessarily a good indicator as to the time required to burn down the arrears. In his supplemental report he carried out an analysis of the time actually taken to burn down arrears between the beginning of October 2012 and the end of December 2012. His analysis indicates that the level of arrears identified by Mr Fisher could be cleared within one quarter. In cross-examination, Mr Fisher accepted this proposition. Mr Dearman acknowledged that during that period, other parts would fall into arrears. If those arrears included parts that were required for transfer, his analysis suggested that they could be cleared within 30 days.

422. Primus was aware that there were operational difficulties at Farnborough that had resulted in significant arrears across customers and platforms. Although there is evidence that some customers would permit transfer of a product to Thailand whilst in arrears, others did not approve transfer during 2012. On that basis, I conclude that Primus should have made some allowance in the LRP for reducing (but not necessarily eliminating) delinquencies before transfer. I accept the assessment of both experts that

a period of three months would be required to burn down the level of arrears accrued at the time of the LRP.

Additional costs

423. Triumph's case is that incremental labour costs and additional scrap costs would be incurred during the accelerated production period needed to build the buffer and clear arrears. It is alleged that a carefully prepared LRP would have modelled an uplift to the variable labour rate at Farnborough of approximately 36% during the period required to eliminate delivery arrears and build buffer stock. It is also alleged that a carefully prepared LRP would have modelled scrap costs at Farnborough of at least 4% during periods of accelerated production and at least 1% at other times.

424. Dr Fox stated in his first witness statement that when trying to recover arrears and build buffer stock it is usually necessary for staff to work premium shifts and/or recruit additional staff. Mr Dunk provided details of the additional staff costs actually incurred in recovering the arrears but explained that:

> "The additional, and more costly, shift patterns (including night shifts, and overtime) were introduced to support recovery of the significant spike in customer arrears following the Nadcap failure. Further, it was necessary to significantly increase the recruitment of temporary direct variable labour to support this recovery."

It follows that the additional labour costs incurred during this period were caused by the Nadcap failure and not inadequacies in the transfer plans.

425. Mr Fisher calculated the average labour rate during the period when the arrears were reduced. However, he used the period May to October 2016, which as Mr Dunk explained in his evidence was enhanced production required to eliminate the arrears caused by the Nadcap failure. As such, it is not directly applicable to any increased labour rate that should have been modelled, to eliminate the arrears that had accrued and build buffer, at the time of the LRP in October 2012.

426. Mr Dearman identified that the variable labour rate in the LRP was a blended rate that included an element of overtime working. Mr Fisher agreed. However, that does not address the issue that, if the LRP had included increased levels of production to reduce arrears and build buffer, the level of overtime working would have increased. This, in turn, would have increased the variable labour rate.

427. I consider that the best evidence of the variable labour rate that should have been used in a carefully prepared LRP, for the period required to reduce arrears and build buffer stock, is the actual variable cost rate for FY2013 (as ascertained by Mr Fisher), that is, US$ 24.51 per hour.

428. Dr Fox stated in his evidence that where production is increased to eliminate arrears and/or build buffer stock, the scrap rate as a percentage of sales is likely to increase. He explained that increasing production at Farnborough would result in congestion at Farnborough, which I note was one of the reasons given for moving production to

Thailand. Further, using inexperienced labour to supplement the skilled workforce would increase the scrap rate.

429. Mr Randeria made a valid point in his third statement that the scrap levels would reduce over time, as the workforce became more experienced. But that would not eliminate increased levels of scrap during the learning curve on any accelerated production. I accept Triumph's case that some allowance should have been made in a carefully prepared LRP for an increase in scrap costs caused by accelerated production to reduce arrears and build buffer.

430. Mr Dearman identified that the scrap costs were included in the LRP within the variable overhead cost per production hour. Mr Fisher agreed. The experts agree that it would be more appropriate to consider scrap costs as a rate per production hour rather than revenue. However, the contemporaneous documents consider scrap costs as a percentage of revenue. The LRP used a rate of 0.9% of revenue for scrap costs and that is the basis against which the allegations have been pleaded and disputed.

431. Mr Fisher calculated the average scrap rate (as a percentage of revenue) during the period May to October 2016. As set out above in relation to the variable labour costs, this period reflected the reduction of the arrears caused by the Nadcap failure. As such, it is not directly applicable to any increased scrap rate that should have been modelled to eliminate the arrears that had accrued and build buffer at the time of the LRP in October 2012. In any event, the scrap costs used by Mr Fisher were blended figures for scrap and re-work costs. Mr Dunk and Mr Free accepted in cross-examination that it would be very difficult to isolate the scrap costs from those figures.

