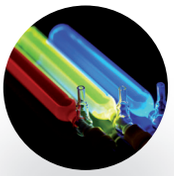
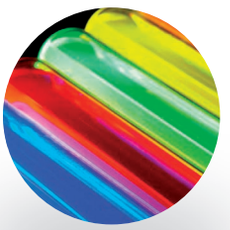
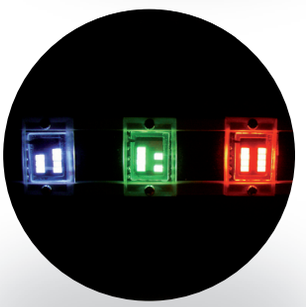
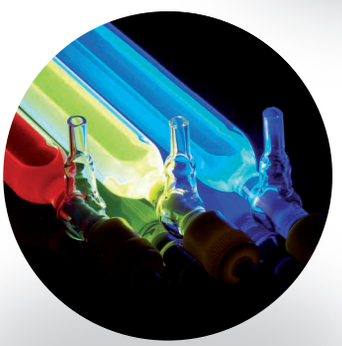




NANOCO
GROUP PLC

Admission to AIM





THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in doubt about the contents of this document, or as to the action you should take you are recommended immediately to seek your own personal financial advice from your stockbroker, accountant or other independent financial adviser authorised under the Financial Services and Markets Act 2000 who specialises in advising on the acquisition of shares and other securities.

This document comprises an admission document prepared in accordance with the AIM Rules. This document does not constitute an offer to the public requiring an approved prospectus for the purposes of section 85 of FSMA; has not been prepared in accordance with the Prospectus Rules published by the Financial Services Authority; and has not been approved by or filed with the Financial Services Authority or by any other authority which could be a competent authority for the purposes of the Prospectus Directive. Copies of this document will be available free of charge to the public during normal business hours on any day (Saturdays, Sundays and public holidays excepted) at the offices of Evolutec Group plc at 7 Devonshire Square, London EC2M 4YH from the date of this document until one month from the date of Admission in accordance with Rule 3 of the AIM Rules.

The Company, the Directors and Proposed Directors whose names appear on page 7 of this document, accept responsibility both individually and collectively for the information contained in this document. To the best of the knowledge and belief of the Company, the Directors and Proposed Directors (who have taken all reasonable care to ensure that such is the case), 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. All the Directors and Proposed Directors accept individual and collective responsibility for compliance with the AIM Rules. The Directors accept sole responsibility for the recommendation set out in paragraph 25 of the Chairman's letter set out in Part I of this document.

Each of the members of the Concert Party, whose names are set out in Part VIII of this document, accept responsibility for the information contained in this document relating to themselves. To the best of the knowledge and belief of each of the members of the Concert Party (who have taken all reasonable care to ensure that such is the case), the information contained in this document for which they are expressly responsible is in accordance with the facts and does not omit anything likely to affect the import of such information.

To the extent that information in this document has been accurately sourced from a third party, this information has been accurately reproduced and as far as the Directors and the Proposed Directors are aware, no facts have been omitted which may render the reproduced information inaccurate or misleading. No person has been authorised to give any information or make any representation other than as contained in this document. If given or made, such information or representations must not be relied on as having been authorised.

Application will be made for the re-admission of the Existing Ordinary Shares and admission of the Consideration Shares to trading on AIM, a market operated by the London Stock Exchange. It is expected that Admission will become effective and that dealings in the Existing Ordinary Shares and the Consideration Shares will commence on or around 30 April 2009. It is emphasised that no application is being made for the Existing Ordinary Shares or the Consideration Shares to be admitted to the Official List or to any other recognised investment exchange.

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 admitted to the Official List of the UK Listing Authority. 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 London Stock Exchange has not itself examined or approved the contents of this document, nor will it. No application is being made for the Ordinary Shares to be admitted to the Official List. Each AIM Company is required pursuant to the AIM Rules to have a nominated adviser. The nominated adviser is required to make a declaration to the London Stock Exchange on Admission in the form set out in Schedule Two of the AIM Rules for Nominated Advisers.

The whole of this document should be read and in particular your attention is drawn to the letter from the Chairman of the Company which is set out in Part I of this document and which contains a unanimous recommendation by the Directors that you vote in favour of the Resolutions. You should be aware that an investment in the Company involves a high degree of risk. The attention of prospective investors is also drawn in particular to Part II of this document which sets out certain risk factors relating to any investment in Ordinary Shares. All statements regarding the Group's business, financial position and prospects should be viewed in light of the risk factors set out in Part II of this document.

Evolutec Group plc

To be renamed

Nanoco Group plc

(Incorporated and registered in England and Wales under the Companies Act 1985 with registered number 5067291)

Proposed acquisition of Nanoco Tech Public Limited Company

Approval of a waiver of the obligations under Rule 9 of the Takeover Code

Re-admission of the Existing Ordinary Shares and admission of the Consideration Shares to trading on AIM

Notice of General Meeting

NOMINATED ADVISER AND BROKER: ZEUS CAPITAL LIMITED

ORDINARY SHARE CAPITAL

Authorised			*Issued and fully paid*	
Number	*Amount(£)*		*Number*	*Amount(£)*
77,000,000	7,700,000	Ordinary Shares of 10 pence as at the date of this document	25,949,996	2,594,999.60
250,000,000	25,000,000	Ordinary Shares of 10 pence immediately after Admission	184,088,032	18,408,803.20

This document does not constitute an offer to sell, or a solicitation of offer to buy Ordinary Shares. This document is not for distribution in or into the Prohibited Territories. 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 the Prohibited Territories or in any country, territory or possession where to do so may contravene local securities laws or regulations and the Ordinary Shares may not be offered or sold directly or indirectly within the United States, Canada, Australia, the Republic of Ireland, the Republic of South Africa or Japan or to, or for the account or benefit of, any person within the United States, Canada, Australia, the Republic of Ireland, the Republic of South Africa or Japan. The distribution of this document in jurisdictions other than the United Kingdom may be restricted by law and therefore any person into whose possession this document comes should inform themselves about and observe any such restrictions. Any failure to comply with these restrictions may constitute a violation of the securities laws if any such jurisdictions. Accordingly, the Ordinary Shares may not subject to certain exceptions, be offered or sold, directly or indirectly in or into the Prohibited Territories or to any national, citizen or resident of the Prohibited Territories.

Zeus Capital, which is authorised and regulated in the United Kingdom by the Financial Services Authority, is acting as nominated adviser and broker to the Company in connection with matters set out in this document. Its responsibilities as the Company's nominated adviser under the AIM Rules and the AIM Rules for Nominated Advisers are owed solely to the London Stock Exchange and are not owed to the Company or to any Director or Proposed Director or to any other person in respect of his decision to acquire Ordinary Shares in the Company in reliance on any part of this document. In accordance with the AIM Rules for Nominated Advisers, Zeus Capital has confirmed to the London Stock Exchange that it has satisfied itself that the Directors and Proposed Directors have received advice and guidance as to the nature of their responsibilities and obligations to ensure compliance by the Company with the AIM Rules and that, in its opinion and to the best of its knowledge and belief, having made due and careful enquiry, all relevant requirements of the AIM Rules have been complied with. No representation or warranty, express or implied, is made by Zeus Capital as to any of the contents of this document or the omission of any material for which it is not responsible (without limiting the statutory rights of any person to whom this document is issued). Zeus Capital will not be offering advice and will not otherwise be responsible to anyone other than the Company for providing protections afforded to customers of Zeus Capital or for advising them on the contents of this document or any other matter.

Where information has been sourced from a third party the Company confirms that such information has been accurately reproduced and that, so far as it is aware and is able to ascertain from information published by that third party, no facts have been omitted that would render the reproduced information inaccurate or misleading.

A notice convening a General Meeting of the Company to be held at 7 Devonshire Square, London EC2M 4YH on 24 March 2009 at 3.30 p.m. is set out at the end of this document. The Form of Proxy for use at the meeting is enclosed with this document and should be returned as soon as possible and, in any event, to arrive at the offices of the Company's Registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU as soon as possible but in any event not later than 20 March 2009 at 3.30 p.m. being 48 hours before the time for the holding of the General Meeting. The completion and depositing of a Form of Proxy will not preclude Shareholders from attending, speaking at and/or voting in person at the General Meeting should they wish to do so.

This document will also be available for download from the Company's website www.evolutec.co.uk. Following completion of the Proposals, this document will also be available for download from the Enlarged Group's website www.nanocotechnologies.com.

CONTENTS

EXPECTED TIMETABLE OF PRINCIPAL EVENTS

Admission Document publication date	25 February 2009
Latest time and date for receipt of Forms of Proxy for the General Meeting	20 March 2009
General Meeting	24 March 2009
Meeting of Nanoco Shareholders to approve the Scheme	27 March 2009
Completion of the Acquisition	30 April 2009
Admission and commencement of dealings in the Enlarged Issued Share Capital	30 April 2009
CREST accounts credited (as applicable)	30 April 2009
Definitive share certificates despatched (as applicable)	14 May 2009

KEY STATISTICS

Number of Existing Ordinary Shares	25,949,996
Number of Consideration Shares	158,138,036
Enlarged Issued Share Capital	184,088,032
Consideration Shares as a percentage of the Enlarged Issued Share Capital	85.90%
Market capitalisation of the Enlarged Group immediately following Admission*	£38,658,487
AIM trading symbol	NANO.L
ISIN	GB00B01JLR99

* Based on the closing price of Ordinary Shares of 21 pence on 24 February 2009 (being the latest practicable date prior to the publication of this document).

FORWARD-LOOKING STATEMENTS

All statements, other than statements of historical facts, included in this document, including, without limitation, those regarding the Company's or Enlarged Group's financial position, business strategy, plans and objectives of management for future operations or statements relating to expectations in relation to dividends or any statements preceded by, followed by or that include the words "targets", "believes", "expects", "aims", "intends", "plans", "will", "may", "anticipates", "would", "could" or similar expressions or the negative thereof, are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the Company's or Enlarged Group's control that could cause the actual results, performance, achievements of or dividends paid by the Company to be materially different from actual results, performance or achievements, or dividend payments expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Enlarged Group's net asset value, present and future business strategies and income flows and the environment in which the Enlarged Group will operate in the future.

