Neutral Citation Number: 2011 EWHC 137 (QB)

Case No: 7LS41681

IN THE HIGH COURT OF JUSTICE
QUEENS BENCH DIVISION
LEEDS DISTRICT REGISTRY
MERCANTILE COURT

The Court House
Oxford Row
Leeds LS1 3BG

Date: 2 February 2011

Before:

His Honour Judge Behrens sitting as a Judge of the High Court in Leeds

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Between:

GOLDENFRY FOODS LIMITED	**Claimant**
- and -	
(1) MALCOLM ALBERT AUSTIN	
(2) PAUL ANDREW CHAPMAN	
(3) ROBERT MICHAEL WADDELL	
(4) FRONTIER FOODS LIMITED	**Defendants**

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Robert Howe QC and Hugh Jory (instructed by **Gordons LLP of Riverside West, Whitehall Road, Leeds LS1 4AW**) for the **Claimant**
Cyril Kinsky QC (instructed by **Langleys of Queens House, Micklegate, York YO1 6WG)** for the **Defendants**

Hearing dates: 30th November 2010, 1 – 3 December 2010, 6 – 9 December 2010, and 10 January 2011

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Judgment

Judge Behrens:

1 Introduction

1. This is the trial on liability of a claim by the Claimant food manufacturer ("Goldenfry") against three former senior employees ("Mr Austin", "Mr Chapman", "Mr Waddell") and their company (the Fourth Defendant – "Frontier").

2. Goldenfry claims that in breach of their duties owed to Goldenfry Mr Austin, Mr Chapman and Mr Waddell set up Frontier and misused confidential information and/or trade secrets belonging to Goldenfry so as unfairly to compete with Goldenfry. As a result they secured a valuable contract to supply low fat gravy granules to ASDA.

3. The essence of Goldenfry's claim is simple. For many years Goldenfry had supplied gravy granules to ASDA. Goldenfry's gravy granules had a fat content of 30%. In late 2003 or early 2004 Goldenfry was asked by ASDA, to try to produce granules with lower fat content.

4. Mr. Austin was Goldenfry's Technical Director. Between early 2004 and December 2005 he was engaged in a development and research project, to investigate the possibility of Goldenfry being able to produce lower fat gravy granules. He and his team carried out investigations and a number of production trials in order to determine the correct processes and ingredients. He concluded that Goldenfry would need to invest in essentially a completely new production line at the cost of approximately £1.7 million in order to produce this new product, and produced a report explaining this

5. Goldenfry contend that the knowledge of the precise limitations of Goldenfry's existing production line, the fact that Goldenfry could not go below a certain fat percentage without very heavy investment in a new production line, the details of how a low-fat competitive product could be produced and with what ingredients, and ASDA's aspirations for the product, were trade secrets which the Defendants learned as a result of their employment by Goldenfry. In addition, the Defendants also knew of certain specific ingredients to use including a specialised oil and brand of heat treated wheat flour.

6. Goldenfry contend that Mr Austin, Mr Chapman and Mr Waddell decided to use this information in order to exploit this opportunity by setting up Frontier, using the innovative production method which Mr Austin had learned from his work for Goldenfry (and also two of the specific ingredients used by Goldenfry), in order to take business from Goldenfry – including, in particular, the ASDA contract. In so doing they have retained documents belonging to Goldenfry that they were contractually obliged to deliver up.

7. The Defendants for their part deny having misused any confidential information. They believe the claim to be baseless in fact and law. They regard it as an attempt by a large company to intimidate and scare off a smaller competitor. It is their case that the low fat gravy granules are produced by a different method from that being researched and/or used by Goldenfry.

8. They do not accept that the information alleged by Goldenfry to be confidential is properly to be categorised as a trade secret. Some of it was in the public domain; some was obvious and some was part of the know-how that they were entitled to use after the end of their employments.

2 Witnesses

9. Goldenfry called two witnesses of fact – Mr Peter Turrill the Managing Director and Mrs Jacqueline Laugher, the Product Development Manager at the relevant time. Each of the individual Defendants gave evidence on their own behalf. In addition each side called an expert – Dr Ashby on behalf of Goldenfry and Mr Ives on behalf of the Defendants.

3 The parties

3.1 Goldenfry

10. Goldenfry is a long established manufacturer and supplier of ambient packaged food products to grocery retailers and wholesalers in the UK. It was founded in the 1950s by Mr Herridge, the father of the current chairman, and employs about 140 people from its base in Wetherby.

11. It manufactures a variety of food products, but by far its largest selling product range is gravy granules. These include both Goldenfry branded gravy granules and retailer own label gravy granules for customers such as ASDA. In around July/August 2007 the production of gravy granules represented about 71% of Goldenfry's turnover and the sales of gravy granules to ASDA for its own label retailer brand represented about 26% of this figure.

3.2 Mr Austin

12. Mr Austin read Engineering at Oxford University and has worked in the food industry for over 30 years. He is a very experienced technician and is the holder of several patents. He worked for Mars for many years and was responsible for the development of Mars ice cream products.

13. He is thus well acquainted with the physical properties of matter and its manipulation in food processing. In paragraph 2 of his 4th witness statement he sets out his considerable experience in designing processing systems including (in paragraph 2.3) a wide variety of forming and shaping systems including multi headed extruders and (in paragraph 2.4) mixing and blending systems including the use of extruders.

14. Though not formally a director, he was described as Goldenfry's Technical Director. He was employed from 2 June 2003 to 14 February 2006.and was paid a base salary of £125,000 plus a discretionary bonus. His duties included delivery of new products and improvements and refinements of existing products and manufacturing processes. He ran a team of two in product development.

15. He is now the Managing Director of Frontier.

3.3 Mr Chapman

16. Mr Chapman was Goldenfry's Customer Services Manager. He was responsible for developing and managing Goldenfry's supply chain with its customers, and managing Goldenfry's departments within the supply chain. He was also responsible for Goldenfry's warehousing and distribution systems engineering and health and safety.

17. Mr Chapman's experience included 10 years with Northern Foods and five years with Hazlewood Foods where he worked, among other things, on ambient liquid cooking sauces. He has accordingly extensive experience in all aspects of manufacturing and supply covering the frozen, chilled and ambient products sectors for the retail and wholesale markets. He was employed by Goldenfry from 26 January 2004 until 8 August 2006, and thereafter acted as a consultant with Goldenfry until 12 January 2007. His salary as an employee was £94,000 p.a.

18. He is now the Supply Chain Director of Frontier.

3.4 Mr Waddell

19. Mr Waddell, though not formally a director, was Goldenfry's Brands Director. He had the main responsibility for developing strategic relationships with customers including ASDA.

20. His experience consisted of working for more than 20 years in many fast moving consumer goods markets (including 5 years at each of United Biscuits plc (McVities) and McCain Foods). He worked with all major UK retailers and many wholesale and cash & carry customers. His work has been predominantly in marketing branded and retailer own brand food manufacturing businesses,

21. He was employed by Goldenfry from 17 April 2002 to 14 February 2006, and his salary was £116,000 p.a.

22. He is now the Commercial Director of Frontier.

3.5 Frontier

23. Frontier was incorporated on 19th June 2007. Mr Austin, Mr Chapman and Mr Waddell are directors and shareholders of Frontier together with a Mr John Hadley-Pike. Mr Hadley-Pike has played no part in these proceedings.

4 Relevant Contractual Terms

24. There are no relevant terms restraining competition by Mr Austin, Mr Chapman or Mr Waddell. As Mr Kinsky QC points out only Mr Austin's contract prevented competition after termination. In the events that happened that restriction terminated after 6 months. In his closing submissions Mr Kinsky QC relies on the lack of such terms. Indeed he submits that this action is in effect an attempt by Goldenfry to prevent legitimate competition from its former employees.

25. Mr Austin, Mr Chapman and Mr Waddell were each subject to contractual obligations that are more extensive than the common law duties relating to confidential information. Mr Kinsky QC contended that such terms are void as a matter of law in so far as they purport to provide greater protection than the common law.

26. Until a very late stage in these proceedings Mr Kinsky QC's submissions were controversial; I was referred to contractual terms in each of the Defendant's contracts of employment and in the Compromise Agreements entered into when they each left Goldenfry. Mr Howe QC referred me to a number of authorities which he submitted supported the proposition that more extensive than the common law protection can be achieved by express covenant.

27. However in his closing oral submissions Mr Howe QC, in effect, abandoned those submissions. In effect he accepted that Goldenfry could only succeed in so far as it could prove that the Defendants had misused confidential trade secrets belonging to Goldenfry.

28. In those circumstances it is not necessary to set out the contractual terms formerly relied on by Goldenfry. It is however worth noting that each of the Defendants had clauses in both their Contracts of Employment and the Compromise Agreement requiring them to deliver up property belonging to Goldenfry at the termination of their employments.

29. Thus Clause 20 in Mr Austin's Contract of Employment provides:

> *[20] "On termination of this agreement for any reason (or earlier if requested) [Mr Austin] will immediately deliver up to [the Claimant] all property (including but not limited to any Company car and property connected with any car provided under this agreement, documents and software, credit cards, keys and security passes) belonging to it or any Group Company in [Mr Austin's] possession or under his control. Documents and software include (but are not limited to) correspondence, diaries, address books, database, files, reports, minutes, plans, records, documentation or any other medium for storing information. [Mr Austin's] obligations under this clause include the return of all copies, drafts, reproductions, notes, extracts or summaries (however stored or made) of all documents and software."*

30. And clause 2 of the Compromise Agreement provides:

> *[2] "[Mr Austin] warrants and confirms that he has returned all property, electronically stored or otherwise, belonging to [the Claimant] and that he has complied with his obligations defined in clause 20 of the Service Agreement"*

31. There are equivalent provisions in Mr Chapman's and Mr Waddell's contracts.

5 Gravy Production

32. At the time when each Defendant was employed by Goldenfry the gravy granule market had only two suppliers, RHM[1] (the owner of the BISTO brand) and Goldenfry. Goldenfry's production process for the manufacture of gravy granules involves mixing the ingredients so as to disperse the solids in the liquid fat and then cooling so as to crystallise the fat and make a mix with the texture that lends itself to breaking down to granules.

33. In this process the fat forms a continuous phase. A relatively high fat content is needed for dispersion in this manner. Typically Goldenfry's granules contain about 30% fat.

5.1 Low Fat Granules

34. The Goldenfry process is not suitable[2] for the manufacture of granules with a fat content of less than 30% because the mixer does not compress the ingredients sufficiently for them to cohere at low fat content.

35. The successful manufacture of low fat granules involves the use of a twin screw extruder. The fat and the solid particles are mixed so as to disperse the fat as discontinuous phase throughout the mass. The extruder acts to compress the particles together so that the fat, when it sets, acts like blobs of glue holding the mass together. Conditions in the extruder must be such as to compress without excessively heating or shearing the mass.

5.2 Extruders

36. Twin screw extruders are used in many industries including food, paper making, plastics and the chemical industry. The working part of the machine consists of two identical co-rotating intermeshed screws driven by shafts from a motor. The screws may rotate at variable speeds from a few hundred rpm to over a thousand rpm. The screws are mounted in a close fitting barrel which may be heated or cooled. The longer the barrel the greater the l/d (length to diameter) and the more work is done on the extrudate.

37. The screws are assembled from modular screw elements assembled together on the shaft. Screw elements can transport, convey, mix, knead, or shear raw materials according to their design and the way they are stacked. The screws can be of different pitches and vary in design as between different manufacturers.

38. The screws commonly feed to a die plate and the material being extruded is forced at high pressure through holes in the die.

39. In cross-examination Dr Ashby identified 3 separate parts to the extruder process as it applied to gravy granules. First it mixes the powders and liquids, second it forms them into a coherent cohesive mass (something like plasticine). Finally the mass has to be formed into shapes. For the gravy granule process there is no die plate. It is necessary to avoid the development of excessive pressure which could overheat the starch. The basket die developed by Buhler offered a low force means of forming the granules.

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[1] At some time the BISTO brand was bought by Premier Foods.

[2] In fact as will appear below Goldenfry did in fact manage to manufacture low fat gravy granules using their existing machinery.

40. The modular nature of extruders offers great scope for process flexibility. It will be apparent that the extruder must be customised and optimised for each specific application. Some applications are well established; some systems are available off the shelf from manufacturers. This was not the case for gravy granules.

5.3 Ingredients

41. Potato starch, vegetable oil, salt and wheat flour are the major ingredients of high fat gravy granules and are common to all. For low fat gravy granules a maltodextrin replaces part of the fat. The minor ingredients (colour, flavouring, flavour enhancer and emulsifier) play no part in the case and thus do not need detailed consideration. Colour and named flavour enhancers are well defined compositions. Flavours are tailored to individual products by development on a small scale, usually in collaboration with a flavour house. Flavour and colour will vary from one gravy flavour to another. A fat such as beef fat may be added to some gravy granules and is declared as such.

Potato Starch

42. Potato starch is available from several suppliers at a range of moisture content and is a relatively well defined ingredient. Goldenfry do not use any of the specialised, physically modified starches.

Wheat Flour

43. Wheat flour covers very many potential ingredients such as bread flour, biscuit flour, or cake flour. In the case of gravy granules "wheat flour" is heat treated soft wheat flour that has been subjected to a specific heat treatment regime to alter its properties in a defined way. Heat treatment kills bacteria present in native flour and inactivates enzymes that would make the fat in the granules go rancid. The precise degree of heat treatment determines the properties of the flour when dispersed in water. Goldenfry use a specific heat treated flour [redacted] from Bowman's range of nine standard heat treated flours.

Vegetable Oil

44. The declarations "vegetable oil" and "hydrogenated vegetable oil" cover a huge range of oils derived from many vegetable sources. Goldenfry use a fat that is unusual in that it has a very high melting point. The fat used by Goldenfry melts at 50°C. This is necessary to resist the melting and sticking together of granules in distribution and whilst being stored before being used. The fat has several functions in the granules. It helps "carry" the flavour and to bind the granules together.

45. In 2004 the oil used by Goldenfry was described as "hydrogenated vegetable oil". This indicates that the oil has been chemically hydrogenated. Hydrogenation hardens oils, that is, the melting point is increased; however partial hydrogenation creates trans-fatty acids in the oil. These are now perceived as presenting a hazard to health. Supermarkets sought the removal of all forms of hydrogenated oil from their own label foods.

46. In 2006 Goldenfry undertook a project to develop a non-hydrogenated oil with the same melting and functional characteristics in their process as the hydrogenated oil. It will be necessary to refer to the project in more detail later in this judgment. It was, however, successful. Some adjustments to process had to be made because non-hydrogenated oils do not crystallise at the same rate as hydrogenated oils.

47. Goldenfry, in common with other food manufacturers, did not at the relevant time and still do not disclose the detail of their recipes. It is true, that as for all foods, a list of ingredients appears on the packets of materials as a nutritional statement detailing the types of ingredients included in the product. However this does not provide information as to the relative amount of those ingredients, the supplier nor the specific characteristics of the ingredients.

48. One of the minor issues in the case was the extent to which it was possible to reverse engineer the ingredients from the information on the packets. In the end I think it was common ground that an experienced food technician such as Mr Austin would be able to make a rough approximation of the ingredients but not an exact specification.

5.4 BISTO

49. BISTO is acknowledged to be the market leader in the manufacture of gravy granules. Until 2003 BISTO used a process similar to that used by Goldenfry and produced granules with a similar fat content. In August 2003 BISTO launched a product advertised as BISTO Reduced Salt granules. This product is in fact a low fat product containing about 16% fat.