432. Mr Fisher ascertained the actual average scrap cost as a percentage of revenue for CY 2012 as 3.1%. From the summary graph at figure 4.1 in Mr Dearman's first report, this includes periods during which there was a sharp decline in the level of delinquencies. On that basis, the average figure calculated by Mr Fisher provides the best available evidence of the scrap rate that should have been included in a carefully prepared LRP to allow for accelerated production to reduce arrears and build buffer stock.

Staff training

433. Triumph's pleaded case is that the Thai personnel lacked the necessary knowledge, training and experience to manufacture the products that Primus planned to transfer from Farnborough, there was insufficient time to train them to meet the transfer plans and there were insufficient Thai engineers.

434. Dr Fox and Mr Ewas accepted in cross-examination that the operatives in Thailand were properly trained and skilled to manufacture the products that were transferred to Thailand in 2012, either directly by clients, such as Bombardier, or from Farnborough. There is no contemporaneous documentary evidence of any delay to production transfer caused by the absence of trained operatives.

435. Triumph has also alleged that Primus should have made allowance in the LRP for the costs of training personnel and recruiting engineers for the Thai facility.

436. Even if this had been pleaded, contrary to the allegation by Triumph, training costs were included in the LRP, as identified by Mr Dearman in his report. The selling, general

and administrative expenses in the FY2013 budget included allowances for seminars and training. Those expenses were included in the LRP as stated in the Model Assumptions document. Mr Fisher considers that the sum of US$ 7,192 per annum was insufficient but that was based on the exaggerated training and associated costs identified by Dr Fox. The suggestion that 72 Thai employees would need to be trained at a cost of US$ 25,500 per employee, a total cost of US$1.8 million, is unrealistic and not supported by evidence of training costs incurred.

437. Dr Fox stated in his witness evidence that there should have been 24 engineers, rather than 20. However, in cross-examination, he accepted that this was a rule of thumb and 20 engineers was within a reasonable margin of error.

438. I am not satisfied that Triumph has established any error in the LRP in respect of the allowance for staff training or engineers. Certainly, the case for any careless error has not been established on the evidence.

Raw materials costs

439. The pleaded case is that a carefully prepared LRP would have modelled an uplift for raw material costs in Thailand of at least 3%. It is common ground that freight costs would increase the cost of raw materials for production in Thailand. Mr Dunk stated in his evidence that the LRP did not seem to make provision for a material price uplift for raw materials, or for any uplift relating to the direct supply of materials to Thailand. Mr Fisher has made an allowance in his restated LRP for freight costs of 7% of all sales revenue.

440. Mr Jerram explained in his third witness statement that the cost of materials, shipping and freight were included in the LRP. The Model Assumptions appear to support this as they state that freight costs were included in the cost of goods sold. The experts have been unable to reconcile the FY 2013 budgets for Farnborough and Thailand with the LRP but that does not demonstrate that freight costs were not included. Triumph has not proved this allegation.

Rolls-Royce cost savings

441. The contract with Rolls-Royce provided that Rolls-Royce would be entitled to the full benefit of cost savings made from transfer of production to Thailand. This suggests that the LRP should have included a reduction in the applicable shipset prices for transferred Rolls-Royce products. The Model Assumptions stated that prices were included in the LRP, with provision for any contractual step down. However, no step down was in fact included in the LRP for transferred Rolls-Royce products.

442. Triumph's case is that a carefully prepared LRP would have included the contractual reduction in price for transferred Rolls-Royce products. However, Primus predicted, correctly, that the ongoing commercial negotiations with Rolls-Royce would result in an overall increase in prices so that no step down would have to be made.

443. The negotiation resulted in an increase in prices of about 25%, subject to a 5% discount for products manufactured in Thailand. Therefore, Primus correctly predicted the outcome of those commercial negotiations.

444. Although there was a discrepancy between the content of the LRP and the statement in the Model Assumptions, the LRP proved to be correct. On that basis, it is difficult for Triumph to show that Primus was careless in making such prediction. Given the outcome of the negotiations, the Rolls-Royce prices included in the LRP were within the range of reasonable pricing forecasts available to Primus.

