

If you are in any doubt about the contents of this document, you should consult a person authorised under the Financial Services Act 1986 who specialises in advising on the acquisition of shares and other securities.

A copy of this document, which comprises a prospectus drawn up in accordance with the Public Offers of Securities Regulations 1995 (the "POS Regulations") and the AIM Rules of the London Stock Exchange plc (the "AIM Rules"), has been delivered for registration to the Registrar of Companies in accordance with regulation 4(2) of the POS Regulations.

Application has been made for the ordinary shares of 10p each in the capital of Corac Group PLC, issued and to be issued pursuant to the Placing, to be admitted to the Alternative Investment Market (AIM). AIM is a market designed primarily for emerging or smaller companies, to which a higher investment risk tends to be attached than to larger or more established companies. AIM Securities are not Officially Listed. A prospective investor should be aware of the risks of investing in such companies and should make the decision to invest only after careful consideration and if appropriate, consultation with an independent financial adviser. The AIM Rules are less demanding than those of the Official List. It is emphasised that no application is being made for admission of these securities to the Official List. Further, the London Stock Exchange plc has not itself examined or approved the contents of this document.

The directors of the Company, whose names appear on page 6 of this document, accept responsibility for the information contained in this document. To the best of the knowledge and belief of the Directors the information contained in this document is in accordance with the facts and does not omit anything likely to affect the import of such information.

The Ordinary Shares have not been, and will not be, registered under the United States Securities Act of 1933, as amended, or under the securities legislation of any state of the United States of America. The relevant clearances have not been, and will not be, obtained from the Securities Commission of any province or territory of Canada, no document in relation to the Placing has been, or will be, lodged with, or registered by, The Australian Securities and Investments Commission, and no registration statement has been, or will be, filed with the Japanese Ministry of Finance in relation to the Placing or the Ordinary Shares. Accordingly, subject to certain exceptions, the Ordinary Shares may not, directly or indirectly, be offered or sold within the United States, Canada, Australia or Japan or offered or sold to a person within the United States or a resident of Canada, Australia or Japan.

Prospective investors should carefully consider the section entitled "Risk factors" in Part III of this document.

Corac Group PLC

(incorporated and registered in England and Wales under number 3152034)

Admission to trading on the Alternative Investment Market

Placing by

WestLB Panmure Limited

of 13,688,884 ordinary shares of 10p each at 105p per share

SHARE CAPITAL IMMEDIATELY FOLLOWING THE PLACING

Authorised			Issued and fully paid	
Number	Amount		Number	Amount
200,000,000	£20,000,000	ordinary shares of 10p each	73,995,308	£7,399,530.80

WestLB Panmure Limited is acting exclusively for Corac Group PLC in relation to the Placing. WestLB Panmure Limited is not acting for, and will not be responsible to, any person other than Corac Group PLC for providing the protections afforded to customers of WestLB Panmure Limited or for advising any other person on the contents of this document or any transaction or arrangement referred to herein.

WestLB Panmure Limited has been appointed nominated adviser and broker to the Company. Under the AIM Rules, the nominated adviser has certain responsibilities to the London Stock Exchange plc which are less onerous than the responsibilities of a sponsor of a company applying for its securities to be admitted to the Official List. In accordance with the AIM Rules, WestLB Panmure Limited has confirmed to the London Stock Exchange plc that it has satisfied itself that the directors of the Company have received independent advice and guidance as to the nature of their responsibilities and obligations under the AIM Rules and that, to the best of its information and belief, all relevant requirements of the AIM Rules (save for compliance with the general duty of disclosure contained in regulation 9 of the POS Regulations, in respect of which the nominated adviser is not required to satisfy itself) have been complied with. In giving its confirmation to the London Stock Exchange plc, WestLB Panmure Limited has not made its own enquiries except as to matters which have come to its attention on which it considers it necessary to satisfy itself. WestLB Panmure Limited has not authorised the contents of, or any part of, this document and (without limiting the statutory rights of any person to whom this document is issued) no liability whatsoever is accepted by WestLB Panmure Limited for the accuracy of any information or opinions contained in this document or for the omission of any material information, for which the Company and its directors are solely responsible.

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Definitions

The following definitions apply throughout this document, unless the context requires otherwise:

“Act”	the Companies Act 1985, as amended;
“Admission”	admission of the Ordinary Shares, issued and to be issued pursuant to the Placing, to AIM becoming effective in accordance with paragraph 6 of the AIM Rules;
“AIM”	the Alternative Investment Market of the London Stock Exchange;
“AIM Rules”	the AIM Rules of the London Stock Exchange;
“Articles”	the Articles of Association of the Company;
“certificated” or “in certificated form”	recorded on the relevant register and in respect of which a share certificate is or has been issued;
“Combined Code”	the Principles of Good Governance and Code of Best Practice prepared by the Committee on Corporate Governance, chaired by Sir Ronald Hampel and published in June 1998;
“CREST”	the relevant system (as defined in the Regulations) in respect of which CRESTCo Limited is the Operator (as defined in the Regulations);
“Corac” or “Company”	Corac Group PLC;
“Corac Group” or “Group”	Corac and its subsidiary undertakings;
“CVA”	company voluntary arrangement;
“Directors” or “Board”	the board of directors of Corac whose names are set out on page 6;
“EMI Agreement”	the rules of the model form of agreement for the grant of options under the Enterprise Management Incentives Scheme introduced by the Finance Act 2000;
“London Stock Exchange”	London Stock Exchange plc;
“New Shares”	the new Ordinary Shares to be issued pursuant to the Placing;
“Official List”	the list maintained by the UK Listing Authority for the purposes of Part IV of the Financial Services Act 1986;
“Ordinary Shares”	ordinary shares of 10p each in the capital of Corac;
“OFEX”	the trading facility managed by JP Jenkins Limited in the United Kingdom;
“Placing Shares”	the New Shares and the Sale Shares which are the subject of the Placing;
“POS Regulations”	the Public Offers of Securities Regulations 1995 (as amended);
“Placing”	the placing of 13,688,884 Ordinary Shares at the Placing Price on the terms of the Placing Agreement as described in this document;
“Placing Agreement”	the conditional agreement dated 27 June 2001 between Corac, the Directors and WestLB Panmure, details of which are set out in paragraph 10 of Part VIII of this document;

“Placing Price”	105p per Ordinary Share;
“Regulations”	the Uncertificated Securities Regulations 1995 (SI 1995/3272);
“Sale Shares”	the 4,165,074 Ordinary Shares to be sold by the Selling Shareholders pursuant to the Placing Agreement;
“the Selling Shareholders”	existing Shareholders who are selling Ordinary Shares as part of the Placing;
“Share Option Schemes”	the 1998 Scheme, the 2000 Scheme and the EMI Agreements, further details of which are set out in paragraph 7 of Part VIII of this document;
“Shareholders”	holders of Ordinary Shares;
“UK Listing Authority”	the Financial Services Authority acting in its capacity as the competent authority for the purposes of Part IV of the Financial Services Act 1986 and in the exercise of its functions in respect of the admission to the Official List otherwise than in accordance with Part IV of the Financial Services Act 1986;
“uncertificated form”	recorded on the Company’s register of members as being held in uncertificated form in CREST, title to which may be transferred by means of CREST;
“the Warrants”	the warrants, further details of which are set out in paragraph 8 of Part VIII of this document;
“Weir”	Weir Pumps Limited;
“WestLB Panmure”	WestLB Panmure Limited;
“1998 Scheme”	the Corac Group PLC 1998 Share Option Scheme adopted by the Company on 4 December 1998;
“2000 Scheme”	the Corac Group PLC 2000 Share Option Scheme adopted by the Company on 27 October 2000.

Glossary

"air bearing technology"	the use of compressed air as the lubricant "fluid" in bearings;
"dry screw compressor"	a screw type compressor that has no lubricant between the rotating screw parts;
"directly coupled"	usually a motor and gearbox and the impeller have a coupling between them to join the shaft ends. A directly coupled drive means that they share the same shaft;
"impeller"	the blades of a compressor;
"IP"	intellectual property;
"IPR"	intellectual property right(s);
"journal bearings"	bearings that operate on a cylindrical shaft carrying a radially directed load;
"on load"	delivering compressed air at working speeds;
"off load"	on standby, not delivering air;
"power electronics"	electronic controls to convert mains voltage and current to those required for electric motors and their control systems;
"radial turbo machine"	a machine that accelerates the working fluid (air) in a radial direction at high speed typically greater than 6,000 rpm;
"rpm"	revolutions per minute;
"turbo spool"	Corac terminology for the assembly that comprises one stage of the compressor system, either high or low pressure generating;
"thrust bearings"	bearings which only carry an axial load.

Directors, Secretary and Advisers

Directors:	Professor Gerald Musgrave (Executive Chairman) Dr Richard Julius Gozdawa (Technical Director) Anthony Michael Hewlett (Finance Director) John Humphrey Gunn (Non-executive Director) John Albert Martin Grant (Non-executive Director)
	All of whose business address is Brunel Science Park, Kingston Lane, Uxbridge, Middlesex, UB8 3PQ
Company secretary:	Anthony Michael Hewlett FCA
Registered office:	Brunel Science Park, Kingston Lane, Uxbridge, Middlesex, UB8 3PQ
Nominated Adviser and Broker:	WestLB Panmure Limited New Broad Street House 35 New Broad Street London EC2M 1SQ
Solicitors to the Company:	Charles Russell 8-10 New Fetter Lane London EC4A 1RS
Solicitors to the Placing:	Norton Rose Kempson House Camomile Street London EC3A 7AN
Reporting accountants:	Grant Thornton Grant Thornton House Melton Street Euston Square London NW1 2EP
Consulting experts:	PA Strategy Partners Limited Cambridge Technology Centre Melbourn Hertfordshire SG8 6DP
Patent agents:	J.A. Kemp & Co. 14 South Square Gray's Inn London WC1R 5JJ
Auditors:	MGI Watson Buckle York House Cottingley Business Park Bradford BD16 1PR
Principal bankers:	National Westminster Bank PLC Beaconsfield Branch 1 Penn Road Beaconsfield Buckinghamshire HP9 2PV
Registrars:	Capita IRG plc Bourne House 34 Beckenham Road Beckenham Kent BR3 4TU

Key information

The following information is derived from, and should be read in conjunction with, the full text of this document.

Summary

Corac Group has a five year record of research and development, achieving innovation within traditional compressed air technology. The Company's first product is a no oil turbo compressor. In addition, it has a design for compressor seals as well as a sponsored research and development programme for the downhole gas extraction industry.

The Company's strategy is to generate revenues from the commercial development of its core technologies to provide innovative products, which the Directors believe will offer significant operational benefits to end-users, such as small size and weight to power ratios, low maintenance and life cycle costs and the elimination of the possibility of oil contamination. The Directors expect that the revenue streams will include the licensing of its intellectual property to existing prominent compressor manufacturers, oil industry suppliers, critical component manufacturers and contract research and development utilising the Company's intellectual property rights.

The principal feature of Corac's technology is that it uses **no** oil in **any part** of its machinery. This should enable the Company's compressors to deliver compressed air without risk of any oil contamination, thus offering an intrinsic advantage over conventional "oil free" industrial compressors. Essentially, Corac's compressors operate on air bearings such that compressed air from the compressor is used to provide a form of "lubrication" to the machine's own bearings.

Key strengths

The Directors believe that Corac's industrial air compressor technology has the following key strengths:

- the absence of any lubricating oil in the bearings and compressor, made possible by Corac's air bearing technology, means that it provides totally oil free high quality compressed air. This is especially attractive in a wide range of applications including food manufacturing, processing and packaging, brewing and beverage manufacture, pharmaceutical and cosmetic industries, gas separation and semiconductor production;
- lower power consumption on and off load, giving energy savings compared to conventional technology;
- the absence of wearing parts (e.g., no gearbox), with only two moving parts without any physical contact wear and hence inherently low maintenance costs and downtime; and
- small size and weight compared to a conventional dry-screw compressor and compact modular construction, needing no special foundations offering excellent integration and packaging flexibility.

As a consequence of these key attributes, the Directors expect there will be a significantly lower cost of ownership.

The Directors are aware that the oil and gas industry is seeking solutions to improve the recovery from depleting gas fields. Corac's proposed system uses gas bearing technology coupled with high speed direct electrical drives and compressors, which Corac has developed for its industrial air compressor. Initial studies show that using this equipment "downhole" should offer the prospect of significant improvements in reservoir recovery. The Corac technology is designed to achieve this through its diminutive size (necessary for deployment directly into the reservoir) and minimal maintenance requirement.

The seals business needs further development to take this component to a commercial demonstrator from its existing research and development status. From this demonstrator, the Company will have the opportunity to seek a licence agreement with one of the leading seals suppliers and have them manufacture under licence, or the Company will sub-contract the manufacture of the straightforward component itself and sell directly to selected end users in order to establish its reputation.

Summary trading record

The following table, which has been extracted from the accountants' report set out in Part VI of this document, summarises the trading record of the Group for the three years ended 31 December 2000:

	Year ended 31 December 1998 £'000	Year ended 31 December 1999 £'000	Year ended 31 December 2000 £'000
Turnover	114	90	1
Operating loss	(886)	(413)	(971)
Loss before taxation	(900)	(413)	(848)

Current trading and prospects for the Group

Since 31 December 2000, the Group has continued to fund its development programme utilising existing cash resources. The Group plans to continue research and development in the main technologies associated with air compression. In addition, it aims to continue the commercial development of its first product, the no-oil turbo compressor. The Company will also ensure that the downhole gas compressor and dynamic seals' research work is fully developed to realise the potential products.

In anticipation of the commercial development of the products, the Company intends to have its own final assembly and testing facilities, and will employ a Production Director to take responsibility of this area. The Group expects to commence the testing and assembly of the industrial air compressor in 2002.

With strategic alliances and commercial arrangements that the Group has formed during the past year and with the funds to be raised through the Placing, the Directors believe that the Group is well positioned to achieve its growth targets.

Details of the Placing

By means of the Placing, the Company is raising additional capital of £9.0 million, net of expenses, by the issue of 9,523,810 Ordinary Shares at the Placing Price which will be used to finance the Group's continued growth.

The Selling Shareholders are selling, in aggregate, 4,165,074 Ordinary Shares, pursuant to the Placing, raising £4.4 million at the Placing Price.

Placing Statistics

Placing Price per Ordinary Share	105p
Number of Ordinary Shares in issue following the Placing	73,995,308
Market capitalisation at the Placing Price	£77.7 million
Number of Ordinary Shares being placed	
– to be issued by the Company	9,523,810
– to be sold by the Selling Shareholders	4,165,074
– total	13,688,884
Percentage of enlarged issued share capital subject to the Placing	18.5 per cent
Net proceeds of the Placing to be received by the Company	£9.0 million

Expected Timetable

	2001
Admission and dealings commence in the Ordinary Shares on AIM	4 July
CREST accounts credited by	4 July
Despatch of definitive share certificates by	11 July

Part I

Information on the Group

Introduction

Corac Group has a five year record of research and development, achieving innovation within traditional compressed air technology. The Company's first product is a *no oil* turbo compressor. In addition, it has a design for compressor seals as well as a sponsored research and development programme for the downhole gas extraction industry.

The Company's strategy is to generate revenues from the commercial development of its core technologies to provide innovative products, which the Directors believe will offer significant operational benefits to end-users, such as small size and weight to power ratios, low maintenance and life cycle costs and the elimination of the possibility of oil contamination. The Directors expect that the revenue streams will include the licensing of its intellectual property to existing prominent compressor manufacturers, oil industry suppliers, critical component manufacturers and contract research and development utilising the Company's intellectual property rights.

Corac currently has 18 employees, the majority of whom are design and development staff, directly involved in the application of its core technologies into products to meet specific market opportunities.

History and Development of the Group

The Company was formed in 1996 at Brunel University Science Park, Uxbridge, to research and develop a number of traditional technologies within the field of compressed air and to make use of Dr Richard Gozdawa's experience within this field and his research work into air bearing technology.

The Company's original concept was to update traditional compressed air technology by using advanced bearing technology to support a high speed turbo spool. This has been achieved by using directly coupled high speed motors, together with sophisticated power electronics. This is a *no oil* industrial turbo compressor based upon technology that will allow quality air to be provided without oil contamination. The application for this form of compressor is seen by the Directors to be particularly relevant to food manufacturing, processing and packaging, brewing and beverage manufacture, pharmaceutical and cosmetic industries, gas separation and semiconductor production.

Corac's original business model was to build, market and sell the advanced compressor. In order to achieve this goal, the Company required considerable funds, not only to develop the technology, but also to underpin its sales and marketing. In order to fund further research and development of the Company's technology, Corac obtained a quotation for its ordinary shares on OFEX in August 1996, raising £1.0 million at that time. However, the development programme took longer than anticipated and the costs of creating a sales infrastructure were higher than expected. The Company was unable to secure the funding to meet these infrastructure costs, to develop the planned selling and manufacturing capability and to meet future working capital needs. Accordingly, in August 1998, following a suspension, the trading facility on OFEX was withdrawn and the Company's active subsidiary, Compact Radial Compressors Limited, was placed into a CVA to protect any new capital investment. This CVA was fully discharged in January 2001.

Following significant changes to the Board in November 1998, the new Directors, led by Professor Gerald Musgrave, believed that to take the Company forward, they would have to alter the business model and refocus the design team. To this end, the Company concentrated its effort and resources on designing and building a working prototype compressor based on Corac's technology that was practical and cost-effective to manufacture. The business model was changed from "build and sell" to one seeking collaborative arrangements with existing prominent compressor manufacturers which have complementary technology and have direct access to the market and a customer support infrastructure. This strategy of licensing to industry partners will exploit the Company's intellectual property rights without requiring the costly infrastructure necessary to allow the Company to keep to its original intention of manufacturing and selling its products itself.

Whilst seeking to exploit the core technology of *no oil* compressors, the Directors have also looked to related fields other than industrial air, resulting in two further product opportunities being developed:

- the application of the Company's small but high power density compressor as a downhole gas field compressor for which the Company is negotiating sponsored research and development programmes; and
- from the design work on ceramic bearings, the Company has applied for a patent in respect of gas seals applications for compressors and pumps.

Background to Industrial Air Compressors

Industrial air compressors have developed from the piston displacement machines of the 1930s through to the dry-screw compressors of the last decade. The 'oil-free' market, for which there is an increasing demand, is currently serviced by dry screw machines and small integrally geared turbo compressors. These machines, however, still need oil to lubricate the bearings and gearboxes, requiring significant and regular maintenance to minimise the risk of oil contaminating the air supply. These systems cannot guarantee completely oil-free compressed air and it is normally necessary to pass the compressed air generated by the machine through one or more filter systems involving additional cost and space and reduction in air pressure before the air can safely be used.

The Group's Core Technology – No oil

The principal feature of Corac's technology is that it uses **no** oil in **any part** of its machinery. This should enable the Company's compressors to deliver compressed air without risk of any oil contamination, thus offering an intrinsic advantage over conventional "oil free" industrial compressors. Essentially, Corac's compressors operate on air bearings such that compressed air from the compressor is used to provide a form of "lubrication" to the machine's own bearings. To do this, it uses a known compressor type, the radial turbo machine, where the air is accelerated at very high speed, typically greater than 50,000rpm, by centrifugal forces through an impeller. The normal method of achieving this would be to use an electric motor followed by a gearbox, necessitating oil lubrication, giving it the same limitations as the dry-screw types. However, the Company has developed technologies to provide a direct drive to the impeller to overcome the problems of oil lubrication as well as delivering further strategic advantages. By using power electronics to increase the electricity supply frequency from 50Hz to 3.0kHz, Corac has designed and developed a compact and powerful motor capable of speeds in excess of 50,000rpm. This motor can then be coupled directly to the impeller, without a gearbox, to give sufficient speeds to achieve efficient turbo compression.

The final piece of the Company's technology package is the air bearings. These support any fast rotating parts by a self-sustained and very thin film of air. The Corac technology includes journal and thrust bearings using novel materials such as ceramics to ensure a very smooth rotation at the design speed of 72,000rpm. The founder of the Company, Dr Gozdawa, is an international design authority in this field.

The Group has developed and refined the key design principles of its compressor over the last five years, following exhaustive testing at the boundaries of its design. This has led to the revision of the materials used and the establishment of key performance characteristics such as air flow, temperatures and pressures.

The Development of the Company's Industrial Air Compressor

The Company's first industrial air compressor was a 90kW unit using two stages (low pressure and high pressure). These stages are of a self-contained modular construction for ease of replacement and maintenance. The whole unit can be packaged with substantial reduction in weight and size to any comparable dry-screw machine.

Currently, the Company's second generation design is being tested, known as the 'Beta 2', which has been considerably simplified and thus cheaper to produce. The rotors are shorter, giving greater stability, and the power electronics have been repackaged to provide a more cost effective design.

The Directors believe that Corac's compressor technology delivers the following key attributes and functions:

- the absence of any lubricating oil in the bearings and compressor, made possible by Corac's air bearing technology, means that it provides totally oil free high quality compressed air. This is especially attractive in a wide range of applications including food manufacturing, processing and packaging, brewing and beverage manufacture, pharmaceutical and cosmetic industries, gas separation and semiconductor production;
- lower power consumption on and off load, giving energy savings compared to conventional technology;
- the absence of wearing parts (e.g., no gearbox), with only two moving parts without any physical contact wear and hence inherently low maintenance costs and downtime; and
- small size and weight compared to a conventional dry-screw compressor and compact modular construction, needing no special foundations offering excellent integration and packaging flexibility.

As a consequence of these key attributes, the Directors expect there will be a significantly lower cost of ownership.

The Group's Business Strategy

The Group is now involved in the commercial development of its no oil compressor technology. It is also seeking to commercialise the other applications, for downhole gas compressors and the Company's innovative design for compressor seals. In addition to developing these products, the Company intends to maintain its competitive technological edge by continuing research and development in its technology. The Directors believe this will enable the Company to seek to address and exploit different applications and markets from its base.

Within the three principal product lines:

- industrial air compressor
- dynamic seals for pumps and compressors
- downhole gas compressors

the Company aims to provide a range of products which can be applied in different market sectors.

The Directors believe that the industrial air compressors are at an advanced stage of development and will be marketed through licensees. The Directors believe that this will provide the Company with the opportunity to gain worldwide market penetration quickly with all the necessary attendant support and without incurring the enormous cost in building a sales infrastructure. The Company will keep its intellectual property and know-how in-house by carrying out the final assembly and test of the 'core' units. The production of all the constituent components of the core units would be subcontracted to specialist manufacturers. The Directors consider this should not only reduce capital expenditure for Corac, but should also ensure that Corac may take advantage of mass manufacturing techniques and automation, leaving Corac to concentrate on component inspection, final assembly and testing. The licensees may then take Corac's core units and package them to suit their particular marketplace or application sector, always acknowledging them as Corac's technology with the legend: 'Containing Corac Cores'.

Development of the downhole gas compressor business will be carried out jointly between Corac and Weir. Corac will provide knowledge on the compressors and Weir will provide expertise on the North Sea deployment. Corac and Weir are currently working with two major North Sea exploration companies developing solutions to their gas fields. Both Weir and Corac will then seek to benefit from the orders for components, with Corac providing the compressors and Weir deploying them in the fields with necessary systems equipment. Assuming the success of this project, Corac would enjoy a component supply revenue, as well as a royalty return on the end selling solution. A summary of the collaboration agreement between Corac and Weir is set out in paragraph 10 of Part VIII of this document.

The seals business needs further development to take this component to a commercial demonstrator from its existing research and development status. From this demonstrator, the Company will have the opportunity to seek a licence agreement with one of the leading seals suppliers and have them manufacture under licence, or the Company will sub-contract the manufacture of the straightforward component itself and sell directly to selected end users in order to establish its reputation.

Industrial air compressor

In 1998, the value of the European and US markets for rotary screw compressors was approximately \$600 million and \$375 million respectively (Frost & Sullivan European Industrial Air Compressor Market Report 1998, and Frost & Sullivan US Compressor and Vacuum Pump Market Report 1999). The Directors believe that the global market for rotary screw compressors is currently between \$1 billion and \$2 billion.

Corac's technology is applicable to the whole of the compressor market but the Directors believe that the optimum means of entering the market will be to exploit the advantages of no-oil for sectors such as:

- Food manufacturing, processing and packaging
- Brewing and beverage manufacture
- Pharmaceutical and cosmetic industries
- Gas separation
- Semiconductor production

Within the food, brewing and beverage and pharmaceutical industries, compressed air is used in the constituent processing systems and, as the resultant products are to be consumed by humans, it is vital that oil contamination is zero. The Directors believe that Corac's products will eliminate oil contamination completely. Compressed air in these industrial sectors is also used to pulverise material prior to transportation, for example, for moving flour through pipes, and so the no-oil solution offered by Corac will deliver significant advantages. In these applications it is of critical importance that the air is oil free and dry.

Within the pharmaceutical and textile industries oil free air is used to activate biological fermentation processes for example in the preparation of antibiotics and proteins. Compressed air is also used in the production of non-woven materials such as polyester, polypropylene and nylon.