These forward-looking statements speak only as of the date of this document. The Company expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained herein to reflect any change in the Company's expectations with regard thereto, any new information or any change in events, conditions or circumstances on which any such statements are based, unless required to do so by law or any appropriate regulatory authority.

KEY INFORMATION

The following information is derived from, and should be read in conjunction with, the whole of this Admission Document including in particular the section headed Risk Factors relating to the Enlarged Group in Part II of this document. Shareholders should read the whole of this document and not rely on key or summarised information.

INTRODUCTION

Evolutec has reached agreement on the terms of a recommended share acquisition of the entire issued and to be issued share capital of Nanoco, a leading nanotechnology company involved in the development and manufacture of fluorescent semi-conducting materials called quantum dots, to be effected by means of a Court approved scheme of arrangement.

The consideration for the Acquisition is to be satisfied by the issue of the Consideration Shares to the Nanoco Shareholders as detailed later in this document.

In view of the size of the Acquisition, in relation to the Company, the Acquisition constitutes a reverse takeover under the AIM Rules which is conditional, *inter alia*, upon the approval of Shareholders, the admission of the Enlarged Issued Share Capital to trading on AIM and the publication of the Admission Document. Accordingly, a general meeting is being convened on 24 March 2009 at which Shareholders will be asked to, *inter alia*, approve the Acquisition and grant the appropriate authority to permit the Company to issue the Consideration Shares. If the Resolutions are approved by Shareholders, it is expected that Admission will take place, and that dealings on AIM will commence, on 30 April 2009.

INFORMATION ON NANOCO

Nanoco is a leading nanotechnology company involved in the development and manufacture of fluorescent semi-conducting materials called quantum dots. Nanoco Technologies was founded in 2001 by Professor Paul O'Brien and Dr Nigel Pickett in order to progress the development of quantum dot technology that was previously developed at the University of Manchester and Imperial College, London.

Quantum dots are a platform technology with uses in a wide range of applications from life sciences through to optoelectronics dominated by solid state lighting, photovoltaics and next generation displays. Quantum dot based applications have the ability to potentially offer significant benefits in performance and energy savings compared to those materials currently used in these industry sectors.

Nanoco's business strategy is to work in partnership with quantum dot application developers. These application developers tend to be large global technology companies working to incorporate quantum dots into a specific end use application. Examples of these applications include quantum dot containing LEDs, displays and solar cells.

Nanoco has been successful in signing development contracts as well as establishing distribution channels with multinational companies to supply Nanoco materials.

NANOCO'S TECHNOLOGY

A key challenge in the quantum dot field has been the ability to manufacture highly efficient quantum dots in significant commercial volumes. The Proposed Directors believe that, to date, the quantum dot industry's production has been limited by the production of milligram to single gram batches.

Nanoco's technology directly addresses these key challenges. Firstly, Nanoco has developed and patented core technology based on methods for producing highly efficient quantum dots that are tuneable to a specific colour emission. Secondly, Nanoco has developed scalable processes for producing quantum dots. This technology enables the control of nanoparticle growth thereby allowing the production of larger quantities of quantum dots. The production technology is currently being scaled up from 50 gram batches towards kilogram batches and greater to meet the forecast market demand.

Nanoco has formed and its strategy is to continue to form strategic partnerships with quantum dot application developers across the world in order to develop quantum dot based applications.

RISK FACTORS

The plan to ramp production batch size up to 1kg and later to 25kg comprises several elements, including some design, technology, and broader management challenges. In particular, the Proposed Directors believe that one of the most challenging technical targets for Nanoco will be the achievement of sufficient life expectancy of its quantum dots in order to satisfy the requirements of its customers.

The commercial success of the Enlarged Group will depend in part on its ability to protect and enforce its IP so as to preserve its exclusive rights in respect of its technology and to preserve the confidentiality of its own and its collaborators' know-how.

MARKET

The market for quantum dots is projected to reach £500 million by 2013. This growth is being fuelled by the wide variety of quantum dot based applications which are currently being developed.

Nanoco is currently focusing on the development of products that serve four core application areas; solid state lighting, next generation displays, solar energy and life science based applications.

STRATEGY AND USE OF FUNDS

Following Admission, Nanoco will continue to develop, protect and improve its quantum technology as well as continue to establish strategic partnerships with quantum dot application developers across a wide range of applications and industry sectors. The Enlarged Group will have cash of approximately £8.1 million following Admission. These funds will be applied to the execution of Nanoco's strategy.

CONCERT PARTY

The Proposals will lead to a change of control of the Company with the Concert Party (defined and explained in this document) being interested in 70,630,848 Ordinary Shares representing 38.37 per cent. of the Enlarged Issued Share Capital. The Concert Party has therefore entered into a Relationship Agreement which amongst other things set out the commitment to allow the Company to be run independently from the Concert Party and that any transactions and relationships between the two are on an arms length basis.

RECOMMENDATION

The Directors, who have been so advised by Zeus Capital, consider that the Proposals are fair and reasonable and in the best interests of the Company and its Shareholders as a whole. Accordingly, the Directors unanimously recommend you vote in favour of the Resolutions.

ACTION TO BE TAKEN

A Form of Proxy is enclosed for use at the General Meeting. Whether or not you intend to be present at the meeting you are requested to complete, sign and return the Form of Proxy to the Company's registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU as soon as possible but in any event so as to arrive not later than 3.30 p.m. on 20 March 2009. The completion and return of a Form of Proxy will not preclude you from attending the meeting, speaking at the General Meeting and/or voting in person should you subsequently wish to do so.

DIRECTORS, PROPOSED DIRECTORS, COMPANY SECRETARY AND ADVISERS

Directors	Dr. David Philip Bloxham (Non-executive Chairman) Gordon James Hall (Non-executive Director) Mark Barrie Hawtin (Non-executive Director) Graeme Manson Hart (Non-executive Director)
Directors following Admission	Dr. Peter John Rowley (Non-executive Chairman) Dr. Michael Albert Edelman (Chief Executive Officer) Dr. Nigel Leroy Pickett (Chief Technical Officer) Michael Anthony Bretherton (Chief Financial Officer) Gordon James Hall (Non-executive Director)
Chief Scientific Adviser to the Company following Admission	Professor Paul O'Brien
Company Secretary following Admission	Mark James Sullivan
Tel No. following Admission	0161 603 7900
Website following Admission	www.nanocotechnologies.com
Registered Office following Admission	46 Grafton Street Manchester M13 9NT
Nominated Adviser and Broker	Zeus Capital Limited 3 Ralli Courts West Riverside Manchester M3 5FT
Solicitors to the Company following Admission	Schofield Sweeney LLP Springfield House 76 Wellington Street Leeds West Yorkshire LS1 2AY
Reporting Accountants	Ernst & Young LLP 100 Barbirolli Square Manchester M2 3EY
Auditors to the Company	Grant Thornton UK LLP 1 Westminster Way Oxford OX2 0PZ

Solicitors to the Nominated Adviser	Hammonds LLP 2 Park Lane Leeds LS3 1ES
Principal Bankers	HSBC Bank plc Midland House Seacourt West Way Botley Oxford OX2 0PL
Registrars	Capita Registrars The Registry 34 Beckenham Road Beckenham Kent BR3 4TU

DEFINITIONS

The following words and expressions shall have the following meanings in this document, unless the context otherwise requires:

"2006 Act"	the Companies Act 2006;
"Acquisition"	the proposed acquisition by the Company of the entire issued and to be issued share capital of Nanoco pursuant to the Scheme of Arrangement;
"Act"	the Companies Act 1985, as amended;
"Acts"	those provisions of the Companies Act 1985 and 1989 and the 2006 Act for the time being in force and every other enactment for the time being in force concerning companies (including any orders, regulations or other subordinated legislation made under those Acts or enactments) so far as they apply to the Company and the Enlarged Group;
"Admission"	admission of the Enlarged Issued Share Capital to trading on AIM becoming effective on 30 April 2009 in accordance with Rule 6 of the AIM Rules;
"Admission Agreement"	the admission agreement to be entered into between (1) Gordon Hall and the Proposed Directors, (2) Zeus Capital, (3) Professor Paul O'Brian, and (4) the Company in connection with the Admission;
"Admission Document"	this document dated 25 February 2009;
"AIM"	the market of that name operated by the London Stock Exchange;
"AIM Rules"	the AIM Rules for Companies published by the London Stock Exchange from time to time governing the admission to and the operation of AIM;
"Articles"	the articles of association of the Company as at the date of this document;
"Board" or "Directors"	the directors of the Company as at the date of this document whose names appear on page 7 of this document against the heading "Directors", and "Director" means any of the Directors;
"certificated" or "in certificated form"	an Ordinary Share which is not in uncertificated form;
"Combined Code"	the combined code on corporate governance;
"Company" or "Evolutec"	Evolutec Group plc whose registered office is at 3 More London Riverside, London, SE1 2AQ (registered in England and Wales under number 5067291);

"Completion"	completion of the Acquisition;
"Concert Party"	for the purposes of the Takeover Code, ORA Capital, ORA Guernsey, James Lawrence Ede-Golightly and Michael Anthony Bretherton further details of whom are set out in Part I and in Parts VIII and IX of this document;
"Consideration Shares"	the 158,138,036 Ordinary Shares to be issued to Nanoco Shareholders;
"Court"	the High Court of Justice in England and Wales;
"Court Hearing"	the hearing by the Court of the claim form to sanction the Scheme of Arrangement and to confirm the associated reduction of capital of Nanoco;
"CREST"	the relevant system (as defined in the CREST Regulations) for paperless settlement of share transfers and the holding of shares in uncertificated form which is administered and operated by Euroclear UK & Ireland Limited (formerly CRESTCo);
"CREST Regulations"	the Uncertificated Securities Regulations 2001 (SI 2001/3755) (as amended);
"Directive"	the Directive in Takeover Bids (2004/25/EC);
"EMI Options"	an option which is an enterprise management incentive option satisfying the provisions of Schedule 5 to ITEPA;
"Employee Options"	options granted by the Company to employees, directors and officers of the Company pursuant to the Option Scheme;
"Enlarged Group"	the Company and its subsidiary undertakings following Completion;
"Enlarged Issued Share Capital"	the issued ordinary shares as at Admission, comprising the Existing Ordinary Shares and the Consideration Shares;
"Ernst & Young"	Ernst & Young LLP;
"Existing Ordinary Shares"	the 25,949,996 Ordinary Shares in issue at the date of this document;
"Form of Proxy"	the form of proxy included with this document for use by Shareholders in connection with the General Meeting;
"FSA"	the Financial Services Authority;
"FSMA"	the Financial Services and Markets Act 2000 (as amended);