50. No one has seen the manufacturing process used by BISTO. However the granules are regular and all the witnesses accepted that they must have been made by extrusion. Dr Ashby, Mrs Laugher and Mr Austin all said that it was possible to deduce that method from an inspection of the granules.

51. Before introducing the product RHM conducted trials with an extruder manufacturer, Buhler. The parties entered into a Confidentiality Agreement which expired in 2005.

6 The Fat Project

6.1 Papers by Mr Austin

52. The first suggestion that ASDA were looking for low fat products came at a Technical Conference for its suppliers held at the end of 2003. The Conference was attended by Mr Austin and Mrs Laugher on behalf of Goldenfry. One of the items that ASDA wished to focus on in 2004 was a food pledge of an imminent lowering of salt, sugar and fat.

53. There was some debate before me as to how far this information was confidential information. In paragraph 54 of his witness statement Mr Turrill suggests that as the information was only given to current suppliers it was not public knowledge.

54. In the end there was not much difference between the parties. In cross-examination Mr Turrill accepted that there was publicity prior to the conference advertising ASDA's "Good For You" range but made the point that it was not made clear at the conference that ASDA were looking for low fat gravy granules.

55. Between 19th May 2004 and 16th November 2004 Mr Austin prepared a total of 7 papers on the Fat Project. The papers are detailed documents and discuss in some detail possible changes to Goldenfry's gravy products and processes and the associated costs. It is not necessary for me to set out in detail the contents of the papers. A number of points emerged from the papers and the cross-examination of Mr Austin and Mr Turrill.

1. It is plain that by May 2004 ASDA had specified a lowering of both fat and salt in gravy granules. Mr Austin pointed out that Goldenfry's current process had severely limited capacity below 30% added fat. In a paper dated 30th June 2004 he pointed out that

Goldenfry had trialled a low fat mixture and the then current mixers/pumps could not cope.

2. The initial solutions proposed by Mr Austin involved increasing the water content of the granules. Mr Austin suggested that the main driving force behind the project was that it would reduce costs. In cross-examination Mr Turrill accepted that this was a very attractive feature but that it was not the only feature.

3. In the papers Mr Austin suggested a number of possible ways of increasing water content. By way of example in the paper dated 9th July 2004 Mr Austin suggested three routes to lowering fat, salt and recipe costs by increasing water content within the limits of an acceptable shelf life. He suggested that there be developed a new continuous granule process capable of handling fat or margarine. He also suggested the use of pre-gelatinisation to improve dispersion of the granules in water. He suggested that the pre-gelatinisation would probably be through an extruder.

4. There is a fairly detailed discussion of the BISTO granules in the undated paper believed to have been made on 12th November 2004. However none of the papers refers to the fact that the BISTO product was made by an extruder. There are a number of references to the use of an extruder in some of the papers. As well as the paper of 9th July 2004 there are references to the use of an extruder to two of the three suggested methods in the paper of 21st July 2004

5. By 21st July 2004 Mr Austin was suggesting, amongst other things that proof of principle trials were necessary.

56. Mr Howe QC suggested to Mr Austin that these papers showed that a process using an extruder was by no means obvious. He pointed to the fact that only some of the methods suggested made use of an extruder, and to the fact that there was no mention of BISTO granules being made with an extruder. If it had been so obvious it would surely have been mentioned.

57. Mr Austin did not accept this. He maintained that both he and Mr Turrill were aware that the BISTO granules were made by extrusion and it was thus unnecessary to mention it in the papers. He made the point that his alternative suggestions provided a defensive position for Goldenfry and showed that there were other routes to lower recipe costs. He also refuted the suggestion that it was odd that he had not mentioned extrusion except in the context of pre-gelatinisation. He said that he was providing an alternative methodology that would give a unique position to Goldenfry. He also said that he was trying to reduce the fat content to below 15% that is to say below the fat content (16%) of the BISTO granules.

6.2 Trials

58. There were, in fact, three sets of trials between January 2005 and October 2005; one at Schroeder's premises in Germany in February 2005, one at Quest's premises in Holland in June 2005 and one at Buhler's premises in Switzerland in October 2005. Mr Austin and Mrs Laugher attended the Schroeder and the Buhler trials. No one attended the Quest trials.

The Schroeder Trials

59. The Schroeder trials took place in Germany in February 2005. They were the subject of a Confidentiality Agreement between Goldenfry and Schroeder dated 28th January 2005. The trials lasted two days. They were attended by Mr Austin and Mrs Laugher on behalf of

Goldenfry. Mr Austin and Mrs Laugher's expenses in attending the trials were paid by Goldenfry.

60. In March 2005 Mr Austin prepared a report dealing in some detail with the trials.

61. He describes the purpose of the project as being to protect the long term viability of gravy granules in the light of the demands to lower the fat content substantially below 30%. In his view the obvious routes were to use Scraped Surface heat exchangers (SSHE) and either single or twin screw extrusion.

62. The Schroeder trials were designed to determine the feasibility of producing using SSHE. It is apparent from the report that the trials failed. Mr Austin gave as the reason:

> *The water in oil emulsion [redacted]. There is a specific need to make the water in oil emulsion and [redacted] starches to prevent [redacted]. Given that the slip point of our fat is 490C the material is [redacted]. This would be available in an extruder.*

63. Under the heading "Learnings" Mr Austin made the point that the SSHE failed because of the viscosity of the cooled material. Mr Austin identified the next step as being tests at Quest on a twin screw extruder.

64. In cross-examination Mr Austin accepted that he appreciated that the work was highly confidential to Goldenfry. He did not accept that he had identified extrusion as a possible route at the trials. He said that it had been identified for some time. He also did not accept that the trials on the extruder were needed because he did not know how to manufacture the granules using an extruder. He said that it was not reasonable for Goldenfry to purchase equipment on his "say-so". Hence trials on extrusion were necessary.

The Quest Trials

65. The Quest trials were carried out in June 2005 in Holland using a Clextral double screw extruder. Mr Austin did not attend the trials but he accepted in cross-examination that he must have asked for the trials to be done. He could not, however remember the structure of the trials or what he asked to be done.

66. The only evidence relating to the trials is contained in an e-mail dated 22nd June 2005 from Mr Roukens at Quest to Mr Austin. It appears from the table attached to the e-mail that the trials were designed to explore two possible routes of production using the Clextral extruder. One involved reducing the amount of oil using a water in oil emulsion; the other was the more straightforward replacement of oil with malto-dextrin.

67. It appears from the e-mail that the results, though interesting, showed that the trials failed to produce granules; one of the samples came out as a thick slurry, another crystallised and blocked the extruder.

The Buhler trials.

68. Between July and early October 2005 there was an exchange of e-mail correspondence between Mr Austin and Clextral/Professor Mitchell about possible trials to take place upon a Clextral machine under the auspices of Professor Mitchell at Nottingham University. At one stage it had been proposed that the trials take place in France. However the trials were too complex and Mr Austin was referred to Nottingham University. In any event the trials did not take place.

69. In an e-mail dated 3rd October 2005 Mr Austin referred to the forthcoming Buhler trials. In his view it made sense to bring the learning from the Buhler trials back to Nottingham.

70. The Buhler trials took place in Switzerland in October 2005. They were the subject of a 3 year Confidentiality Agreement between Goldenfry and Buhler dated 21st July 2005. One of the peripheral disputes between the parties was as to the effect of this Agreement. In my view the agreement covered not only the information supplied by one party to the other but also the information arising as a result of the trials save in so far as it was an exception under the Agreement. In any event Mr Howe QC relied on the Confidentiality Agreements mainly to show that the parties regarded the trials as confidential.

71. The trials lasted three days between 18th and 20th October 2005. They were attended by Mr Austin and Mrs Laugher on behalf of Goldenfry. Mr Austin and Mrs Laugher's expenses in attending the trials were paid by Goldenfry.

72. Initial contact had been made with Buhler in May 2005. However it was not possible to conduct the trials earlier because of the Confidentiality Agreement between Buhler and RHM over the BISTO product.

73. In the light of their importance in this case it is necessary to look at them in a little detail.

Preparation

74. In her witness statement Mrs Laugher said that she spent about four weeks in preparation for the Buhler trials. She referred to conversations with emulsifier suppliers and the carrying out of tests with their samples. She gave other examples of this.

75. Mr Austin prepared a trial plan with 3 groups of tests. Each of the sets contained a basic recipe. Within each set the concentration of some of the ingredients varied. As these were process trials they were based on a basic recipe; there had been no development of flavour profiles. The trials were designed to explore the variation of the ingredients. Thus the first group was designed to explore the ability of the system to inject water directly as a replacement to oil at high, moderate and low oil concentrations. The second group explored the ability of the system to use materials higher in water content (that is to say the use of 14% as opposed to 4% wheat flour and natural as opposed to 125 potato starch). The third group explored the ability of the system to manufacture the then current recipe at high, medium and low fats.

76. In cross-examination Mrs Laugher explained that in preparation for the Buhler trials both she and Mr Austin carried out kitchen trials with a Moulinex press on the basic recipes specified by Mr Austin in the trial plan. She could not in fact remember whether the tests with the emulsifiers had occurred in that period or whether they had been ruled out by the Schroeder trials.

77. In addition Mrs Laugher had to ensure that the necessary ingredients were shipped out to Switzerland in preparation for the trials

The Trials

78. The trials are documented in an e-mail dated 24th October 2005 from Mr Austin to amongst others Mr Turrill, an e-mail the same date sent by Mr Austin to Mrs Laugher and a Technical Report prepared by Buhler and sent to Mr Austin on 11th November 2005. The technical report included a relatively detailed quotation including technical details of the extruder system that Buhler were prepared to supply.

79. In his e-mail to Mr Turrill Mr Austin stated the purposes of the new process were to allow for cheaper recipes through the addition of water and the reduction of flavours, the close coupling of process and packing reducing labour costs, a defensive position in matching the brands fat level and ASDA's requirements and against third party entrants.

80. In his report on the trials Mr Austin describes the Equipment as follows:

> *The trial Buhler extruder is a* [redacted]. *There are* [redacted], [redacted] *The final section of the screws* [redacted] *that operate against a* [redacted]. *The last of the* [redacted], *essentially* [redacted] *the machine. The extrudate comes out of the* [redacted] *and is therefore* [redacted]. *The* [redacted] *is* [redacted] *long, has* [redacted] *open area with* ¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤.*"*

81. Approximately 27 trials took place over the 3 days. There was some variation to the initial trial programme as the learning progressed but the purpose of the trials. 5 different screw configurations were used. The screw configurations were carried out by Buhler and only very general descriptions are provided in the technical report.

82. There is a factual dispute between the parties as to whether Mr Austin saw the screw configurations that were used. Ms Laugher said that, because the laboratory manager had an injured shoulder Mr Austin assisted in putting the screw elements onto the extruder[3]. Mr Austin denied this, claiming that he was not involved in taking off or putting on any of the elements, and he did not see what Buhler did[4].

83. Many of the individual trials failed. However some succeeded. One of the successful trials was based on the existing recipe with low fat (from the third group) and replicated the BISTO low fat granule. In his e-mail to Mr Turrill he described the trials as a qualified success. He summarised the learning:

1) *We successfully made stable granules in a range of fat content from 10 to 16% …*
2) [redacted]
3) *The trial machine ran at 500kg/hr. For a single line packing 500g at 129/min we need a process rated at 3.9 tonnes per hour. A 125mm machine would provide this output.*
4) *Our current meat GF product disperses better than the model recipes we trialled*
5) *All products made with dried and native starches have an Aw less than* [redacted]

84. He also pointed out that it was not possible to achieve a [redacted] product from the machine as the resulting granules recombined. They were able to match the BISTO granule diameter of 1.5m though granules of diameter [redacted] appeared to disperse better.

85. He set out a number of steps that needed to be followed including the verification of project costs, the determination of an effective method of dispersion and the development of model recipes at 16% and 10% fat.

86. In cross examination Mr Austin accepted that he understood that the trials could give rise to some information that was confidential to Goldenfry. Mr Austin did not accept that the trials were structured in the way that they were because he did not realise in advance whether the process could produce gravy granules at all. He said that there was a strong expectation that the trials would be successful because they had produced the BISTO granules at 16% fat.

[3] Day 4/14, 47-48
[4] Day 5/64

He also rejected the suggestion that he expected that Buhler would show him how it was done. He said he believed he knew how it was done. He explained the full range of tests on the basis that he needed to show to Goldenfry that he had explored all the avenues and were not simply focussed on one element.

6.3 Investment proposal

87. On 24th November 2005 Mr Austin drew up a Proposal for Investment in a New Process. It is a detailed 9 page document. Much of it sets out facts already dealt with in this judgment. After setting out various options it recommends the replacement of the existing line with a 16% fat granule system which utilises an extruder. He considered a number of possible alternatives to the Buhler extruder but rejected them. He pointed out that other routes would not offer expertise or support. Thus Goldenfry would have to determine the required screw elements, and to develop its own granulating attachment (i.e. the die basket). This would be both time consuming and expensive. The overall costs of the investment were estimated to be £1,729,000.

88. Mr Turrill raised a number of questions about the Proposal which were answered by Mr Austin. In cross examination Mr Kinsky QC suggested to Mr Turrill that his questions showed that he did not want the project to go ahead. Mr Turrill did not accept that. He made the point that Mr Austin was proposing a substantial investment and he felt it his duty to ensure that the full range of questions had been addressed before any board approval was sought.

89. It was further suggested that the project was not ready for board approval. Many of the matters referred to in the 24th October 2005 report as needing to be done had not been done. Mr Turrill did not accept that. He thought it was ready for board approval. Apart form all other matters he had set this out for Mr Austin as an objective in his Q4 performance.

90. Mr Turrill refuted the suggestion that he thought the scheme "half baked". He also rejected the suggestion by Mr Chapman that he had described Mr Austin's work to make a BISTO granule as "a total waste of time".

91. In any event the proposal did not proceed. As already noted both Mr Austin and Mr Waddell left Goldenfry in February 2006.

7 The Change to Non-Hydrogenated Fats

92. As already noted in 2006 Goldenfry changed the fat in their gravy granules from hydrogenated fat to non-hydrogenated fat. Both Tesco and Sainsbury had specified the use of non-hydrogenated oil by January 1st 2007.

93. In August 2006 Mr Turrill contacted a number of experts to advise Goldenfry on the change. These included a food technologist – Booth Smith Food Technology ("BSFT") – and a Fat Consultant – Geoff Talbot. A number of suggestions were made by Mr Talbot and/or Mr Campbell a consultant commissioned by BSFT. None of these identified a suitable fat.

94. In addition Mrs Laugher and/or Mr Chapman had spoken to [redacted], a well established supplier of fats and oils. By 8th September 2006 Mrs Laugher and Mr Chapman had identified an oil which had performed adequately in kitchen trials. This is referred to as [redacted]. It was, however, still necessary to perform production trials.

95. The production trials were organised by Mr Chapman. There was some confusion in the evidence as to the precise chronology of the production trials. Probably, however, there was a small production trial in October 2006 using a slightly different fat – [redacted] which

could be obtained in relatively small quantities. This was followed by a fuller trial in December using 10 tons of [redacted]. Mr Chapman certainly attended the October trials and may well have attended the December trial. He certainly knew it was successful. There were some minor difficulties because the [redacted] did not crystallise in the same way as the old oil. However after further advice from [redacted] the cooling process was modified and the problem resolved.