In the gas separation sector, the leading companies are Air Products, BOC and Air Liquide. Each has its own patented processing, but essentially pure clean air is a major constituent component. At present, they use dry screw compressors and rely on well-maintained filters to ensure no oil passes through their respective processes. If oil does enter the process, some capital components of the process are destroyed and there is a further loss of several days down-time of production. Hence, the Directors believe this industry sector may also recognise the value of no-oil compression.

The Directors believe there may be several other sectors such as specialist steel making and semiconductor foundries that would welcome no-oil compressed air production and which could be supplied by future licensees, which have particular skills relevant to the sector concerned.

In order to ensure that market penetration can be achieved quickly, the Company intends to establish collaborative arrangements with compressor manufacturers and other commercial organisations that have the necessary market presence and infrastructure to support and sell the Company's products. The Directors believe that the opportunities are very significant because the licensing arrangements for the various pieces of technology can be handled either for particular sectors of the market, or can be handled geographically. Therefore, they consider that the Company can retain ownership and control of its intellectual property, its expertise and know-how in the field, delivering advanced products to a very wide range of applications and geographic locations.

Two compressor manufacturers have already indicated their willingness to take a licence agreement of this technology when it is fully proven to their satisfaction. One of these manufacturers has already placed an order for a Beta 2 compressor. The commercial discussions have matured to the point of draft licence conditions being negotiated and have resulted in some preliminary marketing statistics. The Directors believe that this activity will enable the would-be licensees to quickly exploit the product when it is launched.

Downhole gas compressors

The Directors are aware that the oil and gas industry is seeking solutions to improve the recovery from depleting gas fields. Corac's proposed system uses gas bearing technology coupled with high speed direct electrical drives and compressors, which Corac has developed for its industrial air compressor. Initial studies show that using this equipment "downhole" should offer the prospect of significant improvements in reservoir recovery. The Corac technology is designed to achieve this through its diminutive size (necessary for deployment directly into the reservoir) and minimal maintenance requirement.

For the downhole gas compression application to be successful, it requires a collaborative partner which has complementary knowledge and know-how in the application of gas exploration and production. Weir, which has such experience and knowledge, has signed a collaboration agreement with the Company. This has enabled Weir and the Company to approach the major oil exploration production companies, resulting in preliminary feasibility contract work worth £200,000. Corac and Weir are now in negotiations with two major oil exploration production companies to receive several million pounds for research and development to demonstrate downhole compressor technology.

The joint collaboration agreement protects the respective technologies of Corac and Weir and will allow Corac to adapt the compressor technology with all its retained intellectual property for this specific hydrocarbon production field. Using Corac's technology, Weir will be able to utilise its North Sea experience in deploying the complete systems to the satisfaction of companies such as Shell, BP Amoco, Norsk Hydro, Conoco, Texaco and others. Corac will charge for the supply of its components to be used in the system. In addition, it will charge to Weir a royalty, at a rate to be agreed or established by reference to an expert, on all sales of systems incorporating Corac's technology.

Compressor seals

In the many applications of compressors and pumps, it is necessary to keep the internal fluids and gases of the compressors and pumps separate. To achieve this, seals are used at either end of the rotating parts of these machines. The Directors believe that the market for compressor seals is in excess of £500 million per year. The basic end selling price of a seal system ranges from £20,000 to £60,000 per system, depending upon size. From its ceramic bearing technology, the Company has designed seals which, the Directors believe, provide better performance than the conventional seals technology and, in addition, are cheaper to produce.

The Group has filed a patent application on its compressor seal technology based on its initial academic design studies and expects to complete commercial demonstrator seals within a year. The Directors believe that Corac could then follow the same business strategy as for the industrial air market by seeking to enter into a joint venture arrangement with established seals suppliers.

For further information on the Group's business strategy, reference should be made to the report by PA Strategy Partners Limited as set out in Part IV of this document.

Commercial Development

The Company has a number of patent applications, not all of which are being immediately used in its products, but the Directors believe that they all have value for the on-going development of its business. It is the Directors intention to enhance any rights under existing patent applications by protecting the 'know-how' associated with them and to continue to file patent applications on its innovations. As with all patent applications, the whole processing time can take several years before the Company knows it has any particular rights. Therefore the outcome from this process is uncertain. Investors' attention is drawn to the risk factors set out in Part III of this document.

The commercial development would be achieved by the Company undertaking the critical assembly and testing of products. Accordingly, the manufacturing plans of the Group will be to continue to make a small group of strategic parts in-house, and purchasing the less critical sub-assemblies that are custom made to Corac's design. These components will be supplied to the assembly facility from sub-contract manufacturers, with volume manufacture being addressed through strategic alliances and joint ventures.

The Directors believe that this strategy will allow the Company to achieve a lower cost to manufacture, and retain the final assembly techniques in house in order to protect its know-how.

Use of Proceeds

The 9,523,810 New Shares which are the subject of the Placing represent approximately 12.9 per cent of the enlarged issued share capital of the Company and are being issued by the Company to raise approximately £9.0 million, net of expenses. This will be used for the following reasons:

- *Further research and development*
The Company plans to continue research and development in the main technologies associated with air compression. This will be extended to ensure effective means of mass production can be achieved with particular emphasis on cost. This fundamental work will also enable the Company to ensure its products are at the leading edge of technology and, in particular, enable the downhole gas compressor and the dynamic seals to be fully developed and realised as products. The essential expenditure in this area will be enhancing the engineering team.
- *Investment in the new assembly and test*
The Company's present facilities are essentially research and development premises which include two test cells. In order to satisfy the anticipated market, many of the components will be subcontracted but the Company intends to have its own final assembly and test facilities. These will be new, purpose-fitted facilities and the Company will employ a Production Director to take responsibility for this sector of business.
- *Protection of the IPR*
The Company will continue to build its intellectual property through research and development associated with its in-house programmes and collaborations with partners. The Company will continue to file patent applications where the Directors believe it is cost-effective to do so. As and when patent applications are made, they will take advice to obtain the necessary geographical protection.

- *Sales and Marketing*
The Company expects to appoint a director to coordinate a high level marketing strategy and licence negotiations at board level.
- *Potential acquisitions*
Part of the proceeds may be used to enable the Company to grow by acquisition, taking advantage of high technology developments that will support its business aims.

Sales and marketing

Corac recognises that its principal expertise is in its core technologies and their application to high speed turbo compressors. The Directors believe that the key to market penetration in the short term is to form strategic alliances and joint ventures with organisations who are recognised as market leaders and who have access to the customers for products that will exploit these technologies. Accordingly, the Company aims to deliver a fully functioning 90kW compressor to certain leading manufacturers. The Directors believe that, in the longer term, the Company can secure further licence agreements, with the recruitment of a dedicated Sales and Marketing Director.

Sources of Revenue

The key revenue sources for the Company will be derived from licensing the incorporation of its technology into industrial processes, the sale of assembled compressors and contract research and development. The Company anticipates that these arrangements will lead to other products being created for which the Company will hold the intellectual property rights.

Intellectual Property Rights (“IPR”)

A key area for Corac is the creation and maintenance of the intellectual property rights covering the Company’s products. The Company’s position regarding its intellectual property will continue to be assessed at regular intervals, in close consultation with patent agents. Throughout the design phase, the Directors have sought to protect the intellectual property by filing patent applications. There are a number of patent applications pending covering various aspects of compressors. Where intellectual property is developed in collaboration with relevant partners, Corac intends to retain sufficient rights to allow it to address significant commercial opportunities.

Details of the patents applied for by Corac are set out in the report by J.A. Kemp & Co. set out in Part V of this document.

The Directors believe that each of these patent applications is material to the Group’s business and intend to continue to increase the Company’s intellectual property by further patent applications and by ensuring that know-how is retained by the Company.

Competition

The Directors consider that, as a result of the specialist nature of Corac’s technology and planned range of related products, no one company competes with Corac at the present time. However, within the compressor market, Atlas Copco, Ingersoll-Rand and Compair Group are major manufacturers of the dry screw compressors, with no single company dominating the world market for ‘oil free’ compressors.

Within the market for seals for large compressors and pumps, John Crane, part of the Smiths Group, and Flowserve are key manufacturers of non-contacting face seals.

Within the market for downhole gas compressors, the Directors believe that there is no company that can offer the formula that Corac, in association with Weir, can provide.

Directors, senior management and employees

Directors

The Directors of the Company are:

Professor Gerry Musgrave, Executive Chairman, aged 58

Professor Musgrave has combined an academic career and commercial management for 30 years. He has previously been a director of a number of companies including Cirrus Computers, Plessey Finance Corporation, Siemens PLC and non executive chairman of Synergie Technologies Limited. He is currently chairman of Greenwood Control Systems Limited and Executive Chairman of Mechadyne International plc. He was appointed to the Board in November 1998.

Dr Richard Julius Gozdawa, Technical Director, aged 53

Dr Gozdawa is a director of a number of unquoted companies including Orion Gas Seals Limited and Derivative Technology Limited. He was formerly Chief Engineer for Rochem Equipment, Chief Experimental Engineer for Vandevell Products, Chief Dynamicist with CompAir Broom Wade and Vice President of Centritech Corporation (USA). Dr Gozdawa has been associated with the Company since its inception in 1996.

Anthony Michael Hewlett, Finance Director, aged 56

Mr Hewlett has been practising as a Chartered Accountant since 1992 providing financial management and accounting services to a wide variety of SMEs, including projects for Corac Group in 1999 and 2000. Before that he was Head of Finance at city solicitors Taylor Joynson Garrett and Field Fisher Waterhouse following positions as senior financial officer with trading companies Engelhard Metals Ltd and Wogen Resources Ltd. He was appointed to the Board in December 2000.

John Humphrey Gunn, Non-executive Director, aged 59

Mr Gunn is a director of a number of quoted and unquoted companies including Turbo Genset Inc, Sunblush Technologies Corporation, California Wine Company Inc and Ludgate 181 Limited. He was formerly chief executive officer of Exco International plc, Chairman of Telerate Inc and of British and Commonwealth plc. Mr Gunn has been associated with the Company for 2 years and was appointed to the Board in July 2000.

John Albert Martin Grant, Non-executive Director, aged 55

Mr Grant was formerly chief executive of Ascot plc, and prior to that, group finance director of Lucas Industries plc and LucasVarity plc. Previously he held a number of senior executive positions with Ford Motor Company in Europe and North America. Mr Grant is currently executive chairman of Hasgo Group Limited and Peter Stubs Limited, non-executive chairman of Cordex Plc, and non-executive director of National Grid Group Plc and Torotrak Plc. He was appointed to the Board in November 2000.

Senior management

Julian Reed, BSc(Eng), CEng, MIMechE, ACGI, Director of Technology, aged 39

Mr Reed was recruited to manage and build the design and development team for high speed centrifugal compressor development and associated technologies at Corac. He was formerly a senior Mechanical Engineer at WS Atkins Consultants Limited, Director and Consulting Mechanical Engineer at Neale Consulting Engineers and Design and Development Engineer at British Alcan Aluminium plc. He has been associated with the Company since September 2000.

Dr Ian Bennett, Phd, MSc, BSc, CEng, MIMechE, Aero Dynamicist, aged 36

Dr Bennett is a Aero Dynamicist with experience at Howden Group. For 7 years he was a Senior Research Fellow at Cranfield University carrying out extensive work for Rolls Royce and DERA. He has been associated with the Company since January 2001.

Norman Liley, Btech (Hons), CEng, MIMechE, MBA, MBIM, Off-Shore Systems Development Manager, aged 44

Mr Liley was recruited to lead the downhole gas compression business, commencing with research and development work in conjunction with leading oil companies and equipment suppliers whilst capitalising on company intellectual property. He was formerly Project Manager at Sonsub Limited, Head of the Mechanical Department at Single Buoy Moorings Inc and Project Design Engineer at Rolls Royce Limited. He has been associated with the Company since January 2001.

Lev Roberts, BEng, MSc, CEng, MIMechE, Manager of Seal Technology, aged 32

Mr Roberts was recruited to develop and lead the turbo machinery seal systems business. He was formerly Development Project Manager at John Crane International – turbomachinery Group and Design Engineer at CompAre Broom Wade Limited. He has been associated with the Company since February 2001.

Jeremy Scarlett BSc MIMechE Principal Designer Electrical, aged 43

Mr Scarlett has a BSc in Mechanical engineering and is a winner of the Design Council Molins Award and Crosfield Prize. After working on medical infusion pumps at the Institute of Medical Research and Muirhead Vactric Components, he became Technical Director of Coercive Motors and later Nelco Systems specialising in electric motor design. With 15 years experience in software development and the design and manufacture of AC and DC machines, his speciality is permanent magnet high frequency machines up to 250 kW output.

Incentives

The Company operates two unapproved executive share option schemes. In addition, the Company has established a new Enterprise Management Incentive share option scheme under the Finance Act 2000 for the benefit of employees which is intended to provide further incentives for employees and greater tax efficiency for both the employees and the Company. Each scheme is supervised and administered by the Remuneration Committee. Details of these schemes are set out in paragraph 7 of Part VIII of this document.

Pensions

The Company has a Group Personal Pension Plan which was introduced in November 2000. The arrangement is with Scottish Amicable. As at 28 June 2001, 12 members have joined the arrangement.

Corporate governance

Corac intends, where practicable (having regard to the current stage of development of the Company), to comply with the main provisions of the Combined Code.

An Audit Committee has been established. Members of the Audit Committee will be responsible for both ensuring that the financial performance of the Company is properly reported on and monitored and for meeting the auditors and reviewing their reports relating to accounts and internal control systems. The Audit Committee is chaired by John Grant and the other member of the committee is John Gunn.

A Remuneration Committee has also been established. Members of the Remuneration Committee will review the performance of Executive Directors and recommend the scale and structure of their remuneration and review the basis of their service agreements with due regard to the interests of Shareholders. No Director will participate in decisions concerning their own remuneration. The Remuneration Committee is chaired by John Gunn and the other members of the committee are John Grant and Professor Musgrave.

The Company has adopted and will operate a share dealing code for Directors and senior executives on the same terms as the London Stock Exchange Model Code for companies whose shares have been admitted to AIM.

Given the size of the Board and the Group, the Directors presently envisage having at least two independent non-executive Directors.

Trading record

A summary of the trading record of the Group for the three years ended 31 December 2000, which has been extracted from the accountants' report set out in Part VI of this document, is set out below:

	Year ended 31 December 1998 £'000	Year ended 31 December 1999 £'000	Year ended 31 December 2000 £'000
Turnover	114	90	1
Operating loss	(886)	(413)	(971)
Loss before taxation	(900)	(413)	(848)

Dividends

Corac is seeking primarily to achieve capital growth for its Shareholders. As a company which has incurred significant research and development expenditure, Corac has negative distributable reserves. Accordingly, the Company is currently unable to declare any dividend. It is the Board's intention during the current phase of the Group's development to retain any future distributable profits for use within the business. Thereafter, subject to the availability of distributable reserves, the Directors intend to pursue a dividend policy reflecting the Company's growth in earnings and cash flow generated from operations, while maintaining an appropriate level of dividend cover and having regard to further development of the Group's activities.

Current trading and prospects for the Group

Since 31 December 2000, the Group has continued to fund its development programme utilising existing cash resources. The Group plans to continue research and development in the main technologies associated with air compression. In addition, it aims to continue the commercial development of its first product, the no-oil turbo compressor. The Company will also ensure that the downhole gas compressor and dynamic seals' research work is fully developed to realise the potential products.

In anticipation of the commercial development of the products, the Company intends to have its own final assembly and testing facilities, and will employ a Production Director to take responsibility of this area. The Group expects to commence the testing and assembly of the industrial air compressor in 2002.

With strategic alliances and commercial arrangements that the Group has formed during the past year and with the funds to be raised through the Placing, the Directors believe that the Group is well positioned to achieve its growth targets.

Part II

The Placing and Related Matters

The Placing

The Placing, which has been underwritten by WestLB Panmure, comprises 13,688,884 Ordinary Shares, representing, in aggregate approximately 18.5 per cent of the enlarged issued share capital. Of these Ordinary Shares, 4,165,074 are being sold by the Selling Shareholders and 9,523,810 are new Ordinary Shares being issued by the Company to raise approximately £9.0 million, net of expenses, which will be used to finance the Group's continued growth.

The Placing Shares are being placed at the Placing Price by WestLB Panmure with institutional and other investors.

The Selling Shareholders comprise of approximately 100 existing shareholders who have expressed an interest in selling some or all of their shareholding at the time of Admission. The Directors are not selling any of their Ordinary Shares as part of the Placing. Anthony Hewlett, John Grant and Ludgate 181 Limited (a company in which John Gunn has a beneficial interest) will purchase 19,048, 47,619 and 380,000 Ordinary Shares respectively as part of the Placing.

Following the Placing, the interests of the Directors and their connected persons will, in aggregate, amount to 6.6 per cent of the enlarged issued share capital of the Company.

Placing arrangements

The Company, the Directors and WestLB Panmure have entered into the Placing Agreement subject to which WestLB Panmure will agree, subject to certain conditions, to procure subscribers or purchasers for (or failing which to subscribe for or purchase) the Placing Shares. All such subscriptions will be at the Placing Price.

Lock-up arrangements

Under the terms of the Placing Agreement, the Directors have agreed not to dispose of any of their interests in Ordinary Shares for a period of twelve months from the date of this document, without the prior written consent of WestLB Panmure except in certain limited circumstances.

Following the Placing, SCI Private Equity Limited and Equity Bridge Finanz GmbH, a member of the same group as WestLB Panmure, will hold 10,999,182 and 3,714,284 Ordinary Shares respectively. These holdings will represent 14.9 and 5.0 per cent of the enlarged issued share capital. SCI Private Equity Limited and Equity Bridge Finanz GmbH have irrevocably undertaken, save with the prior approval of WestLB Panmure, not to dispose of any Ordinary Shares for a period of six months from the date of this document.

Admission, settlement and dealings

Application has been made to the London Stock Exchange for the Ordinary Shares to be admitted to trading on AIM. It is expected that Admission will take place and that dealings on AIM will commence on 4 July 2001.

Application has been made for the Ordinary Shares to be admitted to CREST with effect from Admission. Accordingly, settlement of transactions in the Ordinary Shares following Admission may take place within CREST.

CREST is a paperless settlement procedure enabling shares to be evidenced otherwise than by a certificate and transferred otherwise than by a written instrument. The articles of association of the Company will permit the holding of shares under the CREST system. The Company has applied for its shares to be admitted to CREST with effect from Admission. Settlement of transactions in shares following Admission may take place in the CREST system if any shareholder so wishes.

CREST is a voluntary system and holders of shares who wish to receive and retain share certificates will be able to do so. Investors applying for shares under the Placing may, however, elect to receive shares in uncertificated form if they are a system-member (as defined by the CREST Regulations) in relation to CREST.

In general, the Ordinary Shares that are held in uncertificated form under the CREST system will be subject to the rules, regulations and procedures governing CREST and its system-members as in effect from time to time. Ownership of an Ordinary Share held in uncertificated form under the CREST system may only be transferred in compliance with the procedures of CREST in effect from time to time.

Part III

Risk factors

Prospective investors should be aware that an investment in the Company involves a higher than normal degree of risk. In addition to the other information contained in this document, the following risk factors, which are not intended to be exhaustive, should be considered carefully in evaluating whether to make an investment in the Company and, in particular, should be read in conjunction with the Expert's report in Part IV of this document and the patent agent's report in Part V of this document.

Early stage of development of the Group's product portfolio

Although the Group has successfully completed development of its first product, research and development of additional products will be required, and there can be no assurance that any of the Group's product candidates will be successfully developed. The Group may encounter delays and incur additional production costs and expenses, over and above those expected by the Directors, in order to develop products suitable for commercial distribution. Furthermore, there can be no assurance that any of the Group's developed products will successfully become revenue generating in nature or that they will meet the regulatory and production requirements necessary for commercial distribution.

Competition

The Company expects competition both for its existing product and for those currently under development. Competition may come from companies which have greater research, development, marketing, financial and personnel resources than the Group. Competitors may precede the Group in developing and receiving regulatory approval or may succeed in developing a product that is more effective or economically viable than that developed by the Group. Such activities could render the Group's technology and products obsolete and/or otherwise uncompetitive.

Manufacturing

The Group's proposed products must be manufactured in commercial quantities, in compliance with regulatory requirements and at acceptable cost. The Group does not yet own and operate manufacturing facilities, and there can be no assurance that the Group's existing facilities or raw material supplies will be adequate to supply future demand for the Group's products. In addition, there can be no assurances that the Group will succeed in securing collaborative agreements for the successful manufacture of the Group's products or that, if the Group succeeds in securing collaborative agreements for the manufacture of its products, the manufacturers will manufacture in sufficient quantities to meet the Group's demand.

Protection of patents and proprietary rights

The Group's ability to compete effectively with other companies depends, *inter alia*, on its exploitation of technology. However, there can be no assurance that competitors have not developed or will not develop substantially equivalent information or techniques or otherwise gain access to the Group's technology. The Group currently does not hold any patents and there can be no assurance that patents will be issued with respect to the Group's applications now pending or which may be applied for in the future, or that the lack of any such patents will not have a material adverse effect on the Group's ability to develop and market its proposed products. Also, no assurance can be given that the Group will develop products which are patentable or that patents will be sufficiently broad in their scope to provide protection for the Group's intellectual property rights against third parties. Nor can there be any assurance that claims with respect to any patents which may be issued to the Group would not be asserted by other parties. Substantial costs may be incurred if the Group challenges the proprietary rights of others or is required to defend its proprietary rights.

The commercial success of the Group will also depend upon non-infringement of patents granted to third parties who may have filed applications or who have obtained, or may obtain, patents relating to products which might inhibit the Group's ability to develop and exploit its own products. If this is the case, the Group may have to obtain alternative technology or reach commercial terms on the exploitation of other parties' intellectual property rights. There can be no assurance that the Group will be able to obtain alternative technology or, if any licences are required, that the Group will be able to obtain any such licence on commercially favourable terms, if at all. This may have a material adverse effect on the Group.

History of operating losses and accumulated deficit

The Group has experienced operating losses in each year since its inception and, as at 31 December 2000, had an accumulated deficit of approximately £3.7 million. The Group could incur further substantial operating losses over the next few years as its research and development activities continue and increase. There can be no assurance that the Group will ever achieve significant revenues or profitability.

Share price volatility and liquidity

The share price of publicly traded companies can be highly volatile. The price at which the Ordinary Shares will be quoted and the price which investors may realise for their Ordinary Shares will be influenced by a large number of factors, some specific to the Group and its operations and some which may affect the quoted engineering sector, or quoted companies generally. These factors could include the performance of the Group's research and development programmes, large purchases or sales of the Ordinary Shares, currency fluctuations, and general economic conditions.

Admission to AIM should not be taken as implying that there will be a liquid market for the Ordinary Shares. It may be more difficult for an investor to realise their investment on AIM than to realise an investment in a company whose shares are quoted on the Official List.

Management and employees

The future success of the Company will be dependent upon attracting and retaining the right staff. The success of the Company will be dependent on the expertise and experience of the executive Directors, the loss of one or more of whom could have a material effect on the Company. Although the Company has entered into extended service agreements with the executive Directors, and they have significant Shareholdings, the retention of their services cannot be guaranteed.

Furthermore, the Directors consider that the Company's employees are fundamental to its continued success and as such believe that loyalty and stability will be enhanced through appropriate incentive schemes. However, the Company may have difficulty in retaining and recruiting employees with appropriate skills which are essential to the development of the Company's business.

The investment described in this document may not be suitable for all recipients of this document. Prospective investors are advised to consult an investment adviser authorised under the Financial Services Act 1986, who specialises in investments of this kind, before making any decision. A prospective investor should consider carefully whether an investment in the Company is suitable in the light of their personal circumstances and the financial resources available to them.

Part IV

Technical Expert's report

The following is the full text of a report on Corac Group PLC by PA Strategy Partners Limited:

The Directors
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28 June 2001

Dear Sirs

1. Background and Introduction

PA Strategy Partners Limited ("PA") is a wholly owned subsidiary of PA Consulting Group (of which PA Holdings Limited is the parent company), a leading international business and technology consulting group headquartered in the UK and operating in Europe, North America, Scandinavia and Asia Pacific. Over the past 8 years this group has conducted many reviews of pharmaceutical, engineering, media and fine chemical companies which have involved assessing technology and advising companies on research and development matters. PA has prepared Experts' Reports to support the public offerings of Toad plc, Biocompatibles plc, NMT plc, Gyrus Medical plc, Geo Interactive Media Limited, Profile Therapeutics plc and Turbo Genset Inc. PA Consulting Group employs specialists with knowledge of science, technology, product development, markets and business issues in these industries.