Transfer of production hours

445. Triumph's case is that the transfer of production hours from Farnborough to Thailand contained in the LRP had not been, and would not be, achieved at the rates planned. The pleaded case is that no production hours had been transferred from Farnborough to Thailand in 2012 on the Rolls-Royce BR725 and BR710 programmes (corrected in the Amended Reply to the Spirit BR725 and Bombardier BR710 programmes), or the Airbus A330-200 programme. By October 2012, there was no realistic prospect that these programmes would be transferred in 2012. Taking into account the requirement to burn down arrears and build buffer stock, the LRP should have shown such transfers at least one year from October 2012.

446. Primus's case is that no production was due to be transferred on the Rolls-Royce BR725 until December 2012 or on the Rolls-Royce BR710 until September 2013. Therefore, they were not in delay when the LRP was prepared. There were delays on the Airbus A330-200, Bombardier BR710 and Spirit BR725 programmes but those delays were shown clearly in the Business Update in January 2013. In any event, the overall figures show that far from being 32,000 hours behind, production in Thailand was ahead of schedule at the time of the LRP by 205 hours, and only slightly behind by 2,688 hours, at the end of 2012.

447. Mr Dunk, Finance Director at Triumph, compiled a record of actual composite hours transferred to Thailand between April and December 2012, as set out in the appendix to his second witness statement. A comparison of the actual transferred production hours against the hours in the LRP is set out by Mr Fisher in Appendix 6 to his expert report and summarised below:

Product	**LRP Q2-4 2012**	**Actual Q2-4 2012**	**Difference**
Airbus A320 Flap LE	22,512	39,737	17,225
A330-200 Rudder L/E	0	0	0
A330-200 Trailing Edge Panels	1,485	0	(1,485)
A330-200 Fairings	504	0	(504)
A330-300 Rudder L/E	0	0	0
A330-300 Fairings	88	0	(88)
Airbus SA Fairings	10,642	17,502	6,859
SA Dorsal Fin Method Stage 3	0	0	0
BR710 Panels	0	0	0
Bombardier BR 710 Panels	12,841	0	(12,841)
Bombardier BR725 Panels	60	0	(60)
Spirit BR 725 Panels	6,858	395	(6,462)
Rolls-Royce Trent 700 Panels	2,757	7,848	5,091
Bombardier T700 Panels	10,423	0	(10,423)
TOTAL	**68,170**	**65,483**	**(2,688)**

448. The table shows that between 1 April 2012 and 31 December 2012, 65,482 production hours were transferred to Thailand, as compared with 68,170 production hours included in the LRP. The significant differences between the revised plan and actual production in Thailand were that:

    i) no transfers were made in respect of the Bombardier BR710 and T700 programmes during that period;

    ii) increased production hours were transferred in respect of the Airbus A320 Flap Leading Edges, the SA Fairings and Rolls-Royce Trent 700 Panels;

    iii) no, or very limited transfers, were made in respect of the other platforms.

449. Mr Pepperall makes a valid point that the overall production hours transferred during the period April to December 2012 were in line with the forecast in the LRP; indeed, as at the date of the LRP, transfers were slightly ahead of the LRP. Mr Fisher's response to this was curious; he adjusted his restated LRP to remove the production hours planned, but not transferred to Thailand in 2012, but failed to make any adjustments to reflect the production hours transferred ahead of programme. The result was a distortion of the total hours transferred in 2012, which resulted in consequential distortion of his projected figures for 2013.

450. That said, the overall transferred production was but one piece of the evidence that Primus was required to consider when preparing its forecast for future transfers. The production hours transferred fell short of the hours shown in the January and June 2012 transfer plans, which each anticipated more than 80,000 transfer hours between April and December 2012. Critically, there was a material shortfall in the number of platforms transferred. There had been delays in obtaining approvals from customers, resolving engineering issues and building buffer stock, with the consequence that there were platforms in respect of which no transfers had been made, contrary to all 2012 plans. The significance of the shortfall in the number of platforms transferred in 2012, was that allowance would be required to be made in the LRP for the relevant approvals, reduction of arrears and building of buffer stock to facilitate future transfers.

451. By mid-2012, Primus was aware that it would fail to achieve the level of transfers initially planned for 2012. Quite properly, it adjusted and then updated the 2012 figures in the LRP. However, it failed to consider what impact that would have on future transfer plans. Primus assumed, wrongly, that the more aggressive quarterly production figures for 2013 could be maintained, albeit with modest adjustments.

452. The future transfers for 2013 in the LRP were unrealistic because they failed to include time to reduce arrears and build buffer stock.