"GM" or "General Meeting"	the general meeting of the Company to be held on 24 March 2009, notice of which is set out at the end of this document;
"GM Notice"	the notice of the GM, set out at the end of this document;
"Group"	the Company and its subsidiary undertakings at the date of this document;
"IP"	intellectual property;
"Independent Shareholders"	the Shareholders excluding the members of the Concert Party;
"ITEPA"	the Income Tax (Earnings and Pensions) Act 2003;
"London Stock Exchange"	London Stock Exchange plc;
"Long Term Incentive Plan"	the Company's share option scheme (further details of which are set out in paragraph 5 of Part IX of this document);
"Nanoco"	Nanoco Tech Public Limited Company whose registered office is at 46 Grafton Street, Manchester, M13 9NT (registered in England and Wales under number 5853720);
"Nanoco Companies"	Nanoco and Nanoco Technologies;
"Nanoco Shareholders"	the holders of Nanoco Shares;
"Nanoco Shares"	the ordinary shares of £0.10 each in the share capital of Nanoco;
"Nanoco Share Incentive Plan"	the Nanoco Tech Share Incentive Plan established by Nanoco on 1 September 2006;
"Nanoco Technologies"	Nanoco Technologies Limited (registered in England and Wales under company number 04206123);
"Official List"	the Official List of the UK Listing Authority;
"ORA Capital" or "ORA"	ORA Capital Partners plc (registered in England and Wales under number 5614046);
"ORA Guernsey"	ORA (Guernsey) Limited (registered in Guernsey under number 49949);
"Ordinary Shares"	ordinary shares of 10 pence each in the capital of the Company;
"Panel"	The Panel on Takeovers and Mergers;
"Pira International" or "Pira"	Pira International Limited (registered in England and Wales under number 3858209);

"Prohibited Territories"	USA, Australia, Canada, Japan, the Republic of Ireland, the Republic of South Africa and their respective territories and possessions, and any other territories where the publication of this document would be prohibited by law;
"Proposals"	the Acquisition, the proposed approval of the Waiver and Admission;
"Proposed Directors"	Dr. Peter John Rowley, Dr. Michael Albert Edelman, Dr. Nigel Leroy Pickett and Michael Anthony Bretherton;
"QCA"	Quoted Companies Alliance;
"QCA Guidelines"	the corporate governance guidelines for AIM companies, published by the QCA;
"Relationship Agreement"	the relationship agreement dated 25 February 2009 between the Concert Party and the Company (further details of which are set out in paragraph 15.18 of Part IX of this document);
"Resolutions"	the resolutions referred to in the notice of GM set out at the end of this document;
"Restricted Shareholders"	holders of certain Consideration Shares and certain Existing Ordinary Shares, who include the Proposed Directors, who have entered into the lock-in and orderly market agreements referred to in paragraph 15.5 of Part IX of this document;
"Scheme of Arrangement"	the scheme of arrangement under Part 26 of the 2006 Act between Nanoco and the Nanoco Shareholders to implement the Acquisition, with or subject to any modification thereof, or addition thereto, or condition approved or imposed by the Court, and agreed by Nanoco and Evolutec;
"Scheme Document"	the document to be sent by Nanoco to Nanoco Shareholders, of which the Scheme of Arrangement will form part;
"Shareholder Resolutions"	the resolutions, *inter alia*, to approve the Proposals set out in the notice of GM, set out at the end of this document;
"Shareholders"	holders of Existing Ordinary Shares;
"Statutes"	the Acts and the CREST Regulations;
"Takeover Code"	the City Code on Takeovers and Mergers published by the Panel (as amended from time to time);
"UK"	the United Kingdom of Great Britain and Northern Ireland;

"UK Listing Authority"	the Financial Services Authority acting in its capacity as a competent authority for the purposes of Part VI of the Financial Services and Markets Act 2000, including where the context so permits any committee, employee or servant of such authority to whom any function of the UK Listing Authority may from time to time be delegated;
"USA"	the United States of America, its territories and possession, any state of the United States of America and the District of Columbia;
"VAT"	value added tax;
"Waiver"	the conditional waiver by the Panel that would otherwise arise under Rule 9 of the Takeover Code for the Concert Party to make a general offer for the whole of the Company's issued share capital;
"Zeus Capital"	Zeus Capital Limited (registered in England and Wales under number 4417845).

GLOSSARY

"Exciton"	the combination of an electron and a positive hole;
"Excitation"	the condition in which an electron moves to a higher, unstable energy level upon absorbing light or electrical energy;
"LCD"	Liquid Crystal Display;
"LED"	a Light Emitting Diode is a semiconductor diode that emits light when voltage is applied;
"Nanocrystalline"	a single crystal of material that has a diameter of less than 50 nanometres;
"Narrow Band"	a narrow stripe or band of colour or light. This is a measure of the width of an quantum dot emission peak at its half height;
"Next generation display"	future display technology that has the potential to replace current commercially sold LCD or Plasma displays;
"OLED"	Organic Light Emitting Diode whose emissive layer is composed of a film of organic compounds;
"Optoelectronics"	the study and application of electronic devices that source, detect and control light;
"Other nanomaterials"	semiconductor nanoparticles that are not quantum dots for example: zinc oxide, copper indium diselenide ("CIS"), copper indium gallium diselenide ("CIGS");
"Photons"	a particle of light;
"Photovoltaics"	the technology of the conversion of sunlight into electricity;
"Platform technology"	a technology than can be applied to a number of different applications in unrelated industry sectors;
"Quantum dot"	nanocrystalline semiconductor materials whose excitons are confined in three dimensions. When stimulated by an external source such as ultraviolet light quantum dots emit light at a specific colour. The colour is determined by the physical size of the quantum dot;
"RoHS"	The European Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2002/95/EC commonly referred to as the Restriction of Hazardous Substances Directive or RoHS which was adopted in February 2003 by the EU. The RoHS directive took effect on 1 July 2006. The Directive restricts the use of six substances including heavy metals such as cadmium, lead, mercury and chromium VI in electrical and electronic equipment;
"Semiconductor"	a substance, usually a solid chemical element or compound, which can conduct electricity under some

	conditions but not others, making it a good medium for the control of electrical current. Its conductance varies depending on the current or voltage applied to a control electrode, or on the intensity of irradiation by infrared, visible light, ultraviolet, or X rays;
"Single Source Precursor"	a single molecule (chemical entity) containing two or more elemental components of a final material;
"Solar cells"	a device that converts solar energy into electricity;
"Spectrum"	the entire range of wavelengths of all known electromagnetic radiations extending from gamma rays through visible light infrared, and radio waves, to X Rays.

PART I

LETTER FROM THE CHAIRMAN OF EVOLUTEC GROUP PLC

EVOLUTEC GROUP PLC

(Incorporated in England and Wales under the Companies Act 1985 with Registered Number 5067291)

Directors:	*Registered Office:*
David Philip Bloxham (Non-executive Chairman)	**3 More London Riverside**
Gordon James Hall (Non-executive Director)	**London**
Mark Barrie Hawtin (Non-executive Director)	**SE1 2AQ**
Graeme Manson Hart (Non-executive Director)	

25 February 2009

Dear Shareholder,

Proposed acquisition of Nanoco Tech Public Limited Company

Approval of a waiver of the obligations under Rule 9 of the Takeover Code

Re-admission of the Existing Ordinary Shares and admission of the Consideration Shares to trading on AIM

Notice of General Meeting

1. INTRODUCTION

It was announced earlier today that the boards of Nanoco and Evolutec had reached agreement on the terms of a recommended share acquisition by Evolutec of the entire issued and to be issued share capital of Nanoco to be effected by means of a Court approved scheme of arrangement between Nanoco and its shareholders pursuant to Part 26 of the 2006 Act (involving a reduction of capital pursuant to section 135 of the Act).

Nanoco is a leading nanotechnology company involved in the development and manufacture of fluorescent semi-conducting materials called quantum dots. Quantum dots are a platform technology with uses in a wide range of applications from life sciences through to optoelectronics dominated by solid state lighting, photovoltaics, and next generation displays. Quantum dot based applications have the ability to potentially offer significant benefits in performance and energy savings compared to those materials currently used.

The consideration for the Acquisition is to be satisfied by the issue of the Consideration Shares to the Nanoco Shareholders, on the basis of 4.55 Consideration Shares for every Nanoco Share held.

In view of the size of the Acquisition, in relation to the Company, the Acquisition constitutes a reverse takeover under the AIM Rules and, as such, is conditional upon the admission of the Enlarged Issued Share Capital to trading on AIM and the publication of the Admission Document. In addition, the Acquisition also requires the approval of Shareholders. Accordingly, a general meeting is being convened on 24 March 2009 at which Shareholders will be asked to approve the Acquisition and grant the appropriate authority to permit the Company to issue the Consideration Shares. If the Resolutions are approved by Shareholders and subject to the Scheme of Arrangement having become effective in accordance with its terms, it is expected that Admission will take place, and that dealings on AIM will commence, on 30 April 2009.

Immediately following Admission the Consideration Shares will comprise approximately 85.90 per cent. of the Enlarged Issued Share Capital.

Further details of the Scheme of Arrangement are set out in paragraph 14 of Part IX of this document.