PA has been instructed by WestLB Panmure on behalf of the directors of Corac Group PLC ("Corac" or the "Company") to assess certain aspects of Corac's activities, specifically:

1. To provide commentary upon and assessment of, the general validity of Corac's business strategy
2. To provide commentary on and assessment of the company's products and development plans covering the core mechanical and power electronics technologies of:
 - (a) the no-oil turbo compressor family
 - (b) a high power density compressor for use as a downhole gas field compressor
 - (c) the compressor seal designs based on the use of ceramics



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3. For each of the research and development programmes, to comment on:
 - (a) the project/product merits
 - (b) the specific risk factors in successful project completion
 - (c) the commercial potential of a successful project
 - (d) the project's development plans

This report has been prepared for inclusion in the prospectus dated 28 June 2001, prepared in connection with a placing of new and existing shares in the Company and the application for admission of the entire issued share capital of the Company to the Alternative Investment Market of the London Stock Exchange plc.

In preparing this report we have conducted interviews with key staff and officers, made a review of documentation prepared by Corac, such as project plans, market analyses and financial plans, and assessed Corac's activities by reference to PA's internal knowledge base supplemented by discussion with independent authorities including scientific, commercial and regulatory specialists.

This report has been prepared with due diligence based upon information provided to PA by Corac at the time of preparation. PA has no reason to doubt the veracity of such information but has only verified it to the extent indicated above. Changes in circumstances may render such information and verification invalid at any time hereafter.

2. Introduction to Corac Group PLC

Corac was incorporated in 1996 to develop a no-oil compressor using novel air bearing technology developed by its founder Dr Gozdawa while he was employed as a research fellow at Brunel University.

Corac's previous management raised money to fund the development by listing on the unregulated OFEX exchange. Corac withdrew from the listing in March 1998. In November of 1998 a new management team joined the Company, including the present Executive Chairman, Professor Musgrave.

3. Business Strategy

Corac's strategy is to develop and exploit its core technologies in the form of innovative products that offer their users significant operational benefits. It currently has two products under development:

- A 'no-oil' industrial air compressor
- Non-contacting hydrostatic seals for pumps and compressors

and one planned to commence development during 2001:

- Down hole compressors for oil and gas wells.

3.1 Intellectual Property Strategy

Corac currently has several patent applications pending, including patent applications relating to the air bearings of its 'no-oil' industrial compressor. Corac has advised PA that the other patent applications relate to future intended product developments.

Corac has indicated that its intellectual property strategy is to patent its technology where it believes it is possible and beneficial to do so. However it believes that just as important to its success is its knowledge and expertise in its core technologies of air bearings, high-speed motors, compressors and seals. It is intended that this knowledge be protected through retaining technical staff and by undertaking the final assembly and testing of its products.

Corac will continue to build intellectual property through research and development associated with its in-house programmes and collaborations with partners. PA recommends that Corac documents its programmes to avoid potential disputes between commercial partners claiming IPR arising from common developments.

3.2 *Technology Strategy*

Corac has considerable expertise in its core technologies of air bearings, high-speed motors, compressors and seals. Corac currently employs 17 staff, the majority of whom are design and development staff, directly involved in the application of its core technologies into products to meet specific market opportunities.

Specific product development pipelines are aimed at meeting application requirements with competitive unit cost, operating cost and reliability, while enhancing the competitive edge of the core technologies.

In PA's opinion, Corac's approach to technology development is application driven and will require concurrent product development activities to meet proposed project time scales. There is a risk that progress may be hindered by the need for additional expert resource to operate planned concurrent development projects. However, Corac is actively recruiting to address this situation.

The development of new technologies and pre-development work on new products are the responsibility of its Technical Director, Dr Gozdawa. The application of these technologies into specific products is the responsibility of its Director of Technology, Julian Reed, to whom most of the design and development staff report. PA supports this division of responsibilities, which helps clarify the allocation of effort between technology development and product development.

3.3 *Product Development Strategy*

Corac's product development strategy is based on exploiting the benefits of its core technologies to provide products that offer operational benefits to end-users, such as small size and weight to power ratios, low maintenance and life cycle costs and elimination of the possibility of oil contamination.

PA supports Corac's policy of focusing on a small number of product developments:

- A 'no-oil' compressor core comprising a variable speed permanent magnet motor coupled directly to a radial flow compressor and running on air journal and thrust bearings
- A down-hole gas compressor which is intended to extend the operational life of gas wells
- A type of non-contacting seal for pumps and compressors

The first two of these are intended to be co-funded by commercial development partners, thus reducing the financial risk and cost of development. PA considers this to be a suitable approach, as it should result in products that meet market driven specifications. These programmes are also intended to benefit from their partners' technical and marketing ability.

The longest running and most advanced programme has the objective of developing a 'no-oil' industrial air compressor. A 45kW industrial air compressor core has been designed and is undergoing tests to confirm its performance and durability. The compressor has been configured into low pressure (LP) and high-pressure (HP) stages. The intention is to combine these into a 90kW 2-spool unit to deliver 0.3kg/sec of 'no-oil' compressed air at a 9 bar gauge delivery pressure. This core package will be offered to compressor system manufacturers who will in turn package it into complete systems.

Corac also has plans to apply this technology in a larger no-oil industrial air compressor.

Discussions with a commercial partner are well advanced to establish a joint venture with the intention of developing an air compressor for down-hole oil and gas well applications. This will use Corac's compressor and air bearing technology driven either by a water turbine, using the development partner's existing turbine technology, or by an electric motor drive. Funding for this programme is being negotiated from two major oil and gas companies. This programme is planned to start when agreements have been signed between the parties.

The non-contacting hydrostatic seals programme has started and will be funded, at least initially, by shareholder funds.

3.4 *Test and Assembly Strategy*

Corac intends to carry out the final critical assembly and testing of products and to purchase the manufactured components and less critical sub-assemblies of components. Corac believes that this strategy will allow it to achieve both lower cost manufacture and to protect its know-how. PA supports this approach.

The first product that Corac intends to produce is the no-oil industrial air compressor. Corac plans to start series manufacture of compressor cores by the first quarter of 2002. Corac has indicated that initially it intends to be capable of assembling one to two units per week, rising linearly to around 10 per week by the end of 2002. PA understands that the detailed plan to achieve these targets is in the process of being developed.

Corac is investigating possible sites for its final test and assembly facility and has indicated that it intends it to be located away from its research and development facility in Uxbridge, possibly in a development area such as Wales or the North East of England. Corac believes that this will allow it to obtain grant assistance towards the establishment of the facility and to benefit from lower labour rates than in the London area. Corac expects the test and assembly facility to have approximately 5,000 square feet of floor space initially, with the potential for future expansion.

The majority of components that comprise the compressor core are custom made to Corac designs. These components will be supplied to the assembly facility from subcontract manufacturers. Corac has to date subcontracted the manufacture of these components for the prototype compressor cores.

The designs of a number of the compressor core components, for example the rotor, impeller and bearings, detail tight dimensional tolerances. These components must be manufactured and subsequently inspected to a high degree of precision. Corac does not currently have the internal facilities and equipment required to undertake inspection to these tolerances. To date Corac has relied on its subcontractors inspecting their own work. Corac has indicated its intention to put in place a component certification system. This will involve sending a component inspection certificate with the purchase order. The certificate will detail the critical dimensions that the supplier must inspect and certify within tolerance prior to delivering a component with the completed certificate. An independent third party inspection of components may be used to determine the validity of the returned certificates. PA believes that having tight control and confidence of incoming component quality will be a very important factor for Corac to achieve an efficient test and assembly operation and avoid costly problems of rework. PA supports the component certification process and considers it to be a good first step in the supplier qualification and quality control regime that Corac will need to implement.

Detailed information on the test and assembly activities to be carried out in the intended facility is not yet available. Corac has however indicated that the assembly activities will require skilled labour with experience in the assembly and fitting of high precision machines. It is these skills coupled with its internal know-how and IPR, that Corac believes will help protect it from possible copying of its technology by competitors.

PA believes that the selection of a suitable site should be given a high priority if Corac is to achieve its target of series assembly in the first quarter of 2002. Corac should not underestimate the work required to establish an assembly facility for high precision equipment, particularly if it is to be located remotely from its R & D facility. Corac should strive to ensure that it implements world class production management and quality systems from the outset. These will provide it with a solid foundation upon which to build.

PA supports Corac's intention to recruit a Manufacturing/Assembly Director with relevant experience to establish the test and assembly facility in parallel with, and separate from, the ongoing product development activities. This Director should take day to day responsibility for the operation of the test and assembly facility and liaison with the product development and technology development teams.

3.5 *Marketing Strategy*

Corac recognises that its principal expertise is in its core technologies and their application to high speed turbo compressors. Although it ultimately needs to grow its marketing capability, the key to market penetration in the short term is to form strategic alliances and joint ventures with organisations who are recognised as market leaders and who have access to the customers for products that will exploit these technologies.

It is intended where possible to undertake product developments with partners. However, PA recognises that internal funding will sometimes be required to take a project to the technology demonstrator stage to win the confidence of prospective partners. In addition, particularly attractive markets where no suitable partner can be found may be considered for internally funded programmes. PA considers it essential that the level of resources allocated to internally funded programmes (i.e. undertaken without funding from a partner) should be reviewed on a regular basis. This will enable Corac to build up a portfolio of product development programmes that achieves a balance between resource requirements, market attractiveness and risk.

PA considers partnership to be a prudent approach to take advantage of the marketing and global product support offered by partners. The risk mitigation offered by Corac's intention to work with a range of partners on a non-exclusive basis is prudent.

In the short term, Corac's priority is to deliver a fully functioning 90kW compressor that meets the needs of the potential partners with whom Corac has been in discussion. The achievement of this goal will be necessary to secure initial licensing agreements and stimulate interest from other manufacturers who are already aware of the technology and have expressed interest.

In the medium term there will be a need to secure further licence agreements. We support Corac's intention of recruiting a sales and marketing professional at main board level later in 2001. The objective of the Sales and Marketing Director should be to raise awareness of the technology's benefits and to generate a range of contacts which will progress into a funnel of partnering opportunities, qualified against an assessment of the potential markets to which these opportunities provide access.

The assumptions in the business plan about income from the 90kW compressor are dependent on:

- the signing of satisfactory agreements with two potential compressor manufacturing partners which are consistent with the assumptions on down payments, unit prices and royalties
- Corac's ability to successfully complete the development of its current Beta 2 prototype and achieve the performance expected by the partners
- implementing a cost reduction programme for the cores for production
- establishing test and assembly capacity by the middle of 2002, ramping up to approximately 10 units per week by the end of 2002.

3.6 *Facilities*

3.6.1 Current Premises and Equipment

Corac consolidated its operations within its current research and development facility on the Brunel University Science Park in Uxbridge in September 2000. Prior to that it had operated from two smaller sites, a design office at Brunel University and a test facility in Oxfordshire. The current facility is 3000 square feet comprising a CAD/ design/ analysis area, machine shop, assembly shop, stores, test facility and office space. This is suitable for the existing compressor development. We understand that Corac has recently extended the facility for the "down-hole" development by leasing additional space on the same site.

The existing assembly shop has a capacity for one to two cores per week. This is adequate for the pre and initial batch production build programmes planned to start in September 2001 through to the first quarter of 2002.

The small machine shop contains a lathe, a milling machine, a press and a balancing machine. This equipment, together with the metrology and other assembly equipment available to Corac, is adequate for the assembly of the prototype and pre production compressors. The balancing machine is a vital piece of equipment, since very accurate rotor balancing is an essential step in the compressor assembly process and for that reason will be kept in house. The key components require specialist-manufacturing facilities and there is no intention to manufacture these in house.

The assembly shop is a bench area with a number of special jigs, fixtures and gauges and basic measuring instruments for very accurate setting of clearances and component positions for both the sub-assemblies and the final assembly. In particular the journal and thrust bearings are assembled and set with great care because of the micron accuracy required for successful operation of the compressor cores. Some components are assembled and the assemblies sent out for further machining. These include the rotor after magnet assembly and the wound stator/ housing assembly.

A stores area is currently being set up on the mezzanine floor above the assembly shop.

The low-pressure (LP) and high-pressure (HP) compressor cores, or spools, are tested in one of two custom built test cells adjacent to the assembly shop. The test cell itself is equipped with the air ducting, water cooled "inter" and "after" coolers, and the necessary instrumentation required to measure the air flow characteristics during testing. The motor drive electronics unit, powered by a standard three-phase mains supply, is also located in the test cell. The outer instrumentation chamber contains the control console and instrumentation for monitoring the test rig and test unit telemetry. A data logging system has recently been acquired to enable more detailed and accurate analysis of the testing.

The current manufacturing assets have been developed for prototype assembly and, whilst some of the process principles are production scaleable, they are not inherently suitable for medium scale manufacture. Corac recognises that it will need to review its future requirements as part of its assembly plan.

3.6.2 IT Systems

Corac implements and maintains its own IT systems to support office desktop and specific engineering software tools and we understand that it has recently installed a network server and internet link via the Brunel University Network.

A number of different software design packages have been used to produce the detailed design drawings for the prototype machines Beta 1 and Beta 2. The production of drawings is now in the process of being standardised under a formal drawing control system. The detailed mechanical design of the Beta 2 unit, including piece part drawings and sub-assemblies, is currently being transferred onto AutoCAD LT as a common platform for these designs. A new 3D design package has been purchased for all subsequent mechanical design work, which has full 3D modeller, assembly and detailed drawing functions and in addition a finite element package for stress analysis, natural frequency and thermal analysis work. Other software tools used include those for motor, compressor and bearing design.

PA believes this is a critical area in preparing for product assembly and fully agrees with Corac's plans to develop, as a matter of urgency, a fully controlled documentation system. PA suggests that Corac's management regularly reviews how the business should be supported by its IT systems. Corac has a company website.

3.7 Personnel

Corac has in recent months been conducting a vigorous and successful recruitment campaign to fill a number of key vacancies, primarily to complete the design and development team. Its approach is to offer a good employment package with attractive salaries and share incentives to attract and retain the right people. This activity is almost complete with most key technical personnel in place, but with one or two supporting engineering roles remaining to be filled. These include an additional CAD designer and an experienced control engineer to take on the responsibility of running the compressor control system development programme. A senior engineering test manager will also be recruited to take over from the current part-time manager.

No firm plans have yet been made for the recruitment of production personnel including manufacturing, purchasing and quality control. The development team is currently fulfilling these functions. In addition to enhancing the development skill base, Corac ultimately needs to evolve the production skill set of the organisation to ensure that the business is progressing towards its goal of being a successful assembly organisation. PA recommends a further recruitment plan (defining which personnel will be required and when) be put in place to fill these key roles in parallel with the selection of the new assembly site. PA considers this to be an issue that could constrain growth, and it is important that Corac does not underestimate the importance of recruitment in this area. This will be one of the responsibilities of the Manufacturing Director, when he/she is recruited.

Corac has developed a flat management structure with the multi-functional roles and responsibilities that are typical of a small, growing company. Its vision is one of flexibility, with people working across the various project programmes. In PA's opinion, this structure will enable Corac to resource the product programmes effectively.

4. Core Technologies

4.1 Overview

Corac's core technologies comprise:

- A high speed brushless permanent magnet motor
- The power electronics and control system
- The radial flow compressor
- The hydrostatic/hydrodynamic air bearings

Corac's main innovation and business focus is a high speed, highly compact turbo-compressor mounted on air bearings delivering clean oil-free compressed air (i.e. a 'no-oil' compressor).

In PA's opinion, the most striking features of the compressor are:

- its small size and weight compared to a conventional dry-screw compressor delivering a similar quantity of air
- the absence of wearing parts (e.g. no gearbox), and hence inherently low maintenance costs and downtime
- the absence of oil in the system (except for the silicone oil used in the motor magnet assembly), which is made possible by the use of Corac's air bearing technology

The absence of lubricating oil in the bearings and compressor means that it should be possible to guarantee totally oil-free air. This is attractive in a wide range of applications including food and drink processing, printing, pharmaceuticals and electronics manufacture. It is also increasingly in demand from an environmental standpoint.

The size and weight reduction compared to other compressor technologies offers excellent integration and packaging flexibility. This should make the technology attractive to a wider range of applications including for example, down hole gas compression.

Corac has worked with Motech Control Limited of Crawley, West Sussex which has developed the variable speed motor control system. PA supports this strategy of making use of external expertise and experience in specialist areas such as the motor control.

Corac has also developed expertise in relevant technologies for the integration of the compressor with the motor and the bearings and has the ability to adapt the technology for other applications. These technologies include fluid flow modelling, measurement and control, aerodynamics, rotor dynamics and the design of high speed rotating machinery.

In addition, Corac's expertise in high speed air bearing technology has generated an opportunity to develop an innovative non-contacting seal for large pumps and compressors.

4.2 *Motor*

The high-speed brushless permanent magnet motor is an integral part of the compressor module, which forms the basis for each stage of a multi-stage compressor – the "inner core". It has a conventional drum rotor configuration with a radial air-gap. While the design of the motor is not, in itself, novel, the operating speed is unusually high and presents a number of development challenges, which Corac has addressed, and to a large extent overcome. This represents a considerable amount of development know-how.

At present, Corac has produced only one size of motor with a rated output of 45 kW, maximum design speed of 72,500 rpm and efficiency of around 95 per cent. This has a rotor/stator design that is suitable for the high-speed operation of both the low pressure and high pressure spools of the 90 kW prototype compressor. New products in the range will have different motor specifications. Motor designs to suit the configuration, operating performance and output of these new products are under consideration but prototypes have not yet been built.

4.3 *Competing Motor Technologies*

In PA's opinion, whilst the motor technology is not, in itself, novel, it is sufficiently unusual by virtue of the motor's high operating speed for valuable know-how to have been developed. There are however other manufacturers of high-speed permanent magnet motors, particularly in the spindle drive, aerospace and turbo-machinery industries, who have also developed this capability. There is also a possibility of competition from high-speed inverter driven induction motor technology used in spindle drives although these are limited to lower speeds than the permanent magnet motor and are unlikely to provide the performance that Corac requires.

4.4 *Motor Technology Strengths, Weaknesses and Risks*

In PA's opinion the key strength of employing an in-house motor development is its pivotal role in the design of the integrated compressor rotor. Without this capability Corac would be less flexible in its approach to rotor dynamics and developing the design of the rotor.

Although the technology, configuration and construction are conventional, the operation at such high speeds gives rise to a number of particular problems that without the benefit of in-service running time and experience constitute an inevitable risk.

Excessive rotor temperature is a potential weakness that is currently causing some limitations to operating performance and rotor balance. In the extreme it could lead to a degradation of the magnets and magnet adhesive. If the magnet adhesive fails the magnets will move under the retaining sleeve making the rotor go out of balance. This could in turn lead to the retaining sleeve bursting. In tests on earlier prototypes, this has not caused a safety hazard as the rotor parts have been retained within the motor housing. The areas currently under review to address the problem of rotor temperature include rotor losses, adhesive operating temperatures and the containment sleeve assembly and performance. Corac recognises that it is of critical importance that a permanent solution to the rotor temperature problem is found. This may involve some redesign of the motor and cooling system. While we do not believe there are any fundamentally critical weaknesses, the development programme must address and solve these issues.

As with all electrical machines, it will be necessary to derate the machine above a defined maximum ambient temperature, in this case to avoid demagnetisation of the magnets, loss of magnet retention, rotor vibration and differential expansion problems. Market acceptance may be affected if this temperature has to be set too low.

The current prototype compressor is at the low end of the target power range for commercial compressors. Larger compressors will require larger motors running at lower speeds. This should ease the problem of high frequency losses somewhat, and although careful design will again be required, PA has no reason to believe that the design of these larger motors should cause undue additional risk.

4.5 *Power Electronics and Control System*

The electrical power and control system for Corac's two-stage compressor comprises the:

- Power electronics enclosure with internal control card
- Supervisory control electronics enclosure (pneumatic control for bearings and cooling, speed control of motors, liquid cooling for motor and power electronics, and data acquisition)

To date Corac has sub-contracted all power electronics activities, rather than recruit the necessary expertise, to Motech Control Limited. This is a small company that specialises in the design and build of power electronic packages specifically for the control of brushless permanent magnet motors.

The power electronics system has been developed in relation to the power rating of a competitive dry screw compressor (typically 90kW) and although it is a vital part of the control system, Corac does not consider it to be part of its core technology. Indeed, in the future the power and control electronics could be sub-contracted or supplied by an end user with access to suitable expertise. PA understands that Corac has an agreement with Motech over shared rights to the power electronics design, which would enable Corac to second source if production volumes exceed Motech's capacity.

4.6 *Power Electronics and Control System Weaknesses and Risks*

In PA's opinion, there are no apparent technology weaknesses of the power electronics topology to report. However there are some application and regulatory issues to be considered, such as EMC compliance.

An existing risk, at the Beta 2 stage of development, is the lack of accumulated test time and experience of the pre-production power electronics operating with the high-speed compressor.

Since the power electronics is entirely out-sourced, the manufactured cost of the power electronics is dependent on Corac's commercial relationship with the sub-contractor. Long term favourable supply contracts with Motech and a second source supplier will be important to Corac's product cost reduction strategy.

A major issue that would enhance the power density of a demonstrator system is the possibility of integrating the supervisory control equipment package with the drive electronics. This will be driven by end user requirements as well as Corac's relationship with the drive electronics supplier and its expertise.

4.7 *Compressor*

The compression technique being utilised by the compressor design is similar to that currently used in centrifugal compressors. In generic terms this technique is well proven. However, we note that Corac has not yet tested the LP and HP spools at their full load conditions to verify that they can achieve design performance.

4.8 Bearings

Corac has particular knowledge and IPR in the field of hydrostatic and hydrodynamic air bearings.

Each of the LP and HP compressor cores has two sets of journal bearings, one at each end of the shaft. Each set of bearings comprises three independent bearing pads located at 120 degrees relative to each other around the rotor.

The journal bearing pads are intended to operate as hydrostatic and hydrodynamic air bearings. On compressor core start up the bearings operate hydrostatically. At approximately 6,000rpm the bearings are intended to self generate the air pressure required to carry the rotor. Between 6,000 rpm and 20,000 rpm the bearings are intended to operate hydrostatically and hydrodynamically. At 20,000rpm the air supply is removed from the bearing and the bearings only operate hydrodynamically.

Each of the cores has two sets of thrust bearings located at the driven and non-driven sides of the rotor thrust flange. Each set of bearings comprises eight independent bearing pads located at 45 degrees relative to each other around the rotor thrust flange.

The thrust bearing pads are intended to operate as hydrostatic or hydrodynamic air bearings. On compressor start up the bearings operate hydrostatically. At approximately 6,000rpm the bearings are intended to self generate the air pressure required to carry the rotor thrust. Above 6,000 rpm the bearings are intended to operate hydrostatically and hydrodynamically. The bearing pads are manufactured from phosphor bronze to minimise wear of the rotor in the event of contact.

4.9 Bearing Technology Strengths and Weaknesses

In PA's opinion, Corac's decision to use both hydrostatics and hydrodynamics in a single air bearing offers the following potential advantages over other types of bearings:

- lower losses and therefore higher efficiencies as a result of lower frictional drag
- no wearing parts or degrading lubricants and therefore longer running life
- capability to support higher loads at low surface speeds
- capability to support higher loads at high surface speeds

These advantages are key to being able to achieve the predicted performance and benefits of the no-oil industrial air compressor.

The chief risks associated with the bearing system relate to the relatively early stage of the prototype development in particular the limited amount of running time and the lack, as yet, of full system performance testing in the compressor application.

4.10 Non-Contacting Seal Technology

Through earlier research and development work undertaken by Dr Gozdawa at Brunel University in the mid 1990s, Corac has access to a novel design of non-contacting face seal. This utilises a similar principle to a hydrostatic bearing and bleeds a small quantity of air from the high-pressure side of the seal, through a number of flow restrictors, to a number of shallow recesses in one of the running faces of the seal. This enables a thin gas film (of a few microns in thickness) to be established between the stationary seat of the seal and the rotating face. We understand that a prototype was successfully run at speeds of up to 2780 rpm and at pressures up to 15 bar gauge at Brunel University, although the test rig has since been dismantled.

Corac plans to develop this technology further by building a demonstrator and target the resulting product for use in existing large scale gas compressors and liquid pumps. It is not seen as a component of Corac's own industrial compressor, which in its current configuration uses conventional labyrinth seals and does not require a high performance rotary shaft seal.

4.11 *Substitute technologies*

4.11.1 Other direct drive turbo-compressors

As far as PA can ascertain, the only direct drive turbo-compressor currently being offered on the market in the target power range is a range of aerating compressors from the Finnish company High Speed Tech Oy Limited (HST). The HST integral aerating compressor is a single stage radial turbocompressor whose construction, properties, operations, and connections are all designed to meet the requirements of aeration systems (i.e. relatively high flow and low pressure compared to the Corac compressor). PA has no evidence that HST is applying this drive and bearing technology to other compressor applications areas, in particular the higher pressure compressed air market. However, if it did, we believe it could pose a potential threat to Corac's business.

In addition to the aerating turbo-compressor from HST there may be other direct drive turbo-compressors in the product development phase. PA has identified two small but high profile companies which have access to technologies relevant to direct drive turbo-compressors.