96. On 7th September 2006 Mr Chapman and Mrs Laugher had met with [redacted] at [redacted]. At the meeting Mr Chapman asked for exclusivity for the [redacted]. [redacted] discussed this with his Director and in an e-mail dated 8th September 2006 indicated that [redacted] were prepared to discuss it further. In fact there were no further discussions and thus no exclusivity for the [redacted]. In evidence Mr Ives expressed the view that it was most unusual for ingredient manufacturers to agree to such exclusivity deals.

8 The Frontier Project.

97. There has been significant difficulty in working out an exact chronology of the development of the Defendants' process. The Defendants have disclosed remarkably few documents relating to the development. As a result Goldenfry has had to obtain documents from third parties. Furthermore the Defendants' account of the chronology has changed during the course of the proceedings.

8.1 Life after Goldenfry

98. Both Mr Austin and Mr Waddell left Goldenfry in February 2006. According to his witness statement Mr Austin worked as a Consultant for both Quest UK and MSC between May 2006 and May 2007. By the end of January 2007 these consulting jobs were occupying him for no more than 2 days a week. In an earlier witness statement Mr Austin had said that he was a full time consultant until March 2007. He explained this discrepancy as being due to the haste in compiling the first witness statement. In cross-examination he confirmed that he had consultancy jobs occupying him for up to 2 days a week up until May 2007.

99. After he left Goldenfry Mr Waddell ran his own business development company – Market Aspects Ltd. He worked with several small and medium sized companies. Most of his time was split between working for food suppliers and packaging and design projects. He too was a consultant for MSC

100. Mr Chapman remained a Consultant with Goldenfry until 12th January 2007. According to his witness statement he had an ambition to set up his own business and so started to investigate the possibility of manufacturing dry sauces, soups and hot drinks for the own label market. The products would be granular.

8.2 The Birth of Frontier Foods

101. Mr Waddell said that he had a conversation in January 2007 with a senior contact at ASDA and learned that they were supportive of new businesses. This was of interest to him because he had several "self start" food clients who wanted to gain business with ASDA. In cross-examination he described the meeting as "a general discussion" about opportunities that he was working for on behalf of other clients.

102. Shortly after this conversation Mr Austin and Mr Waddell met. Mr Waddell told Mr Austin of the meeting with ASDA. They were both of the view that they could do something in the ambient sector. Mr Waddell suggested that gravy was by far the most opportune sector.

In cross-examination Mr Austin accepted that this conversation, too, was a general conversation about opportunities in the gravy sector.

103. At some time in late January 2007 Mr Austin had a general conversation with Mr Chapman. In that conversation Mr Chapman shared his ideas for the manufacture of dry sauces, soups and drinks. Mr Austin said that he did not discuss his ideas for gravy granules in that conversation because he had not formulated a plan for going forward at that stage. Mr Chapman also confirmed in cross-examination that there was no discussion about gravy granules in this conversation.

104. The difficulty with this account arises because shortly before the trial began Goldenfry received disclosure of a number of documents from Quest[5]. These documents include a Confidentiality Agreement signed by Mr Austin on 18th January 2007 between Quest and Market Aspects Limited, and a Project Action Report entered onto Quest's computer system on 26th January 2007 which reads:

> *A new company approached Quest to supply gravy flavours for the following variants … This range of gravy will be used in a proposition to ASDA to gain all of the business from the incumbent ASDA supplier Goldenfry. The new company is Market Aspects.*

105. When faced with these documents both Mr Austin and Mr Waddell accepted that there had been a meeting at Quest shortly before 26th January 2007. Mr Austin maintained that there was no specific plan such as is suggested in the computer entry. He made the point that Quest were in fact supplying flavours to Goldenfry so it would have been possible for them to infer what is stated in the entry.

106. Mr Waddell did not accept that he used language as specific as that contained in the computer entry. He said that he did not realise the meeting with Quest was as early as is now suggested. He had forgotten about the Confidentiality Agreement. He did not have it in his possession and that is the reason he did not disclose it.

107. On or about 26th January 2007 Mr Austin had a meeting with Quantum (a company involved with corporate finance). The purpose of the discussion was to discover if corporate finance was available for a £5 million top line operation in gravy. In the discussion Mr Austin mentioned the level of capital costs and the gross margins.

108. Mr Howe QC submits that the Quest documents coupled with the approach to Quantum clearly show that the plan was significantly more advanced in January 2007 than either Mr Austin or Mr Waddell will admit and that statements in the witness statements and/or the pleadings that work did not start on the project till February or even March 2007 are not to be accepted.

8.3 Kitchen Trials

109. According to Mr Chapman he had a number of phone conversations with Mr Austin in February 2007. In those conversations they discussed the potential to move into the gravy market. It was a market that already existed rather than moving into the unknown. The potential would be to launch a healthier gravy product than the two options in the market place; subsequently they would move into sauces.

110. Some time towards the end of February 2007 Mr Austin and Mr Chapman performed a number of kitchen trials at Mr Austin's house using a Moulinex press to form the granules. In his evidence Mr Austin said that they lasted for 3 or 4 days and may have spilled over into March.

[5] Now known as Givaudan

111. Mr Chapman describes the trials in paragraph 47 of his witness statement. He says that he obtained samples from potential ingredient suppliers. Mr Austin and he tried a number of different starches and different DE's (dextrose equivalent) of Maltodextrin. Mr Chapman believes they used 15, 18 and 20 DE Maltodextrin. The 20 was too sweet; the best price was the 18 as it was the most commonly used. The 18 worked well in the kitchen, tasted acceptable and dispersed in boiling water. They tried pea and potato starch (both 12% and natural). The pea starch did not dissolve properly and they chose the natural as the kitchen samples dissolved and it was the cheapest.

112. When he gave evidence Mr Chapman said that all of the good results were placed in jam jars and in each container they placed a recipe card with the successful recipe on it. The jam jars and the recipe cards were stored in Mr Austin's house. When the jam jars were thrown away so were the recipe cards.

113. Mr Chapman was cross-examined about the obtaining of samples. He was shown a number of documents dated at the end of January 2007 or the beginning of February 2007 requesting samples of Maltodextrin 18 DE, caramel powders, and AKO flake NF trial blend. All of those samples were in fact used in the trials. However Mr Chapman maintained that the samples were ordered at a time when he was intending to manufacture sauces as they are common to both sauce and gravy manufacture. It was a coincidence that they could also be used for the manufacture of gravy.

114. No documents have been disclosed relating to the trials. In evidence Mr Austin said that there were very few such documents. Mr Chapman was asked specifically why he did not refer to the recipe cards in his disclosure list. He said that he was not aware that he had to disclose documents that had been thrown away. He also denied that he had made up the story over the jam jars even though it was not mentioned in his witness statement.

8.4 The Bruce II Document

115. The Bruce II Document is one of the most important documents in the case. It was disclosed by the Defendants in October 2009 only shortly before an application by the Defendants to strike out the claim under Part 24 of the CPR. Judge Langan QC, who dismissed the strike out application, described the document as "a double barrelled smoking-gun".

116. The Bruce II Document is dated March 2007. It is headed "strictly private and confidential". It was a Financing Proposal to prospective investors in the project seeking to raise approximately £3 million of equity finance.

117. It is 56 pages long including Appendices and contains detailed financial projections including profit forecasts and cash flow projections. The copy which has been disclosed has been substantially redacted. Most of the financial details have been redacted.

118. It was prepared by Mr Austin, Mr Chapman and Mr Waddell assisted by Quantum. In evidence it was apparent that it was largely written by Mr Austin though both Mr Chapman and Mr Waddell accepted that they had read and contributed to it.

119. According to Mr Austin the Executive Summary was drafted by 22nd February and the document finalised by 7th March 2007.

120. It contains a number of statements which, on the face of it are highly damaging to the Defendant's case:

1. the Defendants had “already met with senior training director" of ASDA and have confirmed the availability of a 12 month contract for the supply of gravy granules on an exclusive basis;
2. the Defendants had using their own resources "undertaken substantial research to develop highly novel and innovative recipes and manufacturing techniques to "reinvent" the gravy granules"
3. The Defendants had already undertaken “successful pilot trials of these new recipes and manufacturing techniques to validate their efficacy”.
4. The process is described as “innovative" process on page 11 of the Proposal, under the heading "Technology". Furthermore on page 12 it refers to the “novel use of standard manufacturing processes to “reinvent” the gravy granule.
5. “In addition, the Management Team believes that only with significant technical and financial resources can the product be reverse engineered. Furthermore, these products cannot be readily reproduced using current Manufacturing processes without significant capital investment and changes to internal business processes."

121. The document also contains references to Goldenfry and its capability to compete without substantial capital investment.

122. In cross-examination Mr Austin accepted that the manufacturing process had not been developed by the Defendants. He described the document as a “selling document”. He said it was in fact made clear to investors that although the process was innovative it was a capability known to exist because BISTO was in the market. He did not, however, accept that the process described in the document was, in effect, the process he had witnessed at the Buhler trials. He accepted that the only research that had been carried out was the Kitchen trials and denied that the reference to research was in fact a reference to the Buhler Trials. Mr Austin thought that the manufacturing process was innovative and novel because it involved putting a collection of manufacturing techniques together in a novel way.

123. Mr Chapman took a somewhat different line. He accepted that the manufacturing process described involved the manufacture of granules using an extruder. He did not accept that it was innovative or that it involved re-inventing the gravy granule because it was the process used by BISTO. He accordingly accepted that the statement in the Bruce II document was untrue. He did not, however accept it was misleading. He, too, said that the substantial research referred to the kitchen trials but accepted that the Management Team had not themselves carried out any research into the manufacturing techniques. In his view the reference to “pilot trials” in the document was a reference to trials that would take place in the future.

124. Mr Waddell, too, was asked about whether he considered the process innovative. He was happy to support Mr Austin and Mr Chapman. However he was aware that the truth was being stretched and was aware that some elements in a selling document were being overplayed. He however regarded the fact that the proposal was a joined up production line as being innovative. He also accepted that the statement in relation to ASDA was untrue. He had not met with a “senior director at ASDA”; Mr Waddell’s contact was not a Director. Furthermore the conversation was entirely general. There was no mention of a 12 month contract in that meeting.

125. Although most of the figures in Bruce II have been redacted, the figures in Section 6 dealing with the Market have been left intact. This part of the document states that the total volume of the gravy granule market is 28,000 tons of which the private label volume is 9,800.

The volume sold to ASDA is said to be 2,400 tons. The figure of 2,400 is almost the exact figure that Goldenfry sold to ASDA in 2005, that is to say in the year before Mr Austin and Mr Waddell left. There was thus significant cross-examination as to how that figure had been obtained. Mr Waddell said that he remembered that the volume sold by Goldenfry was 2,400. He also validated it by taking a figure of about 25% of the private label market which he obtained from other sources at 9,800 tons.

126. Goldenfry rely on Bruce II in a number of ways. It casts light on the credibility of the Defendants. If what they say is correct, it means that the document contained a number of serious misstatements. It is far more likely that the representations were true. It suggests that work on the project started much earlier than the Defendants now accept, that the innovative manufacturing process refers to the process witnessed by Mr Austin at the Buhler trials and the substantial research refers to the research on the Fat Project including, of course the Buhler trials.

8.5 Events between March and May 2007

127. On 22nd March 2007 the Defendants made a presentation to NVM Private Equity in an attempt to obtain an Agreement in Principle for equity finance. Mr Austin describes the presentation as a success. On 16th April 2007 he was informed that NVM were giving the proposal serious consideration.

128. On 29th March 2007 Mr Austin and Mr Chapman visited Baker Perkins to discuss the sourcing and configuring of an extruder. Baker Perkins were unable to help with the time frame required.

129. On 2nd April 2007 Mr Waddell met with Ged Futter (ASDA's new buyer of "condiments and cooking") after a cold call. The meeting was encouraging in tone.

130. On 25th April 2007 the Bradman Lake Group sent Mr Chapman a Europack proposal for automated machinery for the packaging of cans of gravy granules.

131. Mr Chapman carried out some research on the internet and came across a company called FES Consultants (UK) Limited ("FES"), specialist suppliers of extruder equipment. FES recommended Dragon Research Limited (Dragon) in Port Talbot for the necessary trials. According to Mr Austin FES also proposed an initial die head design, which bore very little resemblance to the trial unit used by Buhler.

132. On 10th May 2007 Mr Bruce Frisby of FES supplied Mr Chapman with a quotation for a used refurbished Wenger twin screw extruder unit. He quoted two figures, one with new screws and the other with the original screws.

8.6 Dragon Trials

133. The Dragon trials took place in Port Talbot on 24th May 2007. They were attended by Mr Austin and Mr Chapman. There are virtually no documents relating to the Dragon Trials. Thus the following description is taken from Mr Austin's witness statement.

134. Dragon had set up a twin screw extruder machine with a cutting and granulating unit for a secondary process. According to Mr Austin the trial machine was more like the Wenger, in its construction than the Buhler machine.

135. The trial that was conducted was relatively simple. The aim was to work out how the material behaved in the extruder. The recipe comprised 15% Acoflake NF, ~15% salt, ~35% potato starch, ~10% flour and the balance as Maltodextrin. Mr Austin and Mr Chapman

hoped to determine the screw configuration, the likely power consumption and to make granules.

136. They managed to produce granules. They made a 10mm diameter extruded rope which was then passed through a cutter. The cutter forced material against a perforated plate behind which a cutter blade rotated. The method was similar to the design principle of the FES head but different in execution. It would have provided an alternate manufacturing method should this have proved necessary. The FES head used the action of the rotating screw elements to push the mixed material out of the sieve at right angles to the direction of flow. The cutter pushed the granules out in the direction of flow. Because there was no flavour or colouring the granules were white in colour, had no flavour and were not fit to eat. However they did show that the process worked in principle.

137. According to Mr Austin he learned a great deal from the Dragon trials. He sets this out in paragraph 76 of his witness statement:

1. He observed a screw configuration on this scale that effectively combined the powders and fat. It provided a clear start point for a bigger extruder, which was discussed with the technical officer of Dragon.
2. The mechanical energy required by this machine and, by considering scale up factors, the size of the motor needed.
3. That granules could also be made by using a rotary blade behind an exit mesh die plate.
4. That heat generated by the process was enough to require that the barrel of the extruder should be cooled.
5. That a large L/d (length / diameter) ratio adds no value.

138. In the course of cross-examination Mr Austin was asked about the apparent complete lack of any documents relating to the Dragon trials. Reference was made to a letter from the Defendant's solicitor on 30th January 2009 which suggested that there was no documentation relating to the trials. He was also referred to paragraph 6.24 of Dr Ashby's report where he said:

> *In my opinion it is good practice to produce a written record of ingredients, recipes, and process trials when developing a new product. It is almost impossible to carry out the process of development at all without properly documenting that process so that one can see what has been done, what has been learned and what one might do next. It is extremely unusual in my experience within the food industry, for a new product or a new process to emerge as a factory installation with no intermediate development and no supporting research and development documentation.*

139. Mr Austin accepted that the documentation kept by Goldenfry would be regarded as normal. He sought to explain the lack of documentation in two ways. First he said that only one basic recipe was being used; second he said that they could see the screw elements and the information was being transmitted directly to FES.