Following Completion, the Concert Party will be interested in 70,630,848 Ordinary Shares, representing 38.37 per cent. of the Enlarged Issued Share Capital. Since the Acquisition will result in the Concert Party being interested in more than 30 per cent. of the issued share capital of the Company, the Concert Party would, in the absence of a waiver from the provisions of Rule 9 of the Takeover Code being granted by the Panel, be obliged to make a general offer to all remaining shareholders of the Company. The Panel has agreed, however, subject to Resolution number 2 being passed on a poll by the Independent Shareholders at the General Meeting, to waive this obligation.

Further details on the Concert Party are set out in paragraph 19 of this Part I and Part VIII of this document.

The purpose of this document is to provide you with information on the Acquisition and to recommend that you vote at the General Meeting in favour of the Resolutions which are necessary to give effect to, *inter alia*, the Proposals. This document constitutes an Admission Document in respect of the Enlarged Group prepared in accordance with the AIM Rules.

2. BACKGROUND ON EVOLUTEC AND REASONS FOR THE ACQUISITION

Evolutec was admitted to AIM in August 2004. Evolutec's principal activity was the discovery and development of novel agents for the prevention and treatment of human disease. Evolutec focused its therapeutic development on allergy, inflammation and autoimmune disease.

Evolutec progressed its lead therapeutic development candidate from discovery to completion of various phase II trials, however it did not show clinical efficacy in any of the clinical trials. Following the results of these trials an extensive strategic review was undertaken to assess the options available to Evolutec.

On 6 June 2007 a circular was sent to Evolutec shareholders explaining a proposal to distribute cash to shareholders by way of liquidation and the proposed cancellation of admission of Evolutec's shares from AIM. Following dispatch of the circular the board of Evolutec received written confirmation from one significant shareholder that they would vote against the proposals. The board was therefore of the view that the resolutions required to effect the proposals would not be passed and took the decision to continue as a quoted entity with a strategy of identifying potential acquisitions.

Evolutec is now classed as an investment company under the AIM Rules. The investment policy of Evolutec has been to seek a single investment, most probably of a UK or European business, in either the technology, healthcare or service related sectors.

The Directors believe that Nanoco is a suitable acquisition for the Company.

3. INFORMATION ON NANOCO

Nanoco is a leading nanotechnology company involved in the development and manufacture of fluorescent semi-conducting materials called quantum dots. Nanoco Technologies was founded in 2001 by Professor Paul O'Brien and Dr Nigel Pickett in order to progress the development of quantum dot technology that was previously developed at the University of Manchester and Imperial College, London. Since 2001, Nanoco has raised £4.1 million of private equity funds to continue the development and manufacture of quantum dots.

Quantum dots are a platform technology with uses in a wide range of applications from life sciences through to optoelectronics dominated by solid state lighting, photovoltaics, and next generation displays. Quantum dot based applications have the ability to potentially offer significant benefits in performance and energy savings compared to those materials currently used in these industry sectors.

Of the range of potential applications for quantum dots Nanoco has focused initially on four application areas. These are solid state lighting, solar energy, life sciences and next generation displays.

A key challenge in the quantum dot field has been the ability to manufacture highly efficient quantum dots in significant commercial volumes. The Proposed Directors believe that to date, the quantum dot industry's production has been limited to the production of milligram to single gram batches.

Nanoco's technology directly addresses these key challenges. Firstly, Nanoco has developed and patented core technology based on methods for producing highly efficient quantum dots that are tuneable to a specific colour emission. Secondly, Nanoco has developed scalable processes for producing quantum dots. This technology enables the control of nanoparticle growth thereby allowing the production of larger quantities of quantum dots. The production technology is currently being scaled up from 50 gram batches towards kilogram batches and greater to meet the forecast market demand.

Nanoco has also developed a number of other nanomaterials, methods to improve the performance of quantum dots, additional production methods and the incorporation of the resultant nanomaterials into commercial applications.

Nanoco's business strategy is to work in partnership with quantum dot application developers. These application developers tend to be large global technology companies working to incorporate quantum dots into a specific end use application. Examples of these applications include quantum dot containing LEDs, displays and solar cells. Nanoco has been successful in signing development contracts as well as establishing distribution channels with multinational companies to supply Nanoco materials. The Proposed Directors believe that Nanoco is now well placed to become a successful quantum dot partner of choice for application developers globally.

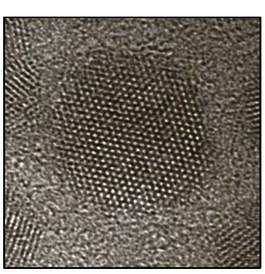
4. QUANTUM DOTS

Quantum dots are tiny particles of a semiconductor material which range from 2 to 10 nanometers in diameter (about the width of 50 atoms).

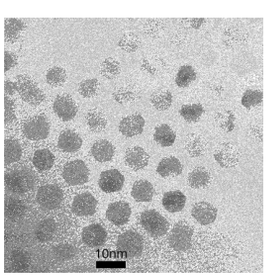
Because of their small size, quantum dots display useful optical and electrical properties that are different in character to those of the corresponding material in bulk. The most immediately apparent of these properties is the emission of photons under excitation, which are visible to the human eye as light. The wavelength of these photon emissions depends on the size of the quantum dot.

The ability to precisely control the size of a quantum dot enables the manufacturer to determine the wavelength of the emission, which in turn determines the colour of light the human eye perceives. Quantum dots can therefore be tuned during production to emit any colour of light desired.

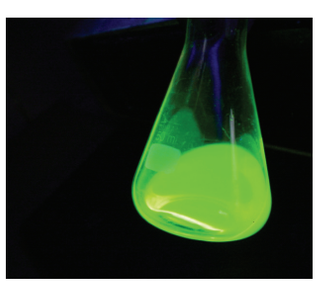
The smaller the dot, the closer it is to the blue end of the spectrum, and the larger the dot, the closer to the red end of the spectrum. Quantum dots can also be tuned beyond visible light, into the infra-red or into the ultra-violet parts of the spectrum.



High resolution electron microscope Image of single QD (5nm across)



Electron microscope image showing QD In very ordered patern



Dilute solution QD excited by UV light

Quantum dot technology has applications in a number of industries where there is a requirement for colour, imaging or the manipulation of light.

5. NANOCO'S TECHNOLOGY

Conventional, small-scale quantum dot manufacturing relies on a process called "high temperature dual injection", wherein raw materials are injected into a hot reaction solution followed by particle growth. While in general producing high quality quantum dots, this process involves harsh reaction conditions and hazardous, often toxic starting materials. Attempts to scale up this process cause increasing inconsistency in the resulting quality of quantum dots that are produced.

A reproducible route to larger quantities of consistent, high quality quantum dots has been developed by Nanoco which avoids the high temperature, difficult to control, process.

Nanoco's technology addresses five key issues associated with quantum dots. These are:

1. Production of bright, highly efficient fluorescent semiconductors;
2. Materials which are highly tunable to a specific colour emission narrow band width;
3. Stable materials which can stand up to the rigours of commercial applications;
4. Heavy metal free quantum dots which are RoHS compliant. It is critical for electronics producers around the world to comply with RoHS legislation;
5. Cost effective manufacturing scale-up of quantum dots which may provide a route towards lower pricing and commercial viability.

The plan to ramp production batch size up to 1kg and later to 25kg comprises several elements, including some design, technology, and broader management challenges. Meeting the specifications for the more demanding applications in display and lighting technology will require further manufacturing process optimization and careful control of a number of parameters during the scale up.

Nanoco has good technical and intellectual property strength but will need to remain focused on its key customer specifications. In particular, the Proposed Directors believe that one of the most challenging technical targets for Nanoco will be the achievement of sufficient life expectancy of its quantum dots in order to satisfy the requirements of its customers.

An independent report on Nanoco's technology has been prepared by Pira International and can be found in Part III of this document.

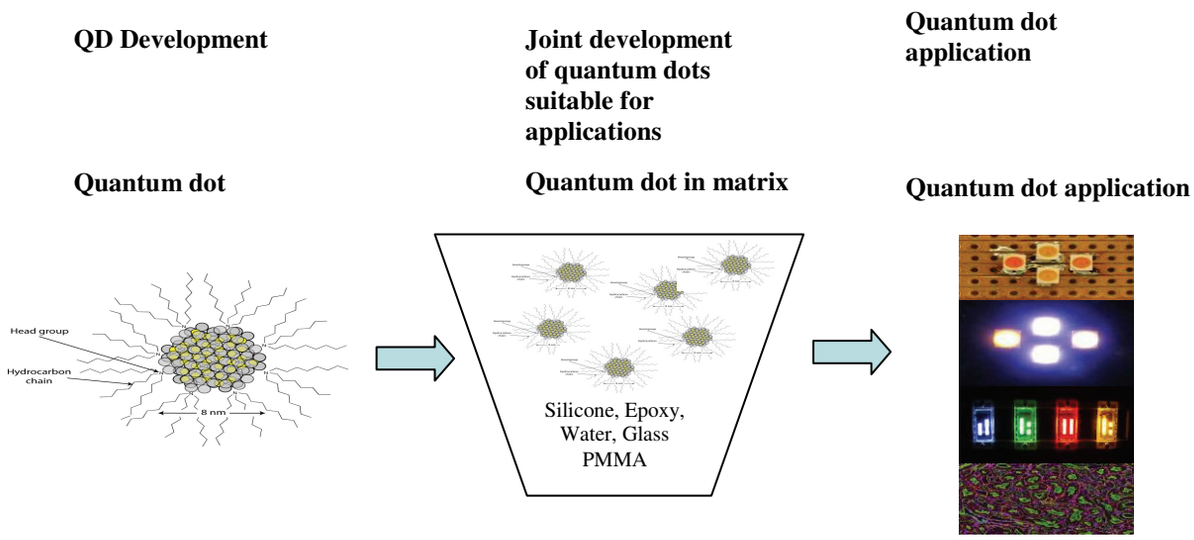
6. NANOCO BUSINESS MODEL

Nanoco forms and will continue to form strategic partnerships with quantum dot application developers across the world. The application developer and Nanoco work together in strategic partnership to develop a quantum dot based application. In these development partnerships Nanoco will focus on the quantum dot material and embedding the quantum dots in an application specific matrix while the application developer focuses on the application itself.