Formed in 1994 and located in New York, Mohawk Innovative Technology Inc (MiTi) is a high speed rotating machine company specialising in the development of oil-free compliant foil, magnetic, hybrid and auxiliary bearings. In PA's opinion MiTi's foil and magnetic bearing technologies and its development applications in the turbo-compressor industry could potentially compete with Corac's compressor programme. Foil bearings have been available for some years and are currently being used commercially in other turbo equipment such as micro-turbine generators.

Located in Torrance California, Calnetix was created in 1998 by the merger of Advanced Motor Technologies and Avcon's magnet bearing technology. It specialises in the manufacture of high speed brushless PM DC motors and magnetic bearing systems for OEM applications. The company is reported to have a staff of 24, including engineers and designers, with 10 to 12 people employed in manufacturing on the same site. PA believes that although this is a very small company, the Calnetix magnetic bearing and high-speed motor technologies are in direct competition with Corac's own motor and bearing technologies as applied to turbo compressors.

Other companies, including academic institutions around the world and possibly larger compressor manufacturers, may also be developing competing systems.

4.11.2 Oil-free industrial air compressors

A large range of oil-free air compressors is readily available in the market from a number of manufacturers. These compressors claim to offer oil-free air at up to approximately 10 bar gauge and are available in a wide range of flow rates. They do not however claim to be oil-less compressors. They are commonly called oil-free since although they rely on lubricants in the bearings (and, when used, the drive gearing), seals are used to avoid leakage of this lubricant into the compression mechanism.

With the exception of silicone oil, used as an aid to fitting the magnet sleeve, and which becomes entrapped below the sleeve, the Corac compressor cores are oil-less. They therefore offer an intrinsic advantage over conventional "oil-free" industrial compressors.

4.11.3 Substitute bearing technologies

A number of bearing technologies are currently used in existing high-speed turbo-machinery and spindle drives. These include oil/grease lubricated rolling element bearings, hydrodynamic oil bearings, magnetic bearings, foil air bearings and simple hydrostatic air bearings. In PA's opinion magnetic bearings and foil air bearings offer possible alternatives to Corac's air bearings in its no-oil compressor application.

There has been a steady increase in usage and applications for active magnetic bearings. Usually a combination of permanent magnet passive and electro-magnetic active bearings, they are, like air-bearings truly non-contacting and have the advantage of lower frictional losses. These bearings use position sensors to servo-control rotor position, hence reducing rotor vibration to give ultra-smooth running of high-speed turbo-machinery. With many years of development and the recent dramatic reduction in the cost of high speed digital processing, they are no longer limited to the large megawatt size machines used in remote locations.

There are electrical losses associated with magnetic bearings, but these are generally low. One disadvantage of magnetic bearings is the need for mechanical back-up bearings in the event of power loss or excessive shock load. Notwithstanding, this is a potential competitor to air bearing technology. However, PA agrees with Corac that its air bearing technology still has the advantage of a virtually passive control system compared with the active high-speed digital control required by the magnetic bearings. This should lead to a favourable cost comparison and reduced complexity with respect to magnetic bearings.

Several recent micro-turbine generator products have favoured foil air bearings and there are a number of patented systems currently in use. These bearings are hydrodynamic and use a compliant foil to establish the necessary air layer on which the rotor is supported. A serious shortcoming of these bearings is that they are contacting at start-up until the required minimum speed is reached. Even with special low friction coatings applied to the foils this leads to a finite number of stop/start cycles and consequent reduction in life cycle when compared to the Corac bearings. They may also suffer from fatigue problems if supporting a cyclical load. In PA's opinion, though technically elegant in its simplicity, the foil air-bearing will have inferior performance and life to the Corac air bearing system.

4.11.4 Non-Contacting Seal Technology

Traditionally large scale compressors and pumps use mechanical face seals to seal the rotating drive shaft where it passes through the compressor or pump housing. At moderately low pressures and speeds, conventional face seals are used in which a thin hydrodynamic film of a few microns thickness is generated between the stationary seat and the rotating face. This type of seal will only operate satisfactorily if a liquid is present to provide a lubricating film, usually of a few microns in thickness, between the seat and the face. This type of seal is therefore unsuitable for sealing a gas and even when sealing liquids, there will be some wear of the seat and face components.

To overcome this limitation, improvements to mechanical seals have been made which can enhance the hydrodynamic film between the face and the seat. One of the most successful has been the spiral groove seal. One of the pioneers and market leaders in this sealing technology is John Crane with its Type 28 series of seal. These incorporate a pattern of shallow spiral grooves etched into one of the running faces of the seal. When the seal rotates this spiral groove pattern acts as a pump and generates a pressure across the face that counteracts the pressure of the fluid that is being sealed.

Flowserve also offers seals using similar design principles to John Crane's gas seals, including one with spiral grooves and one with T-shaped grooves for which it claims the advantage of bi-directional operation.

A disadvantage of spiral groove technology is that the fluid film is only generated when the shaft is rotating above a certain speed. Therefore when starting and stopping, wear is controlled by the selection of hard materials such as ceramics. Another disadvantage is that the seal will only generate a pressure when rotating in one direction, although more complex groove patterns can counteract this limitation.

The advantage of Corac's proposed design is that it is designed to operate hydrostatically and has the potential to generate a film whenever there is a pressure difference across it, whether or not the shaft is rotating. If successful, this should reduce wear and friction losses at low speeds.

5. Development Pipeline

Corac currently has three products under development or planned to commence in the near future.

5.1 No-oil Industrial Air Compressor

This is the most advanced of Corac's product development pipelines. Corac has indicated that it has no plans to develop its own fully packaged compressed air systems. Rather it intends to supply compressor cores to existing OEM's to package into their own systems complete with inlet and outlet interfaces, filters, intercoolers, skids, enclosures, mounting arrangements, etc. The finished compressor will therefore be in the OEM's packaging style but identified as "containing Corac cores".

The development programme is focussed on combining Corac's compressor, air bearing and motor technology to develop the compressor cores.

Corac is developing low and high-pressure core variants each with an installed power of 45kW. Corac has explained that the LP and HP cores are designed to have pressure ratios of 3.75 and 2.62 respectively (ie 9.8 combined). When packaged in series and operated at a rotational speed of 72,500 rpm they are intended to be capable of delivering air at a pressure of 8.8 bar gauge from an atmospheric suction pressure with an airflow of 0.3kg/s (~850 scmh).

5.1.1 Project Merits

Corac claims that the primary benefits of its compressor cores over existing rotary screw oil-free compressors are the absence of any possibility of oil entering the air during compression, high efficiency both on and off load, low maintenance, small size and weight, and easy replacement should replacement become necessary.

PA agrees that these benefits would represent a significant marketing advantage for Corac.

5.1.2 Commercial Potential

PA believes that the output pressure and flow of the Corac compressor would place it in a market segment dominated by rotary screw compressors, in which potential end users currently have the choice of lubricated and oil-free rotary screw compressors. The latter is the more expensive choice and offers oil-free air not oil-less air. Oil-less air is of particular importance in sensitive applications. Examples of industries to which this technology may be of benefit are food and beverages, pharmaceuticals, medical and electronics.

In 1998 the European and U.S. markets for rotary screw compressors was approximately \$600 million and \$375 million respectively (Ref. Frost & Sullivan European Industrial Air Compressor Market report 1998, and Frost & Sullivan U.S. Compressor and Vacuum Pump Market report 1999). These figures correlate with Corac's estimate that the global market is between \$1 billion and \$2 billion.

PA has also contacted the top three European compressor manufacturers (by revenue) to obtain additional price data for 90kW oil-free rotary screw compressors. The list prices quoted before discount ranged from £31,000 to £60,600 for a fully packaged water-cooled 2 stage compressor including drive motor, inlet filtration, inter and after coolers, sound proofed enclosure, controls and connectors. Comparing these prices with Corac's forecast selling price of £60,000 for a similarly fully packaged system confirms that Corac is aiming for the higher capital cost and value end of the market. Corac believes that this high capital cost can be justified by the benefits of reduced life cycle cost (including maintenance and energy costs) offered by its compressor. PA has been told by a large end user of air compressors that maintenance costs for screw compressors can range from £1,000 p.a. (for a 45 kW machine) to £5,000 p.a. (for a 200 kW machine). In addition, dry screw compressors are reported to have a high off-load power consumption (typically 20 to 50 per cent of power consumption at full-load). Corac claims a comparatively high part load efficiency for its machine and low maintenance costs, both of which would contribute to reduced life cycle costs compared to dry screw compressors.

5.1.3 Project Management and Development Plans

Julian Reed, Corac's Director of Technology is responsible for the development programme and has provided PA with a high-level development plan. It identifies the key development stages Corac believes are required before series manufacture of compressor cores can begin. Corac's first milestone is to gain customer acceptance of a working prototype, Beta 2, by mid-2001. This is to be followed by a replication of the prototype to make two additional Beta 2 units, one of which is planned to be submitted for acceptance by a second customer. The other will be used for further internal testing.

In parallel with this, Corac intends to develop a Beta 3 version. Corac envisages that this will be a redesigned Beta 2 incorporating necessary design changes to both correct problems identified during Beta 2 testing and to reduce the cost of manufacture. Corac plans to complete the redesign, build, test and optimisation of Beta 3 by September 2001. A batch production sourcing and build/test phase is then planned through to the end of 2001. Additionally Corac has provided a more detailed list of activities that it believes is required to achieve its first milestone. PA recommends that Corac considers in more detail the activities required beyond this milestone. This should include reliability testing, safety testing and appropriate type certification, although Corac expects its partners to undertake reliability testing and overall system certification.

A key requirement of any high speed, high power turbo machinery is the design for safe and reliable operation. PA has no reason to believe that strategic elements of the compressor core design will not be safe or reliable but the necessary safety checks, FMEA (failure modes and effects analysis) and hazard analysis work needs to be conducted.

5.1.4 Risk Factors

Beta 2 testing has identified unacceptable shaft vibration in the LP stage due to unbalance associated with high rotor temperatures. As a consequence of this, the LP stage cannot currently be operated at the design speed of 72,500 rpm, although it has been run up to 66,500 rpm. Therefore the intended pressure ratio and mass flow is not yet being achieved. A development programme is ongoing to resolve this problem, and Corac believes that it has a number of potential solutions involving changes to the motor and shaft.

For Corac to achieve a higher performance, it will have to resolve the rotor heating problem. PA does not believe it is possible to say when this problem will be resolved and therefore what its impact might be on Corac's plans.

Corac has tested the HP compressor stage up to its design speed of 72,500 rpm but hasn't yet run it at its full rated load. The LP and HP stages have been run together and achieved a pressure ratio of nearly 6 (i.e. a delivery pressure of approximately 5 bar gauge with an atmospheric suction pressure). Development work is still ongoing with the objective of generating the planned pressure ratio. Extrapolating from test results, Corac expects the Beta 2 prototype to achieve a pressure ratio of approximately 8 (i.e. corresponding to a delivery pressure of approximately 7 bar gauge) if both spools can be operated at their design speed of 72,500 rpm. Although this will not achieve the design pressure ratio of 9.8 (corresponding to a delivery pressure of 8.8 bar gauge), it would bring the performance of the Beta 2 prototype into at least the lower end of the mainstream industrial air market. The mainstream market is generally considered to require between 7 and 10 bar gauge delivery pressures. Corac expects further increases in delivery pressure to be possible from further refinement of the aerodynamic design of the compressor. It is not yet possible to say when this further development work will be completed. Corac has explained that it expects considerable cost reductions to be possible compared to the one-off prototype component cost. PA agrees with Corac that significant cost reductions will be possible when the system is designed for volume production, but recommends that Corac makes adequate and timely provision to achieve this planned cost reduction as it is key to Corac achieving its forecasted profitability.

To help demonstrate Corac's lower lifecycle cost claims, PA recommends that Corac prepares a comparative analysis between the Corac compressor and the competing technologies. Currently it is not clear what the magnitude of the savings might be to an end user. PA believes that this comparison will be crucial in obtaining acceptance of the product at Corac's forecast selling price.

Corac has indicated that the detailed assembly plan for the achievement of its targets is in the process of being developed. Corac should not underestimate the work required to establish a test and assembly facility and recruit the appropriate personnel. PA supports Corac's plan to recruit a director with relevant experience to establish the assembly facility in parallel with the ongoing product development activities.

PA recommends that Corac manages each of these risks effectively if profitable series production is to be realised at the end of quarter one 2002.

5.2 *Down-hole Gas Compressor*

This programme seeks to develop a down-hole compressor that will take advantage of Corac's gas bearing and motor technology. Corac has been working with a partner to present its concept to a number of major oil and gas companies, two of which have expressed a strong interest in funding R & D programmes.

There are two variants planned, each with a different oil and gas exploration company. Both are planned to use a multi stage axial compressor. The first, with an electric motor drive based on Corac's permanent magnet motor technology, is intended to pump natural gas out of gas wells. PA understands that this has the potential to extend the life of gas wells by between three and five years. The bearings would run on a supply of clean methane pumped down from a small compressor on the surface.

The second variant will be used in oil wells to assist in the separation of natural gas from the oil being extracted. Because of the high pressures at the bottom of oil wells (typically up to 250 bar) this will be a water turbine driven system and will use existing turbine technology developed by Corac's partner. In this case it is proposed that the bearings would run on a supply of the separated gas.

5.2.1 *Project Merits*

The primary benefit of applying the Corac technology is the ability to produce a reliable, compact compressor that can operate down oil and gas wells. The gas well application is intended to be capable of being retrofitted, although this is not the case with the oil well gas separator compressor.

An alternative in each application is to use a compressor on the surface (wellhead gas compression), but this is reported to have operational disadvantages in both applications.

5.2.2 *Commercial Potential*

A representative of Corac's partner has informed PA that it is currently undertaking a market study of the potential for this technology. Although the size of the opportunity has not been quantified, it believes it to be substantial, with the potential to sell several hundred systems per year at a total system cost in the order of £1m. Each gas field may have typically a dozen individual wells.

One of the benefits of working with a partner on this development is its experience of supplying systems to the oil and gas sector.

5.2.3 Project Management and Development Plans

Corac anticipates that R & D contracts covering the development of both variants will be signed within the next few months. These contracts are planned to fund the total cost of these programmes (labour, materials and contribution to overheads).

Corac's team leader for the programme has been identified and staff will be recruited once the R & D contracts have been signed. The programmes will require additional development facilities, which Corac has leased adjacent to its existing facilities at Uxbridge. Both downhole programmes are expected to take at least three years, with prototype field testing in the third year.

5.2.4 Risk Factors

PA notes that the R & D contracts are still in the negotiation phase and that the development programme has not yet commenced.

Given the proposed funding mechanism of the project, PA believes that the financial risk to Corac is acceptable. Investment in the oil and gas sector has been traditionally dependent on the price of crude oil, but Corac and its partners see this as a long-term development of at least three years duration.

There are technical risks inherent in making the technology work in hostile downhole conditions, which we expect the development programme to be structured to address. These risks include:

- operating the system at high static pressures (particularly in the case of the oil-gas separator system)
- providing an adequate high frequency motor drive remotely from the inverter (which will be on the surface)
- providing a clean gas supply for the bearings and motor cooling
- the presence of water droplets and solids in the gas being compressed.

5.3 *Hydrostatic Seals for Compressors and Pumps*

This project seeks to design, build and test a commercial demonstrator to prove Corac's hydrostatic seal technology.

5.3.1 Project Merits

The potential merits of this technology are that it offers a seal that, if successful, will generate a film between the moving surfaces that is generated hydrostatically rather than hydrodynamically. Therefore a lubricating film will be generated whenever there is pressure across the seal and it will not rely on relative motion between the surfaces. This should enable wear and film shearing losses to be reduced under starting, stopping and low speed running.

5.3.2 Commercial Potential

We have not been able to identify any independent market data for non-contacting spiral groove seals. However we understand sales to have grown significantly since John Crane launched its Type 28 series of spiral groove seals in the 1980s. We believe that the existing spiral groove seals command a high price, although apart from the spiral grooves, their design is not significantly different or more costly than lower cost conventional face seals of a similar size.

5.3.3 Project Management and Development Plans

This programme has commenced and Corac has recruited an engineer with industry and product knowledge to manage the development. Corac plans to build a commercial demonstrator within the next six to twelve months. It will then make a decision on the next stage of development.

5.3.4 Risk Factors

We understand that Corac has filed for a patent to cover the existing seal technology. Corac's ability to exploit the technology commercially will depend to a significant extent on whether this patent is granted.

The successful design of mechanical seals, particularly gas seals, depends on optimising the design of the seat and face rings to operate over a wide range of steady state and transient operating conditions. Small amounts of thermal or pressure distortion of the seal rings can have a significant effect on the operation of the seal. It will be necessary for Corac to structure its development programme to address these technical risks, although the recruitment of an engineer with seal development experience will help in managing these risks.

Corac should not underestimate the challenge of successfully introducing a new type of seal to the market. Although the technology is important, the success of existing seal manufacturers depends to a large extent on their reputation, their ability to offer a wide range of applications engineering experience during the specification phase and comprehensive after sales support, on a global basis. As the cost of unplanned down-time of large compressors and pumps is so high, one of the reasons that users are prepared to pay such a high price for existing seals, is confidence in the product and the ability of the supplier to support the product. This may bias the preferred exploitation route towards licensing rather than supplying products.

6. Conclusions

PA believes that Corac has a strong technology position and an experienced technical team, which it is still expanding. Whilst there are challenges ahead in completing the technology development, developing a test and assembly capability and recruiting staff, Corac is taking steps to evolve against a defined business plan into a commercially strong operation.

Corac appears to have based its high-speed turbo compressor on sound engineering principles and has applied fundamental theory to establish the basic concept. Theoretical analysis and experimental engineering have enabled Corac to demonstrate the basic operation of the 90kW industrial air compressor, although there remains some work to achieve satisfactory operation under full load conditions. Technical issues to be resolved include the high rotor temperature, demonstrating full-load operation and achieving a satisfactory manufacturing cost. PA would expect Corac to overcome these issues given the appropriate time and resource.

Successful market entry will depend on signing satisfactory agreements with partners who can provide access to customers, package the cores into complete systems and provide after-sales support. Completing the current demonstrator prototype and satisfying the performance requirements of their potential partners are Corac's most immediate priorities.

As well as being able to offer a truly no-oil compressor, one of the key market drivers appears to be low life cycle costs, including low maintenance and energy costs. It will be essential for Corac to demonstrate to licensees and end users that the compressor can run reliably with low levels of maintenance and at high efficiencies.

In addition to industrial air applications, Corac's compressor technology offers the potential for a very compact compressor for down hole applications in the oil and gas sector. In PA's view, Corac is planning a sensible approach to applying its technology to down hole oil and gas applications. Corac and its development partner recognise that this programme represents a considerable engineering challenge and is therefore high risk. However, if successful, the market potential for such a product appears to be considerable. Corac plans to manage the financial risk by seeking funding to cover its total costs for this programme and PA supports this prudent approach.

The non-contacting seals programme could result in an attractive alternative to currently available non-contacting hydrodynamic seal technology. Corac's strategy of internally funding the development of a working prototype is appropriate to secure the interest of potential customers or licensees. However, this programme should be reviewed regularly to ensure that its commercial potential is commensurate with the resources being allocated to it.

Corac is taking an appropriate approach to exploiting its core technologies via a focused portfolio of product developments. It has the intention of partnering with organisations that can offer complementary skills to those of Corac and who can offer access to its selected markets. Corac recognises the need to begin to turn its programmes into product based revenues. This will require a skill set and culture which supports a rigorous product development process and medium volume assembly capability, in addition to the strength of its technology.

Yours faithfully

John V Buckley
For and on behalf of PA Strategy Partners Limited

Part V

Patent agent's report

The following is the full text of a report on Corac by J.A. Kemp & Co.:

The Directors
Corac Group PLC
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The Directors
WestLB Panmure Limited
New Broad Street House
35 New Broad Street
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28 June 2001

Dear Sirs

1. Introduction

- 1.1 This report deals with patent rights which are relevant to Corac Group PLC
- 1.2 J. A. Kemp & Co has acted on behalf of Corac Group PLC since April 1999.
- 1.3 J. A. Kemp & Co is a professional partnership of patent attorneys in private practice. All the partners and fully qualified technical assistants are Chartered Patent Attorneys, entitled to practice before the United Kingdom Patent Office and to appear before certain courts in the United Kingdom. They are also European Patent Attorneys entitled to represent clients before the European Patent Office in Munich. Some partners and technical assistants who are active in prosecuting trade mark applications are also qualified as registered Trade Mark Agents. In addition one of the partners is a qualified solicitor.
- 1.4 J. A. Kemp & Co is composed of partners and technical assistants. A significant part of the firm's practice is in the field of engineering. All those working in this area have degrees in branches of engineering or physics. The firm has wide experience over many years in advising British and overseas clients on intellectual property matters in a wide range of technical areas.

2. The Patent System

- 2.1 Patents are national rights in respect of inventions granted under the legislation of most countries of the world. In principle a valid patent, when granted, confers upon the holder a right in the country concerned to stop others from carrying out the patented invention without his permission. This right is generally enforceable by court proceedings. The right conferred by a patent is a limited one. It is limited to the country for which it has been granted. It is of limited duration and is usually subject to payment of annual fees. It does not give the owner a positive right to practise the patented invention since to do so may infringe the patent rights of others. The holder of a patent may, in general, grant licences under the patent.
- 2.2 Obtaining a patent in the United Kingdom and most other countries is a complex matter. It involves the initial filing of a patent application with the appropriate authorities. The patent application may be filed at the national Patent Office of the country in question. In some countries, including the UK, the patent application may alternatively be filed under the auspices of an international convention such as the Patent Cooperation Treaty (PCT) or the European Patent Convention (EPC). Thereafter the applicant will have to comply with the requirements of the applicable legislation for the grant of a patent. This is usually a lengthy process. It may take several years and success cannot be guaranteed.

- 2.3 A European patent application filed now under the EPC will, when granted, become a bundle of national patents in any or all of the following twenty EPC contracting states:
- Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Netherlands, Portugal, Spain, Sweden, Switzerland, Turkey and the United Kingdom.
- 2.4 The initial application, made to the European Patent Office (EPO), must designate the EPC contracting states of interest and is centrally searched and examined. This involves an EPO Examiner searching for potentially relevant "prior art" in the form of prior publications, both patent documents and non-patent literature, in similar fields to the invention, and considering whether these render the invention old or otherwise unpatentable. Objections to the grant of a patent may then be raised by the Examiner. The applicant will have to answer these objections, if he can, to the satisfaction of the Examiner. It will frequently be necessary to narrow the scope of the invention he seeks to patent. If the invention is considered patentable the application will be granted by the EPO. It can then become effective as a national patent in any or all of the EPC states designated in the application as filed. Each national patent will then be enforceable under local law in the European country in question.
- 2.5 When broader territorial coverage is required an international application can be filed under the PCT. This is administered by the World International Property Organisation (WIPO) based in Geneva, Switzerland. The centralised PCT procedure allows applicants for patents to file a single application designating those member states of the PCT in which patent protection is desired. Over one hundred countries worldwide are currently members of the PCT including the United States, Japan, the twenty EPC contracting states and other European countries. A PCT application is subjected to a search and, if desired, a preliminary examination. After that the PCT application ceases to be a single application. It is converted instead into a bundle of separate "national phase" applications in the designated PCT states of interest. Each national phase application is treated separately. A final decision on patentability for each application is taken by the national patent office, or regional office such as the EPO, in question.
- 2.6 The filing of a patent application is frequently a two stage process. The Paris Convention for the Protection of Industrial Property provides that, if a patent application is filed in one of the contracting states to that Convention, further applications for the same invention may be filed up to one year later in other contracting states and be treated for most purposes as if they had been filed on the date of the first application. The further applications may, for instance, be filed as PCT applications or as European patent applications under the EPC. This system of establishing a so-called priority date, and then filing worldwide within one year of that priority date, has the practical consequence of allowing an applicant for a patent to file a single application initially and then to consider, over the course of the next twelve months, the territorial extent of coverage which is required for the invention. It also allows further developmental work to be carried out on the invention which can then be included in the final patent application(s) filed.
- 2.7 In most countries patent applications are published eighteen months from the priority date. A notable exception is the USA where, until recently, publication only occurs on grant. This publication maybe the first opportunity that interested third parties will have to read details of the invention.
- 2.8 If a patent application is considered to have met the relevant statutory requirements, a patent will be granted. However, the possession of a patent granted by a Patent Office does not guarantee that the patent is valid and enforceable. It is open to third parties after patent grant (and before grant in some countries) to assert that the patent should not have been granted and to obtain revocation of the grant or refusal of the patent application as the case may be. Once granted, patents in most countries last for twenty years from the filing date in that country provided that statutory renewal fees, necessary to maintain the patent in force, are paid. In most countries such fees are due annually.

3. Patent Policy

- 3.1 National/regional filing decisions are taken on the basis of the importance of the invention.
- 3.2 The current strategy generally results in applications being filed in Europe, USA and Japan.
- 3.3 We have not carried out any infringement studies in the United Kingdom or any other territory.