140. During the course of the hearing Mr Austin did identify two manuscript sheets which represent calculations carried out by him. One of them is dated 24th May 2007 and may well be some notes taken by Mr Austin at the meeting. The other contains Frontier's registered number. As Frontier was not incorporated until June 2007 it is unlikely that the notes on the second sheet were made during the Dragon trials. In any event the notes are too sparse to give any real assistance on the trials.

8.7 Negotiations with ASDA

141. On 31st May 2007 Mr Austin and Mr Waddell made a formal presentation to Mr Futter at ASDA using slides and some kitchen samples. On 1st June 2007 Mr Futter e-mailed Mr Waddell attaching costs he would be happy to work with. There was some further negotiation over price but on 15th June 2007 Mr Futter sent a further e-mail in which he said that ASDA was committed to the Frontier proposal subject to a number of caveats with business to commence from January 2008.

8.8 The order for the refurbished Wenger extruder.

142. Mr Austin and Mr Chapman met with Matthew and Bruce Frisby (the two principals of FES) at their offices in Corby on 5th June 2007. In cross examination Mr Austin described the discussion as wide ranging about how the machine was going to be built and what it was there to do.

143. The discussion forced Mr Austin to think about the detailed build specification of the machine. When he returned home that evening Mr Austin sent them an e-mail setting out details of the specification required. A copy of the e-mail was sent to Mr Chapman.

144. The e-mail was not disclosed by either Mr Austin or Mr Chapman and Goldenfry only obtained a copy as a result of third party disclosure. Mr Austin's explanation was that all of the items in his sent folder prior to November 2007 were lost or destroyed by Yahoo when they were transferred. Mr Chapman's explanation was that the e-mail must have been deleted or double deleted by his wife as it did not concern him directly. He only kept e-mails that were sent by or to him directly not e-mails that he was copied in to. Accordingly it was not kept and not disclosed.

145. The e-mail includes the following:

> *There are four process sections:, … …*
>
> *The final section of the screws is a series of wiper elements that operate against a basket die. The last of the wiper elements are angled to convey backwards, essentially dead-ending the machine. The extrudate comes out of the basket and is therefore exiting at right angles to the rotational axis of the machine.*
>
> *The basket die is 4d long, has ~50% open area with 1 to 2mm diameter openings*

146. The second paragraph replicates – word for word – the third, fourth and fifth sentences of the description of the Buhler extruder in the report made by Mr Austin to Mr Turrill following the Buhler trials on 24th October 2005 (some 18 months earlier). The third paragraph is practically identical to the sixth sentence. The only difference is the report to Mr Turrill ends with the words "*with 2mm diameter openings*".

147. Not surprisingly Mr Howe QC suggested that this part of the e-mail had been copied from the report to Mr Turrill and that Mr Austin had accordingly retained highly confidential documents relating to the Fat Project which were the property of Goldenfry.

148. Mr Austin denied that he had copied the report. His explanation was that he must have remembered what he wrote 18 months earlier and regurgitated it. He made the point that it is a technical description and he must have regurgitated the description because he did not have the report.

149. The e-mail contains other significant material:

> *In my trial there were 12d internal to the barrel So 13.5d is more than adequate with 4d of overhang in the basket sieve … making a total of 17.5?*

> *I have a machine quoted with 110kw motor, so my calcs of 106 kw are well in line. A 144 mm machine may require a higher starting torque so a 150 kW motor will suffice.*
>
> *Screw speed on a 62.5 mm machine was ~ 350 rpm with an output of ~500kg/hr*

150. Mr Austin agreed that the trial referred to was the Buhler trial. Thus the reference to 12D internal to the barrel, the machine quoted with the 110 kilowatt motor, the screw speed on a 62.5mm machine of 350 rpm were references to the Buhler trials, the Buhler machine and/or the quotation from Buhler.

151. He also agreed that in giving information to FES he imparted some of the learning he had from Buhler. It is also to be noted that not all of the information in the e-mail is derived from one document. Part, as set out above is derived from Mr Austin's report of 24th October 2005, part from the quotation supplied by Buhler on 11th November 2005 and part appears to be taken from e-mails between Buhler and Mr Austin about the trials.

152. On receipt of the e-mail of 5th June 2007 Matthew Frisby sent Mr Chapman a revised quotation for the supply of the Wenger extruder with a set of new screws.

8.9 Selection of oil

153. In paragraph 5 of his most recent witness statement Mr Chapman explains the selection of oil.

> *During the kitchen trials which we conducted for Frontier Foods we used a solid form of fat from [redacted] called [redacted]. I bought several boxes of this from [redacted] and took it to Dragon where our trials were conducted. It worked well and so when we began to manufacture at Frontier Foods I ordered what I assumed was the liquid version of [redacted] from [redacted]. I now know that the specification for [redacted] and the liquid fat that [redacted] supplied is not identical, but that the specification of the liquid oil supplied by [redacted] to Frontier and Goldenfry is identical to the specification of the liquid oil supplied to Goldenfry.*

154. In fact there are differences between oil used for the kitchen trials which was a trial blend, the [redacted] standard blend which was used for the Dragon trials and the [redacted] supplied to Frontier which is identical to the [redacted] supplied to Goldenfry.

155. Mr Chapman makes a number of additional points in paragraph 5:

1. [redacted] works every bit as well in our manufacturing process as does the oil supplied by [redacted];
2. [redacted] and the oil from [redacted] have been used interchangeably at Frontier Foods depending on the size of the production run, among other things. [redacted] has been used exclusively since May 2008;
3. The fat content of the Frontier gravy granule (which varies from between 13 and 18% as Mr Austin explains elsewhere) is not wholly made up of non HVO (whether [redacted]).

156. It was suggested to Mr Chapman that when he saw [redacted] of [redacted] on 21st June 2007 he must have asked or mentioned the blend of oil supplied to Goldenfry. Mr Chapman denied this in emphatic terms. He described it as unethical and said that no manufacturer would give such information.

157. He was asked why he chose [redacted]. He said that there are only 2 oil manufacturers in the UK. Of those only [redacted] will supply oil in sufficiently small quantities.

8.10 Selection of Wheat Flour

158. In his most recent witness statement Mr Chapman points out that heat treated flour is a very common recipe in the food industry. A simple internet search will reveal the use of heat treated flours in very many everyday food products (including gravy granules).

159. Bowmans are a well-known supplier of heat treated flours. He explains the choice of [redacted] flour in paragraph 6.1 of the witness statement:

> *In 2007 when I contacted Bowmans regarding heat treated flours there were only 2 flours that were commercially available for low micro controlled product, these were* [redacted] *and* [redacted]*. The* [redacted] *was recommended to me for use in dried products which the end customer would add liquid to as it has the best microbiological benefits for shelf life. Dr Ashby claims there are a number of heat treated flours and this is true of today but the only other heat treated flours I was informed about at the time were specialist low bacteria heat treated flours. The specialist flours are more expensive and not necessary for products with a low AW. We therefore use the* [redacted] *version.*

160. In paragraphs 7 to 9 he makes a number of other points:

1. A number of other flours were tried in 2008 but they were not suited to Frontier's equipment.
2. There is no magic in the moisture content of the flour. Indeed flour, whether heat treated or not is not a crucial ingredient. In some of Frontier's products flour is replaced with potato starch.

8.11 Grant Application

161. In July 2007 Frontier applied partially successfully to the DTI for a regional investment grant. In the supporting information there is a reference to the time spent by the Management Team proving that the new ideas and concepts will deliver. The document like Bruce II describes the manufacturing process as "new and novel".

8.12 Goldenfry's reaction

162. On or about 13th July 2007 Goldenfry were informed that a potential supplier had submitted gravy granule samples and prices. The prices offered improved his margin by "nearer £200,000 than £100,000" and were for the whole of the then current range. The recipes were "half fat" and offered increased health benefits. As a result Mr Turrill prepared a devised an action plan designed to generate cost savings whilst maintaining current Goldenfry process producing granules with 30% fat.

163. On or about 13th August 2007 there was a meeting between Mr Futter and Goldenfry's Commercial Manager. It is possible that Mr Futter gave informal notice of the termination of Goldenfry's contract at that meeting.

164. In any event in a telephone call to Mr Turrill on 23rd August 2007 formal notice was given that ASDA would switch the supply of gravy granules from Goldenfry with effect from 1st February 2008.

165. There was an immediate objection by Mr Turrill. In an e-mail dated 24th August 2007 he complained about the way the contract had been taken away and summarised points that were made in a meeting held the previous day. On 4th September 2007 Mr Turrill sent a proposal to Mr Horton at ASDA under which he offered to reduce the fat content of the Goldenfry granules and to reduce Goldenfry's prices.

166. There were further negotiations including meetings on 3rd October 2007 and 19th October 2007. As a result Goldenfry managed to retain the contract in respect of 3 of the 7 flavours sold to ASDA.

167. As Goldenfry did not have the use of an extruder they had to develop what Mr Turrill described as a messy Heath Robinson process to reduce the fat level. It had to produce two separate batches one with 30% fat and one with zero fat and find a way of combining them in equal proportions so as to achieve 15% fat.

168. Thus Goldenfry supplied ASDA with 3 flavours of low fat gravy granules from February 2008 to September 2009. During that time Frontier supplied 4 flavours. In September 2009 Goldenfry won back the order and have supplied ASDA as sole supplier thereafter. Under the new contract the gravy granules have 30% fat and are no longer made by the messy process described by Mr Turrill.

169. On 1 November 2007 Mrs Laugher attended an ASDA supplier conference and saw Mr Austin and Mr Waddell. She received confirmation that it was they who had secured the contract. Mr Turrill discovered that they were both directors of Frontier.

8.13 Production by Frontier

170. In his witness statement Mr Chapman sets out in some detail how he sourced the equipment and how it was commissioned. I can summarise it quite shortly:

1. Frontier bought a mixture of new and second hand equipment. The initial capital expenditure was of the order of £1.5 million. All the processing equipment was sourced from suppliers Mr Chapman had dealt with before or after his employment with Goldenfry.
2. In paragraphs 60 to 62 Mr Chapman deals with the problems that were encountered in commissioning the extruder. He asserts that the initial screw formation was identified by Dragon although there have been modifications. There were considerable problems with the design of the basket die
    1) The first die basket was designed by FES. However there were considerable problems. The starch overheated and the head clogged.
    2) There were a number of modifications to the head with the wall thickness being reduced, and the diameter and number of the holes increased. This led to considerable waste.
    3) The head was redesigned to be made in two stages. Two heads failed. The third worked but the idea has been further developed. According to Mr Chapman Frontier have gone through 4 different designs and 3 sub designer. Many of these changes took place after production for ASDA had begun.
3. There were a number of problems in getting the factory ready. Apart from the problems with the basket die which I have summarised above and which continued through till April 2008, there were problems with the filler and the capper.
4. The line was working properly by April 2008 but improvements continued until October 2008.

9 Expert Evidence

9.1 Dr Ashby

171. Dr Ashby is an expert in the field of food processing and production. He worked for six years with Rowntree Mackintosh Plc between 1980 and 1986 where he conducted a variety of projects relating to flour, flavours, regulatory issues, factory quality control and he also worked in group research. Between 1986 and 1989 he was the Technical Director of a Rowntree owned business: Holgates Honey Farm (later Halo Foods) where he carried out work relating to product development and manufacture of diet and sports and "healthy" bars to tight timelines

172. In 1995 he was employed by Cereal Partners Worldwide where he became director of research and development responsible for the international research operation based at Welwyn Garden City. He had a team of 30 internationally recruited graduate staff supported by technicians. That team developed product and processes for breakfast cereals including own label cornflakes and crisp rice. He thus has direct experience of product and process development in the food industry. He retired in 2007 but remains active as a Consultant.

173. Dr Ashby summarised his report in the executive summary which makes four points:

1. The Frontier Foods recipes and processes bear a strong similarity to those developed for Goldenfry by Mr Austin in the course of a well documented project for Goldenfry. During that project Mr Austin used a Buhler extruder, whereas Frontier uses an extruder from a different manufacturer, Wenger. In his opinion the use of a Wenger extruder in place of a Buhler extruder is not a major change. Mr Austin has left records indicating that after the Buhler trial he was confident that he knew how to transfer the learning to other extruders.

2. The nature of the "Fat Project" and the existence of confidentiality agreements between Goldenfry and the external businesses that were involved in trials made for the "Fat Project" leave him in no doubt that the project and its results were considered "trade secrets" by Goldenfry.

3. The development of the process and the recipes of Frontier Foods are very poorly documented in contrast to the extensive documentation of the installation and start up of the factory. This has made it difficult to assess what-was-done and when-it-was-done by Frontier Foods. In his opinion a new process and product development could not be made on the time scale claimed by Frontier Foods without using trade secrets learned from Goldenfry. The short time scale contrasts with the duration of about two years for the project led by Mr Austin for Goldenfry. The duration of - and the failures recorded in – the "Fat Project" are much closer to his experience of development.

4. The Bruce II paper and other documents seeking finance display great confidence in the project from the moment of its initiation. In his opinion this confidence and commitment are not justified by the kitchen scale work described by Mr Austin. They are justified by the knowledge gained for the Goldenfry "low fat" project. In his opinion the Goldenfry "low fat" project was the underpinning for the Frontier Foods Bruce II project.

174. In paragraphs 3.21 – 3.36 of the report he discussed "The Fat Project" in some detail and concludes that it was successful. In support of this conclusion he relies on Mr Austin's report of 24th October 2005 to Mr Turrill, the detailed proposal for investment supplied to Mr Turrill on 24th November 2005 and an e-mail that Mr Austin sent to Manuel Delgado at Clextral (another extruder manufacturer) where he said

> *"… I have run trials at one of your competitors. So I know that there is a configuration that will work on a twin screw extruder... This was achieved with fat contents at 16% and lower. The machine had an inlet section and two processing sections, prior to the exit. Cooling water was set at 15°c with little change in temperature between the raw materials and the finished product exiting at 31°c to 34°c. The oil was conditioned to 50°c prior to the extruder"*

175. In paragraph 3.43 he summarised four specific discoveries obtained from the Fat Project:

1. That the Schroeder scraped surface heat exchanger could not reduce fat below 22%
2. That a water-in-oil emulsion did not work satisfactorily on the Schroeder equipment.
3. That the Quest extrusion system did not work for gravy granules.
4. That Buhler's extrusion system could manufacture acceptable granules at 16% or less fat. However the system could not replace the existing Goldenfry 30% fat systems so that one manufacturing process could make both high and low fat gravy granules.

176. In paragraph 3.44 he identified five specific pieces of learning from the Buhler system. All are taken either from Mr Austin's report on 24th October 2005 or the proposal for Investment of 24th November 2005

177. The first two pieces of learning related to the set up as of the Buhler system. Dr Ashby makes the point that this defines the nature and describes in outline the screw configuration of the extruder and also contains a detailed description of the Buhler system for getting extrudate out of the extruder without shear or back-pressure and for generating granules by the use of a [redacted] surrounding the exit to the extruder.