In order to be successfully embedded into an application or device, the quantum dots need to be designed and produced in a bespoke manner specific to each application. The matrix could be made from a number of materials and could exist in a liquid, powder or solid state.

Nanoco has developed its ability to fabricate quantum dots into end use devices to assist the company's application partners and facilitate adoption of its technology by the market. These devices include quantum dot printing inks, quantum dot electroluminescent displays, quantum dots LEDs and quantum dot based photovoltaic devices. The quantum dot containing devices give Nanoco rapid feedback on its quantum dot material performance and enable the company to quickly improve and modify the quantum dots to better suit the end use applications of the company's partners.

The following diagram illustrates the three stages of quantum dot development into a specific application.



Nanoco seeks to control and own all the IP created in Phase I and II. Following a successful joint development, Nanoco will typically seek to enter into a material supply and license agreement with the application developer.

In some cases the application developer may not be the manufacturer of the final product, but will supply a quantum dot containing subcomponent to the ultimate manufacturer of the application.

Nanoco generates revenue from three sources: funded research, material sales and royalties gained from sales of its application products into the market.

Funded research

Funded research is where a customer pays for all or a portion of Nanoco's development costs in order to tailor Nanoco's quantum dots to fit the customer's specific application.

Material sales

Nanoco currently sells materials to a number of universities, commercial and government research laboratories and application developers both directly and through its small lot distributor, Sigma Aldrich Corporation (headquartered in the USA) and its Asian distributor, Kisco Limited. After the successful development of a quantum dot containing application, Nanoco will sell quantum dots which are tailored for a specific application.

Royalty income

Where Nanoco has worked with an application developer to incorporate quantum dots into a specific application, Nanoco will negotiate a royalty from the sale of that application.

Having a three tiered revenue stream will allow Nanoco to cover development costs, sell materials and capture a portion of the added value of the quantum dot containing application sale.

Strategic partnerships

Nanoco has entered into a strategic partnership with a major Japanese corporation to develop quantum dot based LED's for use as a backlight in an LCD display. A joint development agreement was entered into in December 2007 to tailor Nanoco's heavy metal free quantum dots into specific LED encapsulating resins.

Following the successful joint development agreement the corporation and Nanoco entered into a material supply and licence agreement in November 2008. This corporation is now working with Nanoco to develop the quantum dot LED's to produce white light for the LCD backlight market. This agreement includes a milestone based, non-refundable US$10 million upfront royalty payment of which Nanoco has to date received US$2 million. The Proposed Directors believe that all three technical milestones set out below will be achieved by 31 December 2010 and therefore trigger the payments set out below.

Milestone 1: the achievement of milestone 1 will trigger a US$2 million payment if small quantities of red and green cadmium free quantum dots demonstrating a set lighting efficiency, power, spectral width and life expectancy are demonstrated.

Milestone 2: the achievement of milestone 2 will trigger a further US$2 million payment if small quantities of red and green cadmium free quantum dots, with higher efficiency, higher power, tighter spectral width and life expectancy than in milestone 1 are demonstrated.

Milestone 3: the achievement of milestone 3 will trigger a US$4 million payment if 1kg of red and 1kg of green cadmium free quantum dots, each made from a single batch are delivered, at a price to be agreed between the parties.

Under the agreement, royalties will be charged at a rate of 5 per cent. of the net sales price of this corporation's products (product being defined as a packaged LED, comprising an LED chip, quantum dots and an encapsulant).

Distribution agreements

In September 2007, Nanoco entered a distribution agreement with USA headquartered Sigma Aldrich, the world's largest supplier of research chemicals. Sigma Aldrich sells Nanoco's quantum dot products to universities, government and corporate laboratories in small lot sizes.

In May 2008, Nanoco entered a five year exclusive distribution agreement for Asia (excluding China) with Japan headquartered Kisco, a leading Asian electronics materials trading and manufacturing company. Kisco assists Japanese customers with the purchase, logistics and supply of Nanoco's quantum dot materials from the UK into Asia. This agreement does not prohibit Nanoco from working directly with Asian customers.

Further details of the Kisco Agreement are detailed in paragraph 15 of Part IX of this document.

7. STRATEGY AND USE OF FUNDS

There are two parts to Nanoco's strategy, the first being the continued development, protection and improvement of its quantum dot technology; and the second being the establishment of strategic partnerships with quantum dot application developers across a range of applications and industry sectors.

Nanoco will:

- Continue the development of quantum dot materials and structures;
- Continue to develop the production technology and facilities for larger batches of quantum dots;
- Continue to develop heavy metal free, RoHS compliant quantum dots;
- Continue to protect its technology through patents;
- Continue to develop strategic partnerships with application developers in a range of industries;
- Continue to develop its quantum dot device development program; and
- Establish additional distribution channels in order to supply Nanoco materials.

Following Admission, the Enlarged Group will have net funds of approximately £8.1 million. These funds will be applied to the execution of Nanoco's strategy.

8. APPLICABLE MARKETS AND CUSTOMERS

The market for quantum dots is currently estimated at £10 million and is projected to reach approximately £500 million by 2013. This growth is being fuelled by the wide variety of quantum dot based applications which are currently being developed.

Nanoco is currently focusing on the development of products that serve four core application areas; solid state lighting, next generation displays, solar cells and life science based applications.

Solid state lighting

Solid-state lighting refers to a type of lighting that utilises light-emitting-diodes (LEDs) as sources of illumination.

Recently, next generation lighting based on LEDs has gained momentum by providing high efficiencies and long lifetimes to existing lighting applications. Current estimates for the value of the overall LED backlight market by 2012 vary between US$4-8 billion.

Although LEDs offer benefits over traditional incandescent and mercury based lighting, large corporations operating in the solid state lighting field are providing demand for the use of quantum dots as a colour change media to their LEDs over other traditional phosphor based solutions.

By mixing red and green quantum dots and applying them to a blue LED, white light can be efficiently produced. The colour temperature of the white light can be controlled by "tuning" the emission of the red and green quantum dots. For LCD display backlight applications the quantum dot LED can be optimised to match the display's colour filters and is replacing wide spectrum cold cathode fluorescent lights where up to 80 per cent. of the white light generated is not utilised resulting in a significant loss of overall operating efficiency. Quantum dot technology therefore offers a lower-cost, higher efficiency solution LCD display to existing general lighting application providers.

The following table set out the average efficiencies and life expectancy of various solid state lighting options:

Type of Light	Efficiency	Life of Light (Hours)
Incandescent light bulbs	1 – 5 per cent.	500
Mercury discharge lighting	20 – 30 per cent.	3,000
LED lighting including quantum dots	>60 per cent.	50,000

The market currently targeted by Nanoco can be split into three sectors based on performance. Low performance LED's for example holiday lights, toys and other inexpensive applications; medium performance general lighting and illumination applications and high performance backlighting for the Liquid Crystal Display (LCD) TV market.

Nanoco is currently working with a number of major companies to develop and supply quantum dots for the solid state lighting market.

Next generation displays – Quantum dot electroluminescent displays

An Organic Light Emitting Diode (OLED) comprises an electroluminescent emissive layer composed of a film of fluorescent and phosphorescent organic compounds. This market is estimated to be worth over £1 billion by 2015.

These structures can be used in television screens, computer displays and small portable system screens such as mobile phones and PDAs. OLEDs also have the potential to be used in light sources for general space illumination.

The advantages of OLED displays over conventional LCD displays include the removal of energy intensive backlights and costly colour filters; allowing for more energy efficient, lower cost and potentially better quality displays. As there is no need for a backlight or colour filter, an OLED display can be much thinner than an LCD panel.

Quantum dots electroluminescent displays work in a similar manner to OLED displays in that the quantum dots replace the emissive organic layer. The advantage quantum dots have over OLED materials is improved colour and potentially longer life.

Nanoco is currently in partnership discussions with a number of multinational companies in order to develop and commercialise electroluminescent quantum dot applications.

Photovoltaics

Historically, harnessing solar energy has proven inefficient using traditional methods; however the use of quantum dots in this sector provides a physically flexible, more efficient and wider ranging alternative to traditional solar panels which could eventually be integrated to household and other structures, theoretically aiding demand for solar energy.

The global photovoltaics market is forecasted to reach US$32 billion by 2012 compared to US$12.9 billion in 2007; a compound annual growth rate of 15 per cent.

Initial research on multiple exciton generation of quantum dots has demonstrated that potential sunlight conversion efficiencies of greater than 40 per cent. can be achieved compared to 10-20 per cent. using traditional methods.

Nanoco is working with a number of companies in this sector and in some cases has sold evaluation samples to a number of corporations.

Other technologies within the photovoltaic industry where quantum dots could be applied are solar cell concentrators, dye sensitised solar cells and organic solar cells.

Biological applications

The life science market, specifically the in-vitro biological imaging market was the first commercial application for quantum dots. Quantum dots' fluorescent properties provide an alternative to traditional organic dye based fluorescent bio-imaging technology for a multitude of uses including cell imaging and multiplexing techniques (the ability to image a number of different colours at the same time). In these applications quantum dots are attached to cells and certain drugs. The quantum dot tagged drug or cell can then be studied under high powered microscopes. The advantage of using quantum dots over traditional organic fluorophors are their ability to withstand more intense irradiation from a high powered microscope for a longer period of time combined with quantum dots intrinsic narrow emission allowing for multiplexing applications.

Nanoco is least advanced in this area of quantum dot technology due to the focus on the larger volume optoelectronics market. Nanoco is working to address this weakness over the coming year.

Nanoco's heavy metal free quantum dots are attractive to customers in this arena given their non-toxic properties; this has led to a partnership development with a company who use Nanoco's quantum dot technology for in-vivo imaging of cancer.

Other Sectors

The number of potential markets available to quantum dots is wide ranging and continues to grow. Additional markets that the Proposed Directors believe will be applicable to Nanoco in the future include; anti-counterfeiting tags, industrial sensing and detection, quantum dot containing inks, quantum dot light emitting diodes and infra-red emitting tags for military personnel.