3.4 It is open to third parties to challenge patents and patent applications, on grounds such as lack of novelty and/or inventive step. For example, patents granted by the European Patent Office are open to opposition in the nine month period following grant. We are not aware of any such challenge having been made to any of the patent applications listed below.

3.5 Appropriate checks have been carried out to confirm that the patent applications referred to below remain in force and that all maintenance fees have been paid, where these are due.

4. Ownership

4.1 All of the patent applications referred to below stand in the name of Corac Group PLC. We have not investigated whether any third party has a claim to rights in any of these patent applications.

5. Patent Portfolio

Introduction

5.1 The patent applications listed below are grouped together in patent families. The scope of the claims may vary slightly within each family, due to the differences in patent law in the various territories in which the inventions are pursued. The summaries below provide details of all the live patent applications in the portfolio. To the best of our knowledge and belief the summaries are up-to-date at the date of this report.

5.2 The summaries below necessarily present an overview of the portfolio. The reader should consult the pending claims (where available for public inspection) for an assessment of the claim coverage.

Water Cooling I

5.3 This invention was originally the subject of British Patent Application No. 9602126.6, filed on 2 February 1996. This application was abandoned in favour of an International (PCT) patent application filed on 31st January 1997 and claiming priority from the original British patent application. This International application was given the application number PCT/GB97/00292 and was published on 7 August 1997 as International publication no. WO 97/28372. This International application was taken into the European Regional Phase and was assigned European Patent Application No. 97902446.0. This European (EPC) patent application designates Austria, Belgium, Switzerland/Liechtenstein, Germany, Denmark, Spain, Finland, France, the United Kingdom, Greece, Ireland, Italy, Luxembourg, Monaco, the Netherlands, Portugal and Sweden. This International application was also taken into the US National Phase where it was assigned US Patent Application No. 09/117,648. This US Patent Application was subsequently abandoned in favour of a continuation-in-part application (US Patent Application No. 09/128,377) - see Section 5.5 below.

European Patent Application No. 97902446.0 is currently pending. In a first examination Official Letter the European Patent Office indicated that it considered the claimed apparatus and method to be novel and inventive over the prior art known to it. In response to that indication the claims were voluntarily amended to correspond generally to relevant claims from the US Water Cooling I and II patent application - see Section 5.5 below. The application has been examined by the European Patent Office and indicated to be in acceptable order for grant.

This European patent application relates to the liquid cooling of compressor rotors. Coolant liquid is passed through the hollow rotor shaft of the compressor via a hollow tie bolt, and through a hollow impeller rotor stage.

The sole named inventor is Dr Richard Julius Gozdawa.

Water Cooling II

5.4 This invention was originally the subject of British Patent Application No. 9716494.1, filed on 5 August 1997. This application was abandoned in favour of a European (EPC) patent application filed on 5 August 1998 and claiming priority from the original British application. This European patent application was given the application number 98306266.2 and was published on 10 February 1999 as publication no. 0 896 158. This European patent application designates Germany, France and the United Kingdom and is currently pending. The examination fee was paid in May 2000. The first examination report has yet to be issued.

Like the EPC "Water Cooling I" application, this application relates to the liquid cooling of compressor rotors. The general concept is similar to the original concept of the "Water Cooling I" application, but is modified.

The sole named inventor is Dr Richard Julius Gozdawa.

Water Cooling I and II

- 5.5 US Patent Application No. 09/128,377, filed 3 August 1998, is a continuation-in-part of the now-abandoned US Patent Application No. 09/117,648 (filed 3 August 1998), which claims priority of International application no. PCT/GB97/00292 (filed 31 January 1997), which claims priority of British Patent Application No. 9602126.6 (filed 2 February 1996) - see Section 5.3 above. US Patent Application No. 09/128,377 also claims priority from British Patent Application No. 9716494.1 (filed 5 August 1997) - see Section 5.4 above.

US Patent Application No. 09/128,377 is currently pending. Notice of Allowance issued on 21 February 2001. The issue fee was paid in May 2001. A US Patent should issue approximately three to four months thereafter.

US Patent Application No. 09/128,377 relates to the liquid cooling of compressor rotors. It concerns both the original concept of the "Water Cooling I" case and the modifications of the "Water Cooling II" case.

The sole named inventor is Dr Richard Julius Gozdawa.

Composite Shaft

- 5.6 This invention was originally the subject of a British Patent Application No. 9715951.1, filed on 30 July 1997. This application was abandoned in favour of an International (PCT) patent application filed on 29 July 1998 and claiming priority from the original British application. This International application was given the application No. PCT/GB98/02266 and was published on 11 February 1999 as International publication no. WO 99/06721.

International Patent Application No. PCT/GB98/02266 was subjected to International Preliminary Examination before the European Patent Office. This resulted in the issue of an International Preliminary Examination Report commenting favourably on patentability. The International application was taken into the European Regional Phase and into the US national phase.

The European Regional Phase was allocated European (EPC) Patent Application No. 98936533.3 and designates Germany, France, the United Kingdom and Italy. The application has been examined by the European Patent Office and indicated to be in acceptable order for grant.

The US National Phase was allocated US Patent Application No. 09/463,813. The application has been examined by the US Patent and Trademark Office and some of the claims rejected. A reply has since been filed arguing for allowance of the application and the reaction of the US Patent and Trademark Office is awaited.

These applications relate to a composite shaft comprising at least two segments of dissimilar materials, e.g. different mechanical or thermal properties.

The sole named inventor is Dr Richard Julius Gozdawa.

Tilting Pad Journal Bearing

- 5.7 This invention was originally the subject of British Patent Application No. 9818098.7, filed on 19 August 1998. This application was abandoned in favour of an International (PCT) patent application filed on 19 August 1999 and claiming priority from the original British application. This International application was given the application No. PCT/GB99/02748 and was published on 2 March 2000 as International Publication No. WO 00/11360.

International Patent Application No. PCT/GB99/02748 was subjected to International Preliminary Examination before the European Patent Office. This resulted in the issue of an International Preliminary Examination Report commenting unfavourably on patentability. The International Application was then taken into the European Regional Phase and into the US and Japanese National Phases.

The European Regional Phase was allocated European (EPC) Patent Application No. 99940370.2 and designates Austria, Belgium, Switzerland/Liechtenstein, Cyprus, Germany, Denmark, Spain, Finland, France, the United Kingdom, Greece, Ireland, Italy, Luxembourg, Monaco, the Netherlands, Portugal and Sweden.

The Japanese National Phase was allocated Japanese Patent Application No. 2000-566585. The US Patent Application No. allocated to the US National Phase is 09/762,997.

None of the European, US and Japanese patent applications has yet been examined.

These applications relate to a tilting pad journal bearing in which at least one of the pivotable bearing pads is provided on a radially movable member and is biased towards the journal. Pressurised gas is supplied to the pad to journal interface to separate the pad from the journal until a speed is reached at which the bearing functions as a self-generating bearing.

The sole named inventor is Dr Richard Julius Gozdawa.

Bearing Assemblies

- 5.8 This invention was originally the subject of British Patent Application No. 9818097.9, filed on 19 August 1998. This application was abandoned in favour of an International (PCT) patent application filed on 19 August 1999 and claiming priority from the original British application. This International application was given the application No. PCT/GB99/02753 and was published on 2 March 2000 as International Publication No. WO 00/11362.

International Patent Application No. PCT/GB99/02753 was subjected to International Preliminary Examination before the European Patent Office. This resulted in the issue of an International Preliminary Examination Report commenting favourably on patentability. The International Application was then taken into the European Regional Phase and into the US and Japanese National Phases.

The European Regional Phase was allocated European (EPC) Patent Application No. 99940375.1 and designates Austria, Belgium, Switzerland/Liechtenstein, Cyprus, Germany, Denmark, Spain, Finland, France, the United Kingdom, Greece, Ireland, Italy, Luxembourg, Monaco, the Netherlands, Portugal and Sweden.

The Japanese National Phase was allocated Japanese Patent Application No.2000-566587.

The US Patent Application No. allocated to the US National Phase is 09/763,227.

None of the European, US and Japanese patent applications has yet been examined.

These applications relate to a bearing comprising inner and outer bearing shells for supporting a rotary shaft. The inner shell can move axially and tilt relative to both the outer shell and the rotary shaft. Channels are provided in shell surfaces for the supply thereto of high pressure fluid to maintain the components in equilibrium.

The sole named inventor is Dr Richard Julius Gozdawa.

Thrust Bearing Load Control

- 5.9 This invention is the subject of British Patent Application No. 0103298.6, filed on 9 February 2001. There are no corresponding applications at this stage. The deadline for filing patent applications claiming priority from the British patent application is 9 February 2002.

The application was filed together with a request for the British Patent Office to conduct a novelty search, the results of which are awaited.

This application relates to the determination and/or control of the loadings on thrust bearings.

The sole named inventor is Dr Richard Julius Gozdawa.

Gas Seal

- 5.10 We are informed by Urquhart-Dykes & Lord, Patent Agents for Orion Gas Seals Limited, that: British Patent Application No. 9325128.8 was filed in respect of gas seals technology on 8 December 1993 in the name of Orion Gas Seals Limited and this application was withdrawn on 5 November 1994; this application was re-filed as British Patent Application No. 9422500.0 on 8 November 1994 in the name of Orion Gas Seals Limited and on 8 November 1995 this application was allowed to lapse; and this application was further re-filed as British Patent Application No. 9523091.8 on 10 November 1995 in the name of Orion Gas Seals Limited and this application was allowed to lapse on 10 November 1996. We are also informed by Urquhart-Dykes & Lord that each of the subsequent applications was re-filed at a time when the earlier application(s) had been unconditionally withdrawn or abandoned without leaving any rights outstanding. None of the applications was filed claiming priority from an earlier application.

We are informed by Dr Richard Julius Gozdawa that he was the inventor of the subject-matter contained in these three applications. We are also informed by A Messulam & Co. Ltd, Patent Agents, that a further British Patent Application, No. 0110521.2 and relating to gas seal assemblies, was filed on 30 April 2001 in the name of Corac Group PLC containing the subject-matter of the earlier three British patent applications, as well as substantial extra new subject-matter, naming Dr Richard Julius Gozdawa as the inventor. We are further informed that application No. 0110521.2 was filed together with a request for the British Patent Office to conduct novelty searches, the results of which are awaited.

Yours faithfully

J. A. KEMP & CO

Part VI

Accountants' report on the Group

Set out below is the text of a report received from Grant Thornton, registered auditors, chartered accountants and reporting accountants:

The Directors
Corac Group PLC
No 1 Building
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Uxbridge UB8 3PQ

Grant Thornton 

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and

The Directors
WestLB Panmure Limited
New Broad Street House
35 New Broad Street
London EC2M 1SQ

28 June 2001

Corac Group PLC ("the Company") and its subsidiary undertakings (together "the Group")

1. Introduction

1.1 We report on the financial information set out in sections 3 to 7. This financial information has been prepared for inclusion in the Admission Document dated 28 June 2001 of Corac Group PLC.

Basis of preparation

1.2 The financial information set out in sections 3 to 7 below is based on the audited consolidated financial statements of Corac Group PLC for the three years ended 31 December 2000 after making such adjustments as we considered necessary.

Responsibility

1.3 Such financial statements are the responsibility of the directors of Corac Group PLC who approved their issue.

1.4 The directors of Corac Group PLC are responsible for the contents of the Admission Document relating to the admission of Corac Group plc to AIM dated 28 June 2001 in which this report is included. It is our responsibility to compile the financial information set out in our report from the financial statements, to form an opinion on the financial information and to report our opinion to you.

Basis of opinion

1.5 We conducted our work in accordance with the Statements of Investment Circular Reporting Standards issued by the Auditing Practices Board. Our work included an assessment of evidence relevant to the amounts and disclosures in the financial information. The evidence included that recorded by the auditors who audited the financial statements underlying the financial information. It also included an assessment of significant estimates and judgements made by those responsible for the preparation of the financial statements underlying the financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

1.6 We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial information is free from material misstatement whether caused by fraud or other irregularity or error.

Opinion

- 1.7 In our opinion the financial information gives, for the purposes of the Admission Document dated 28 June 2001, a true and fair view of the results and cash flows of the Company for the three years ended 31 December 2000 and the state of affairs of the Company at the end of each of those periods.

Consent

- 1.8 We consent to the inclusion in the Admission Document dated 28 June 2001 of this report and accept responsibility for this report for the purposes of paragraph 45(1)(b)(iii) of Schedule 1 to the Public Offers of Securities Regulations 1995.

2. Statutory information

- 2.1 The Company has two wholly owned subsidiaries, Corac Engineering Limited and Compact Radial Compressors Limited.
- 2.2 Compact Radial Compressors Limited entered into a Company Voluntary Arrangement with its creditors in November 1998. Creditors outstanding at 31 December 2000 amounted to £2,000 (1999: £125,000, 1998: £137,00). A notice of completion of this voluntary arrangement was filed at Companies House by the supervisor on 30 January 2001. Compact Radial Compressors Limited did not trade in 1999 or 2000.
- 2.3 Corac Engineering Limited did not trade in 2000. Trading activity in 1998 and 1999 related to the manufacture and development of bearings.

3. Accounting policies*Basis of consolidation*

The Group financial statements consolidate those of Corac Group Plc and of its subsidiary undertakings drawn up to 31 December each year. The results of subsidiary undertakings acquired during the year have been included from the date of acquisition. Profit or losses on intra-group transactions are eliminated in full. On acquisition of a subsidiary, all of the subsidiary's assets and liabilities which exist at the date of acquisition are recorded at their fair values reflecting their condition at that date.

Goodwill arising on consolidation, reflecting the excess of fair value of the consideration given over the fair value of the identifiable net assets acquired, is capitalised and is amortised on a straight line basis over its estimated useful economic life.

As a matter of accounting policy, goodwill arising on consolidation first accounted for in accounting periods ended before 23 December 1998 (the implementation date of Financial Reporting Standard 10) was written off to reserves immediately on acquisition.

Stocks

Stocks and work in progress are stated at the lower of cost and net realisable value after making due allowance for obsolete or slow moving stocks. Cost includes all direct costs and an appropriate proportion of production overheads. Net realisable value is based on the estimated selling price less the estimated cost of disposal.

Deferred taxation

Deferred taxation is provided for using the tax rates estimated to arise when the timing differences reverse and is accounted for to the extent that it is probable that a liability or asset will crystallise in the foreseeable future. Unprovided deferred tax is disclosed as a contingent liability.

Depreciation

Depreciation is calculated to write down the cost less estimated residual value of tangible fixed assets by equal annual instalments over their expected useful lives. The periods generally applicable are:

Computer equipment	Three years
Office furniture and fittings	Five years
Plant and machinery	Five years

Short leasehold improvements are amortised over the life of the lease.

Research and development

Research and development expenditure is charged to the profit and loss account in the period in which it is incurred.

Leases

Rentals under operating leases are charged on a straight-line basis over the lease term.

Contributions to pension funds

The Company operates a money purchase scheme for the benefit of the employees. The pension costs charged against profits represent the amount of the contributions payable to the scheme in respect of the accounting period.

Foreign currencies

Transactions in foreign currencies are translated at the exchange rate ruling on the date of the transaction. Monetary assets and liabilities in foreign currencies are translated at the rates of exchange ruling at the balance sheet date. Exchange differences are dealt with through the profit and loss account.

Patent fees

Patents costs are written off in the year of registration.

Cash

In accordance with FRS 1 (Revised), short term cash deposits are included on the balance sheet within cash at bank and in hand. These deposits do not constitute cash for the purposes of the cash flow statement and have been disclosed separately in note 7.11 to these accounts.

4. Consolidated Profit and Loss Accounts

		Year ended 31 December 1998	Year ended 31 December 1999	Year ended 31 December 2000
	Note	£'000	£'000	£'000
Turnover	7.1	114	90	1
Cost of sales		(58)	(16)	(8)
Gross profit/(loss)		56	74	(7)
Other operating charges	7.3	(942)	(487)	(964)
Operating loss	7.2	(886)	(413)	(971)
Net interest	7.4	(14)	—	123
Loss on ordinary activities before taxation		(900)	(413)	(848)
Tax on loss on ordinary activities	7.6	—	—	—
Loss transferred from reserves		(900)	(413)	(848)

There were no recognised gains or losses other than the loss for each of the financial years ended 31 December 1998, 1999 and 2000.

5. Consolidated Balance Sheets

	Note	As at 31 December 1998 £'000	As at 31 December 1999 £'000	As at 31 December 2000 £'000
Fixed assets				
Tangible assets	7.7	50	25	192
Current assets				
Stocks	7.8	3	—	—
Debtors	7.9	49	20	127
Cash at bank and in hand	7.10	12	3	4,221
		<u>64</u>	<u>23</u>	<u>4,348</u>
Creditors: amounts falling due within one year	7.11	(225)	(251)	(260)
Net current assets/(liabilities)		<u>(161)</u>	<u>(228)</u>	<u>4,088</u>
Total assets less current liabilities		<u>(111)</u>	<u>(203)</u>	<u>4,280</u>
Creditors: amounts falling due after more than one year				
Convertible debt	7.12	(399)	—	—
		<u>(510)</u>	<u>(203)</u>	<u>4,280</u>
Capital and reserves				
Called up share capital	7.13	100	155	248
Share premium account	7.14	1,795	2,460	7,698
Profit and loss account	7.14	(2,405)	(2,818)	(3,666)
Equity shareholders' funds		<u>(510)</u>	<u>(203)</u>	<u>4,280</u>

6. Consolidated Cash Flow Statements

		Year ended 31 December 1998	Year ended 31 December 1999	Year ended 31 December 2000
	Note	£'000	£'000	£'000
Net cash outflow from operating activities	7.16	(755)	(358)	(1,013)
Returns on investments and servicing of finance				
Interest received		3	4	141
Interest paid		(17)	(4)	(18)
Net cash (outflow)/inflow from returns on investments and servicing of finance		(14)	—	123
Taxation		—	—	—
Capital expenditure and financial investment				
Purchase of tangible fixed assets		(248)	—	(196)
Sale of tangible fixed assets		235	—	—
Net cash outflow from capital expenditure and financial investment		(13)	—	(196)
Management of liquid resources				
Cash transferred to short term deposits		—	—	(3,658)
Net cash outflow from management of liquid resources		—	—	(3,658)
Financing				
Issue of share capital		744	349	5,304
Issue of loan stock		324	—	—
Receipts from borrowings		75	—	—
Repayment of borrowings		(130)	—	—
Capital element of finance lease payments		(97)	—	—
Net cash inflow from financing		916	349	5,304
Increase/(decrease) in cash		134	(9)	560

7. Notes to the financial information

7.1 Turnover

Turnover is attributable to the sale of licences in the Company's research project and the sale of bearings by the Company's subsidiary Corac Engineering Limited, excluding VAT.

7.2 Loss on ordinary activities before taxation

Operating loss is stated after charging

	1998 £'000	1999 £'000	2000 £'000
Development costs	486	265	477
Loss on disposal of fixed assets	35	—	9
Auditors remuneration:			
– audit services	4	5	7
– non-audit services	3	6	3
Depreciation of tangible fixed assets	95	25	20
Operating leases			
– plant and equipment	50	—	—
– property	35	28	37
	<u>486</u>	<u>265</u>	<u>477</u>

7.3 Cost of sales and other operating income and charges

	1998 £'000	1999 £'000	2000 £'000
Other operating charges:			
Development costs	486	265	477
Administrative expenses	456	222	487
	<u>942</u>	<u>487</u>	<u>964</u>

7.4 Net interest

	1998 £'000	1999 £'000	2000 £'000
Bank interest receivable	3	4	141
Bank overdraft interest payable	(15)	(3)	(18)
Convertible loan stock interest	(2)	(1)	—
	<u>(14)</u>	<u>—</u>	<u>123</u>

7.5 Directors and employees

Staff costs during the year were as follows:

	1998 £'000	1999 £'000	2000 £'000
Wages and salaries	337	215	345
Social security costs	31	25	41
Other pension costs	—	—	5
	<u>368</u>	<u>240</u>	<u>391</u>

The average number of employees of the group, including directors was 10 (1999: 9, 1998: 8.)

Remuneration in respect of directors was as follows:

	1998 £'000	1999 £'000	2000 £'000
Emoluments	128	66	182
Payments to third parties for directors' services	9	24	91
	<u>137</u>	<u>90</u>	<u>273</u>
Compensation for loss of office	13	—	—
	<u>150</u>	<u>90</u>	<u>273</u>

No pension contributions were made on behalf of the directors. The Group does not operate a pension scheme for the benefit of directors.

During the year ended 31 December 2000 Paul Banner exercised options over 250,000 shares at 10p per share.

The amounts set out above include remuneration in respect of the highest paid director as follows:

	2000 £'000
Emoluments	<u>182</u>

7.6 Tax on loss on ordinary activities

No charge to corporation tax arises on the trading loss for the years ended 31 December 1998, 1999 and 2000.

Subject to Inland Revenue agreement the Group has unrelieved tax losses at 31 December 2000 of approximately £3,397,000 (1999: £2,603,000, 1998: £2,217,000), of which £2,058,000 (1999: £2,058,000, 1998: £2,058,000) relates to Compact Radial Compressors Limited.

7.7 *Tangible fixed assets*

	Short leasehold improvements £'000	Computer equipment £'000	Office furniture and fittings £'000	Plant and machinery £'000	Total £'000
Cost					
At 1 January 1998	30	44	2	122	198
Additions	—	1	—	247	248
Disposals	—	(5)	—	(340)	(345)
At 31 December 1998	30	40	2	29	101
Additions	—	—	—	—	—
Disposals	—	—	—	—	—
At 31 December 1999	30	40	2	29	101
Additions	80	66	1	49	196
Disposals	(30)	(14)	(1)	(12)	(57)
At 31 December 2000	80	92	2	66	240
Depreciation					
At 1 January 1998	8	15	—	8	31
Provided in the year	6	15	1	73	95
Eliminated on disposal	—	(4)	—	(71)	(75)
At 31 December 1998	14	26	1	10	51
Provided in the year	6	13	—	6	25
Eliminated on disposal	—	—	—	—	—
At 31 December 1999	20	39	1	16	76
Provided in the period	9	1	1	9	20
Eliminated on disposal	(25)	(14)	(1)	(8)	(48)
At 30 December 2000	4	26	1	17	48
Net book amount at 30 December 2000	76	66	1	49	192
Net book amount at 31 December 1999	10	1	1	13	25
Net book amount at 31 December 1998	16	14	1	19	50

7.8 *Stocks*

	1998 £'000	1999 £'000	2000 £'000
Work in progress	3	—	—

7.9 *Debtors*

	1998 £'000	1999 £'000	2000 £'000
Trade debtors	20	—	10
Other debtors	29	14	85
Other taxes and social security	—	6	32
	49	20	127

7.10 *Cash at bank and in hand*

	1998 £'000	1999 £'000	2000 £'000
Bank balances and cash	12	3	563
Short-term deposits	—	—	3,658
	12	3	4,221

7.11 Creditors: amounts falling due within one year

	1998 £'000	1999 £'000	2000 £'000
Series A convertible loan stock (see note 7.12)	—	28	1
Trade creditors	117	127	133
Social security and other taxes	33	38	69
Other creditors	2	3	—
Accruals	73	55	57
	<u>225</u>	<u>251</u>	<u>260</u>

7.12 Creditors: amounts falling due after one year

	1998 £'000	1999 £'000	2000 £'000
Series A Convertible unsecured loan stock	300	—	—
Series B Convertible unsecured loan stock	24	—	—
Additional loan	75	—	—
	<u>399</u>	<u>—</u>	<u>—</u>

Series A convertible unsecured loan stock was convertible by the holder into ordinary shares at 10 pence per share at any time until 28 February 2000. On this date, any loan stock not converted was redeemable at par together with interest at the rate of 10 per cent per annum. At 31 December 1999 £28,000 remained unconverted. At 31 December 2000, £1,000 of this loan stock remained unredeemed as the holder is untraceable; this amount is repayable on demand and interest accrues at the rate of 10 per cent per annum.

Series B convertible unsecured loan stock was convertible by the holder into ordinary shares at 10 pence per share at any time until 28 February 2000. On this date, any loan stock not converted was redeemable at par together with interest at the rate of 10 per cent per annum. All stock had been converted at 31 December 1999.

The additional loan arose when an investment via a third party broker was not issued as share capital within the prescribed time limit. This amount was converted into Series B convertible unsecured loan stock on 7 May 1999 and subsequently converted.

7.13 Share capital

	1998 £'000	1999 £'000	2000 £'000
<i>Authorised</i>			
30,000,000 (1999: 30,000,000, 1998: 20,000,000) ordinary shares of 1p each	<u>200</u>	<u>300</u>	<u>300</u>
<i>Allotted, called up and fully paid</i>			
24,796,739 (1999: 15,506,782, 1998: 10,026,682) ordinary shares of 1p each	<u>100</u>	<u>155</u>	<u>248</u>

Allotments during the year – 2000

At 1 January 2000 the company had in issue 1,962,218 warrants (1999: 1,962,218, 1998: 1,962,218) which gave the holder the right to acquire 1 ordinary share for each warrant held, exercisable on or before 31 December 2000. The exercise price of each warrant was 45p. 1,274,526 (1999: nil, 1998: 110,000) of these warrants were converted prior to the year end. The remainder have lapsed at 31 December 2000 and ceased to have any value.