New business

453. Triumph's case is that as at the date of the LRP, Primus had won no new composites business. Any new composites business would not result in significant production for a period of at least 12 months. Therefore, Primus should not have included any revenues from new business in the LRP for 2013. Primus's case is that the projection for new

business in the LRP was based on historical data, as stated in the Model Assumptions. It included modest new business income of US$ 1.9 million for 2013, consistent with the small amount of new business won about 12 months earlier.

454. There was conflicting factual evidence on the lapse of time between winning new business and achieving production. Mr Dunk referred to examples where production was not started until 18 months after the relevant contracts were formed. In contrast, Mr Delaney referred to examples where production was started within 3 months of winning new business. It is clear that there is a very wide range in the timing of production flowing from new business, as accepted by Mr Fisher in cross-examination. This is unsurprising, given the very wide range of products and the variability in the capacity and facilities needed for production. An assessment of the revenue, if any, that would be earned from potential new business was not something that could be ascertained by mathematical calculation; it was a matter of commercial judgment, based on industry experience. As Mr Kornblatt stated in cross-examination:

> "forecasting wins is always inexact science".

455. It is not in dispute that Primus had won substantial new business in each of the financial years 2009 to 2011. Although it had not won any new business in 2012 by November of that year, as identified in the EY report, it was not unrealistic to assume that new business could be won thereafter, leading to a modest amount of revenue at some stage in 2013. Based on the historical data, US$1.9 million new business revenue was within the range of reasonable commercial assessments open to Primus.

456. For those reasons, I reject the allegation that a careful preparation of the LRP would have excluded any new business revenue for 2013 or would have assumed a delay of at least 12 months in respect of any new business.

Conclusion on FLPs

457. The LRP failed to take into account, properly or accurately, key operational and financial assumptions, namely, the requirement for buffer stock to be built, the requirement for arrears to be reduced, increased labour and scrap costs during accelerated production, and the consequential delay to production in Thailand. As a result, the LRP failed to adequately model the known operational and financial position of Primus as at October 2012.

458. Mr Fisher criticises Mr Fletcher's approach to the preparation of the LRP, describing as surprising the use of a desired or target outcome as a starting position and 'reverse engineering' the inputs and assumptions in order to achieve that outcome. That oversimplifies the exercise carried out by Primus. The initial model was prepared for internal purposes without any target in mind. Mr Fletcher's approach to the preparation of the LRP in 2012 was not necessarily inappropriate, careless or misleading. Mr Fletcher was entitled to scrutinise and question whether the figures were too pessimistic; indeed, he also challenged figures that he considered to be too aggressive, or optimistic. The key issues are whether the assumptions underpinning the model were sound, whether he was justified in making any changes to the model, by reference to supporting evidence, and whether such changes were accompanied by clear stated assumptions and explanation.

459. The difficulty faced by Primus in defending the LRP is that it has been unable to produce any rational explanation or justification for the sudden increase in the EBIT and EBITDA figures in June 2012. Its strategy to return to profitability was based on the planned transfer of production hours to Thailand. In June 2012, Primus was forced to make downwards adjustments to the planned transfer of production hours for 2012 and 2013. But the effect shown in the LRP was an increase in EBIT and EBITDA, rather than a decrease.

460. Triumph has suggested that the reference to "creative tweaks" in Ms Radostovets' email of 10 October 2012 indicate inappropriate manipulation of the model. Read in context, the email explains that tweaks were made to the model, not to create a desired outcome, but to incorporate the updated figures which were inserted manually. Of more substance is Mr Fisher's concern that manual changes were made to the LRP model in October 2012 without updating the underlying assumptions or making consequential changes to figures in later years. As set out above, Primus failed to make consequential changes to its plans for future transfers, despite its knowledge of the significant delays and ongoing operational problems in 2012. That omission was careless.

461. In January 2013, Mr Fletcher encouraged his engineers to find additional production hours for transfer, to maintain the LRP and preserve the EBIT/EBITDA predictions. Changes were made, based on aspirational adjustments to production levels, but without any explanations as to how the accelerated production could be achieved or any plan for implementing them. Those unsubstantiated changes were careless.

462. The knowledge qualifier does not assist Primus. As set out above, clause 8.2 was a deeming provision. In any event, as Mr Jerram accepted in cross-examination, all relevant operational and financial information was available to the Knowledge Group. Therefore, reasonable inquiries could and should have been made to ascertain the errors in the information supplied to Triumph.

463. In conclusion, for the above reasons, the FLPs were not carefully prepared.

What should carefully prepared FLPs have shown?

464. Carefully prepared FLPs should have reflected the following matters in respect of the proposed transfer of production from Farnborough to Thailand.