178. In cross-examination it was suggested that there were significant differences between the Buhler configuration and Frontier configuration. Dr Ashby agreed that the Wenger extruder bought by Frontier was different – it was 144 mm rather than [redacted], and rotated at between 100 and 200 rpm. He also agreed that the definition of the Buhler screw configuration was very much an outline. He felt that the information would, however, be a significant help to finding a configuration that worked. Amongst the answers he gave were the following

> *You would reconfigure to suit the Wenger, but knowing what you were seeking to achieve ... with my experience, I agree -- I would agree with the view that you can transfer from one extruder to another if you have an idea of what the structures are and you can make it work. The question is how much information you have, I agree.…*
>
> *Transfer from one extruder to another, and scaling one or two sizes up in an extruder is a relatively routine task.*
>
> *I'm hesitating because the objective when developing a screw configuration is to create a texture, and with experiment, if you know what you're trying to achieve you can achieve it. So I think, given time, given thought, it could be done. Because as we've said through this discussion, individual units – the individual units of this equipment are known art, it's putting them -- what Buhler have done was put them together in a way that's relatively uncommon in the food industry.*[6]

179. The third piece of learning related to the changes in the mechanical structure of the extrudate at 16%. Dr Ashby points out that this describes a discontinuity in the nature and performance of the granules above 16% fat. The implication is that the behaviour of low fat granules in the process will be more consistent at or below 16% fat. As the fat content

[6] Day 7 pp 74 – 75.

decreases below 16% granules are more likely to fall apart thus a fat content at or just below 16% would give the best plant performance.

180. In cross examination Dr Ashby agreed that it would be regarded as common knowledge that there would have been a point where the structure of the extrudate changed. It was suggested to him that the 16% could have been obtained by kitchen trials with the Moulinex. Dr Ashby did not accept that. He had not experimented with a Moulinex but did not accept that it would give the same result as trials with an extruder.

181. The fourth piece of learning related to the diameter of the holes in the [redacted] for BISTO). Dr Ashby points out that there is learning about how this changes the uniformity of the granules.

182. Dr Ashby was cross-examined at some length about the Buhler [redacted]. He agreed that Buhler had not invented the [redacted] but considered that they had tailored one to be used with their extruder. He agreed he had not seen the Buhler system but inferred that they must have carried out development work to make it work.

183. He also agreed having considered a drawing by FES of the [redacted] that the design originally proposed [redacted] holes with an amendment suggesting [redacted] holes. He accordingly agreed that it suggested that Frontier never looked at 2 mm holes.

184. The final piece of learning related to the cooling necessary after discharge from the extruder. Dr Ashby points out that it shows that plant design must include purchase of a cooler.

185. In Dr Ashby's opinion the first two these discoveries are the key to the process and would be considered to be trade secrets as they were generated out of the research and development conducted by Mr Austin for Goldenfry. The third, fourth and fifth discoveries help define a successful recipe and operating conditions for the extruder – granulator system defined by the first two, and if known and used by a competitor wishing to develop this product would save a significant amount of time and investment. As such he believes they would be considered to be trade secrets. The results stemmed from detailed work carried out and documented by Mr Austin. They were all the results of external and paid for trials made under the terms of confidentiality agreements.

186. In paragraphs 3.47 to 3.49 Dr Ashby discusses the 25 Buhler trials. He points out that most of the experiments were failures. These failures help define the boundaries of the recipe for a low fat gravy granule. The knowledge of what worked and what did not would speed development for a competitor.

187. In section 4 of his report Dr Ashby described in some detail in section (a) Frontier's manufacturing processes and in section (b) the ingredients used by Frontier. A summary of the production process is contained in paragraphs 4.6 and 4.7:

> *4.6) The mass formed by mixing under moderate pressure in the extruder is transported into the sieve/basket. As it accumulates it is forced through the sieve holes and breaks off as gravy granules which, after cooling, are ready to package. I do not propose to detail the packaging arrangements in this report.*
>
> *4.7) The core of the production line is the extruder and the sieve basket arrangement. The ingredient feed is standard equipment appropriate to the scale and nature of the equipment. The packaging line is more specialised but such equipment is routinely available to order if one has the knowledge to specify it.*

188. In section 5 Dr Ashby compared the Frontier process with that proposed by Mr Austin in the 24th November 2005 proposal. In his view the Frontier Foods system differs only in

minor details from the proposal made to Mr Turrill. The detail of the loss in weight feeder arrangement is different as is the method of granule cooling.

189. Although the extruder is not made by Buhler Dr Ashby infers that Mr Austin felt that he was able to generalise the learning from the Buhler trial to any other manufacturer's extruder.

190. In paragraph 5.6 he identified three similarities between the Frontier process and the successful Buhler trials:

1. A mixture of salt, heat-treated flour, potato starch and maltodextrin and minor ingredients is fed in at the start of the extruder barrel.
2. Oil is introduced part way down the barrel so as to mix with the dry powders and yield a product at or just below 16% fat.
3. The extruder barrel is open which assures that extrusion is at low pressure.

191. In paragraph 5.10 he pointed out that the specification [redacted] arrangement for the extruder barrel arrangement was the closest available match to the Buhler trial machine. The same projection of the screws beyond the barrel ([redacted]) was specified.

192. Although Mr Austin has stated that the screw configuration was provided by Dragon following the Dragon trials Dr Ashby noted that there are no records of this trial.

193. Between paragraphs 5.12 and 5.16 Dr Ashby considered the die basket. He made the point that the drawing provided by Frontier appeared to be a close match to the appearance of the Buhler. In cross-examination, however, Dr Ashby agreed that he had not seen the detailed configuration of the Frontier basket die. He also agreed that the screw arrangement in the Frontier basket die was in fact different to that in the Buhler trials

194. He summarises the problems encountered by Frontier with the die basket. In paragraph 5.17 he expressed the opinion that the die basket design from FES was very similar to the Buhler design.

195. Dr Ashby makes the point that the [redacted] used by Frontier is identical to the [redacted] presently used by Goldenfry. He also made the point that the heat treated flour used by Frontier is the same choice from 9 heat treated flours offered by Bowmans.

9.2 Mr Ives

196. Mr Ives is the Senior Partner of D C Ives International Consultants. He is a Chartered Engineer, a Chartered Scientist, a Fellow of various professional institutions including the Institutions of Mechanical Engineers and Food Science and Technology. He has extensive experience in the food and allied processing industry worldwide gained over the past 38 years. His core business in the past 28 years has been the design of food factories. In evidence he described himself as a mechanical engineer specialising in the processing technology, processing equipment, including packaging technology and the design of food factory layouts and specifications to the relevant EU Directives.

197. He agreed that he was not an ingredient expert or an expert in the food technology of recipe development. He was assisted in his report by David Gifford and Professor Toomey in these aspects of the case. He agreed with Mr Howe QC that he did not have the same experience as Dr Ashby in the research and development of new food products.

198. He has provided expert reports about 6 times a year for the last 17 or 18 years and given oral expert evidence about once a year. In one such case[7] the trial judge (Field J) was critical of his evidence because he expressed opinions on factual matters and opinions outside his areas of expertise.

199. Mr Ives' report starts with a Section entitled "Background" in which he summarised in 16 short paragraphs his understanding of the facts of the case. In a section entitled "Trade Secrets" he summarised his understanding of two authorities – Faccenda Chicken v Fowler [1987] Ch 177 and Printers & Finishers v Holloway [1965] RPC 239. He then arrived at his first summary of the facts most of which is in fact relatively uncontroversial. Paragraph 7, however, contained an assertion that the Defendants contributed to the profitability of Goldenfry whilst they were employed. Apart from the fact that this is irrelevant Mr Howe QC criticises this as being outside Mr Ives's expertise.

200. There then followed a number of sections under the following headings: Amended Particulars of Claim, the Extrusion Process and Low Fat Process, Prior Art, The Extruder and Die Designs and the Buhler tests

201. In the section headed "Amended Particulars of Claim" Mr Ives considered a number of the allegations. He suggested that the manufacture of a gravy granule by the process of extrusion is within US patent 5332585; the fact that cooling is necessary is also within the same patent and in the public domain.

202. In the section headed "The Extrusion Process" he summarised the history of the Fat Project. In the section headed Prior Art he referred to Patent 5332585 and to a further Patent 6214406B1 granted in 2001. In the section headed "The Extruder" he described the Buhler extruder. In the section headed "Die Designs" he explained that there are many forms of dies which produce a granulated product. He described the design used by Frontier as a radial die which has been the mainstay of low pressure extrusion for 30 years. In the section headed "The Buhler Test" he summarised very shortly the Buhler Trials.

203. This analysis was followed by a Second Summary which included:

1) *That Mr Austin advised Goldenfry, from an inspection of a Bisto product, that the product had been manufactured by extrusion. This advice was prior to the evaluation of the Buhler extrusion trials and was determined from his knowledge of extrusion.*

2) *That Buhler and Bisto had worked together and had developed an extruded gravy granule product and had completed such tests, constructed a manufacturing facility and was marketing an extruded gravy granule product with reduced salt and fat approximately two years prior to Goldenfry's Buhler trial.*

3) *It is considered that Buhler delayed the trials of Goldenfry due to their confidential agreement with Bisto, assumed to be of a three year standard period, as offered to Goldenfry.*

4) *That Mr Austin had attempted to manufacture a cheaper, less fat, gravy granule for Goldenfry by considering alternative process methods which would have provided savings of ingredient costs and the use of existing process equipment as used by Goldenfry at a lower capital expenditure to that of extrusion.*

5) *Patents lodged by Nestle of Vevey Switzerland indicate that the concept of preparing granules by extrusion for use in gravies had been evaluated and a US patent issued on July 26th 1994 thus making the concept of granule manufacture by extrusion with the associated conveyor cooling of the product after extrusion, information within the public domain. This included*

[7] Sam B v McDonalds Restaurants

the use of fat with a melt temperature of 35c to 50c and use of a wheat flour heat treated to a moisture content of 3%.

6) *That the die design used by Frontier Foods has been available, as a low pressure low temperature granulator for 30 years.*

7) *From this assessment I do not see that Goldenfry have a trade secret relating to the manufacture of gravy granules by extrusion.*

204. In cross-examination Mr Ives accepted that the first paragraph was an assessment of the facts. Paragraphs 2 and 3 are linked. Mr Ives accepted that during the currency of the confidentiality agreement between Buhler and BISTO meant that the material from those tests was confidential as between those two companies. He initially suggested that the material from the Buhler/Goldenfry tests was also confidential. He amplified this by saying that engineering matters were the property of Buhler and ingredients and recipe matters the property of Goldenfry. Paragraph 4 is also an assessment of the facts. Mr Howe QC however pointed out that it was by no means clear that the alternative methods proposed by Mr Austin were cheaper than the extruder route. The 9th July 2004 paper had referred to costs of approximately £2.75 million.

205. Mr Ives was cross-examined about Nestle's patent. It was pointed out that the process described in the patent application was a high fat product – the fat ratio being between 25 and 50 % with a preferred range of 35 to 45%. Mr Ives sought to rely on the patent simply to demonstrate it was in the public domain from 1994 that it was possible to make gravy granules with an extruder. In fact the patent itself makes no reference to the manufacture of gravy. It refers to the manufacture of granules as a food base for sauces and soups.

206. Mr Ives was cross-examined about paragraph 6. (Mr Ives preferred the expression radial die to basket die but I shall continue to refer to it as the basket die). He however agreed that the material in this section of the report only showed that basket dies have a wide variety of uses. There was no detail as to how it might be used for the specific production of low fat gravy granules.

207. Mr Ives repeated his conclusion that that Goldenfry do not have a trade secret on the use of an extruder. He did not consider the internal configuration of an extruder to be a trade secret

208. Mr Ives was then cross examined on his understanding of a trade secret. It was suggested that unpublished research and development would be regarded by an employer as highly confidential and in many cases a trade secret. Mr Ives accepted that they were or often were highly confidential matters within a company but did not accept they were necessarily trade secrets. He gave this answer;

> *Well, to be a trade secret, as I understand it from the data I have read, there has to be an in-plant procedure for intellectual property, there has to be agreements of personnel signed and there has to be a positive action via the company to achieve security and secrecy of what they consider to be a trade secret. I have not seen any documents relating to Goldenfry's management procedure that does this.*

209. He went to agree that Mr Austin's work on "The Fat Project" was very confidential as between Goldenfry and Mr Austin but in the absence of some contractual term could be used by Mr Austin after the end of his employment. He therefore disagreed with Dr Ashby's view that it was inconceivable that any employee cold reasonably consider that the information generated in the Buhler trials was general know how. In the absence of a contractual term the employee could use the information.

210. The next sections of the report are concerned with gravy recipes. Amongst the matters considered are the use of Bowmans Flour and the [redacted]. In this section of the report Mr Ives has relied on the advice of Professor Twomey and Mr Gifford. He set out his conclusions in Summary Three:

1) *That Goldenfry did not have an exclusivity agreement with Bowman's or [redacted] Oils.*
2) *That the use of such ingredients is common practice within the food industry.*
3) *That heat treated flours are available from other major ingredient manufacturers and it is probable that Mr Austin achieved a cost effective solution from Bowman's by use of 1 tonne bag deliveries. (state. M Austin).*
4) *I do not see that the use of either of these two ingredients can be considered a trade secret of Goldenfry.*

211. In cross-examination Mr Ives accepted that a recipe could be confidential yet contain ingredients which were readily available on the open market. He also accepted that Goldenfry would want to keep secret that it bought a particular heat treated flour from a particular supplier and that it was using a particular Blend of [redacted]. He justified his conclusion by his understanding of the definition of trade secret, that is to say the contract point already discussed.

212. In the next sections of his report Mr Ives discussed the Establishment of Frontier Foods and the Start Up Problems including the various designs for the basket die which failed. He summarises his conclusions in Summary 4

1) *Mr Chapman was able to establish a manufacturing facility, having first completed the search for a suitable property and completed an access agreement within a period of approximately ten weeks.*
2) *That the difficulties experienced by Frontier Foods relating to the failure of the packaging machine, the extrusion die repeated failure together with the changes of the extruder screw configurations are the normal progression of manufacturing development necessary when building a processing function.*
3) *That the establishment of a successful recipe formulation using the four main ingredients without flavour, colouring and spice enhancement was established by trials and further re-affirmed by tests carried out at Dragon Industries. Such information being readily available from market products.*
4) *Enhancement of this recipe was then further developed by discussion with ASDA and finalised to ASDA's approval as defined within the ASDA contractual document, --- see* ***Appendix G****.*
5) *The configuration of the extruder screw collars established by trials with Dragon Industries, was not effective as first assembled by FES and required the company FES to return to site and amend the screw configuration.*
6) *The continued failure and re-design of the extruder die, from a perforated tube to the current design, resulted in considerable product wastage, loss of production volume and necessitated the re-design by Mr Austin. (ref M Austin calculations of the extruder die included within J Laugher's statement ?).*
7) *The patent US 5332585 was in the public domain listing the process and ingredient details necessary to manufacture gravy granules by extrusion. The die design used by Nestec was not of the type designed by Mr Austin.*
8) *The die design fitted to the Wenger extruder of Frontier Foods was of a radial design available to the extruder market for the past 30 years.*

9) The associated equipment used by Frontier Foods as part of the extrusion process is of conventional design used by many processors in the food industry.

10) I do not see how any of these activities have benefited from a trade secret, or confidential information of Goldenfry.

213. Many of these points have already been discussed and need not be repeated. In cross-examination Mr Ives agreed that subparagraph 3 was based on what he had been told by the Defendants, and that subparagraph 10 was based on his understanding of a trade secret. In the absence of a contractual restriction Goldenfry could not protect its trade secrets.

10 The Law

10.1 Confidential Information – general law

214. The authorities establish 3 classes of information :

215. Class 1: trivial or public information which is not confidential at all, and which an employee is free to disclose or use.