Transaction	Number of shares	Price per share pence	Consideration £'000	Nominal value £'000	Share premium £'000
Conversion of series A loan stock	270,000	10	27	3	24
Exercise of share options by PL Banner	250,000	10	25	2	23
Subscription for shares	466,666	30	140	5	135
Conversion of warrants	1,280,526	45	576	13	563
Subscription for shares	2,021,839	60	1,213	20	1,193
Subscription for shares	5,000,926	70	3,350	50	3,300
	<u>9,289,957</u>		<u>5,331</u>	<u>93</u>	<u>5,238</u>

As a condition of the placing at 60p, shareholders were issued with one warrant for every two shares granting the right to purchase additional shares at 75p each. These warrants remain valid until June 2004. The number of warrants in issue at 31 December 2000 was 1,000,000 (1999: nil, 1998: nil).

Allotments during the year – 1999

Transaction	Number of shares	Price per share pence	Consideration £'000	Nominal value £'000	Share premium £'000
Conversion of loan stock	3,752,530	10	375	38	337
Subscription for shares	1,727,570	20	345	17	328
	<u>5,480,100</u>		<u>720</u>	<u>55</u>	<u>665</u>

Allotments during the year – 1998

Transaction	Number of shares	Price per share pence	Consideration £'000	Nominal value £'000	Share premium £'000
Exercise of warrants	110,000	45	50	1	49
Subscription for shares	988,900	75	694	10	684
	<u>1,098,900</u>		<u>744</u>	<u>11</u>	<u>733</u>

7.14 *Share premium account and reserves*

	Other reserve £'000	Share premium account £'000	Profit and loss account £'000
At 1 January 1998	(11)	1,062	(1,494)
Retained loss for the period	—	—	(900)
Goodwill written off	11	—	(11)
Premium on issue of shares net of expenses	—	733	—
At 31 December 1998	<u>—</u>	<u>1,795</u>	<u>(2,405)</u>
Retained loss for the period	—	—	(413)
Premium on issue of shares net of expenses	—	665	—
At 31 December 1999	<u>—</u>	<u>2,460</u>	<u>(2,818)</u>
Retained loss for the period	—	—	(848)
Premium on issue of shares net of expenses	—	5,238	—
At 31 December 2000	<u>—</u>	<u>7,698</u>	<u>(3,666)</u>

7.15 Reconciliation of movement in shareholders funds

	1998 £'000	1999 £'000	2000 £'000
Loss for the period	(900)	(413)	(848)
Issue of shares	744	720	5,331
Net increase/(decrease) in shareholders' funds	(156)	307	4,483
Shareholders' funds at start of period	(354)	(510)	(203)
Shareholders' funds at end of period	(510)	(203)	4,280

7.16 Net cash outflow from operating activities

	1998 £'000	1999 £'000	2000 £'000
Operating loss	(886)	(413)	(971)
Loss on disposals of assets	35	—	9
Depreciation	95	25	20
Decrease/(increase) in stock	(3)	3	—
Decrease/(increase) in debtors	(32)	29	(107)
Increase/(decrease) in creditors	36	(2)	36
Net cash outflow from operating activities	(755)	(358)	(1,013)

7.17 Analysis of change in net debt

	As at 1 January £'000	Cash flow £'000	Converted to equity £'000	As at 31 December £'000
1998				
Cash in hand and at bank	1	11	—	12
Bank overdraft	(123)	123	—	—
	(122)	134	—	12
Loan	(130)	55	—	(75)
Finance leases	(97)	97	—	—
Loan stock issued	—	(324)	—	(324)
	(349)	(38)	—	(387)
1999				
Cash in hand and at bank	12	(9)	—	3
Loan	(75)	—	75	—
Loan stock issued	(324)	—	296	(28)
	(387)	(9)	371	(25)
2000				
Cash in hand and at bank	3	560	—	563
Loan stock issued	(28)	—	27	(1)
Current asset investments	—	3,658	—	3,658
	(25)	4,218	27	4,220

7.18 Capital commitments and contingent liabilities

At 31 December 1998, 1999 and 2000 the Group had no capital commitments.

7.19 Pension costs

Defined contribution scheme

The Company operates a money purchase scheme for the benefit of the employees. The assets of this scheme are held separately from those of the Company in a trustee administered fund.

The pension cost charge represents contributions payable by the Company to these funds and amounted to £4,797 in 2000 (1999: nil, 1998: nil). There were no outstanding contributions payable to these funds at 31 December 1998, 1999 and 2000.

7.20 Leasing commitments

Annual commitments under operating leases are as follows:

	1998 £'000	1999 £'000	2000 £'000
Land and buildings			
Expiry date:			
– within one year	19	17	4
– between one and five years	16	16	—
– more than five years	—	—	40
	<u>35</u>	<u>33</u>	<u>44</u>
Other			
Expiry date:			
– within one year	9	—	—
	<u>9</u>	<u>—</u>	<u>—</u>

7.21 Transactions with directors and other related parties

The following transactions took place between the directors and Corac Group PLC:

- Fees of £12,000 were paid to Abel Venture Managers in respect of director's services provided by Paul Banner (1999: £12,000, 1998: £5,000).
- Fees of £66,800 were paid to Greenwood Control Systems in respect of director's services provided by Professor G Musgrave (1999: £12,000, 1998: £4,000).
- Fees of £6,000 were paid to Scheidegg Limited in respect of director's services provided by Mr J H Gunn (1999: nil, 1998: nil).
- Fees of £6,000 have been accrued in respect of director's services provided by Mr J Grant (1999: nil, 1998: nil).
- Fees of £3,428 have been paid to the accounting practice of Mr A M Hewlett for services provided prior to his appointment as a director.
- RJ Stallard is the principal of James Stallard & Co which provided professional services, fees for which totalled £47,000 in 1998 (2000: nil, 1999: nil)
- MF Davenhall provided an interest free loan of £30,000 to the Company in 1997. This loan was repaid in 1998.
- FAS Medical Limited, a company on which MF Davenhill has a business relationship, provided the Company with a loan of £100,000 in 1998. This was repaid on 27 February 1998, with interest of £3,000.

7.22 *Post balance sheet events*

At a general meeting of the Company on 15 March 2001 it was resolved that:

- the authorised share capital of the Company be increased from £300,000 to £20,000,000 by the creation of an additional 1,700,000,000 ordinary shares of 1p each
- £6,200,685 be capitalised and 25 ordinary shares be issued by way of a bonus issue to existing shareholders on the basis of 25 new ordinary shares for every 1 ordinary share held
- every ten of the issued and authorised but unissued 1p shares be consolidated into one 10p ordinary share.

Yours faithfully,

GRANT THORNTON

Part VII

Pro Forma Statement of Net Assets of Corac Group PLC

Unaudited pro forma statement of net assets of Corac Group PLC

Set out below is the pro forma unaudited statement of net assets of Corac plc prepared on the basis of the notes set out below, to illustrate how the Placing might have affected the net assets of the Group if it had occurred on 31 December 2000, the date to which the last audited consolidated balance sheet of the Group was prepared. This has been prepared for illustrative purposes only and, because of its nature, it may not give a true picture of the financial position of the Group.

	As at 31 December 2000 £'000 Note 1	Adjustments Note 2	As at 31 December 2000 Pro forma £'000
Fixed assets			
Tangible assets	192	—	192
	<u>192</u>	<u>—</u>	<u>192</u>
Current assets			
Debtors	127	—	127
Cash at bank and in hand	4,221	9,000	13,221
	<u>4,348</u>	<u>9,000</u>	<u>13,348</u>
Creditors: amounts falling due within one year	(260)	—	(260)
Net current assets/(liabilities)	<u>4,088</u>	<u>9,000</u>	<u>13,088</u>
Total assets less current liabilities	<u>4,280</u>	<u>9,000</u>	<u>13,280</u>
Net assets	<u><u>4,280</u></u>	<u><u>9,000</u></u>	<u><u>13,280</u></u>

Notes:

1. Based on the audited consolidated balance sheet of the Group as at 31 December 2000, extracted without material adjustment from the annual report and accounts for that period.
2. Based on funds raised on Admission of £10 million, net of expenses of £1 million.
3. No account has been taken of the trading results of the Group since 31 December 2000.

The Directors
Corac Group plc
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Kingston Lane
Uxbridge UB8 3PQ

Grant Thornton 

Grant Thornton House
Melton Street
Euston Square
London NW1 2EP

and

The Directors
WestLB Panmure Limited
New Broad Street House
35 New Broad Street
London EC2M 1SQ

28 June 2001

Dear Sirs

Pro forma statement of net assets

We report on the pro forma statement of net assets set out in Part VII of the Admission Document dated 28 June 2001, which has been prepared, for illustrative purposes only, to provide information about how the Admission might have affected the financial information presented.

Responsibilities

It is the responsibility solely of the directors of Corac Group PLC to prepare the pro forma statement of net assets.

It is our responsibility to form an opinion, on the pro forma financial information and to report our opinion to you.

Basis of opinion

We conducted our work in accordance with the Statements of Investment Circular Reporting Standards and Bulletin 1998/8 "Reporting on pro forma financial information pursuant to the Listing Rules" issued by the Auditing Practices Board. Our work, which involved no independent examination of any of the underlying financial information, consisted primarily of comparing the unadjusted financial information with the source documents, considering the evidence supporting the adjustments and discussing the pro forma financial information with the directors of Corac Group PLC.

Opinion

In our opinion:

- (i) the pro forma statement of net assets has been properly compiled on the basis stated;
- (ii) such basis is consistent with the accounting policies of the issuer; and
- (iii) the adjustments are appropriate for the purposes of the pro forma statement of net assets as disclosed.

Yours faithfully

GRANT THORNTON

Part VIII

Additional Information

1. The Company

1.1 The Company is registered in England and Wales, having been incorporated on 29 January 1996 under the Companies Act 1985 with company registration number 3152034, as a public company limited by shares. The Company operates under the Act. The liability of the members of the Company is limited.

1.2 The registered office of the Company is at Brunel Science Park, Kingston Lane, Uxbridge, Middlesex, UB8 3PQ.

2. The Subsidiaries

The Company acts as the holding company of the Group. The Company has the following subsidiaries, which are private limited companies, wholly owned and incorporated in England and Wales. Compact Radial Compressors Limited entered into a company voluntary arrangement on 10 November 1998. The company voluntary arrangement was brought to a successful conclusion on 30 January 2001; Corac Engineering Limited manufactures and develops bearings.

Name	Field of Activity	Issued & Fully paid Share capital	Percentage held by the Company
Compact Radial Compressors Limited	Dormant Company – CVA concluded 30 January 2001	10,000,000 ordinary shares of 0.001p each	100%
Corac Engineering Limited	Trading company – Involved in the sale and development of bearing technology	1 ordinary share of £1	100%

3. Share Capital

3.1 The authorised and issued share capital of the Company at the date of this document and following completion of the Placing, assuming subscription in full, is as follows:

	Current Shares		Proposed Shares	
	£	Number	£	Number
Authorised	£20,000,000.00	200,000,000	£20,000,000.00	200,000,000
Issued fully paid	£6,447,149.80	64,471,498	£7,399,530.80	73,995,308

3.2 By special resolution passed on 15 March 2001 it was resolved that:

3.2.1 every ten of the issued and authorised but unissued ordinary shares of 1p each be consolidated into one ordinary share of 10p;

3.2.2 the authorised share capital of the Company be increased from £300,000 to £20,000,000 by the creation of an additional 1,700,000,000 ordinary shares of 1p each;

3.2.3 £6,200,684.75 be capitalised and 25 ordinary shares be issued by way of a bonus issue to existing shareholders on the basis of 25 new ordinary shares for every 1 ordinary share held;

3.2.4 the Directors be generally and unconditionally authorised, pursuant to Section 80 of the Act, to allot, grant options over, offer or otherwise deal or dispose of relevant securities (as defined in that section) up to an aggregate nominal amount of £18,000,000 (being 180,000,000 Ordinary Shares);

3.2.5 pursuant to Section 95 of the Act, rights of pre-emption be disapplied: (i) in respect of the issue of up to 8,000,000 Ordinary Shares pursuant to the Placing (representing approximately 10.8 per cent of the issued share capital assuming the Placing is subscribed in full); (ii) in respect of the grant of options over up to 9,673,068 Ordinary Shares under the Enterprise Management Incentive option scheme adopted by the Company (representing approximately 13.1 per cent of the issued share capital assuming the Placing is subscribed in full); (iii) in connection with a rights issue; and (iv) in connection with the issue and allotment of equity securities up to an aggregate nominal amount of £1,289,742.40;

3.2.6 new articles of association be adopted;

3.2.7 the EMI Option Agreement be approved together with the grant of options over Ordinary Shares thereunder.

The authorisation referred to in paragraph 3.2.4 expires five years after the passing of the resolution and the disapplication referred to in paragraph 3.2.5 expires fifteen months after the date of passing the resolution or, if earlier, the date of the next Annual General Meeting, in each case except as regards an allotment being made thereafter pursuant to an offer or agreement made by the Directors before such expiry date. The disapplication authority referred to in paragraph 3.2.5 above is in addition and without prejudice to the authorities granted to the directors by special resolutions of the Company passed at an extraordinary general meeting of the Company on 27th October 2000 and all other existing authorities granted to the Directors to allot equity securities for cash as if Section 89(1) of the Act did not apply to such allotment.

Section 89 of the Act gives shareholders certain statutory pre-emption rights on issues wholly for cash, which have been disappplied to the extent specified in paragraph 3.2.5 above.

3.3 Save for the Placing Shares and the Ordinary Shares to be issued pursuant to the Share Option Schemes and the Warrants, no share or loan capital of the Company is now proposed to be issued, in any such case either fully or partly paid or for cash or any other consideration.

3.4 There are no listed or unlisted securities issued by the Company not representing share capital and save for any Warrants there are no convertible securities issued by the Company.

3.5 Save pursuant to the Share Option Schemes and the Warrants, no share or loan capital of the Company is under option or agreed conditionally or unconditionally to be put under option.

4. Directors and their Interests

4.1 Directors' Interests

4.1.1 The interests (all of which are beneficial unless stated otherwise) of the Directors and the persons connected with them (within the meaning of Section 346 of the Act) which have been notified to the Company pursuant to Sections 324 and 328 of the Act or are required to be disclosed in the Register of Directors' interests pursuant to Section 325 of the Act in the issued share capital of the Company and the existence of which is known to, or could with reasonable due diligence be ascertained by, any Director as at the date of this document and as expected to be immediately following the Placing (assuming full subscription under the Placing) are as follows:

					Immediately following the Placing			
	Shares	% of issued share capital	Number of shares over which options granted	Number of warrants	Shares	% of issued share capital	Number of Shares over which options granted	Number of warrants
Richard Gozdawa	3,548,896	5.50	1,170,000	—	3,548,896	4.80	1,170,000	—
Gerald Musgrave	13,000	0.02	3,587,530	—	13,000	0.02	3,587,530	—
Anthony Hewlett	0	0.00	52,000	—	19,048	0.03	52,000	—
John Gunn	1,123,200	1.74	—	175,500	1,123,200	1.52	—	175,500
John Grant	130,000	0.20	—	—	177,619	0.24	—	—

4.1.2 Save as disclosed above, none of the Directors has any interest, whether beneficial or non beneficial, in any share capital of the Company.

There are no outstanding loans granted or guarantees provided by the Company to or for the benefit of any of the Directors.

4.1.3 Interests in transactions

Save as disclosed above and otherwise in this document, no Director has any interest, whether direct or indirect, in any transaction which is or was unusual in its nature or conditions or significant to the business of the Company taken as a whole and which was effected by the Company since its incorporation and which remains in any respect outstanding or unperformed.

4.2 Directors' service agreements and letters of appointment

4.2.1 Directors Service Agreements, Consultancy Agreement and Letters of Appointment

- (a) A contract of employment dated 1 April 2001 has been entered into between the Company and Professor Gerald Musgrave under which he is appointed as Executive Chairman at a salary of £51,000 per annum. The Agreement can be terminated by either party on 12 months' written notice. Professor Musgrave is entitled to participate in the pension scheme and the Company will contribute up to 4 per cent. Professor Musgrave's company Greenwood Control Systems provides management services to the Company in accordance with an agreement dated 24 June 2000 and this is not seen to conflict with his appointment as Executive Chairman; this agreement can be terminated by either party on 12 months written notice; the fee payable under this agreement is £21,000 per annum.
- (b) A service contract dated 1 December 2000 has been entered into between the Company and Dr Gozdawa under which he is employed as Technical Director. The Agreement is terminable by either party on 12 months notice. The Agreement also contains provision for payment in lieu of notice. A salary of £100,000 per annum is payable, subject to review by the Board. In addition, within 7 days of signing the Agreement, Dr Gozdawa was paid a signing on bonus of £100,000. Dr Gozdawa is also entitled to the following additional bonuses:
- (i) £300,000 for assigning all relevant intellectual property rights to the Company in respect of incompressible face seals;
 - (ii) 30 per cent of his basic salary payable upon the completion of the design of a new frame size compressor of 400kw;
 - (iii) £100,000 in respect of the design of a down-hole compression of electrically driven vertical axial flow multi-stage uncoupled compressor system; and
 - (iv) £100,000 for the design of a multi-stage axial flow compressor for Norsk Hydo.

The Agreement contains customary restrictive covenants of 12 months duration from termination of employment (save for an undertaking of confidentiality which is unlimited in time). As an exception to the restriction on competition, Dr Gozdawa is permitted to retain his interest in Derivative Technology Limited ('DTL'), provided that if the Board believes a conflict of interest arises, he must forthwith dispose of his interests in DTL.

- (c) A contract of employment dated 8 December 2000 has been entered into between the Company and Mr Hewlett under which he is appointed as Finance Director at a current salary of £39,000 per annum. The agreement can be terminated by either party on three months notice after 30 September 2001. Mr Hewlett is entitled to participate in the pension scheme and the Company will contribute up to 4 per cent
- (d) Under an agreement dated 18 September 2000, as amended by a letter dated 20 April 2001, Mr Hewlett's accounting practice is engaged to act as company secretary of Corac, Compact Radial Compressors Limited and Corac Engineering Limited; the fee for the provision of such services is £1,750 (plus VAT) per month.
- (e) By a letter dated 19 June 2001, Mr Gunn was appointed a non-executive director of the Company. He is chairman of the Remuneration Committee and a member of the Audit Committee of the Company. He is to commit a minimum of 12 days per annum to the Company and receive a fee of £18,000 per annum (plus VAT). In addition, he receives a fee of £3,000 per annum for his role as chairman of a sub-committee. This appointment can be terminated by either party on three months' notice.
- (f) By a letter dated 19 June 2001, Mr Grant was appointed a non-executive director of the Company. He is chairman of the Audit Committee and a member of the Remuneration Committee of the Company. He is to commit a minimum of 12 days per annum to the Company and receive a fee of £18,000 per annum (plus VAT). In addition, he receives a fee of £3,000 per annum for his role as chairman of a sub-committee. This appointment can be terminated by either party on three months' notice.

4.2.2 Save as disclosed in paragraph 4.2.1 above, there are no service contracts, existing or proposed, between any Director and any Group company.

4.2.3 There is no arrangement under which any Director has agreed to waive future emoluments nor has there been any waiver of emoluments during the financial year immediately preceding the date of this document.

4.2.4 The aggregate remuneration, including benefits in kind, of the Directors of the Company for the year ended 31 December 2000 amounted to £272,841. It is estimated that under the arrangements currently in force, the aggregate remuneration and benefits in kind to be paid to the Directors for the year ending 31 December 2001 will be approximately £520,000.

4.3 *Additional Information on the Directors*

(a) In addition to the directorships in the Group the Directors hold or have held the following directorships within the five years immediately prior to the date of this document:

Director	Current Directorships	Past Directorships
Dr Richard Julius Gozdawa (D.O.B 03/07/1948)	Orion Gas Seals Limited Derivative Technology Limited	Advanced Bearing Technology Limited
John Humphrey Gunn (D.O.B 15/01/1942)	Hiflux plc Barnham Broom Limited Trilateral Group Limited Wengen Limited California Wine Company (UK) Limited MEC International Limited Scheidegg Limited Miller Brazil (Marketing Consultants) Limited Daveney Limited WAM Interactive (U.K.) Limited Ludgate 181 plc The Turbo Genset Limited DAT Enterprises Limited LBM Solutions Limited XPO Network Limited Turbo Genset Inc California Wine Company Inc Sunblush Technologies Corporation	Christows Group Limited Glencrowton plc JD Participations Limited West 175 Media Evolution Group Wood Brigdale, Nisbet & Robinson Limited D.G.Corporation Limited Trafford Carpets (Manchester) Limited (in administrative receivership) Kaines Forfating Limited (dissolved) Hodgson & Partners Limited (dissolved) Trafford Carpets (Bradford) Limited (in administrative receivership) HBS Holdings PLC Erisko Limited British & Commonwealth Holdings Plc (in administration) Finance Initiatives Limited (dissolved) Cabledown Limited (in administrative receivership) Witlecraft Limited (dissolved) Full Support Limited (administrative receivership) Ultrasmart Systems (UK) Limited (dissolved) The St. Petersburg Corporation Limited Forza Fitness Equipment Limited Fitness Holdings (Europe) Limited South Bank Board Limited Satinbridge Limited (dissolved) Warrantech Europe plc Meadowcrofts Limited Sterling Hamilton Wright Group Limited Midland & Scottish Resources plc (in liquidation) Brown Rock Limited Garmex Petroleum Limited Le Traiteur Francais (Catering) Limited (dissolved) Jaygate Homes Plc Kaines Corporation Limited (dissolved) Kaines Holdings Limited (dissolved) Kaines (UK) Limited(dissolved) Pavilion Holdings plc (in administrative receivership)
Gerald Musgrave (D.O.B. 21/08/1942)	Mechadyne International Limited Mechadyne plc UniGroup Plc Camp Road Gerrards Cross Association Limited	Siemens Public Limited Company Greenwood Control Systems Limited (dissolved) Abstract Design Automation Limited (in liquidation) Frontend Limited (dissolved) Phalarope Limited

Director

John Albert Martin Grant
(D.O.B. 13/10/1945)

Current Directorships

Cordex plc
National Grid Group plc
Torotrak plc
Floform Limited
Hasgo Group Limited
Peter Stubs Limited

Past Directorships

Ascot Plc
Adengate Limited
Alpha Air Distribution Limited
Ascot Chemicals Limited
Ascot Commercial Limited
Ascot Corporate Directors Limited
Ascot Corporate Secretaries Limited
Ascot Estates Limited
Ascot Group Finance Limited
Ascot Group Pension Trustee Limited
Ascot Holdings Limited
Ascot Hotels Limited
Ascot Industrial Limited
Ascot International Management Limited
Ascot Investments Limited
Ascot Management Services Limited
Ascot Nominees Limited
Ascot Overseas Limited
Ascot Properties Limited
Ascot Real Estate Limited
Ascot Refrigeration Limited
Ascot Specialist Engineering Limited
Ascot St. Vincent's Limited
Ascot Trustees Limited
Balmcrest Estates Limited
Brightgrove Limited
Buildtape Limited
Chemoxy International Limited
Cleveland Chemicals Limited
Cotts & Company Limited
Dawmec Limited
Ellesmere Port Properties Limited
Ascot Winterstoke Limited
Caterham Cars Limited
ICG (UK) Limited
Lynshield Limited
Marclay Limited
Ascot Mitchell Cotts Limited
Mitchell Cotts Chemicals Limited
Jolly (No. 1) Limited
Pentagon Chemicals Limited
S.S. Coils Limited
Sagar-Richards Limited
Searle Manufacturing Company Limited
St Vincent's Limited
Suter Ash Limited
Suter Equipment Limited
Suter Estates Limited
Suter Limited
Taplute Limited
WDS Limited
Wyebrook Developments Limited

Past Directorships of Companies with Insolvency Proceedings

Francis Industries Limited (Ascot subsidiary)

Director

John Albert Martin Grant
(D.O.B. 13/10/1945)
(continued)

Current DirectorshipsPast Directorships of Dissolved Companies

Adlec Limited
Avon Maxwell Transmissions Limited
Avon P.S.V. Servicing Limited
Balmcrest 1995 Limited
C.W.V. (Predecessors) Limited
Cadalog Limited
Cardiff Commercial Properties Limited
Chemoxy Fine Organics Limited
Chemoxy Trading Limited
Clear (Predecessors) Limited
Cockburns Valve Services Limited
Coldstream Refrigeration Limited
Commercial & Industrial Credit Limited
Drummond Packaging Limited
EKAL Limited
Faulkner Engineering Limited
Francis Industries International Limited
Francis Packaging Limited
H.C. (Predecessors) Limited
Harrowby Street Properties Limited
Henfaes Clips Limited
Highgate & Job Limited
Hi-Speed Limited
Howard Tenens Engines Limited
James Wilkes Limited
Key Resource International Limited
Lacrinoid Products Limited
Lake & Elliot Realisations Limited
Leo Refinery Fittings and Supplies Limited
Longform Limited
Motts (Predecessors) Limited
Packing & Presentation Limited
Pegdene Properties Limited
Perm Distribution Company Limited
Peter Stubs Properties Limited
Powerlock Limited
Purfleet Properties Limited
Searle Overseas Limited
Shemtec Packaging Ltd
Spen (Predecessors) Limited
St Vincent's (Holdings) Limited
St Vincent's (Middle East) Limited
St Vincent's Engineering Limited
St Vincent's International Projects Limited
St Vincent's Investments Limited
St Vincent's Management Services Limited
St Vincent's Mining Equipment Limited
St Vincent's Tea Limited
Steel Diecasting Co Limited
Sumar Beauty Products Limited
Suter Management Services Limited
Suter Services Limited
T.C. Thompson Limited
The National Steel Foundry (1914) Ltd.
Virgosword Trustee Limited
WDS Marlco Limited
WDS Wharton Limited
Wilkes Aviation Limited
Wilkes Securities Limited
WL (Predecessors) Limited

<u>Director</u>	<u>Current Directorships</u>	<u>Past Directorships</u>
Anthony Michael Hewlett (D.O.B. 11/02/1945)	EPL Limited (<i>Note</i>) EPL Employees Benefit Trust Limited Polly Peck Finance plc	Discdata Limited (dissolved) Redco Resources (now Cloakhart Limited) (dissolved) Xsteamis plc (now TUT Systems UK Limited) Xsteamis Inc

Note: EPL Limited has convened a meeting of its creditors to be held on 28 June 2001 to consider a resolution for its voluntary winding up.