465. Firstly, the transfer schedule used to produce the LRP should have included reasonable time for three month's buffer stock to be produced and arrears to be reduced to facilitate transfer of production. Logically, it would take three months' production to build the buffer stock. As set out above, it would take three months to eliminate the arrears accrued at the date of the LRP.

466. Secondly, the LRP should have modelled the additional costs of premium shifts/additional staff and increased scrap costs during accelerated production required to achieve the necessary production of buffer stock and to burn down the arrears.

467. Thirdly, the LRP should have reflected the delayed transfer of production hours from Farnborough to Thailand, with the consequential reduction in forecasted revenues, operating income and profits. It was not necessary for the LRP to model each 'gateway' in the transfer process consecutively. It was not necessary to build the buffer stock and

eliminate arrears for each part on each platform prior to any transfers. A phased approach was used by Farnborough when planning and implementing transfers to Thailand. Buffer stock could be built in phases and arrears could be reduced alongside production to meet immediate demand. Mr Dearman's analysis of delinquencies in 2012 and 2013 demonstrates that, in practice, they were managed alongside production. At the same time, qualification approvals could be obtained for tools and processes.

468. The overall impact of the above factors should have been reflected in the LRP by delaying the transfer of each platform (save for those platforms which were already transferred and were ahead of programme) by three months.

469. Mr Fisher made a number of additional adjustments to the figures in the LRP based on adjustments made in the EY report. He also made corrections to items that he considered were errors in the LRP, such as the decrease in the direct labour rate and changes to the tax rates. Those might be appropriate matters for Mr Fisher, as a forensic accountant, to address. But the Court is only concerned with the pleaded case. Triumph has identified the specific errors that it relies on in support of its claim that the LRP was carelessly prepared. It would not be appropriate for the Court to determine unpleaded matters or to quantify the claims by reference to the same.

470. In summary, a carefully prepared LRP should have included the following adjustments:

i) a period of 3 months accelerated production to build the buffer stock on each platform that had not been transferred;

ii) a period of 3 months accelerated production to reduce arrears;

iii) upwards adjustments to the variable labour rate and scrap costs rate for the periods of accelerated production;

iv) reduced revenues, operating income and profits to reflect the delays to transfers of 3 months on each outstanding platform.

Would Triumph have walked away from the acquisition of Primus or would the purchase price have been lower?

471. As chief financial officer at TGI, Mr Kornblatt had a leading role in the acquisition of Primus by Triumph.

472. Mr Kornblatt took a rather optimistic approach to the figures that had been provided by PCC. A memorandum to the TGI board on 1 October 2012, based on a draft prepared by Mr Kornblatt, stated:

> "The Farnborough operation is a long standing facility and is profitable. Their strategy is to transfer all their high volume work to their new facility in Thailand to take advantage of lower cost labor. The Thailand operation is operational and will break even in 2012…"

473. This was inconsistent with the September briefing by Primus and the Information Memorandum, which clearly stated that the business was loss-making. Farnborough

was forecasted to become profitable in 2013 but Thailand would not become profitable until 2016.

474. Mr Kornblatt was also rather confused as to the basis on which TGI's indicative bids were made. He wrongly thought that the net book value of Primus was US$ 59.1 million. In fact, the asset value of Primus was US$ 59.1 million but the net book value on a 'cash free, debt free' basis was US$ 45.5 million. Hence, the indicative bid by Triumph was made erroneously at an inflated price of US$ 60 million.

475. However, I accept Mr Kornblatt's evidence that, even if the bid were US$ 20 million over the 'cash free, debt free' value, it would still have been an attractive price if Primus could produce US$ 20 million profits in the future. In any event, the ultimate purchase of Primus was subject to the financial due diligence exercise and assessment of value using the TGI financial model.

476. Timothy Wilkin was the Manager of Corporate Development at TGI in 2012/2013 and was responsible for directing due diligence in respect of the proposed purchase of Primus. He added the information provided in the LRP to a financial model produced by TGI, to assess the value that might be added by the purchase of Primus to TGI's earnings per share.

477. The TGI model incorporated a discounted cash flow ("DCF") calculation based on the future cash flows forecast in the LRP. The model produced an indicative equity value with a very wide range of between US$ 58.3 million and US$ 127.3 million. Assuming a growth rate of 4% and a discount rate of 12%, the model showed a net present value ("NPV") of US$ 92.5 million.

478. There were warnings as to the reliability of the financial information produced by Primus. MaryLou Thomas visited the Thai facility at the end of October 2012 and warned that there was no historical data to support the forecasted financials.