216. Class 2: information which the employee must treat as confidential (either because he is expressly told that it is confidential or because from its character it obviously is so) but which once learned necessarily remains in the servant's head and becomes part of his own skill and knowledge applied in the course of his master's business. It might well be a breach of the employee's duties if he were to disclose this information whilst employed, but there is generally no restriction on him using or disclosing such information after termination of the employment.

217. Class 3: specific trade secrets so confidential that, even though they may necessarily have been learned by heart and even though the employee may have left the service, they cannot lawfully be used for anyone's benefit but the master's.

218. There is a very full discussion of this area of the law in the judgment of Arnold J in *Vestergaard Frandsen A/S v Bestnet Europe Ltd* [2009] EWHC 657 (Ch) ("*Bestnet*")[8]. That case also involved a claim for breach of confidence by an employer against some former employees (and their new employer, amongst others). It was alleged that certain confidential information consisting of technical trade secrets relating to the manufacture of mosquito nets had been misused by the ex-employees.

219. In *Bestnet* Arnold J summarised the guidance provided in (1) *Faccenda Chicken Ltd v Fowler* [1987] Ch 117 (CA) ("*Faccenda Chicken*") at 135G-138H, (2) *Thomas Marshall Ltd v Guinlie* [1979] Ch 227 at 248E-H, and (3) *Lancashire Fires Ltd v SA Lyons & Co Ltd* [1996] FSR 629 (CA) ("*Lancashire Fires*") at 668-9. As the passage is of direct relevance to the issues in this case it is convenient to set it out despite its length:

649. In Faccenda Chicken Ltd v Fowler [1987] Ch 177 at 135G-138H Neill LJ delivering the judgment of the Court of Appeal stated the principles to be applied in such cases as follows:

"(1) Where the parties are, or have been, linked by a contract of employment, the obligations of the employee are to be determined by the contract between him and his employer: cf. Vokes Ltd v Heather (1945) 62 RPC 135, 141.

(2) In the absence of any express term, the obligations of the employee in respect of the use and disclosure of information are the subject of implied terms.

[8] Cited with approval by the Court of Session in ***EFH Technologies Ltd Rytium Technology FZC t/a TRB Rytium*** [2010] CSOH 143 ("***Rytium***") (§28)

(3) While the employee remains in the employment of the employer the obligations are included in the implied term which imposes a duty of good faith or fidelity on the employee. For the purposes of the present appeal it is not necessary to consider the precise limits of this implied term, but it may be noted: (a) that the extent of the duty of good faith will vary according to the nature of the contract (see Vokes Ltd v Heather, 62 R.P.C. 135); (b) that the duty of good faith will be broken if an employee makes or copies a list of the customers of the employer for use after his employment ends or deliberately memorises such a list, even though, except in special circumstances, there is no general restriction on an ex-employee canvassing or doing business with customers of his former employer: see Robb v Green [1895] 2 QB 315 and Wessex Dairies Ltd v Smith [1935] 2 KB 80.

(4) The implied term which imposes an obligation on the employee as to his conduct after the determination of the employment is more restricted in its scope than that which imposes a general duty of good faith. It is clear that the obligation not to use or disclose information may cover secret processes of manufacture such as chemical formulae (Amber Size and Chemical Co. Ltd v Menzel [1913] 2 Ch 239), or designs or special methods of construction (Reid & Sigrist Ltd v Moss and Mechanism Ltd (1932) 49 RPC 461), and other information which is of a sufficiently high degree of confidentiality as to amount to a trade secret. The obligation does not extend, however, to cover all information which is given to or acquired by the employee while in his employment, and in particular may not cover information which is only 'confidential' in the sense that an unauthorised disclosure of such information to a third party while the employment subsisted would be a clear breach of the duty of good faith. This distinction is clearly set out in the judgment of Cross J in Printers & Finishers Ltd v Holloway [1965] 1 WLR 1, [1965] RPC 239 where he had to consider whether an ex-employee should be restrained by injunction from making use of his recollection of the contents of certain written printing instructions which had been made available to him when he was working in his former employers' flock printing factory. In his judgment, delivered on 29 April 1964 (not reported on this point in [1965] 1 WLR 1), he said [1969] RPC 239, 253:

> *'In this connection one must bear in mind that not all information which is given to a servant in confidence and which it would be a breach of his duty for him to disclose to another person during his employment is a trade secret which he can be prevented from using for his own advantage after the employment is over, even though he has entered into no express covenant with regard to the matter in hand. For example, the printing instructions were handed to Holloway to be used by him during his employment exclusively for the plaintiffs' benefit. It would have been a breach of duty on his part to divulge any of the contents to a stranger while he was employed, but many of these instructions are not really "trade secrets" at all. Holloway was not, indeed, entitled to take a copy of the instructions away with him; but in so far as the instructions cannot be called "trade secrets" and he carried them in his head, he is entitled to use them for his own benefit or the benefit of any future employer.'*

The same distinction is to be found in E. Worsley & Co. Ltd v Cooper [1939] 1 All ER 290 where it was held that the defendant was entitled, after he had ceased to be employed, to make use of his knowledge of the source of the paper supplied to his previous employer. In our view it is quite plain that this knowledge was nevertheless 'confidential' in the sense that it would have been a breach of the duty of good faith for the employee, while the employment subsisted, to have used it for his own purposes or to have disclosed it to a competitor of his employer.

(5) In order to determine whether any particular item of information falls within the implied term so as to prevent its use or disclosure by an employee after his employment has ceased, it is necessary to consider all the circumstances of the case.

We are satisfied that the following matters are among those to which attention must be paid:

(a) The nature of the employment. Thus employment in a capacity where 'confidential' material is habitually handled may impose a high obligation of confidentiality because the employee can be expected to realise its sensitive nature to a greater extent than if he were employed in a capacity where such material reaches him only occasionally or incidentally.

(b) The nature of the information itself. In our judgment the information will only be protected if it can properly be classed as a trade secret or as material which, while not properly to be described as a trade secret, is in all the circumstances of such a highly confidential nature as to require the same protection as a trade secret eo nomine. The restrictive covenant cases demonstrate that a covenant will not be upheld on the basis of the status of the information which might be disclosed by the former employee if he is not restrained, unless it can be regarded as a trade secret or the equivalent of a trade secret: see, for example, Herbert Morris Ltd v Saxelby [1916] 1 AC 688, 710 per Lord Parker of Waddington and Littlewoods Organisation Ltd v Harris [1977] 1 WLR 1472, 1484 per Megaw L.J.

> *We must therefore express our respectful disagreement with the passage in Goulding J's judgment at [1984] ICR 589, 599E, where he suggested that an employer can protect the use of information in his second category, even though it does not include either a trade secret or its equivalent, by means of a restrictive covenant. As Lord Parker of Waddington made clear in Herbert Morris Ltd v Saxelby [1916] 1 AC 688, 709, in a passage to which Mr. Dehn drew our attention, a restrictive covenant will not be enforced unless the protection sought is reasonably necessary to protect a trade secret or to prevent some personal influence over customers being abused in order to entice them away.*

In our view the circumstances in which a restrictive covenant would be appropriate and could be successfully invoked emerge very clearly from the words used by Cross J in Printers & Finishers Ltd v Holloway [1965] 1 WLR 1, 6 (in a passage quoted later in his judgment by Goulding J [1984] ICR 589, 601):

> *If the managing director is right in thinking that there are features in the plaintiffs' process which can fairly be regarded as trade secrets and which their employees will inevitably carry away with them in their heads, then the proper way for the plaintiffs to protect themselves would be by exacting covenants from their employees restricting their field of activity after they have left their employment, not by asking the court to extend the general equitable doctrine to prevent breaking confidence beyond all reasonable bounds.'*

It is clearly impossible to provide a list of matters which will qualify as trade secrets or their equivalent. Secret processes of manufacture provide obvious examples, but innumerable other pieces of information are capable of being trade secrets, though the secrecy of some information may be only short-lived. In addition, the fact that the circulation of certain information is restricted to a limited number of individuals may throw light on the status of the information and its degree of confidentiality.

(c) Whether the employer impressed on the employee the confidentiality of the information. Thus, though an employer cannot prevent the use or disclosure merely by telling the employee that certain information is confidential, the attitude of the employer towards the information provides evidence which may assist in determining whether or not the information can properly be regarded as a trade secret. It is to be observed that in E. Worsley & Co. Ltd v Cooper [1939] 1 All ER 290, 307D, Morton J attached significance

to the fact that no warning had been given to the defendant that 'the source from which the paper came was to be treated as confidential.'

(d) Whether the relevant information can be easily isolated from other information which the employee is free to use or disclose. In Printers & Finishers Ltd v Holloway [1965] RPC 239, Cross J considered the protection which might be afforded to information which had been memorised by an ex-employee. He put on one side the memorising of a formula or a list of customers or what had been said (obviously in confidence) at a particular meeting, and continued, at p. 256:

> *'The employee might well not realise that the feature or expedient in question was in fact peculiar to his late employer's process and factory; but even if he did, such knowledge is not readily separable from his general knowledge of the flock printing process and his acquired skill in manipulating a flock printing plant, and I do not think that any man of average intelligence and honesty would think that there was anything improper in his putting his memory of particular features of his late employer's plant at the disposal of his new employer.'*

For our part we would not regard the separability of the information in question as being conclusive, but the fact that the alleged 'confidential' information is part of a package and that the remainder of the package is not confidential is likely to throw light on whether the information in question is really a trade secret."

650. When it comes to determining whether information constitutes a trade secret, two further authorities are of assistance. First, in Thomas Marshall Ltd v Guinle [1979] Ch 227 at 248E-H Sir Robert Megarry V-C said:

> *If one turns from the authorities and looks at the matter as a question of principle, I think (and I say this very tentatively, because the principle has not been argued out) that four elements may be discerned which may be of some assistance in identifying confidential information or trade secrets which the court will protect. I speak of such information or secrets only in an industrial or trade setting. First, I think that the information must be information the release of which the owner believes would be injurious to him or of advantage to his rivals or others. Second, I think the owner must believe that the information is confidential or secret, i.e., that it is not already in the public domain. It may be that some or all of his rivals already have the information: but as long as the owner believes it to be confidential I think he is entitled to try and protect it. Third, I think that the owner's belief under the two previous heads must be reasonable. Fourth, I think that the information must be judged in the light of the usage and practices of the particular industry or trade concerned. It may be that information which does not satisfy all these requirements may be entitled to protection as confidential information or trade secrets: but I think that any information which does satisfy them must be of a type which is entitled to protection."*

651. Secondly, in Lancashire Fires Ltd v S.A. Lyons & Co Ltd [1996] FSR 629 at 668-669 Sir Thomas Bingham MR (as he then was) delivering the judgment of the Court of Appeal said:

> *"In Faccenda Chicken (at page 137) the Court of Appeal drew attention to some of the matters which must be considered in determining whether any particular item of information falls within the implied term of a contract of employment so as to prevent its use or disclosure by an employee after his employment has ceased. Those matters included: the nature of the employment: the nature of the information itself: the steps (if any) taken by the employer to impress on the employee the confidentiality of the information: and the case or difficulty of isolating the information in question from other information which the employee is free to use or disclose. We have no doubt that these are all very relevant matters to consider. In the ordinary way, the nearer an employee is to the inner counsels of an employer, the more likely he is to gain*

> *access to truly confidential information. The nature of the information itself is also important: to be capable of protection, information must be defined with some degree of precision: and an employer will have great difficulty in obtaining protection for his business methods and practices. If an employer impresses the confidentiality of certain information on his employee, that is an indication of the employer's belief that the information is confidential, a fact which is not irrelevant: Thomas Marshall Ltd v Guinle [1979] Ch 227 at 248. But much will depend on the circumstances. These may be such as to show that information is or is being treated as, confidential; and it would be unrealistic to expect a small and informal organisation to adopt the same business disciplines as a larger and more bureaucratic concern. It is plain that if an employer is to succeed in protecting information as confidential, he must succeed in showing that it does not form part of an employee's own stock of knowledge, skill and experience. The distinction between information in Goulding J's class 2 and information in his class 3 may often on the facts be very hard to draw, but ultimately the court must judge whether an ex-employee has illegitimately used the confidential information which forms part of the stock-in-trade of his former employer either for his own benefit or to the detriment of the former employer, or whether he has simply used his own professional expertise, gained in whole or in part during his former employment."*

220. In Goldenfry's opening and closing submissions Mr Howe QC relied on these passages and sought to apply the factors identified in those authorities to the facts in this case. I shall refer to that analysis later in this judgment.

11 Assessment of witnesses.

11.1 Mr Austin, Mr Chapman and Mr Waddell

221. There was a major attack on the credibility of the three individual Defendants. In assessing their credibility Mr Howe QC reminded me of an oft cited passage from the judgment of Goff LJ in *The Ocean Frost [1985] Ll Rep. 1 at 57* regarding the assessment of oral testimony in which he referred to the need to test the evidence by reference to the documents in the case, the motives of the witnesses and the overall probabilities.

222. There are to my mind three documents of crucial importance on the issue of credibility:

1. The Quest Project Action Report of 26th January 2007. To my mind this document is inconsistent with the Defendants' account of how the Frontier Project started and shows that by that date there was a reasonably developed plan at least between Mr Austin and Mr Waddell to sell gravy granules to ASDA and to gain all of the business from Goldenfry. It is to my mind simply not credible that the information on the Project Action Report did not emanate from either Mr Austin or Mr Waddell.
2. The Bruce II Document. I shall not repeat the points already made about this document. It was plainly an important document. It was to be presented to investors in an attempt to obtain a substantial injection of capital. On any view it contained substantial inaccuracies. Apart from the question of whether the process was "innovative", there had been no meeting with a senior director of ASDA; far less had there been any discussions over a 12 month contract, the only research carried out by the Defendants at that time was the kitchen trials. The attempts by the Defendants to explain away these inaccuracies on the ground that it was a "selling document" to my mind throw significant light on the credibility issues in relation to their evidence. They were plainly prepared to lie in this document.

3. The e-mail dated 5th June 2007 to FES. Not only did this e-mail contain an almost verbatim copy of four highly technical sentences in Mr Austin's report of 24th October 2005, it also contained significant other detailed information relating to the Buhler trials contained in other contemporaneous documents such as the Buhler quotation and e-mails passing between Mr Austin and Buhler relating to the trials. To my mind it is highly improbable that Mr Austin could have memorised this material so as to be able to "regurgitate" it in this e-mail, It is, to my mind, far more likely that it was copied from documents or copies of documents retained by Mr Austin.

223. There is also considerable force in the criticisms made of the Defendants' disclosure. As Mr Howe QC points out in Goldenfry's closing written submissions Goldenfry made repeated efforts to obtain adequate disclosure from the Defendants. Yet there were a number of important documents that were not disclosed by them. These include the Confidentiality Agreement with Quest, the 5th June 2007 e-mail, any documents relating to the successful recipes emerging from the kitchen trials (which Mr Chapman said existed but had been destroyed) and any documents emerging from the Dragon trials (which Mr Austin said existed and had been disclosed). The explanations for these failures are, to my mind, when viewed cumulatively, unsatisfactory. I also agree with Mr Howe QC that this is not a case where the failure to give proper disclosure can be put down to mere oversight or omission.

224. Each of the Defendants would plainly have a motive to conceal the fact that they had used trade secrets belonging to Goldenfry in the development of their product.