Further details on Nanoco's applicable markets and customers can be found in Part III of this document.

9. COMPETITION

Nanoco's competition can be split into two groups, direct and indirect. Direct competition comes from companies working to supply quantum dots to the market. Indirect competition comes in the form of alternative competing technologies working to penetrate the market for similar applications that Nanoco and its development partners are focused on.

There are a number of very small companies using inefficient "dual injection" technology to supply the life science market with cadmium based quantum dots. These companies tend to be poorly funded and associated with a university.

Three companies to note which have had significant funding (>US$10 million) are Nanosys Inc., based in Palo Alto, California which is broadly focused on nanomaterials and their applications rather than just quantum dots; Evident Technologies based in Troy, New York which has adopted a "go alone" strategy to getting quantum dot containing products to the market and QD Vision based in Watertown, Massachusetts which is focused solely on the quantum dot electroluminescent display market.

All three competitors are similar in that their technology is based on restricted heavy metals such as cadmium. The Proposed Directors believe they do not have the ability to produce large volumes of quantum dots.

The Proposed Directors believe Nanoco is unique in its ability to mass produce large quantities of high performance cadmium free quantum dots.

10. INTELLECTUAL PROPERTY

Nanoco has core technology patents that are granted or progressing to grant in key geographic regions following international patent applications. A report by Marks and Clerk on the patent portfolio of Nanoco is included in Part IV of this document.

Nanoco's IP portfolio is based around the continued development of its technology and currently contains 15 patent families (nine published, six unpublished) containing four granted patents and 55 pending patent applications.

Nanoco's earliest patent family dates back to 1995 and contains granted patents in the US, Germany, France and the UK relating to the use of metal complexes to produce nanocrystalline material known as the Single Source Precursor technology. The Single Source Precursor technology was developed by Professor Paul O'Brien while he was at Imperial College, London and all IP was subsequently assigned to Nanoco.

Nanoco's next oldest patent family dates from 2004 and relates to a scaleable process for producing nanoparticles using a molecular cluster compound to seed and control nanoparticle growth thereby enabling the production of large quantities of high quality nanoparticles. This family currently contains pending applications in Australia, Canada, China, Europe, Hong Kong, Israel, India, Japan, South Korea and USA. The scale up technology was initially developed by Nanoco's Chief Technology Officer, Dr Nigel Pickett while at University of Manchester and subsequently all IP was assigned to Nanoco. This methodology was further developed and refined over the next three years resulting in two further patent families which contain pending applications in a number of countries.

A number of prior art documents have been cited against the scale up technologies during examination and these are discussed in more detail within the Marks and Clerk report in Part IV of this document. It is Marks and Clerk's current view that the fundamental technology that Nanoco currently employs and which underpins all three of the scale-up patent families should be patentable in the light of the prior art documents currently cited in respect of these applications.

More recently, numerous patents have been filed on the next generation cadmium free materials and methods to manufacture them, other novel semi-conductor nanoparticles, semi conducting metal oxides and methods for stabilising and fabricating the quantum dots into an easy to use bead format. Other areas of patent filing have been in using the Nanoco developed nanoparticles in devices. One such area is next generation thin film solar cells.

As Nanoco grows and develops its technology, products and methods of producing products the company will continue with its strategy of filing patents to protect the technology.

The commercial success of the Enlarged Group will depend in part on its ability to protect and enforce its IP so as to preserve its exclusive rights in respect of its technology and to preserve the confidentiality of its own and its collaborators' know-how.

11. SUMMARY FINANCIAL INFORMATION

The financial information set out in the table below has been extracted from the historical financial information on Evolutec included in Part V of this document. Shareholders should read the full report and not rely solely upon the summary below.

	Year ended 31 December 2006 £'000	Year ended 31 December 2007 £'000	Year ended 31 December 2008 £'000
Revenue	14	82	–
Operating loss	(12,857)	(2,288)	(205)
Profit/(loss) after tax	(11,827)	(1,763)	77

The financial information set out in the table below has been extracted from the historical financial information on Nanoco, included in Part VI of this document. Shareholders should read the full report and not rely solely upon the summary below;

	Year ended 31 July 2006 £'000	Year ended 31 July 2007 £'000	Year ended 31 July 2008 £'000	Unaudited 5 month period ended 31 December 2008 £'000
Revenue	204	576	1,078	1,741
Operating profit/(loss)	(232)	(844)	(785)	793
Profit/(loss) after tax	(219)	(555)	(551)	882

Revenue growth accelerated in the year ended 31 July 2008 and the five months ended 31 December 2008 from new licensing and joint development contracts referred to later.

12. TERMS OF THE ACQUISITION

It was announced earlier today that the boards of Nanoco and Evolutec had reached agreement on the terms of a recommended share acquisition by Evolutec of the entire issued and to be issued share capital of Nanoco to be effected by means of a court approved scheme of arrangement between Nanoco and its shareholders pursuant to Part 26 of the 2006 Act (involving a reduction of capital pursuant to section 135 of the 1985 Act).

Upon the Scheme of Arrangement becoming effective, the Company will become the owner of the whole of the issued share capital of Nanoco. To become effective, the Scheme of Arrangement requires, amongst other things, the approval at the Court convened meeting of Nanoco Shareholders (such meeting to be convened pursuant to section 896 of the 2006 Act) of a majority in number representing not less than seventy-five per cent. in value of the Nanoco Shareholders present and voting, either in person or by proxy at the Court meeting or at any adjournment thereof, and the passing of a special resolution necessary to approve matters to give effect to the Scheme of Arrangement at a separate extraordinary general meeting of

Nanoco. Following the Court meeting and the extraordinary general meeting of Nanoco, the Scheme of Arrangement (including the associated reduction of capital of Nanoco) must also be sanctioned by the Court at the Court Hearing.

Nanoco and the Company have received irrevocable undertakings to vote or (where applicable) to procure that the registered holder votes, in favour of the Scheme of Arrangement at the Court meeting and separately in favour of the special resolution to be proposed at the extraordinary general meeting, in each case in respect of in aggregate 32,271,831 Nanoco Shares, representing approximately 92.85 per cent. of Nanoco's existing issued share capital. The irrevocable undertakings also extend to any Nanoco Shares that may be issued to, or acquired by, such persons after the date of the Scheme Document.

The consideration for the Acquisition is to be satisfied by the issue of the Consideration Shares to the Nanoco Shareholders, on the basis of 4.55 Consideration Shares for every Nanoco Share held.

In view of the size of the Acquisition, in relation to the Company, the Acquisition constitutes a reverse takeover under the AIM Rules and, as such, is conditional upon the admission of the Enlarged Issued Share Capital to trading on AIM and the publication of the Admission Document. In addition, the Acquisition also requires the approval of Shareholders. Accordingly, a general meeting is being convened on 24 March 2009 at which Shareholders will be asked to approve the Acquisition and grant the appropriate authority to permit the Company to issue the Consideration Shares. If the Resolutions are approved by Shareholders and subject to the Scheme of Arrangement having become effective in accordance with its terms, it is expected that Admission will take place, and that dealings on AIM will commence, on 30 April 2009.

Immediately following Admission the Consideration Shares will comprise approximately 85.90 per cent. of the Enlarged Issued Share Capital.

Further details of the Scheme of Arrangement are set out in paragraph 14 of Part IX of this document.

13. CURRENT TRADING AND PROSPECTS

The financial information for the five month period ended 31 December 2008 is set out in Part VI of this document. There has been no significant change in the financial or trading position of Nanoco since 1 January 2009.

The Acquisition is expected to strengthen the Company's balance sheet and provide the Enlarged Group with funding to pursue its proposed strategy as set out in paragraph 7 of this Part I.

A Pro forma Statement of Net Assets is set out in Part VII of this document and discloses that the Enlarged Group will have pro forma net assets of £9.037 million inclusive of cash and cash equivalent balances of approximately £8.1 million after paying the estimated expenses of the Proposals.

14. DIRECTORS AND THE PROPOSED DIRECTORS

The Directors of the Company as at the date of this document comprise David Philip Bloxham as Non-executive Chairman, Graeme Manson Hart, Gordon James Hall and Mark Barrie Hawtin as non-executive directors. A brief summary of the Evolutec board members' biographies are set out below:

Current Directors

Dr. David Philip Bloxham ***(Aged 61) Non-executive Chairman***

David has significant experience in the biotechnology industry and has been successful at both the R&D and commercial levels. In 1984 he joined the pharmaceutical industry as director of Biology Research at Roche Research in the UK. Subsequently he became Research and Development director of Laboratories Almirall. He joined Celltech in 1990 later becoming Chief Operating Officer. Celltech listed on the London Stock Exchange in 1994.

From 1998 to 2001, David was Chief Executive Officer of Cobra Therapeutics Limited until it was sold to ML Laboratories. David became Chief Executive of Evolutec in May 2001 and non-executive chairman upon the Company's admission to AIM.

Graeme Manson Hart ***(Aged 64) Non-executive Director***

Graeme is an orthopaedic surgeon who has also built a successful business career. He founded Medic International in 1972 and built this into Health Care Services, an Unlisted Securities Market quoted company, which was eventually acquired by Compass Group in 1989. Currently, Graeme is Non-executive Chairman of Corin Group plc and Neuropharm plc.

Gordon James Hall ***(Aged 66) Non-executive Director***

After an early career in teaching, Gordon built up substantial international sales, management and development expertise with Rank Xerox and Abbott Laboratories.

He became Chief Executive Officer of Shield Diagnostic Ltd (now Axis Shield plc) in 1990 and was responsible for listing the company on the London Stock Exchange. More recently Gordon has been involved with a range of different companies and he is currently a Non-executive Director of International Brand Licensing plc which is listed on AIM.

Mark Barrie Hawtin ***(Aged 46) Non-executive Director***

Mark was a Partner of Marshall Wace LLP, a European hedge fund until June 2007. He launched the Eureka Interactive Fund for Marshall Wace in 1999 which became a global technology hedge fund. While predominantly investing in quoted technology, media and telecom companies, the fund also invested in pre IPO and earlier stage unquoted investments. Prior to Marshall Wace, Mark was at Enskilda Securities as the director responsible for international equities. Mark is currently an investment director of GAM International.