479. On 7 January 2013 EY provided its report to TGI. Under the heading "Quality of financial information and associated limitations", EY provided the following summary:

> "The financial information provided included the IM, the forecast model and management accounts … Reconciling differences exist between the various sources of financial information, particularly for FY12F results. Management has explained that these reconciling differences have arisen as a result of the sources of information being updated at different points in time. Further the basis of preparation of historical and forecast information are different. As a result historical information can only be mapped to forecast information at revenue, total COGS, total SG&A and EBITDA levels.
>
> Farnborough has experienced high levels of staff turnover within the finance team. Doug Fletcher and Roger Day (Finance Director) only joined the management team in 2012. Due to this, Management has limited knowledge of historical financial information and has been unable to provide detailed responses to questions in respect of historical periods. The staff turnover issue

has been exacerbated by the recent changes in ownership of the Group such that Deloitte considered the control environment weak.

Budgets are prepared for the purposes of reporting to the parent. Management does not consider these to be accurate for monitoring detailed performance of the business, consequently focus has been placed on operational rather than financial budgeting and budgets for FY10, FY11 and YTD12 have not been made available. Therefore we cannot comment on Management's achievement of past budgets.

Deloitte, the auditor identified the Farnborough stock system as weak due to the manual nature of the system resulting in human error, alongside system costing errors. Management believes that implementation of the Syteline ERP system has improved the stock process however it has not yet completed an exercise to determine the appropriate standard hour rate to be applied in the system resulting in a need for additional cost absorption to be provided.

As of the writing of this report, the audit of FCD's March 2012 financial statements is not complete. We understand from Deloitte that the remaining open item relates to the loss contract provision.

...

Rolls Royce, Aircelle and Airbus have been and are forecast to remain the Group's most significant customers contributing 86% (respectively 32.5%, 29.4% and 23.9%) of FY11A revenue of $39.9m.

Revenue is forecast to increase by $16.3m, from $55.5m for FY12F to $71.8m for FY14F. Forecast revenues are primarily driven by assumed increases in volumes on existing contracts of $6.9m, and combined new business from Farnborough and Thailand of $9.0m.

…

Despite historical margins being adversely impacted by the effects of the PCC acquisition (through cost allocations and operating changes) and set-up costs of the Thailand facility, more recently a substantial improvement has been seen. Management has started to shift component production to Thailand in order to benefit from favourable cost rates, expand capacity and allow Farnborough to become a technical development centre. This strategy underpins forecast increases in Group gross margin from 8.1% in FY12F to 21.8% in FY14F

The forecast cost base is driven by: build volumes; estimated production hours/ shipset; assumed unchanged material cost/ shipset, consistent with management's assertion that it can contractually recover material price increases from customers; and labour and overhead absorption rates. Absorption rates are assumed to decrease in most instances in Q412F and Q113F and into the forecast period.

Whilst we would expect margin improvement from the transfer to Thailand, it is not possible to confirm the timing or quantity of this by reference to actual results due to the basis of preparation of the forecast and therefore we identify forecast gross margins as an un-quantified sensitivity.

We recommend that operational due diligence covers the extent to which efficiencies are likely to be achieved and the timing of such effectiveness. The Group is at a critical point in turning from EBITDA loss to profit. In light of uncertainties surrounding the timing and quantum of the profit improvement, you may wish to protect yourself through either:

- Deferring completion pending proof of Q4FY12 and Q1FY13 forecasts by actual results; or

- Structuring the Transaction so that part of the consideration is contingent upon the FY13 forecast…

… Historically the business has generated negative free cash flows due to (i) significant capital investment in Thailand (ii) lack of senior management oversight over working capital (iii) EBITDA losses incurred due to the investment in Thailand site ahead of the ramp up in revenue. Forecast FCF is negative $5.9m in FY12F resulting in a cash balance of negative $2.2m at Dec12A.

Management's forecast NWC reduces to $14m at Dec13F, based upon assumptions which are stretching compared to historic experience and which management acknowledges are challenging. Our sensitised estimate results in a working capital cash outflow in FY13F and FY14F rather than an assumed cash inflow from working capital movements.

We recommend you analyse forecast cash flows, taking account of updated FY12 results once available and considering capex requirements, trading sensitivities identified above and further potential working capital sensitivities to assess the likely forecast funding requirement.