- (b) Mr Gunn was an executive director at the time of winding up proceedings occurring of British & Commonwealth Holdings plc ("B&C"). Mr Gunn was appointed Chief Executive of B&C in October 1986 and Executive Chairman in March 1987. Following the collapse of B&C as a result of a takeover Atlantic Computers plc ("Atlantic"), inspectors were appointed by the Secretary of State for Trade and Industry pursuant to Section 432(2) of the Act to investigate the affairs of Atlantic, Atlantic Computer Systems plc and B&C. The inspectors reported to the Secretary of State in April 1994 and their report was published in July 1994. This report included certain criticisms of Mr Gunn's actions as a director of B&C and other companies within the group. These criticisms included criticism of Mr Gunn for approving the annual accounts of each of Atlantic and B&C for 1988 at a time when the possible existence of significant contingent liabilities within Atlantic and B&C, respectively, had already emerged and for not drawing this to the attention of each company's auditors; for failing to inform the whole of the B&C board of the possible contingent liabilities within Atlantic as soon as he became aware of them; and for allowing the interim statement of B&C for the six months ended June 1989 to be issued with misleading content. These criticisms were refuted by Mr Gunn.

Following publication of the report, the Secretary of State commenced proceedings against Mr Gunn under Section 8 of the Company Directors Disqualification Act 1986, on the basis that the Inspectors' report demonstrated an unfitness to act as a director of a company.

These proceedings culminated in a trial in the High Court of Justice conducted throughout January to March 1998. The judgement found no culpability in Mr Gunn's conduct as a director of any company in the British & Commonwealth group of companies and justifies Mr Gunn's repeated assertions that the findings of the inspectors appointed by the DTI were incorrect and unfounded.

- (c) Save as disclosed above none of the Directors has:

any unspent convictions in relation to indictable offences;

had any bankruptcy order made against him or entered into any voluntary arrangements;

been a director of a company which has been placed in receivership, compulsory liquidation, creditors voluntary liquidation, administration, been subject to a company voluntary arrangement or any composition or arrangement with its creditors generally or any class of its creditors whilst he was a director of that company or within the 12 months after he ceased to be a director in that company;

been a partner in any partnership which has been placed in compulsory liquidation, administration or been the subject of a partnership voluntary arrangement whilst he was a partner in that partnership or within the 12 months after he ceased to be a partner in that partnership;

been the owner of any assets or a partner in any partnership which has been placed in receivership whilst he was a partner in that partnership or within 12 months after he ceased to be a partner in that partnership;

been publicly criticised by any statutory or regulatory authority (including recognised professional bodies);
or

been disqualified by a court from acting as a director of any company or from acting in the management or conduct of affairs of a company.

5. Substantial Shareholders

Other than the interests disclosed in paragraph 4 above, the Directors are aware of the following holdings which represent an interest within the meaning of Part VI of the Act in three per cent or more of the Company's issued share capital:

Name of Shareholder	At the date of this document		Following Admission	
	Number of Ordinary Shares	% of issued share capital	Number of Ordinary Shares	% of issued share capital
Pershing Keen Nominees Limited ⁽¹⁾	11,999,182	18.61	10,999,182	14.86
Equity Bridge Finanz GmbH ⁽²⁾	3,714,284	5.76	3,714,284	5.02
Prudential-Bache Nominees Limited	2,780,713	4.31	2,780,713	3.76
State Street Nominees Limited	2,197,000	3.41	2,197,000	2.97

(1) Pershing Keen Nominees Limited holds these Ordinary Shares on behalf of SCI Private Equity Limited

(2) Equity Bridge Finanz GmbH is part of the same group of companies as WestLB Panmure

Save as disclosed in this paragraph and paragraph 4 above the Directors are not aware of any person or persons who, directly or indirectly, jointly or severally, at the date of this document, exercise or could exercise control over the Company.

6. Memorandum and Articles of Association

6.1 Memorandum of Association

The Memorandum of Association of the Company provides that the Company's principal objects include, inter alia, the carrying on of all or any of the businesses of manufacturer, inventor, producer, distributor, developer, wholesaler and retailer of compressors, motors and other industrial and commercial plant, tools and accessories. The objects of the Company are set out in full in Clause 4 of its Memorandum of Association.

6.2 Articles of Association

The following is a description of the rights attaching to the Ordinary Shares based on the Company's Articles of Association (the "Articles") and English law. This description does not purport to be complete and is qualified in its entirety by the full terms of the Articles.

6.2.1 Rights attaching to Ordinary Shares

(a) Voting

Subject to disenfranchisement in the event of (1) non-payment of calls or other monies due and payable in respect of Ordinary Shares or (2) non-compliance with a statutory notice requiring disclosure as to beneficial ownership of Ordinary Shares, and, without prejudice to any special rights previously conferred and subject to any special terms as to voting upon which any shares may be issued or may for the time being be held and to any other provisions of the Articles, on a show of hands every shareholder who is present in person at a general meeting of the Company shall have one vote, and on a poll every shareholder who is present in person or by proxy shall have one vote for every share held.

(b) Dividends

Subject to the Statutes (as defined in the Articles), the Company at a general meeting may declare dividends to be paid to shareholders according to their rights and interests in the profits available for distribution, but no dividend shall be declared in excess of the amount recommended by the Board. Except insofar as the rights attaching to, or the terms of issue of, any share otherwise provide, all dividends shall be declared according to the amounts paid-up or credited as paid-up on the Ordinary Shares and apportioned and paid pro rata according to the amounts paid-up or credited as paid-up on the Ordinary Shares during any portion or portions of the period in respect of which the dividend is paid. The Board may from time to time pay to the shareholders such interim dividends as appear to the Board to be justified by the position of the Company. Any dividend unclaimed after a period of 12 years from the date it became due for payment shall be forfeited and shall revert to the Company.

(c) *Distribution of assets on liquidation*

On a winding-up, the liquidator may, with the sanction of an extraordinary resolution of the Company and subject to and in accordance with the Statutes, divide among the shareholders in specie or kind the whole or any part of the assets of the Company, subject to the rights of any shares which may be issued with special rights or privileges.

6.2.2 *Transferability of Ordinary Shares*

All transfers of Ordinary Shares which are in certificated form may be effected by transfer in writing in any usual or common form or in any other form acceptable to the Board. The instrument of transfer shall be executed by or on behalf of the transferor and (except in the case of fully-paid shares) by or on behalf of the transferee. All transfers of Ordinary Shares which are in uncertificated form may be effected by means of a relevant system (as defined in the Articles).

The Directors may, in the case of shares in certificated form, in their absolute discretion and without assigning any reason therefor refuse to register any transfer of shares (not being fully-paid shares), provided that any such refusal does not prevent dealings in partly-paid shares from taking place on an open and proper basis. In addition, the Directors may refuse to register a transfer of shares (whether fully-paid or not) in favour of more than four persons jointly or made to or by an infant or patient within the meaning of the Mental Health Act 1983.

The Directors may decline to recognise any instrument of transfer relating to shares in certificated form unless the instrument of transfer is duly stamped, is in respect of only one class of share and is lodged at the Transfer Office accompanied by the relevant share certificates or such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer.

6.2.3 *Variation of rights*

Subject to the Statutes, the special rights attached to any class of shares for the time being issued may from time to time (whether or not the Company is being wound-up) be altered or abrogated with the written consent of the holders of three-fourths in nominal value of the issued shares of that class or with the sanction of an extraordinary resolution passed at a separate general meeting of the holders of the issued shares of that class at which a quorum of two or more persons holding or representing by proxy not less than one-third in nominal value of the issued shares of that class (or in the case of an adjourned meeting any holder of shares of the class present in person or by proxy shall be a quorum is present). The special rights conferred upon the holders of any shares or class of share shall not, unless otherwise expressly provided in the rights attaching to the terms of issue of such shares, be deemed to be altered by the creation or issue of further shares ranking *pari passu* therewith or the purchase by the Company of any of its own shares.

6.2.4 *Changes in capital*

Subject to the provisions of the Statutes and to any special rights conferred on the holders of any shares or class of shares, the Company may issue redeemable shares. Subject to the provisions of the Statutes and to any special rights previously conferred on the holders of any existing shares, any share may be issued with such special rights or such restrictions as the Company may determine by ordinary resolution. The Company may by ordinary resolution increase its share capital, consolidate and divide its share capital into shares of a larger amount, sub-divide its share capital into shares of a smaller amount (subject to the provisions of the Statutes) and cancel any shares which have not been taken or agreed to be taken by any person and diminish the amount of its authorised share capital by the amount of the shares so cancelled.

Subject to the provisions of the Statutes, the Company may reduce share capital, any capital redemption reserve and any share premium account in any manner. The Company may also, subject to the requirements of the Statutes, purchase its own shares.

6.2.5 *Untraced Shareholders*

Subject to various notice requirements, the Company may sell any shares of a member or person entitled thereto who is untraceable, if during a period of 12 years, at least three dividends in respect of the shares in question have become payable and the cheques or warrants for all amounts payable to such member or person in respect of his shares have remained uncashed or mandated dividend payments have failed and the Company has received no indication of the existence of such member or person. The net proceeds of sale shall belong to the Company but the member or person who had been entitled to the shares shall become a creditor of the Company in respect of those proceeds.

If on two consecutive occasions notices or other communications (including dividend payments) have been sent through the post to any holder of shares to his registered or other specified address but returned undelivered or mandated dividend payments have failed, or following one such occasion and enquiries by the Company fail to establish a new address or account, the Company may cease to send such notices or other such communications or mandated payments until the person entitled thereto otherwise requires.

6.2.6 Non-UK Shareholders

There are no limitations in the Memorandum or Articles on the rights of non-UK shareholders to hold, or exercise voting rights attaching to, Ordinary Shares. However, no shareholder is entitled to receive notices from the Company, including notices of general meetings, unless he has given an address in the UK to the Company to which such notices may be sent.

6.2.7 Sanctions on Shareholders

A holder of Ordinary Shares loses his rights to vote in respect of Ordinary Shares if and for so long as he or any other person appearing to be interested in those Ordinary Shares fails to comply with a request by the Company under the Act requiring him to give particulars of any interest in those Ordinary Shares within 14 days in the case of shareholdings representing 0.25 per cent or more, in nominal amount, of the share capital of the Company then in issue, or any class thereof; the sanctions which may be applied by the Company include not only disenfranchisement but also the withholding of the right to receive payment of dividends and other monies payable on, and restrictions on transfers of, the Ordinary Shares concerned.

6.2.8 Directors

The Directors (other than those holding executive office with the Company or any subsidiary of the Company) shall be paid by way of fees for their services at such rate and in such proportion as the Board may resolve, a sum not exceeding an aggregate of £100,000 per annum or such larger amount as the Company may by ordinary resolution determine or, in the case of such Directors who are resident outside the UK, such extra remuneration as the Board may determine. Any Director who holds executive office or who performs duties outside the ordinary duties of a Director, may be paid such remuneration or extra remuneration by way of salary, commission or otherwise as the Board may determine.

The Directors shall also be paid all expenses properly incurred by them in attending meetings of the Company or of the Board or otherwise in connection with the business of the Company.

A Director who is in any way, whether directly or indirectly, interested in any contract or proposed contract with the Company shall declare the nature of his interest in accordance with the Statutes.

A Director shall not vote, and shall not be counted in a quorum, in respect of any contract, arrangement or proposal in which he has an interest which (together with any interest of any person connected with him) is to his knowledge a material interest (otherwise than by virtue of shares or debentures or other securities of or otherwise through the Company), except that this prohibition shall not apply to:-

- (a) the giving of any security, guarantee or indemnity in respect of money lent or obligations incurred by him or any other person at the request of or for the benefit of the Company or any of its subsidiaries;
- (b) the giving of any security, guarantee or indemnity in respect of a debt or obligation of the Company or any of its subsidiaries for which he himself has assumed responsibility in whole or in part under a guarantee or indemnity or by the giving of security;
- (c) any contract or arrangement by a Director to participate in the underwriting or subunderwriting of any offer of shares, debentures or other securities of the Company or any of its subsidiaries for subscription, purchase or exchange;
- (d) any contract or arrangement concerning any other company in which the Director and any persons connected with him do not to his knowledge hold an interest in shares (as that term is used in sections 198 to 211 of the Act) representing one per cent or more of either any class of the equity share capital, or the voting rights, in such company. For the purpose of this paragraph, there shall be disregarded any shares held by a Director as bare or custodian trustee and in which he has no beneficial interest, any shares comprised in a trust in which the Director's interest is in reversion or remainder if and so long as some other person is entitled to receive the income thereof, and any shares comprised in an authorised unit trust scheme in which the Director is interested only as a unit holder;

- (e) any arrangement for the benefit of employees of the Company or any of its subsidiaries which does not award him any privilege or benefit not generally awarded to the employees to whom such arrangement relates;
- (f) any proposal concerning any insurance which the Company is empowered to purchase and/or maintain for or for the benefit of inter alia any Directors of the Company.

Subject to the provisions of the Statutes, and provided that he had disclosed to the Board the nature and extent of any material interest he may have, a Director notwithstanding his office may be a party to, or otherwise interested in, any transaction or arrangement with the Company or in which the Company is otherwise interested, may be a director or other officer of, or employed by, or a party to any transaction or arrangement with, or otherwise interested in, any body corporate promoted by the Company or in which the Company is otherwise interested and shall not, by reason of his office, be accountable to the Company for any benefit which he derives from any such office or employment or from any such transaction or arrangement or from any interest in any such body corporate and no such transaction or arrangement shall be liable to be avoided on the ground of any such interest or benefit. Any Director may act by himself or by his firm in any professional capacity (other than auditor) and he or his firm shall be entitled to remuneration as if he were not a Director.

The provisions of Section 293 of the Act as to the retirement of Directors on reaching 70 apply to the Company.

The Directors are not required to hold qualification shares.

At each annual general meeting of the Company one-third (or the nearest number to one-third) of the Directors shall retire from office by rotation. The Directors to retire in every year shall be those who have been longest in office since their last election but as between persons who became directors on the same day, those to retire shall (unless they otherwise agree among themselves) be determined by lot. In addition, any Director who would not otherwise be required to retire shall retire by rotation at every third annual general meeting after his last appointment or re-appointment. A retiring Director shall be eligible for re-election. The Company may from time to time by ordinary resolution appoint any person to be a Director. The Directors may also from time to time appoint one or more Directors but any Director so appointed shall retire at or at the end of the next annual general meeting of the Company but shall then be eligible for re-election and any Director who so retires shall not be taken into account in determining the number of Directors who are to retire by rotation at such meeting.

The Board may from time to time appoint one or more Directors to be the holder of any executive office for such period and on such terms as it decides.

6.2.9 Borrowing Powers

The Articles provide that the aggregate principal amount from time to time remaining undischarged of all moneys borrowed by the Company (exclusive of intra-group borrowings) shall not, without the previous sanction of an ordinary resolution of the Company, exceed an amount equal to an amount equal to three and a half times the aggregate of the issued share capital and reserves of the Company adjusted in the manner set out in the Articles.

7. Share Option Schemes

7.1 *Corac Group PLC 1998 Share Option Scheme ("1998 Scheme")*

On 4 December 1998, the Company adopted the 1998 Scheme under which options may be granted over unissued Shares of the Company. Options over 2,093,712 Ordinary Shares have been granted and remain unexercised under the 1998 Scheme and are exercisable at between 10 pence and 11.5385 pence per Ordinary Share.

7.1.1 Participation

Participants in the 1998 Scheme must be directors or employees of the Company or any other company under the control of the Company. Participation will be at the discretion of the Board.

7.1.2 Grant of options

Options may be granted at any time, and from time to time for no consideration, by the Board. No options may be granted after the tenth anniversary of the date of adoption of the 1998 Scheme.

Options may be granted such that their exercise is subject to performance conditions (including limitation on the time at or period during which or extent to which the option may be exercised) being satisfied.

No consideration will be payable for the grant of an option. Each option will be personal to the option holder and cannot be transferred, assigned, charged, pledged or otherwise disposed of or dealt with.

The price payable by participants on the exercise of options granted under the 1998 Scheme shall be determined by the Board but shall not be less than the market value on the date of grant and in relation to an option to subscribe, nor less than the nominal value of a Share.

7.1.3 Scheme limits

Options over unissued Ordinary Shares may not be granted if the nominal value of Shares issuable on the exercise of the options when aggregated with the nominal value of all Ordinary Shares issued or remaining issuable by the Company in respect of the options and any rights granted over unissued Ordinary Shares under any profit sharing or other share option scheme (other than options granted under EMI Agreements), respectively within the period of 10 years immediately preceding the proposed date of grant of options, would exceed 10 per cent in the nominal value of the ordinary share capital of the Company in issue immediately before the proposed date of grant.

7.1.4 Exercise of options

An option may normally only be exercised at any time between the date of grant and the seventh anniversary of the date of grant, provided that any performance conditions have been satisfied.

If a participant ceases to be an employee as a result of death, his legal personal representatives may be entitled to exercise his options within 12 months from the date of death following which the option will lapse.

On the exercise of an option, Ordinary Shares will be allotted and issued, within 30 days of the date of exercise. All Ordinary Shares that are issued on the exercise of options will rank *pari passu* in all respects with other ordinary shares then in issue.

7.1.5 Take-overs and liquidations

In the event of a take-over, scheme of arrangement, change of control or voluntary winding-up of the Company, options will become immediately exercisable provided that the performance conditions have been satisfied.

Alternatively, in the case of a take-over or a change of control, options may be exchanged for options in respect of shares in the acquiring company.

7.1.6. Variation of capital

In the event of a rights or capitalisation issue or any sub-division, consolidation, reduction or other variation of the Company's share capital, the exercise price and the number of ordinary shares over which an option subsists shall be adjusted by the Board, subject to written confirmation of the Company's auditors that the adjustment is in their opinion fair and reasonable.

7.1.7 Taxation

Where a tax liability arises on the exercise of an option, the Company may make deductions from any payments due to the option holder to meet such liability.

7.1.8 Alterations to the Unapproved Scheme

The 1998 Scheme cannot be altered to the disadvantage of participants in respect of options granted prior to the alteration. The substantive provisions of the 1998 Scheme cannot be altered to the advantage of present or future participants without the prior approval of shareholders in general meeting (except for minor amendments to benefit the administration of the 1998 Scheme, to take account of a change in legislation or to obtain or maintain favourable tax, exchange control or regulatory treatment for participants in the 1998 Scheme or for the Company or for members of its Group).

The 1998 Scheme was amended by resolution of its Directors on 11 November 2000. As a consequence, any employee of the Company who is granted options under the 1998 Scheme would cease to be entitled to exercise such options, and such options would automatically lapse, upon such employee ceasing to be employed by the Company other than as a result of death.

7.2 *Corac Group PLC 2000 Share Option Scheme ("2000 Scheme")*

On 27 October 2000, the Company adapted the 2000 Scheme under which option may be granted over Ordinary Shares of the Company. Options over 2,210,000 Ordinary Shares have been granted and remain unexercised under the 2000 Scheme and are exercisable at 38.4614 pence per Ordinary Share. The rules of the 2000 Scheme are identical to those of the 1998 Scheme, save for the following:

7.2.1 Scheme Limits

An option to subscribe for Ordinary Shares under the 2000 Scheme may only be granted if the nominal value of Ordinary Shares issuable on the exercise of the option when aggregated with the nominal value of all Ordinary Shares issued or remaining issuable by the Company in respect of options granted under the 2000 Scheme will not exceed 5 per cent of the nominal value of the ordinary share capital of the Company in issue immediately before the date of adoption of the 2000 Scheme.

7.2.2 Exercise of Options

If a participant ceases to be an employee as a result of death, injury, disability, pregnancy or retirement, or as a consequence of the company by which or the business in which the participant was employed ceasing to be under the control of the Company, or in other circumstances determined by the Board, an option may be exercised within 6 months (12 months in the case of death) of the option holder ceasing to be an employee, following which the option will lapse.

If an participant ceases to be an employee otherwise than in circumstances referred to above options will lapse immediately and in any event on the expiry of 7 years from the date of grant.

7.3 EMI Agreements

The Company intends to grant options under EMI Agreements to key employees and directors in order to recruit and retain them. Options under EMI agreements cannot be granted over shares having an aggregate value (at the date of grant in each case) of more than £3,000,000. Each option will be granted by a separate agreement, but subject to a standard set of conditions described below. The Company has been advised that a series of such grants would constitute an employee's share scheme for the purposes of the Act. On 15 March 2001, the Company approved the rules of the model form of agreement for the grant of options under the Enterprise Management Incentive Scheme introduced by the Finance Act 2000. The summary below outlines the conditions applicable to each EMI Agreement. EMI Agreements for different employees may contain different terms in respect of the exercise price of options and the number of Ordinary Shares the subject of options, and, in exceptional circumstances, certain other conditions. Changes may be required to be made to an EMI Agreement in order to ensure its compliance with the Finance Act 2000 and Inland Revenue practice once that becomes clearer. Options over 2,232,400 have been granted and remain unexercised under EMI Agreements and are exercisable at 38.4616 pence per Ordinary Share.

7.3.1 Participation

EMI options can only be granted to employees or directors of the Company who at all material times work for at least 25 hours per week for the Company or work for at least 75 per cent of their total working time for the Company. Each option holder will be required to warrant that he satisfies these criteria.

7.3.2 Grant of Options

Options will be granted subject to performance conditions to be satisfied before the option can be exercised which will be determined by the Board prior to the grant of the option. The Company intends that the exercise of EMI options should be linked to targets based on earnings per Ordinary Share (as derived from annual or half yearly results) ("EPS") and the Ordinary Share price.

When an option is granted, the Board can specify an effective date of grant which is different from the actual date of grant.

Each option will be personal to the option holder and any transfer, assignment, charge, pledge or other disposal of, or dealing with, the option will cause it to lapse.

7.3.3 Exercise Price

The Board can determine the exercise price of EMI options before they are granted. EMI options have been granted to all existing employees and Executive Directors at an exercise price of 38.4616 pence. Other EMI options should be granted at the market value of the Ordinary Shares at the time of grant, save in exceptional circumstances.

7.3.4 Personal limits

The maximum number of Ordinary Shares in respect of which an option holder can hold EMI options is limited to the number of Ordinary Shares having an aggregate market value of £100,000 at the date of grant after taking account of any other EMI options or options granted under a discretionary approved share option scheme that may be held by that employee.

7.3.5 Exercise of Options

The EMI option will be exercisable within a period of five years after each of the first, second and third anniversary of the date of grant or effective date of grant in respect of one third of the shares comprised in the EMI option. In any event, the EMI option cannot be executed after the tenth anniversary of the date of grant or effective date of grant.

The right to exercise the option terminates immediately upon the option holder ceasing to be an eligible employee. However, where the option holder dies, his personal representatives may exercise the option within a period of 40 days of death or such longer period as may be permitted by the Inland Revenue not exceeding 12 months after the date of death. Where the option holder ceases to be an employee by reason of injury, disability or pregnancy, retirement on or after the expected retirement date, or by the company by which the option holder is employed ceasing to be a participating company, or by the transfer of the business in which the option holder is employed to another person who is not under the control of the Company, or in any other circumstances determined by the Board, the option may be exercised within a period of 40 days of such cessation regardless of any performance conditions.