Proposed Directors

A summary of the Proposed Directors' biographies are set out below:

Dr. Peter John Rowley ***(Aged 65) Non-executive Chairman***

Peter joined the board of Nanoco in 2006. Previously he led the management buyout of Victrex from ICI in 1993, followed by the successful listing of Victrex plc on the London Stock Exchange in 1995. He joined ICI in 1968 and progressed through a number of positions in the organisation. In 1983 he became International Business Manager for the widely used polymer PTFE and in 1989 he was appointed General Manager for ICI Advanced Materials Asia Pacific.

Peter has a BSc and PhD in organic chemistry from King's College, London.

Dr. Michael Albert Edelman ***(Aged 44) Chief Executive Officer***

Nanoco is led by Michael Edelman. Michael joined Nanoco in 2004, led the initial fund-raising and spun Nanoco out of the University of Manchester. Prior to Nanoco Michael was responsible for licensing the technology developed by the GE/Bayer joint venture, Exatec LLC. As Vice President and managing director of yet2.com Michael set up, grew and ran yet2.com's European operation and was instrumental in successfully selling the business. He was main board director for Colloids Ltd, a manufacture of colours and additives for plastics with responsibility for global sales, marketing and restructuring of the business. Michael started his career with ICI, has a Ph.D. in organo-metallic chemistry from the University of Sussex, UK, and undergraduate degree in classics and chemistry from Tufts University, Boston, MA, USA.

Dr. Nigel Leroy Pickett ***(Aged 39) Chief Technical Officer***

Nanoco's technology team is led by Dr Nigel Pickett who is a co-founder of Nanoco and inventor of Nanoco's key quantum dot scale-up technology. Nigel graduated from Newcastle University in 1991 and chose to remain at Newcastle to pursue a Ph.D. in the field of main group organometallics. After graduation

in 1994 he undertook a postdoctoral fellowship at St. Andrews University, Scotland, in the field of precursor design for MOVPE growth and synthesis of nanoparticles using CVD techniques. In 1996 he won a Japan Society for the Promotion of Science (JSPS) fellowship and spent the following year working at Tokyo University of Agriculture and Technology, Japan. In 1998 he became a research fellow at Georgia Institute of Technology, USA, working on the design and evaluation of precursor used in MOVPE. Nigel co-founded Nanoco in 2001.

Michael Anthony Bretherton ***(Aged 53) Chief Financial Officer***

Michael Bretherton graduated in Economics from University of Leeds in 1978. He worked as an accountant and manager with PriceWaterhouse for seven years in both London and the Middle East before joining The Plessey Company Plc in 1985 as a corporate financial manager. Michael was appointed finance director of the fully listed Bridgend Group Plc in 1988 where he was involved in the strategic evaluation and commercial implementation of a broad range of business initiatives over a twelve year period, including acquisitions, disposals and company restructurings. He subsequently worked at the property and services company, Mapeley Limited, as financial operations director until he was recruited to the entertainment software games developer, Lionhead Studios Limited, in 2002 where he helped to complete a venture capital syndicate funding and also a trade sale of the business to Microsoft in 2006. Michael is currently also a director of ORA Capital and joined the board of Nanoco on 23 June 2006.

Michael will continue working with the Company on a part-time basis, until such time that the size or requirements of the Enlarged Group demand a full-time finance director.

Details of service contracts and letters of appointment relating to the Proposed Directors are set out in paragraph 6 of Part IX of this document.

Upon completion of the Proposals the board of the Company will comprise the Proposed Directors and Gordon James Hall. David Philip Bloxham, Graeme Manson Hart and Mark Barrie Hawtin will step down from the board of the Company on Completion. Evolutec has no employees.

15. KEY MANAGEMENT AND EMPLOYEES OF NANOCO

Nanoco currently employs 28 people with three additional consultants. The majority of Nanoco's personnel have extensive technical experience. The company invests time in the recruitment of key technical staff with quantum dot experience. Of the 31 people working directly or as a consultant for Nanoco, 23 hold a Ph.D. in chemistry or physics. Dr Nigel Pickett, CTO and co-founder, is the executive director responsible for leading the technical team on a day to day basis. He is supported by four section heads, all of whom have relevant technical and industrial experience.

Following Admission Professor Paul O'Brien will become the Chief Scientific Adviser to the Company.

Business development and sales is headed by Dr. Michael Edelman, who is supported by Vice President of Business Development, Steve Reinhard in the USA and Dr. Nobuaki Tamagawa in Asia.

Professor Paul O'Brien – ***Chief Scientific Adviser***

Professor O'Brien was responsible for developing Nanoco's patented cluster technology while a professor at Imperial College, London. Since 1999 Paul O'Brien has held the chair of Inorganic Materials Chemistry at the University of Manchester – spanning both the Chemistry Department and the Manchester Materials Science Centre. In September 2002 he was appointed head of the Chemistry Department at the University of Manchester. Previously Paul has held professorial positions at Imperial and Queen Mary and Westfield Colleges and has been a visiting professor at Georgia Institute of Technology. Paul has published over 100 papers.

Dr. Nobuaki Tamagawa – ***Vice President – Asia***

Dr. Nobuaki Tamagawa joined Nanoco in August 2005. Previously Dr Tamagawa was Vice President for yet2.com responsible for setting up and growing their Asian business. He spent 17 years working for

DuPont as Technical director which included responsibility for DuPont's Advanced Materials Laboratory. Dr Tamagawa was with Sony for 21 years during which time he held positions of Scientist, Plant Manager responsible for setting up USA based factories and General Manager for product development and marketing of Sony's video systems.

Dr Tamagawa holds a Ph.D. in physics from Hokkaido National University. He served at National Ordnance Laboratory as a visiting researcher and taught physics at the American University as a visiting professor in Washington D.C. for five years.

Steve Reinhard – ***Vice President – Business Development***

Steve is based in the USA and focuses his efforts on developing Nanoco's business in the USA and supporting Dr Tamagawa in Asia. Prior to Nanoco, Steve was responsible for business development at Dynamic Organic Light (Quantum Dot-Electroluminescent displays), Displaytech Inc. and Lockheed Martin Corporation. He has a degree in industrial engineering from Pennsylvania State University and an MBA from State University of New York.

16. SHARE OPTIONS

The Proposed Directors recognise the importance of ensuring that employees of the Enlarged Group are well motivated and identify closely with the future success of the Enlarged Group.

Long Term Incentive Plan

The Directors and Proposed Directors aim to align the interests of all employees' as closely as possible with the interests of shareholders. They therefore regard employee share ownership as a key incentive. The Company intends to administer the Long Term Incentive Plan with the object of giving employees at all levels the opportunity to acquire and hold shares in the Company.

Nanoco Share Incentive Plan

In addition, there are existing employee options over 1,828,000 Nanoco Shares outstanding pursuant to the Nanoco Share Incentive Plan which may be exercised prior to and conditional upon the Scheme of Arrangement being sanctioned by the Court, and which, to the extent not so exercised, would lapse upon the Scheme of Arrangement becoming effective.

In accordance with the rules of the Nanoco Share Incentive Plan, the Company has agreed to offer holders of such options the opportunity to release their unexercised options in consideration of the grant to them of new options over Ordinary Shares equivalent (as nearly as practicable without involving fractions of shares) to 4.55 Ordinary Shares for every 1 Nanoco Share the subject of the existing option. Any such new options taken up would remain subject to the rules of the Nanoco Share Incentive Plan and, in accordance with such rules, will become exercisable at any time more than six months following Admission (provided that any such option so exercised less than three years after the date of grant of the original option by Nanoco, will only be exercisable in respect of a proportion of the total number of shares being subject to the option, such proportion being equivalent to the proportion of three years elapsed since the original date of grant).

In respect of those EMI Options granted pursuant to the Nanoco Share Incentive Plan, confirmation has been obtained from the Shares and Assets Division of HM Revenue & Customs that such replacement options will be of equivalent value and as such will continue to be treated as qualifying EMI Options.

If such options were exercised in full this would equate to 8,317,400 Ordinary Shares representing approximately 4.32 per cent. of the Enlarged Issued Share Capital, as diluted by the issue of such Ordinary Shares.

Further details of the Long Term Incentive Plan and Nanoco Share Incentive Plan are set out in paragraph 5 of Part IX of this document.

17. TAXATION

Information on taxation in the UK with regard to holdings of Existing Ordinary Shares is set out in paragraph 9 of Part IX of this document. **Shareholders who are in any doubt as to their tax position or who are subject to tax in any other jurisdiction should consult an appropriate independent professional adviser immediately.**

18. LOCK IN ARRANGEMENTS

Certain Restricted Shareholders, who include the Proposed Directors agree they will not (save in certain specific circumstances) dispose of 124,188,804 of the Consideration Shares (or any Ordinary Shares held or acquired anytime before the second anniversary of Admission) for a period of 15 months following Admission, and thereafter for a further 9 months have agreed only to dispose of Ordinary Shares with the prior consent of the Company's broker and in an orderly manner.

Certain Restricted Shareholders agree they will only (save in certain specific circumstances) dispose of 22,891,363 of the Consideration Shares and 6,743,999 of the Existing Ordinary Shares (or any Ordinary Shares held or acquired anytime before the second anniversary of Admission) for a period of 24 months following Admission with the prior consent of the Company's broker and in an orderly manner.

The Restricted Shareholders, who include the Proposed Directors, will have an aggregate interest in Ordinary Shares immediately following Admission amounting to 153,824,166 Ordinary Shares representing 83.56 per cent. of the Enlarged Issued Share Capital.

Further details of the lock in and orderly market arrangements are set out in paragraph 15.5 of Part IX of this document.

19. THE CITY CODE ON TAKEOVERS AND MERGERS

The terms of the Proposals give rise to certain considerations and consequences under the Takeover Code. Brief details of the Panel, the Takeover Code and the protections they afford to Shareholders are described below.