Whilst the timing of this capex appears in line with the capacity requirements of new business, we recommend that operational

> due diligence is performed to assess whether capex spend and timing is sufficient to support projected growth…
>
> …
>
> Based on the above points we recommend that Triumph include the following in the transaction terms:
>
> – Finalisation and signing of 31 March 2012 financial statements prior to deal closure;
>
> – Access to 31 December 2012 Management accounts to be provided. We understand that these should be available 2 working days post close.
>
> – Robust completion accounts process to measure completion net assets versus target Sep12A
>
> – Robust warranties and indemnities in relation to financial information provided.
>
> …
>
> Adjusted EBITDA margin per the IM / YTD management accounts is negative 43.9%, negative 25.1% and negative 11.0% in FY10A, FY11A and 9mSep12A respectively. Our further proposed adjustments only change the FY11A EBITDA and EBITDA margin to negative $9.3m and negative 23.4% respectively…"

480. Mr Kornblatt's evidence was that he was not concerned when he learned in early 2013 that transfers to Thailand were behind schedule. Triumph was not focused on the 2012 results or past claims and arrears. Triumph was interested in the long term, future performance of Primus and would have accepted a slower ramp up rate of transfer:

> "So if it had taken slightly longer to get to the $20 million profitability range, you know, I think we would still have done the deal."

481. From that evidence, I conclude that, if the FLPs had been adjusted as set out above to show a slower rate of transfer to Thailand, delaying the profitability of the companies, Triumph would still have proceeded with the SPA. The consequential reduction in NPV would have been modelled by Triumph as part of its financial due diligence and would have resulted in a lower purchase price.

Conclusion on FLPs

482. For the above reasons, Primus was in breach of warranty in respect of the FLPs prepared showing the financial forecasts based on anticipated rates of transfer of work to Thailand.

Clause 6.6 claim

483. Triumph's case is that Primus was required to give notice prior to Completion of any breach of the warranties (together with an estimate as to the value of the breach) but failed to do so. Triumph's case is that had Primus complied, it would have provided a notice estimating the value of the breach in excess of US$ 6,353,014 and that would have entitled Triumph to walk away from the deal. Had Triumph received such a notice, it would have walked away from the deal.

484. As set out above, this claim is not open to Triumph because it failed to give notice of the claim within 18 months from Completion.

485. In any event, even if Triumph could rely on a breach of clause 6.6, it would not have walked away from the deal. Triumph was not concerned with historical problems at Primus. The SPA would still have been entered into but the purchase price would have been reduced to reflect the reduced value of Primus based on necessary adjustments to the FLPs.

Quantum

486. To the extent that the 'as warranted' value of Primus at the date of the SPA/Completion is relevant to the quantum of damages in respect of the Nadcap and Operational Warranty claims, which I find have failed, the purchase price is the best evidence available and therefore reflected such value.

487. The relevant warranty in respect of which I have found Primus to be in breach was warranty 19.5, which provided that the FLPs had been carefully prepared.

488. Guidance as to the basis on which damages for such breach should be valued is set out in *Lion Nathan Ltd v C-C Bottlers Ltd* [1996] WLR 1438 (PC) per Lord Hoffmann at pp.1441-1442:

> "In the case of a warranty as to the quality of the goods, the purchaser is *prima facie* entitled to the difference between what the goods as warranted would have been worth and what they were actually worth …
>
> On the other hand, if one construes paragraph 32 as a warranty that reasonable care has been taken in the preparation of the forecast, there is no analogy with a warranty of quality. The forecast, though prepared with reasonable care, may on account of unknown or unforeseeable factors turn out to be substantially inaccurate. It therefore does not warrant that the company has any particular quality. The *prima facie* rule for breach of a warranty of quality of goods cannot be applied. One must therefore return to the general principle of which that rule is only one example, namely that damages for breach of contract are intended to put the plaintiff in the position in which he would have been if the defendant had complied with the terms of the contract. In this case the vendor represented to the purchaser that $2.223m was a figure upon which he could rely in calculating the price. The figure was in fact used in the calculation of the price. If the vendor had made a forecast in accordance with the

> terms of the warranty, he would have produced a lower figure and the price would have been correspondingly lower. The damages are therefore the difference between the price agreed on the assumption of NZ$2.223m earnings and what the price would have been, using the same method of calculation, if the forecast had been properly made.
>
> … the crucial question in this case is the ascertainment of what a properly prepared forecast would have been."

489. The price that was agreed by the parties on the assumption that the FLPs had been prepared carefully was US$ 76,530,145.

490. Triumph agreed the purchase price by reference to its financial model, which valued the shares using a discounted cash flow ("DCF") calculation.