On the exercise of an EMI option Ordinary Shares will be allotted and/or transferred within 30 days and where Ordinary Shares are issued, they will rank *pari passu* with the Ordinary Shares then in issue.

7.3.6 Takeovers and Liquidations

In the event of a takeover, scheme of arrangement, change of control or voluntary winding up of the Company, options may be exercised within a period of 40 days provided that any applicable performance conditions have been satisfied. There will be a provision allowing the roll-over of options provided that such roll-over satisfies the conditions of the Finance Act 2000.

7.3.7 Variation of Capital

In the event of a rights or capitalisation issue or any sub-division, consolidation, reduction or other variation of the Company's Ordinary Share capital, the exercise price and the number of Ordinary Shares over which an option exists shall be adjusted in such manner as the Board shall determine, subject to certification in writing by the Company's auditors that the adjustment is in their opinion fair and reasonable. Any variation must be approved by the Inland Revenue and must satisfy the conditions of the Finance Act 2000.

7.3.8 Taxation

Where a tax liability arises on the exercise of an option, the Company may make deductions from payments due to the option holder to meet such liability. If such payments are insufficient, the option holder must pay the Company the balance of the liability before Ordinary Shares are allotted to him. The conditions of the EMI Options allow for the cost of any employers' National Insurance Contributions to be passed to the option holder provided that this is permitted by law. It is intended that this issue be considered on a case by case basis for each option holder.

7.3.9 Amendment and Assignability

An EMI Agreement cannot be assigned by the option holder and any rights under it are personal only to him. An EMI Agreement can only be amended by the agreement of the parties (although it is intended that the conditions should not be altered on a case by case basis save in exceptional circumstances). It is intended that the EMI Agreements should comply with the provisions of the Finance Act 2000 and to the extent that any provision does not so comply, it will not have any effect, but the parties can make amendments to ensure that the relevant provision does comply with the provisions of the Finance Act 2000.

8. Summary of Warrants 2004

1,000,000 warrants were issued on 1 May 2000. By virtue of the re-organisation of the Company's share capital on 15 March 2001, the persons to whom such warrants were issued now have warrants to subscribe for 2,600,000 Ordinary Shares at a subscription price of 28.8462 pence per Ordinary Share. The Warrants are subject to the following notable terms and conditions:

8.1 Subscription Rights

8.1.1 A Warranholder has rights ("Subscription Rights") at any time and from time to time on any date from the date of issue of the Warrants to 1 June 2004 (the "Subscription Period") to subscribe in cash for all or any of the number of Ordinary Shares equal to 2.6 times the number of Warrants specified on his Warrant Certificate at 28.8462 pence per Ordinary Share (the "Subscription Price"). This amount is payable in full on subscription. This number of Ordinary Shares to be subscribed pursuant to the Warrants and the Subscription Price represents the figure reached after adjustment was made following the re-organisation of the Company's share capital on 15 March 2001. If immediately after the end of the Subscription Period the Subscription Rights under the Warrants shall have been exercised in respect of 75 per cent or more of the Ordinary Shares to which such rights relate, the Company may appoint a trustee who, provided, in his opinion, that the net proceeds of sale after the deduction of all costs and expenses incurred by him will exceed the costs of subscription, shall exercise the remaining Subscription Rights on behalf of the Warranholders and shall sell the resultant Ordinary Shares on the market. The trustee shall distribute pro rata the net proceeds of sale to the persons entitled. To the extent not so exercised, all Subscription Rights shall lapse on the date 14 days following the expiry of the Subscription Period (the "Final Subscription Date").

8.1.2 Ordinary Shares allotted pursuant to the exercise of Subscription Rights will not rank for dividends or other distributions declared, made or paid on the Ordinary Shares for which the record date is a date prior to the relevant subscription date but, subject thereto, will rank in full for all dividends and other distributions declared, made or paid on the Ordinary Shares after the relevant subscription date and *pari passu* in all other respects with the Ordinary Shares in issue at that date.

8.1.3 No exercise by a Warranholder of any Warrants nor any adjustments made pursuant to paragraph 8.2 below shall result in the issue by the Company of a fraction of an Ordinary Share or of a Warrant.

8.2 Adjustments of Subscription Rights

If, while any Subscription Rights remain outstanding:

8.2.1 the Company issues (excluding cash dividends or an issue of Ordinary Shares in lieu of cash dividends or a distribution of assets out of the profits available for distribution or otherwise in the ordinary course of business made, in each case, to holders of Ordinary Shares) Ordinary Shares by way of capitalisation of profits or reserves (including any share premium account and capital redemption reserve) to holders of Ordinary Shares, the number of Ordinary Shares to be issued on exercise of the Subscription Rights shall be increased and/or the Subscription Price reduced *pro rata* and if any doubt shall arise as to the adjustment, the certificate of the auditors for the time being of the Company (the "Auditors") shall be conclusive and binding on all concerned;

8.2.2 the Ordinary Shares shall be consolidated or subdivided or otherwise altered, the number of Ordinary Shares to be issued on any subscription of the Warrants and/or the Subscription Price shall be reduced or increased *pro rata* and, if any doubt shall arise to the adjustment, the certificate of the Auditors shall be conclusive and binding on all concerned;

8.2.3 the Company makes any offer or invitation to holders of Ordinary Shares (whether by rights issue or otherwise), then the Company shall, so far as it is able, procure that at the same time the same offer or invitation is made to the then registered holders of the Warrants as if their Subscription Rights had been exercised on the day immediately preceding the record date of such offer or invitation on the terms on which the same could then be exercised, provided that, if the Directors so resolve, the Company shall not be required to procure that the same offer or invitation is made to the then registered holders of the Warrants but the Subscription Price and the Subscription Rights shall be adjusted in such manner as the Auditors shall certify to be fair and reasonable. Any such adjustment shall become effective as at the record date for the offer or invitation.

8.2.4 No adjustment pursuant to the above paragraph shall reduce the Subscription Price per Ordinary Share to less than the nominal value per Ordinary Share.

8.3 Other Provisions

Whilst any Subscription Rights remain outstanding, the Company except with the sanction of an Extraordinary Resolution:

8.3.1 shall not modify the rights attached to the Ordinary Shares or do anything which is deemed by the Articles to be such modification (but nothing herein shall restrict the right of the Company to increase or to consolidate or to subdivide its share capital);

- 8.3.2 shall not reduce its share capital or any uncalled liability in respect thereof or (except as authorised by Sections 130 to 134 (inclusive) of the Act and Part V of the Act) any share premium account or capital redemption reserve fund unless in either case the reduction does not include the diminution of liability of unpaid shares capital or the repayment to any shareholder of any paid up share capital ;
- 8.3.3 shall keep available for issue sufficient Ordinary Shares to satisfy in full all Subscription Rights for the time being outstanding;
- 8.3.4 shall not issue Ordinary Shares credited as fully paid by way of capitalisation of profits or reserves nor make any offer if as a result the Company would on any subsequent exercise of the Subscription Rights be obliged to issue Ordinary Shares at a discount to nominal value.

The Company shall use its reasonable endeavours to procure that the Ordinary Shares allotted pursuant to the exercise of the Subscription Rights are admitted to AIM and to any other stock exchange upon which the Company's Ordinary Shares are for the time being listed.

8.4 *Modification of Rights*

- 8.4.1 All or any of the rights for the time being attached to the Warrants may from time to time (whether or not the Company is being wound up) be altered, waived or abrogated with the sanction of an Extraordinary Resolution passed at a separate general meeting of the Warrantholders. All the provisions of the Articles as to general meetings shall *mutatis mutandis* apply to such separate general meetings as though the Warrants were a class of Ordinary Shares forming part of the capital of the Company but so that (i) the necessary quorum shall be the holders (present in person or by proxy) entitled to subscribe one-third in nominal amount of the Ordinary Shares attributable to such outstanding Warrants, (ii) every holder of a Warrant (present in person or by proxy) at any such meeting shall be entitled on a poll to one vote for every Ordinary Share for which he is entitled to subscribe, (iii) any holder of a Warrant (present in person or by proxy) may demand or join in demanding a poll, and (iv) at any adjourned meeting those holders of Warrants (present in person or by proxy) shall be a quorum (whatever the number of Warrants held or represented by them).
- 8.4.2 "Extraordinary Resolution of the holders of the Warrants" means a resolution proposed at a meeting of the holders of the Warrants duly convened and held and passed by a majority consisting of not less than three-fourths of the votes cast whether on a show of hands or on a poll.

9. Premises

Details of the principal properties occupied by the Company are as follows:

<u>Location</u>	<u>Tenure</u>	<u>Rent per Annum</u>	<u>Lease Expiry Date</u>
Tin Research Institute Building Brunel University (part ground and mezzanine floors).	The sub underlease was completed on 18 May 2001. The term of the sub underlease is 6 years from 1 September 2000	£40,255 p.a.	31 August 2006
Area 1-1 Building No. 1 Brunel Science Park	The lease was completed on 18 May 2001. The lease is for a 3 year term from 28 April 2001.	£50,500	27 April 2004

10. Material Contracts

The following contracts, not being contracts entered into in the ordinary course of business, have been entered into by the Company or its subsidiaries during the two years immediately preceding the date of this document and are or may be material:

- 10.1 An agreement between the Directors (1) the Company (2) and WestLB Panmure (3) dated 27 June 2001 under which WestLB Panmure agreed to act as the Company's Nominated Adviser and Nominated Broker for a period of one year from Admission and thereafter unless terminated by three months written notice by WestLB Panmure or the Company (the 'Nominated Adviser Agreement'). The fee payable by the Company under the Nominated Adviser Agreement is £25,000 (plus VAT) per annum.

- 10.2 An agreement between the Company (1), the Directors (2) and WestLB Panmure (3) dated 27 June 2001 whereby WestLB Panmure has undertaken as agent for the Company to use its reasonable endeavours to procure subscribers for and purchasers of the Placing Shares at the Placing Price (the "Placing Agreement"). Under the Placing Agreement, commission is payable by the Company on the value of the Placing Shares issued at the Placing Price at the rate of 3.5 per cent in the event that the pre-new money equity value of the Company is less than £100 million or 4.0 per cent in the event that the pre-new money equity value of the Company is greater than or equal to £100 million. A further corporate finance advisory fee of £150,000 (plus VAT) will also be paid by the Company to WestLB Panmure.

The Placing Agreement contains warranties and an indemnity given by the Company and the Directors to WestLB Panmure and also contains provisions entitling WestLB Panmure to terminate its obligations thereunder in certain circumstances prior to Admission. The liability of the Company and the Directors in respect of such warranties and indemnity is limited to £6,000,000 (which liability is covered by insurance), save in respect of the warranty relating to working capital (which is not insured) where the liability of the Company is limited to £2,000,000 and the liability of the Directors is limited to £75,000.

The Placing Agreement also contains undertakings by the Directors not to dispose of the Shares in which they are interested at Admission for one year, save in connection with a take-over offer for the Company, death of the Director concerned, to allow Dr Richard Gozdawa to sell up to £200,000 worth of Ordinary Shares to satisfy an expected tax liability or in certain other limited circumstances.

- 10.3 An agreement between (1) the Company and (2) Weir dated 8 March 2001, whereby the Company and Weir undertake to collaborate in the development of compressor technology and system technology, and in research and development in relation to a proposed downhole gas compression system suitable for application in the oil and gas exploration and production industries. The arrangement envisages that Weir will market the system that, it is hoped, will result from the research and development. The system is to incorporate components manufactured by the Company, for which the Company will be paid appropriately. In addition, Weir will pay a royalty to the Company for the use in the system of the Company's intellectual property, which the Company will license to Weir. In addition it is hoped that research will yield technology that can be used both by the Company and Weir in their respective areas of operation, independently of each other.

11. Working Capital

The Directors are of the opinion that, having made due and careful enquiry and taking into account available bank facilities and the proceeds of the Placing receivable by the Company, the working capital available to the Group will, from the time the Ordinary Shares are admitted to AIM, be sufficient for its present requirements (that is for at least the next twelve months from the date of Admission).

12. Litigation

There are no legal or arbitration proceedings (including, to the knowledge of the Directors, any such proceedings which are pending or threatened by or against any member of the Group) which may have or have had during the 12 months immediately preceding the date of this document a significant effect on the financial position of the Company.

13. Taxation

The comments in this section are intended as a general guide for the benefit of holders of shares as to their tax position under United Kingdom law and Inland Revenue practice as at the date of this document. Any shareholder who has any doubt as to his or her tax position or who is subject to tax in a jurisdiction other than the United Kingdom should consult a professional adviser without delay.

Taxation of Dividends

Under current United Kingdom legislation, no tax is required to be withheld from dividend payments by the Company. A Shareholder (other than a company) receiving a dividend from the Company also receives a tax credit in respect of the dividend of an amount equal to one ninth of the amount of the dividend which is 10 per cent of the sum of the dividend and the tax credit. Generally, the liability to United Kingdom income tax is calculated on the sum of the dividend and the tax credit ("the dividend income"). Individual Shareholders whose income is within the starting rate or basic rate tax bands will be subject to income tax at the rate of 10 per cent on their dividend income, so that such Shareholders will have no further liability to income tax on that dividend income. The higher rate of income tax is 32.5 per cent in respect of dividend income. A higher rate tax payer may set the tax credit against his liability to income tax on the dividend income and will have further tax to pay of 22.5 per cent of the dividend income. A Shareholder who is not liable to income tax on the dividend income (or any part of it) may not claim payment of the tax credit (or part of it) from the Inland Revenue, save where the dividend is paid on or before 5 April 2004 in respect of shares held in an "individual savings account" or Personal Equity Plan.

A United Kingdom resident corporate Shareholder is not normally liable to United Kingdom taxation on any dividend received. United Kingdom resident Shareholders (including authorised unit trusts and open-ended investment companies) and pension funds are not entitled to payment in cash of the tax credit.

Whether Shareholders who are resident for tax purposes in countries other than the United Kingdom are entitled to a payment from the Inland Revenue of a proportion of the tax credit in respect of dividends on their Shares depends in general upon the provisions of any double taxation convention or agreement which exists between such countries and the United Kingdom. In addition, individual Shareholders who are resident in countries other than the United Kingdom but who are Commonwealth citizens, nationals of members states of the European Economic Area or fall within certain other categories of person within Section 278 of the Income and Corporation Taxes Act 1988 are entitled to the entire tax credit which they may set against their total United Kingdom income tax liability or, in appropriate cases, reclaim in cash. Non-United Kingdom resident Shareholders should consult their own tax advisers on the possible application of such provisions and the procedure for claiming any relief or credit in respect of such tax credit in their own jurisdictions. However, in general, no cash payment will be recoverable from the Inland Revenue in respect of the tax credit.

Stamp Duty and Stamp Duty Reserve Tax ("SDRT")

No stamp duty or SDRT will be payable on the issue of shares save that special rules apply to persons operating clearance services or depository receipt services.

A transfer or sale of shares will generally be subject to ad valorem stamp duty at the rate of 0.5 per cent rounded up to the nearest multiple of £5 on the amount or value of the consideration paid by the purchaser. If an unconditional agreement for the transfer of such Shares is not completed by a duly stamped transfer to the transferee by the seventh day of the month following the month in which the agreement becomes unconditional, SDRT will be payable on the agreement at the rate of 0.5 per cent of the amount or value of consideration paid. Liability to SDRT is generally that of the transferee. Where a purchase or transfer is effected through a member of the London Stock Exchange or a qualified dealer, the said member or dealer will normally account for the SDRT.

When Shares are transferred to a CREST member who holds those shares in uncertificated form as a nominee for the transferor, no stamp duty or SDRT will generally be payable.

When Shares are transferred by a CREST member to the beneficial owner (on whose behalf it has held them as nominee), no stamp duty or SDRT will generally be payable.

Where a change in beneficial ownership of shares held in uncertificated form occurs and such change is for consideration in money or money's worth (whether the transferee will hold those shares in certificated or uncertificated form) a liability to SDRT at the rate of 0.5 per cent of the amount or value of the consideration will arise. This will generally be met by the new beneficial owner.

Enterprise Investment Scheme ("EIS")

The Company's current structure and activities should enable it to meet the requirements of a qualifying company under EIS, which will enable eligible investors to obtain certain tax reliefs. The shares are likely to be treated as not being 'listed' or 'quoted' for relevant tax purposes provided that the Company's shares are not quoted on a recognised Stock Exchange which does not include AIM.

The Company has obtained advance assurance from the Inland Revenue of its qualification under EIS. The Company expects to satisfy the relevant conditions, but no undertaking is given, by the Company or its Directors, that the Company will conduct its activities in such a way as to qualify for or preserve this relief.

Where individual investors are eligible for EIS relief, they will be entitled to claim 20 per cent income tax relief on the Placing Shares subscribed for, up to a maximum subscription of £150,000. Relief is not available for investments of less than £500 made in any one company in any tax year.

Where shares are issued between 6 April and 5 October in any tax year, the investor may be able to carry back part of the EIS subscription so that it is treated as though it was made in the previous tax year. The amount carried back cannot exceed the lower of:

- 50 per cent of the investment
- £25,000, and
- the unused balance of the EIS limit for the previous year.

Provided the Company and individual investor continue to qualify for EIS relief for the relevant period, broadly three years from the share issue, a profit made by an individual investor on the disposal of the shares after three years will be free of capital gains tax.

Individuals and certain Trustees subscribing for Placing Shares may be entitled to claim deferral of tax on capital gains realised on assets disposed of within three years before, and up to one year after, the investment. This relief enables a shareholder to defer part or all of a gain made on a disposal that would normally be charged to tax. The amount of gain which can be deferred is restricted to the amount of the re-investment and the deferred gain comes back into charge when the re-invested shares are disposed of.

Upon conclusion of the Placing and obtaining authority from the Inland Revenue, the relevant tax certificates (EIS 3), which are needed for claiming tax relief, will be issued to eligible investors who request them.

Section 574 Relief

Section 574 of the Income and Corporation Taxes Act 1988 permits a loss on investment in ordinary shares in a qualifying trading company to be relieved against an investor's taxable income as an alternative to setting the loss against capital gains. Upon making the appropriate claim, relief is given against income on the tax year in which the loss arises, or the preceding year.

Inheritance Tax ("IHT") Relief

Unquoted ordinary shares in companies such as the Company qualify for 100 per cent IHT Business Property Relief provided that they have been held for two years prior to an event giving rise to a potential charge of IHT. Any shareholder who has any doubts as to his IHT position should consult a professional adviser, especially before making any gift or transfer of shares.

Venture Capital Trust ("VCT") Investors

The Company's current structure and activities should enable it to meet the requirements of a qualifying company under VCT legislation. The Company has obtained advance assurance from the Inland Revenue that it fulfils the requirements for investments by VCT companies.

14. General

- 14.1 Save as disclosed in this document, there has been no significant change in the financial or trading position of the Company since 29 January 2001, being the date to which the last audited financial statements of the Company were published.
- 14.2 The total costs and expenses payable by the Company in connection with or incidental to the Placing and Admission including registration and London Stock Exchange fees, printing, advertising and distribution costs, legal and accounting fees and expenses, are estimated to amount to approximately £900,000 (excluding VAT). Included within such expenses are the commissions (and other sums) due to WestLB Panmure for procuring Places, as set out in paragraph 10.2 above.
- 14.3 The period within which placing participations may be accepted pursuant to the Placing and arrangements for the payment and holding of subscription monies pending Admission are set out in the Placing Agreement and in the placing letters sent to prospective Places ("Placing letters").
- 14.4 The Placing Shares are not being offered generally and no applications have or will be accepted other than under the terms of the Placing Agreement and the Placing letters. All the Placing Shares have been conditionally placed. The Placing is not being guaranteed or underwritten by any person.
- 14.5 Grant Thornton of Grant Thornton House, Melton Street, Euston Square, London NW1 2EP and have given and have not withdrawn their written consent to the issue of this document with the inclusion of their report and letter and the references to such report and letter and to their name in the form and context in which they are included and accept responsibility for such report and have not become aware, since the date of such report, of any matter affecting the validity of that report at that date.
- 14.6 J.A. Kemp & Co. has given and has not withdrawn its written consent to the issue of this document with the inclusion of its report and the references to such report and to its name in the form and context in which they are included and accept responsibility for such report and has not become aware, since the date of its report, of any matter affecting the validity of that report at that date.

- 14.7 PA Strategy Partners Limited has given and has not withdrawn its written consent to the issue of this document with the inclusion of its report and the references to such report and to its name in the form and context in which they are included and accept responsibility for such report and has not become aware, since the date of its report, of any matter affecting the validity of that report at that date.
- 14.8 WestLB Panmure has given and has not withdrawn its written consent to the issue of this document with the references to it in the form and context in which such references are included.
- 14.9 The Ordinary Shares in issue at the date of this document are, and the further Ordinary Shares to be in issue following Admission will be, in registered form. Temporary documents of title will not be issued under the Placing. It is expected that share certificates will be despatched to those persons requesting delivery of their Ordinary Shares in certificated form, at the risk of the persons entitled to them, by 11 July 2001. Where Placees request that Ordinary Shares be delivered to them in uncertificated form it is expected that such Ordinary Shares will be credited to their CREST accounts as soon as practicable after Admission has occurred.
- 14.10 Save as disclosed in this document no person (excluding professional advisers otherwise disclosed in this document and trade suppliers) has:
- 14.10.1 received, directly or indirectly, from the Company within the 12 months preceding the date of this document; or
- 14.10.2 entered into contractual arrangements (not otherwise disclosed in this document) to receive, directly or indirectly, from the Company on or after Admission any of the following:
- (a) fees totalling £10,000 or more; or
- (b) securities in the Company with a value of £10,000 or more calculated by reference to the Placing Price; or.
- (c) any other benefit with a value of £10,000 or more at the date of Admission
- 14.11 The Company is placing 9,523,810 Ordinary Shares pursuant to the Placing. The Placing Price represents a premium of 95p over the nominal value of 10p per Ordinary Share. The Placing Price is payable in full on application.
- 14.12 Save as disclosed in this document, no payment (including commissions) or other benefit has been or is to be paid or given to any promoter of the Company.
- 14.13 CREST is a paperless settlement procedure enabling securities to be evidenced otherwise than by certificate and transferred otherwise than by written instrument. The Articles permit the holding and transfer of shares under CREST. The Company has applied for the Ordinary Shares to be admitted to CREST and it is expected that the Ordinary Shares will be so admitted, and accordingly enabled for settlement in CREST, as soon as practicable after Admission has occurred.
- 14.14 The minimum amount, which in the opinion of the Directors must be raised by the Placing in order to provide the sums required to be provided pursuant to paragraph 21 (a) to Schedule 1 of the POS Regulations, is £900,000 which will be applied as follows:
- | | £m |
|---|-----|
| (a) purchase price of property | — |
| (b) commissions and expenses of the issue | 0.9 |
| (c) repayment of borrowings | — |
| (d) working capital | — |
- 14.15 Other than the proposed application for Admission, the Ordinary Shares have not been admitted to dealings on any recognised investment exchange nor has any application for such admission been made, and there is not intended to be made any other arrangements for dealings in the Ordinary Shares on any such exchange.

14.16 The financial information set out in this document relating to the Company does not constitute statutory accounts within the meaning of Section 240 of the Act. The statutory accounts of the Company for the years ended 31 December 1998, 31 December 1999 and 31 December 2000 have been delivered to the Registrar of Companies. In respect of each of such accounts, the auditors gave unqualified reports and no statement under Section 237(2) or (3) of the Act was made.

14.17 WestLB Panmure has been appointed nominated advisor and broker to the Company and is registered in England with the number 2002991 and its registered office is New Broad Street House, 35 New Broad Street, London, EC2M 1SQ. WestLB Panmure is regulated in the UK by the Securities and Futures Authority Limited.

14.18 The Company's accounting reference date is 31 December.

14.19 Save as disclosed in this document, there are no patents or other intellectual property rights, licences or particular contracts which are, or may be, of fundamental importance to the business of the Group.

14.20 Save as disclosed in this document, there are no investments in progress which are significant.

14.21 Save as disclosed in this document, the Directors are not aware of any exceptional factors which have influenced the Group's recent activities.

15. Documents Available for Inspection

Copies of the following documents may be inspected at the offices of Charles Russell, 8-10 New Fetter Lane, London, EC4A 1RS during usual business hours on any weekday (Saturday and public holidays excepted) for a period of 14 days following the date of this document:

15.1 the Memorandum and Articles of Association of the Company;

15.2 the audited accounts of the Company for the three years ended 31 December 2000;

15.3 the reports and letters set out in Parts IV, V, VI and VII;

15.4 the service agreements and letters of appointment referred to in paragraph 4 above;

15.5 the rules of the Share Option Schemes referred to in paragraph 7 above;

15.6 the material contracts referred to in paragraph 10 above; and

15.7 the written consents referred to in paragraph 14 above.

16. Availability of Prospectus

Copies of this document will be available to the public during normal business hours on any weekday (Saturdays and public holidays excepted) free of charge from the offices of WestLB Panmure at New Broad Street House, 35 New Broad Street, London, EC2M 1SQ and shall remain available for at least one month after the date of Admission.

Dated: 28 June 2001