225. In all the circumstances I conclude that that the evidence of each of the Defendants is unreliable. I also conclude that the information in the 5th June 2007 e-mail was taken from copies of documents relating to the Buhler trials and/or the subsequent Buhler quotation which Mr Austin had wrongfully retained after the termination of his contract.

11.2 Mrs Laugher and Mr Turrill

226. It is no part of the Defendant's case that either Mr Turrill or Mrs Laugher were dishonest witnesses or were in general unreliable witnesses. In paragraph 35 of his closing submissions Mr Kinsky QC pointed out that there was a difference between Mrs Laugher's witness statement and her evidence as to the preparation for the Buhler trials. In footnote 173 he criticises the first of Mr Turrill's witness statements as being exaggerated in some respects. He is, in particular, critical of Mr Turrill's opinion of the extent to which the information was confidential.

227. In my view both Mrs Laugher and Mr Turrill were honest witnesses and were in general terms reliable. As Mr Howe QC pointed out both responded to straight questions with straight answers and conceded where the witness statements were inaccurate.

228. In so far as there was a conflict of evidence between Mrs Laugher and Mr Austin in relation to the Buhler trials I prefer the evidence of Mrs Laugher. In addition to my overall comparative view of the two witnesses there are the additional matters referred to in paragraph 30.1 – 30.2 of Mr Howe QC's closing submissions which I shall not set out in full in this judgment.

229. Equally I do not accept that Mr Turrill described Mr Austin's work on the Fat Project as "a waste of time" as suggested by Mr Chapman and Mr Waddell.

11.3 The Expert Evidence

230. As Mr Howe QC points out in his closing submissions the principal purpose of the expert evidence in this case is to educate the Court on the question of whether the alleged

information is or is not a trade secret (that is to say within Class 3 of Goulding J's classification). In the end that is a decision for the Court. Thus the Court is not really concerned with the expert's view on the matter but with the reasons given by the expert for that view[9].

231. Both experts did their best to assist the Court and there was much in each of their reports which was of considerable assistance. However it seems to me that there were a number of valid criticisms or comments that can be made of Mr Ives's report and his reasoning. First, Dr Ashby was plainly more qualified than Mr Ives in the fields of ingredients and food technology. Second, Mr Ives's reasoning was plainly flawed by a misunderstanding of the law relating to trade secrets. In his view there could be no trade secret unless there was some express contractual provision prohibiting its use or disclosure. Third many of Mr Ives's opinions are based on his interpretations of the facts and thus he (again) went outside the proper province of an expert. Fourth his reliance on US Patent 5332585 to show that the process or part of the process was in the public domain was plainly misconceived.

232. Dr Ashby's views were more objectively based on the documents relating to the Buhler trials and his own direct experience as a food technologist including Director of Research of Cereal Partners Worldwide. Dr Ashby was prepared in cross-examination to concede points (such as his knowledge of the Buhler and Frontier basket die). In general I preferred the views of Dr Ashby to those of Mr Ives.

12 Confidential Information

233. Before considering the items of information relied on by Goldenfry Mr Kinsky QC invites me to bear in mind two factors which he submits are of considerable importance. First Goldenfry has never made low fat gravy granules; second, BISTO make low fat granules using an extrusion method claimed to be Goldenfry's trade secret.

234. The authorities establish that in a case of this sort the Claimant must set out with particularity the information that he alleges constitutes a trade secret[10]. Goldenfry have sought to do this in paragraph 76 and Confidential Schedule A of the Re-Amended Particulars of Claim.

12.1 Mr Kinsky QC's submissions

235. In his submissions Mr Kinsky QC made the point that there has been a shift in emphasis in Goldenfry's case. In the original Particulars of Claim it sought to rely on the shortness of time that there had been a misuse of information. Amendments were made 18 months later and further amendments after the receipt of Dr Ashby's report.

236. In his closing submissions Mr Kinsky QC helpfully identified the 21 pleaded items:

1. *The Claimant's difficulties with Sonoco and ASDA's reaction (paragraph 86.1(A)(i))*
2. *The home baking mix supply problems and ASDA's reaction (paragraph 86.1(A)(ii))*
3. *That it was possible in principle to produce a gravy granule using a twin screw extruder which would be both cheaper and lower in fat than Goldenfry's 30% fat product (paragraph 86.1(B) – in Confidential Schedule A)*

[9] see *SmithKline Beecham v. Apotex* [2005] FSR 23, [51] - [53], per Jacob LJ

[10] See ***FSS Travel & Leisure Ltd v Johnson & Chauntry*** [1998] IRLR 382 CA, ***Lock International v Beswick*** [1989] 1 W.L.R. 1268, Hoffmann J

4. [redacted] *(paragraph 86.1(B)(vi)(a) – in Confidential Schedule A)*
5. [redacted] *(paragraph 86.1(B)(vi)(a) – in Confidential Schedule A)*
6. [redacted] *(paragraph 86.1(B)(vi)(b) – in Confidential Schedule A)*
7. [redacted] *(paragraphs 86.1(B)(vi)(c) and 86.1(D)(v) – in Confidential Schedule A)*
8. [redacted] *(paragraph 86.1(B)(vi)(c) – in Confidential Schedule A)*
9. [redacted] *(paragraph 86.1(C)(i)(a) – in Confidential Schedule A)*
10. *A particular specification of heat treated flour from Bowmans (paragraph 86.1(C)(i)(b) – in Confidential Schedule A)*
11. [redacted] *(paragraph 86.1(D)(i) – in Confidential Schedule A)*
12. [redacted] *(paragraph 86.1(D)(ii) – in Confidential Schedule A)*
13. [redacted] *(paragraph 86.1(D)(iii) – in Confidential Schedule A)*
14. [redacted] *(paragraph 86.1(D)(iv) – in Confidential Schedule A)*
15. [redacted] *((paragraph 86.1(D)(vi) – in Confidential Schedule A)*
16. *That ASDA's requirements for a lower fat gravy granule offered a business opportunity to a potential competitor because*
    a) *it was possible to produce them using an extruder*
    b) *it was cheaper and*
    c) *there was a significant barrier to entry to an existing producer such as Goldenfry (paragraph 86.1(E)(i)-(iii))*
17. *That the Claimant had decided not to invest in twin screw extruder technology (paragraph 86.1(E)(iv))*
18. *The prices charged to ASDA for gravy granules whilst the individual Defendants were employed (paragraph 86.1(E)(v))*
19. *That the Claimant would not be able to match the lower fat and/or lower price pitch of a competitor who used twin screw extrusion technology (paragraph 86.1(E)(v))*
20. **That the best extruder to buy was one that closely matched the length/diameter ('L/D') ratios of the Buhler extruder including a 4D projection beyond the barrel (paragraph 86.3(ii)(iii))*
21. **That the extrudate should flow directly into a sieve/basket die (paragraph 86.3(ii)(iv))*

237. Items 3, 4, 5 and 6 emerge from the Fat Project prior to the Buhler trials and include the Schroeder and Clextral trials. Items 7, 8, 11, 12, 13, 14, 15, 20 and 21 relate to the Buhler trials. Items 1, 2, 16 and 18 relate to Goldenfry's relationship with ASDA and ASDA's

requirements. Items 16, 17, and 19 relate to Goldenfry's production methods, its ability to change. Item 9 relates to the oil bought from [redacted]. Item 10 relates to the heat treated flour bought from Bowmans.

238. The thrust of Mr Kinsky QC's submissions both in writing and orally was that none of the information relied on by Goldenfry was either individually or cumulatively a trade secret within Class 3 of Goulding J's classification. Some of it was obvious; some of it was confidential within Class 2 and some was within the general skill and know-how of the Defendants, especially Mr Austin, which they were entitled to take away with them and use for the benefit of any future employee. He also denied that any use had been made of any trade secrets.

Items 3, 4, 5 and 6 – The Fat Project

239. Mr Kinsky QC makes detailed submissions on these items in paragraphs 132 to 146 of his closing submissions. In summary he makes the following points:

1. that Mr Austin did not need the Buhler trials to determine that low fat gravy granules could be made by extrusion. It was possible to tell that the BISTO low fat gravy granules were made by inspection simply by looking at them.
2. The SSHE technology is only relevant to a granule relying on a water in emulsion approach. This was not the approach with the Frontier granule. Accordingly the Defendants did not make use of any information they acquired from the Schroeder trials. If they did it was not it was part of Mr Austin's skill and expertise which he was at liberty to place at the disposal of anew employer.
3. The relevance of the Quest trials is unclear. It is true that the Quest trials were unsuccessful. This may have been because of the characteristics of the mixture rather than the extrusion system. In any event the Defendants did not use the information because they purchased a Wenger extruder. If contrary to that submission they did use the information of the June 2005 trials it was not a trade secret properly so called.

Items 7, 8, 11, 12, 13, 14. 15, 20 and 21 – The Buhler trials

240. Mr Kinsky QC makes a number of submissions about the 9 items relating to the Buhler trials.

1. [redacted]
2. Mr Austin was able to work out the relevant proportions of ingredients from reverse engineering the BISTO product, from the kitchen trials with Mrs Laugher and his know how.
3. Goldenfry were in fact able to come up with a competing product with their existing technology. It is thus difficult to see how the belief that they could not could ever be confidential or a trade secret. If this mistaken opinion was confidential it was part of the general know-how of the Defendants.
4. [redacted] It does not follow that information could be "read across" to the Frontier product where there was a different extruder and a different recipe. In any event the information was obvious.

5. Buhler's trial extruder had [redacted]. Buhler's production machine has [redacted]. Frontier's extruder has 144mm screws which rotate at between 100 – 200 rpm. It is in any event in the public domain and/or within Mr Austin and Mr Chapman's expertise that twin screw extruders were used for human food production.

6. The details of the extruder elements contained in his report on the trials would not be useful in that it ¤¤¤ [redacted]. In any event the machine chosen by Frontier had a different screw configuration. The [redacted] were designed by FES.

7. The choice of a [redacted] is obvious as it subjects the extrudate to the least pressure and thus creates less heat. It is general knowledge and in the public domain. It had been seen by Mr Austin at Eli Lilly. Frontier originally specified a [redacted]. There is no evidence as to whether the internal screw elements of the Frontier [redacted] is the same as the Buhler [redacted]. In any event there has been considerable development and problems with the [redacted] generally including ¤¤¤¤¤¤¤¤¤¤¤¤¤¤¤ [redacted] and .The [redacted] now used by Frontier is significantly different from the Buhler [redacted]. It has [redacted]. The only information used by Mr Austin was as a result of his long experience with extruders or was in the public domain.

8. The L/D ratios for extruders are a matter of general processing knowledge. In any event the Defendants chose the Wenger because they were offered it and not because of its L/D ratio. In so far as it is suggested that the L/D ratio of the Wenger extruder ([redacted] is suspicious as being the closest available to the Buhler extruder ([redacted]) the Defendants rely on the Dragon trials and on an assertion that it is common knowledge that an extruder of between [redacted] will probably be the right length.

9. The fact that there was a [redacted] beyond the end of the barrel is the result of balance between maximising the area for discharge and minimising the overhang load on the screws.

Items 1, 2, 16 and 18 – Relationship with ASDA

241. Item 1 was not pursued by Goldenfry at the trial. Mr Kinsky QC submitted that there was little evidence and virtually no cross-examination about the problems in 2003 with the home baking supply problems in 2003. It is difficult to see how they could be relevant to the issues in this case. No evidence was called to suggest that ASDA was displeased in any relevant way. It is difficult to see how this information could amount to a trade secret.

242. Mr Kinsky QC submitted that the suggestion that ASDA's requirement for a low fat gravy granule amounted to confidential information is absurd. Anyone shopping has known the advantage of low fat products.

243. Mr Kinsky QC does not accept that belief that a business opportunity exists can be a trade secret. He repeats that it was public knowledge that gravy granules could be produced using an extruder. In so far is the low fat gravy granules are cheaper to produce arises because the lower fat content allows for the use of less flavourings. Savings flow from the fact that it is a continuous process. As already noted Goldenfry was in fact able to produce a low fat gravy granule without the use of an extruder.

244. Whilst it is true that the Defendants had access to price information when they were employed by Goldenfry they deny that they used it. In particular as experienced professionals

they knew the level of mark-up that supermarkets expected to make on its own label goods and thus they were able to estimate what ASDA were paying Goldenfry.

Items 16, 17 and 19 – Limitations on Goldenfry's existing methods.

245. The Defendants did not know that Goldenfry had ruled out investment in extruder technology though they knew that no such investment had taken place.

246. Furthermore as already pointed out Goldenfry was in fact able to produce a competitive low fat gravy granules without using extruder technology

Item 9 – The Oil

247. In effect Mr Kinsky QC invites me to accept Mr Chapman's evidence. He did not ask [redacted] for the oil supplied to Goldenfry. There was no exclusivity between [redacted] and Goldenfry and no reason why [redacted] should not supply oil similar to that supplied to Goldenfry. [redacted] were chosen because they were the only supplier willing to supply the small quantities sought by Frontier.

Item 10 – The Wheat Flour

248. Again I am asked to accept Mr Chapman's evidence. It is true that Mr Chapman chose Bowman [redacted] heat treated flour which is the same brand used by Goldenfry. Mr Chapman was offered two brands by Bowman. He chose the cheaper.

12.2 Mr Howe QC's submissions

249. Mr Howe QC approaches the matter somewhat differently. He criticises Mr Kinsky QC's approach to the issue as "salami slicing". It is, he submits, a wrong approach to address each item of information, to suggest that it in general terms, is common knowledge (e.g. "production of food by extrusion" or "radial dies"); and then claim that there can be no trade secret, because each individual item, if stated in this general way, is common knowledge. Many, if not most, commercial trade secrets consist not of one item of information, whether public knowledge or not, but a combination of items which together comprise secret knowledge of commercial value. He submitted in opening that there is an analogy between infringement of copyright and misuse of trade secrets and relied on a passage in paragraph 132 of the judgment of Mummery LJ in *Baigent v Random House [2007] EWCA Civ 247*. In his closing submissions he relied on a passage from the judgment of Laddie J in Ocular Sciences v Aspect Vision [1997] RPC 289 at 374 where he had cited with approval passages from the judgment of Lord Greene in Saltman Engineering v Campbell Engineering [1948] 65 RPC 203, 215 and from Megarry J in Coco v A N Clark [1969] RPC 41, 47. In both quotations the point is made that something confidential can be made from materials in the public domain. Something new may have been brought into being by the skill and ingenuity of the human brain. Novelty depends on the thing itself and not upon the quality of its constituent parts.

250. There was some debate as to the extent to which negative knowledge could be a trade secret (within Class 3) as opposed to just confidential information (within Class 2). It was Mr Ives's view that negative knowledge could never be a trade secret. Dr Ashby disagreed. He pointed out that in a research and development project, working out which paths in the fog lead to a dead end is an intrinsic part of the research, and often part of the essential process in working out what does work. I have no hesitation in preferring Dr Ashby's views on this point. Mr Ives's view leads to potentially absurd results and is illogical. In my view whether

"negative knowledge" is or is not a trade secret is to be judged on the same basis as positive knowledge. In his closing submissions Mr Kinsky QC appeared to accept that Mr Ives's approach was too dogmatic.

251. Mr Howe QC did not deal with each of the pleaded items individually. He did, however identify four categories of information which amounted to trade secrets –

1. the relationship between Goldenfry and ASDA,
2. the manufacturing process for making low fat gravy granules,
3. the oil and wheat flour used by Goldenfry and
4. the limitations on Goldenfry's production methods.