491. In the joint memorandum dated 19 January 2018, the experts agreed that an approach to a consideration of the effect on the valuation of the sale shares of a breach of warranty 19.5 would be to construct a discounted cash flow model based on the LRP and use it to compare the impact of different changes to the underlying model assumptions. Mr Fisher constructed such a model and has used it to demonstrate the impact of the alleged breaches of warranty on a DCF valuation.

492. However, the experts do not agree the methodology for valuing the companies or the impact of the breaches. The experts have put forward different bases of valuation, namely:

i) the asset approach (favoured by Mr Dearman) – current market value of the underlying assets of the business, less its outstanding liabilities;

ii) the income or DCF approach (favoured by Mr Fisher) – anticipated future economic benefits or cash flows from the assets, converted in to a single NPV using a discount rate which reflects the time value of money and the risks inherent in the achievement of the forecast cash flows;

iii) the market approach – comparable business values (from available sources, such as listing on the stock exchange) to determine 'fair value' of the business.

493. In my judgment, Mr Fisher's DCF approach is the appropriate method of valuation in this case because the Primus companies were sold as a going concern; they remain in active business and their value lies in revenues driven by production, rather than value of the underlying assets. Mr Wilkin's evidence was that financial due diligence for determining the purchase price range was based on a DCF valuation using information in the LRP. Mr Kornblatt's evidence was that Triumph based its decision to purchase the Primus companies on the future profits forecast in the LRP.

494. If Primus had produced carefully prepared FLPs, they would have shown the LRP with the adjustments for buffer, arrears, increased costs and delayed transfers set out above. The experts have not had an opportunity to calculate the value of Primus on that combination of assumptions, using the DCF approach. Although I was given access to Mr Fisher's model (and have attempted to make the necessary adjustments), I have

decided that the most appropriate course of action is to seek the experts' assistance in carrying out this further exercise. The experts are far better placed that I am to ensure that the correct switches and other changes are made. Also, it became apparent during cross-examination of the experts that changes to the model could have unexpected consequences. It would be more efficient to require the experts to carry out this exercise, unimpeded by my attempts to work through the variations to the model.

495. The experts have agreed that 31 March 2017 is an appropriate date for the current market valuation of the companies. I accept the submission by Primus that the appropriate basis of valuation as at that date is the DCF approach, for the reasons given above. Mr Dearman has carried out such a valuation, giving a current value of US$ 48.3 million.

496. Primus relies on paragraph 3.1(f) of Schedule 8 to the SPA, which provides that the Sellers shall not be liable in respect of any claim to the extent that the matter to which the claim relates is in respect of lost goodwill. I reject the submission by Primus that the claims made by Triumph for breaches of warranty are claims for lost goodwill. The plain and natural meaning of goodwill in a commercial contract is business reputation. The losses sustained by reasons of the breaches are lost revenues and increased costs, leading to reduced profitability and loss of share value. The exclusion relied on by Primus does not affect the claims for breaches of warranty.

Conclusion

497. I am very grateful to counsel for their impressive command of the issues and documentation in this case. The clear and concise written submissions have been of immense help.

498. In conclusion, for the reasons set out above:

i) Triumph gave adequate notice of its claims in respect of the Nadcap warranty claim, the Operational warranty claims and the FLP claim.

ii) Triumph did not give adequate notice of its claim for breach of clause 6.6 and therefore is precluded from pursuing such claim.

iii) Primus was not in breach of warranties 6.1 or 6.2 in respect of the loss of Nadcap accreditation in 2013.

iv) Primus was not liable for breach of warranties 7.2, 9.1, 9.2 or 10.3 in respect of operational issues at Farnborough because those matters were fairly and clearly disclosed.

v) Primus was in breach of warranty 19.5 in that it failed to prepare the FLPs with care.

vi) Carefully prepared FLPs would have included adjustments to the LRP to allow for buffer stock to be built and arrears to be reduced, increasing costs during accelerated production and delaying transfers of platforms to Thailand.

vii) The adjusted LRP would have shown delayed profitability for the Primus companies in Farnborough and Thailand.

viii) Triumph would have proceeded with the sale on the basis of the adjusted LRP showing delayed profitability of the companies but would have reduced the purchase price accordingly.

ix) Triumph is entitled to damages based on the difference between the price agreed on the assumption of the LRP and what the price would have been, using the same method of calculation, if the properly adjusted LRP had been made, subject to the contractual cap of US$ 15 million.

x) The price agreed was US$ 76,530,145. The DCF value based on the properly adjusted LRP is to be calculated and agreed by the experts.