He submitted that each of the categories comprised one or more trade secrets and that together it provided a highly valuable trade secret in the form of a business opportunity.

252. In paragraph 25 of his closing submissions he made a number of submissions about "The Fat Project": He submitted that the documents show that it was not obvious to Mr Austin how to produce low fat gravy granules. Mr Austin had initially followed a water addition route. This led to the unsuccessful Schroeder and Quest trials. It was not obvious to Mr Austin that the BISTO low fat gravy granules were produced by extrusion. It was only following the Buhler trials that a successful method for low fat gravy granules was discovered. He reminded me of the Bruce II document and the description of the process as "highly novel and innovative".

253. In paragraphs 27 to 29 he stressed the importance of the Buhler trials. The trials not only identified a particular method which would successfully produce granules, but also investigated the parameters of the production method, so as to establish the boundaries of successful operation, and the workability of the system.

254. Mr Howe QC approached the question of confidentiality by reference to the factors identified by Arnold J in Bestnet in the passage I have cited above. Amongst the points made by Mr Howe QC :

1. All three Defendants were highly paid and trusted employees. Mr Austin's responsibilities included the development of new products. Mr Chapman's responsibilities included the supervision of production. Mr Waddell was responsible for managing the relationship with ASDA.
2. The information in question is all of a type which would be typically regarded as highly commercially sensitive and confidential.
3. The information was not public knowledge:
    1) ASDA's dealings with Goldenfry were confidential as between Goldenfry and ASDA. Whilst it was common knowledge that retailers were trying to reduce fat and salt, it was not common knowledge that ASDA had specifically asked for a reduced fat gravy granule.
    2) The details of how to produce low fat gravy granules by extrusion was known only to BISTO, Goldenfry and Buhler. It was protected by Confidentiality Agreements.
    3) Goldenfry's use of [redacted] and Bowman's [redacted] heat treated wheat flour was not public knowledge.
    4) It was not public knowledge or obvious that Goldenfry could not produce low fat gravy granules with their existing processes.

4. Goldenfry took steps to ensure that access to the information was restricted to employees who needed access to them. It was password protected and made available on a "need to know" basis. In addition there were Confidentiality Agreements between Goldenfry, Schroeder, Quest and Buhler.

5. The information was not part of the Defendants' general know how and was separable from it:

   1) The Buhler process constituted a particular and highly novel arrangement and configuration of extrusion equipment, and its specialised application to a very specific product, and specific style of recipe for that product. Without the specific and detailed knowledge acquired by Mr Austin as to precisely how to produce low fat gravy granules, which he acquired when working on a highly confidential research and development project for Goldenfry, it would have been impossible to set up and launch their new business without first undertaking a substantial process of research and development themselves – similar in scale and length to the Fat Project.

   2) The Defendants did not use the information in order to set up some general food processing company, or even a company operating in a related area (such as sauces or the like) – they used it to set up a directly competing business, specifically making the very product which Mr Austin had researched at great length and at Goldenfry's expense, and which was overtly founded on the proposition that they could use this advantage to take away Goldenfry's most important customer.

   3) As already noted, in the Bruce II document the Defendants described the process as unique and innovative. Similar points were made in the grant application to the DTI.

6. The information was commercially valuable because it enabled the Defendants quickly to obtain the contract to supply ASDA with low fat gravy granules.

7. Mr Howe QC relies on the views of Dr Ashby that detailed information relating to product development carried out for one's employer, of this type, would certainly be considered to be a trade secret and not open for use by the employee following the end of his employment. He cited paragraph 3.46 of Dr Ashby's report

   "In my opinion, it is inconceivable that any employee could reasonably consider that the information generated in these trials was general know-how or skill or knowledge that could be transported to a competitor. There would be little point in a business funding such projects if the knowledge were freely transferable."

13 Discussion and Conclusions

255. In general I agree with Mr Howe QC's approach to the question of trade secrets. Whilst I agree that it is necessary to look individually at the items that are pleaded, I also agree with his submissions based on the citations from Ocular Sciences referred to above. I agree that a process can be novel and confidential even though the constituent parts are in the public domain.

256. I therefore propose to consider whether any of the matters relied on by Goldenfry either individually or cumulatively amounted to a trade secret so as to be entitled to protection after the termination of the Defendants' employment. In so far as there were trade secrets I shall then consider whether the Defendants made use of them in the Frontier project.

13.1 Trade Secrets

Items 1, 2, 16 and 18 – Relationship with ASDA

257. In my view none of the four matters pleaded under these headings constituted trade secrets within Class 3. Item 1 was not pursued. I cannot, for my part, begin to see how Goldenfry's delivery problems with the Home Baking Mix in 2003 could conceivably be or remain a trade secret in 2007. I also agree with Mr Kinsky QC that ASDA's requirement for a low fat gravy product was not a secret. It was public knowledge that low fat products were being sought. It was specifically mentioned at the November 2003 supplier's conference. It is true that by May 2004 ASDA had specifically asked Goldenfry for a low fat gravy granule. However in the context of the market conditions generally this was not the sort of information that would amount to a trade secret.

258. Similarly I take the view that the 2005 prices charged and volumes sold to ASDA amount at most to Class 2 information. I note that in Faccenda Chicken the Court of Appeal upheld the decision of Goulding J that the sales information on the facts of that case fell into Class 2. Whilst the factors that influenced the Court of Appeal in that case (set out at [1987] 1Ch 140) are not all present some of them are. There was no evidence that the prices charged to ASDA were kept confidential or that the Defendants were informed it was confidential. It almost certainly appeared in invoices. There is no suggestion that it was invested with a sufficient degree of confidentiality to render it a trade secret. The prices charged by ASDA would give an indication in any event to anyone experienced in the trade.

The Fat Project – including the Buhler trials.

259. I take a different view with regard to The Fat Project. As Mr Howe QC pointed out this was a highly confidential piece of research carried out at Goldenfry's expense designed specifically to discover how to make low fat gravy granules. It is true that one of the reasons for the project was to save costs but that does not detract from the purpose of the research.

260. I accept the evidence that it is possible to determine by inspection that the BISTO low fat granule is manufactured by extrusion. That does not, however, mean that Mr Austin did in fact appreciate this early in the research. I agree with Mr Howe QC that it is surprising that this fact is not mentioned in the early papers on the Fat Project. Be that as it may the learning of the Fat Project went far beyond the simple statement that low fat gravy granules can be made by extrusion.

261. In general terms I accept Dr Ashby's evidence as to the learning derived from the Fat Project. Much of this is derived from Mr Austin's report of 24th October 2005. As well as learning a method that worked Mr Austin acquired a great deal of negative knowledge about what did not work.

262. I agree with Dr Ashby that the manufacturing process demonstrated at the Buhler trials can properly be described as novel. Indeed in evidence Mr Austin accepted that it was novel because they were putting together a collection of manufacturing techniques in a novel way. That, after all, was how the Defendants described it in both the Bruce II document and the application for a grant from the DTI.

263. I also agree with Dr Ashby it is inconceivable that any employee could reasonably consider that the information generated in these trials was general know-how or skill or knowledge that could be transported to a competitor. There would be little point in a business funding such projects if the knowledge were freely transferable.

264. In my view the four criteria identified by the Court of Appeal in Faccenda and referred to Arnold J in Bestnet all point to the information obtained from the Fat Project being a trade secret. Each of the Defendants were highly paid senior employees who handled confidential information; the research was highly confidential and reasonably so regarded. Almost any manufacturer would regard research into new products and processes in that light. Goldenfry kept its information confidential. Indeed Mr Turrill was criticised for being too protective of his information. In my view the information derived from the Fat Project was separable. It related solely to the manufacture of low fat gravy granules.

Limitations in Goldenfry's methods

265. My mind has wavered on whether the Defendant's belief that Goldenfry could not manufacture low fat gravy granules without significant additional expenditure amounted to a trade secret. Some of the information upon which that belief was based derived from the learning in the Fat Project. Trials had revealed that the existing process could not produce low fat granules.

266. As against that it was an opinion and, an opinion which proved to be wrong because Goldenfry did in fact manage to produce low fat gravy granules by the Heath Robinson process described by Mr Turrill. Whilst there was no doubt some additional expenditure involved it does not appear to have been of the same order as that envisaged in the opinion of the Defendants.

267. In the end I do not believe that the Defendants' incorrect belief that Goldenfry could not manufacture a low fat gravy granule amounted to a Class 3 trade secret. The limitations in Goldenfry's manufacturing methods seems to me to fall within the sort of information referred to by Cross J in Printers & Finishers at [1965] RPC 256 and cited in Faccenda Chicken at [1987] 1 Ch 138.

Ingredients – Wheat Flour

268. I accept, of course, that a recipe – such as the well debated recipe of Coca Cola – can, and often is likely to be a trade secret. I also accept that the information on the packet will not allow reverse engineering to the extent of identifying the precise brand of what flour in the recipe for Goldenfry's gravy granules.

269. However the use of heat treated wheat flours is well-known in the food industry. Bowmans are a well-known and well-established supplier of heat treated flours. There are a limited number of heat treated flours supplied by Bowmans. [redacted] is one of them. In those circumstances I would not regard the use of Bowmans [redacted] in Goldenfry's recipe as being sufficiently confidential to amount a trade secret.

Ingredients – [redacted]

270. I take a different view with regard to the oil used by Goldenfry. The main difference between the oil and the flour is that Goldenfry carried out research into the oil in 2006 and altered their production methods because of it. It was a specific brand identified by [redacted] as [redacted] Whilst there was no exclusivity as between Goldenfry and ¤¤¤¤¤¤ the evidence was that raw material manufacturers would not normally disclose the products that they supplied to other customers.

271. I think that Goldenfry's use of [redacted] did amount to a trade secret.

13.2 Use of Trade Secrets by the Defendants

272. Despite the submissions of Mr Kinsky QC I am satisfied that the Defendants did make use Goldenfry's trade secrets on a number of occasions. I am satisfied they made use of them in the Bruce II Document. As Dr Ashby points out, by early March 2007 the Defendants had sufficient confidence to draft a document to be presented to persons who were to provide substantial finance to them for the project. That document referred to the research that had taken place and to the highly novel and innovative manufacturing technique. In my view the confidence expressed in Bruce II was derived from the successful results from the Fat Project. In my view the manufacturing technique referred to was the process trialled in the Buhler trials. In my view the research was also a reference to the Fat Project. I reject as wholly unrealistic the suggestion by the Defendants that the reference was a reference to the kitchen trials carried out by Mr Austin and Mr Chapman in late February 2007.

273. I am satisfied that Mr Austin made extensive use of the trade secrets in his e-mail of 5th June 2007 in relation to the order for the refurbished Wenger extruder. Part of the e-mail is plainly copied from the 24th October 2005 report. It is true that this relates to the [redacted] and the final version of the [redacted] was not in accordance with the description in the e-mail. That does not affect the fact that Mr Austin plainly described the Buhler [redacted] when describing the machine to FES. Indeed the fact that Mr Austin felt it necessary to give such a detailed description of the [redacted] shows that the use and configuration of the [redacted] was not obvious

274. In the same e-mail Mr Austin used the dimensions of the Buhler machine ([redacted] internal to the barrel) to be satisfied that the dimensions suggested by FES for the Wenger ([redacted]) was adequate. Similarly he used the Buhler quotation of a [redacted] machine as a cross check for his calculation of [redacted]. Similar comments can be made about the screw speeds.

275. This e-mail also demonstrates to my mind that Dr Ashby was correct when he stated that it was relatively easy to transfer the learning from the Buhler trials to another extruder. This is precisely what Mr Austin did in this e-mail. This point can also be made in relation to the Investment Proposal of 24th November 2005 where he discussed the possibility of obtaining machines from manufacturers other than Buhler.

276. Mr Austin and Mr Chapman sought to rely on the Dragon trials both as to the source of their learning and also as to the screw configuration. I have difficulty with and cannot accept this evidence. First, for reasons set out above neither Mr Austin nor Mr Chapman were reliable witnesses. Second there are no documents or records about the Dragon trials. Third, if, as Mr Austin and Mr Chapman contended there was learning from the Dragon trials, why on earth did Mr Austin quote so extensively from the documentation relating to the Buhler trials in this e-mail? Why did he use the figures from the Buhler trials and the Buhler quotation as the basis for his calculations? Furthermore for reasons I have given I am satisfied that Mr Austin did have the opportunity to observe the screw configurations at the Buhler trials.

277. It is, of course, true that there was significant development by Frontier in the period between January and April 2008. That does not, however, mean that Mr Austin and/or Mr Chapman did not make significant use of the information derived from the Fat Project in the initial stages of the Frontier Project.

278. I am also satisfied that the Defendants made use of the negative information derived from the Fat Project. One of the points made in their favour justifying the speed with which they were able to compete with Goldenfry was that their project was much less ambitious than the Fat Project. They were only seeking to create a BISTO substitute. Thus they did not

need to go down some of the blind alleys investigated by Goldenfry including the use of the water/oil emulsion or SSHE. However it seems to me that the reason that they took this course was because they knew that the trials with water/oil emulsion and SSHE had failed. They also knew that the trial for the BISTO substitute had succeeded. Armed with that knowledge (derived from the Fat Project) it is hardly surprising that they sought only to go down the route which the Fat Project had demonstrated could successfully produce low fat gravy granules.

279. I am not, however, satisfied that Mr Chapman made any use of Goldenfry's confidential information in his selection of [redacted]. First Frontier was seeking to use a completely different manufacturing process from that actually employed by Goldenfry. The Buhler trials did not involve non-HVO oil. Second Frontier was going to produce a different product – low fat gravy granules as opposed to the gravy granules produced by Goldenfry. Third there is in fact no reason to disbelieve Mr Chapman's account of how he purchased the oil and I accept it.

13.3 Documents

280. For reasons I have given I am satisfied that Mr Austin copied significant amount of the 5th June 2007 e-mail from documents he had wrongly retained when he left Goldenfry. It follows that he was in breach of contract in failing to deliver up the documents. It was common ground that on that basis he was also in breach of his duty of fidelity.

281. There was no other satisfactory evidence that any other documents had been retained by any other Defendant. There was some suggestion that documents relating to recipes had been retained. However the evidence (based on the similarity between some of the ingredients in the respective recipes and the recipes for the Buhler trials) did not convince me. Accordingly I reject all other claims for failure to deliver up and breach of the duty of fidelity.

13.4 Overall Conclusion

282. In my view Goldenfry has established that information derived from the Fat Project was a trade secret within Class 3 of the classification in Faccenda, and that the Defendants have wrongly made use of it in a number of ways in the Frontier Project. Accordingly the claim for misuse of confidential information succeeds on the question of liability. There have been no detailed submissions on the appropriate relief but my initial impression is that this may well be a case for compensation rather than an injunction.

283. The claim against Mr Austin for failure to deliver up documents and breach of the duty of fidelity succeeds to the extent stated above.

284. I cannot leave this case without expressing my gratitude to all concerned for the preparation and assistance I have received throughout this case. It was particularly helpful that I was provided with electronic copies of all the relevant documents. The skeleton arguments and oral arguments were very full and of the highest quality. It was particularly gratifying that the parties were able so accurately to keep to the trial timetable. I should also mention that although I have referred extensively to Mr Howe QC in this judgment, I am aware that he has throughout led Mr Jory. References to Mr Howe QC should accordingly be taken to include Mr Jory where appropriate.