The Takeover Code is issued and enforced by the Panel. The Panel has been designated as the supervisory authority to carry out certain regulatory functions in relation to takeovers pursuant to the Directive. Its statutory functions are set out in and under Chapter 1 of Part 28 of the 2006 Act. The Panel is a designated authority for the purposes of the FSMA and the 2006 Act and as such, it receives specific practical assistance from the FSA as the rules of the FSA require certain persons regulated by the FSA to co-operate with the Panel in its investigations.

Under Rule 9 of the Takeover Code, any person who acquires, an interest in shares which, taken together with shares in which he is already interested and in which persons acting in concert with him are interested, carry 30 per cent. or more of the voting rights of a company, is normally required by the Panel to make a general offer in cash to the shareholders of that company to acquire the balance of the shares not held by such person or group of persons acting in concert at not less than the highest price paid by him or any persons acting in concert with him for any such shares within the preceding 12 months.

Rule 9 of the Takeover Code also provides, *inter alia*, that where any person, together with persons acting in concert with him, is interested in shares carrying not less than 30 per cent. but not more than 50 per cent. of a company's voting rights and such person, or any person acting in concert with him, acquires an additional interest in shares which increase his percentage of the voting rights in that company, such person is normally required to make a general offer in cash to all shareholders of that company at not less than the highest price paid by him or any person acting in concert with him for any such shares within the preceding 12 months.

The Takeover Code also provides that where any person, together with persons acting in concert with him, holds more than 50 per cent. of a company's voting rights, no obligation will normally arise under Rule 9

to make a general offer in cash to all shareholders of that company, save as described below, as a result of any acquisition by such person or any person acting in concert with him of any further shares carrying voting rights in the company. However, the Panel will regard as giving rise to an obligation to make an offer the acquisition by a single member of a concert party of shares sufficient to increase his individual holding to 30 per cent. or more of a company's voting rights, or, if he already holds more than 30 per cent. but less than 50 per cent., an acquisition which increases his shareholding in that company.

For the purposes of the Takeover Code, a concert party arises where persons acting in concert pursuant to an agreement or understanding (whether formal or informal) co-operate to obtain or consolidate control of a company or to frustrate the successful outcome of an offer for a company. Control means an interest, or interests, in shares carrying in aggregate 30 per cent. or more of the voting rights of the company, irrespective of whether such interest or interests give *de facto* control.

As a result of the issue of the Consideration Shares, the Acquisition will lead to a change of control of the Company. Under the Takeover Code, ORA Capital, ORA Guernsey, Michael Anthony Bretherton and James Lawrence Ede-Golightly together constitute a concert party.

Following the issue of the Consideration Shares, the Concert Party would be interested in 70,630,848 Ordinary Shares representing 38.37 per cent. of the Enlarged Issued Share Capital.

The relevant interests of the members of the Concert Party, now and following completion of the Proposals, will be as follows;

	Number of Shares in Evolutec	Percentage holding in Evolutec	Number of Shares in Nanoco	Percentage holding in Nanoco	Number of Consideration Shares	Total number of Shares in the Company following Completion	Percentage of Shares in the Company following Completion
ORA Guernsey	Nil	Nil	14,702,437	42.30	66,896,088	66,896,088	36.34
ORA Capital*	2,870,260	11.06	Nil	Nil	Nil	2,870,260	1.56
Michael Anthony Bretherton	Nil	Nil	50,000	0.14	227,500	227,500	0.12
James Lawrence Ede-Golightly	Nil	Nil	140,000	0.40	637,000	637,000	0.35
Total	**2,870,260**	**11.06**	**14,892,437**	**42.84**	**67,760,588**	**70,630,848**	**38.37**

(a) ORA Guernsey is a holding company which is a wholly owned subsidiary of ORA Capital.

(b) ORA Capital is a London based investment company whose principal activity is the growth and development of businesses in which ORA Capital has a significant shareholding. Further details on ORA Guernsey and ORA Capital are set out in Part VIII of this document.

(c) Michael Anthony Bretherton is a director of ORA Capital and will be a director of the Company on Completion.

(d) James Lawrence Ede-Golightly is a director of ORA Capital.

* ORA Capital has a contract for difference interest in Evolutec over 2,870,260 Ordinary Shares representing 11.06 per cent. of the issued share capital of the Company. This contract does not give ORA Capital any voting rights or any option to purchase these Ordinary Shares in the future.

No member of the Concert Party holds any shares in the Company at the date of this document and none of them has sold or purchased Ordinary Shares in the 12 months prior to the date of this document. The waiver of the obligation to make a general offer under Rule 9 will be invalid if purchases of shares in the Company are made by any member of the Concert Party in the period between the date of this document and the General Meeting. Each member of the Concert Party has undertaken to the Company that it will not make any such purchases of shares in the Company.

The members of the Concert Party have confirmed to the Board that they are not at present proposing any changes to the board of the Company beyond those described in this document and that it is their intention that, following completion of the Acquisition, the business of the Enlarged Group be continued in substantially the same manner as at present with no repercussions on employment and the principal locations of the Enlarged Group's business. The Concert Party will honour the existing employment rights, including pension rights, of the employees of the Enlarged Group. The Concert Party does not intend to redeploy any

of the fixed assets of the Enlarged Group. The Concert Party supports the strategy of the Directors and Proposed Directors for the Enlarged Group as set out in paragraph 7 of Part I of this document.

Further information on the Concert Party can be found in Part VIII of this document.

The Panel has agreed, subject to Resolution 2 being passed (on a poll) by the Independent Shareholders at the General Meeting, to waive the obligation on the Concert Party, under Rule 9 of the Takeover Code, to make a general offer for the entire issued share capital of the Company which would otherwise arise as a result of the Proposals. Accordingly, Independent Shareholders' approval (on a poll) for the waiver of any obligations of the Concert Party under Rule 9 is sought in Resolution 2.

Following completion of the Proposals the members of the Concert Party will be interested in shares comprising 30 per cent. or more of the Company's voting share capital but will not hold shares comprising more than 50 per cent. of such voting rights and (for as long as they are to be treated as acting in concert) any further increase in their aggregate interest in Shares will be subject to the provisions of Rule 9.

20. CORPORATE GOVERNANCE

The Directors and Proposed Directors recognise the importance of sound corporate governance and intend to ensure that, following Admission, the Company continues to apply policies and procedures which reflect the principles of Good Governance and Code of Best Practice as published by the Committee on Corporate Governance (commonly, known as "the Combined Code") as are appropriate to the size, nature and stage of development of the Company. The Directors and Proposed Directors intend to comply with the QCA Guidelines in such respects as are appropriate for a company of its size, nature and stage of development following Admission.

The Company has an audit committee, a remuneration committee and a nomination committee with formally delegated duties and responsibilities.

The audit committee's primary responsibilities are to monitor the integrity of the financial affairs and statements of the Company, to ensure that the financial performance of the Company and any subsidiary of the Company is properly measured and reported on, to review reports from the Company's auditors relating to the accounting and internal controls and to make recommendations relating to the appointment of the external auditors. Following Admission the audit committee comprises Michael Bretherton, who acts as chairman of the committee, and the non-executive directors.

The remuneration committee's primary responsibilities are to review the performance of the executive directors of the Company and to determine the broad policy and framework for their remuneration and the terms and conditions of their service and that of senior management (including the remuneration of and grant of options to such person under any share scheme adopted by the Company). The remuneration committee will, following Admission comprise Peter Rowley, who will act as chairman of the committee, and the non-executive directors. The remuneration of non-executive directors shall be a matter for the chairman and the executive members of the board of the Company.

The nomination committee's primary responsibilities are to regularly review the structure, size and composition required of the board of the Company, prepare a description of the role and capabilities required of an appointment, make recommendations to the directors on all new appointments of directors and senior management, interviewing nominees, to take up references and to consider related matters. The nomination committee will, following Admission comprise of Peter Rowley, who will act as chairman of the committee, and the non-executive directors.

The Company has adopted a model code for directors' dealings in securities of the Company which is appropriate for a company quoted on AIM. The Directors comply with Rule 21 of the AIM Rules relating to directors' dealings and also take all reasonable steps to ensure compliance by the Group's "applicable employees" as defined in the AIM Rules.

The Directors have considered the guidance issued by the Institute of Chartered Accountants in England and Wales (commonly known as the Turnbull Report) concerning the internal requirements of the Combined Code.

21. DIVIDEND POLICY

Whilst it remains the Directors' and Proposed Directors' intention to consider the payment of a dividend when appropriate and when commercially prudent, they currently consider it prudent to retain cash to fund the further expansion of the Company. As a result, the Directors believe it inappropriate to give an indication of the likely level and timing of future dividends.

22. GENERAL MEETING

Completion of the Acquisition is conditional upon Shareholders' approval being obtained at the General Meeting and on the Scheme of Arrangement becoming effective. Accordingly, you will find set out at the end of this document a notice convening the GM to be held at 7 Devonshire Square, London EC2M 4YH at 3.30 p.m. on 24 March 2009 for the purposes of considering and, if thought fit, approving the following Resolutions:

- Resolution 1 is an ordinary resolution to approve the Acquisition;
- Resolution 2 is an ordinary resolution to approve the Waiver;
- Resolution 3 is an ordinary resolution approving the Long Term Incentive Plan;
- Resolution 4 is an ordinary resolution to increase the Company's authorised share capital from £7,700,000 to £25,000,000 by the creation of 173,000,000 new Ordinary Shares;
- Resolution 5 is an ordinary resolution to authorise the directors under Section 80 of the Act to allot relevant securities up to an aggregate nominal value of £21,406,944.72, such authority expiring at the conclusion of the next Annual General Meeting of the Company or 15 months after the passing of this Resolution, whichever is earlier;
- Resolution 6 is a special resolution to dis-apply the statutory pre-emption rights contained in Section 89(1) of the Act in connection with the allotment of Ordinary Shares to be allotted pursuant to the authority contained in Resolution 5, such authority expiring on expiration of the authority provided pursuant to Resolution 5;
- Resolution 7 is a special resolution to alter the memorandum of association of the Company;
- Resolution 8 is a special resolution to amend the articles of association of the Company; and
- Resolution 9 is a special resolution to change the name of the Company to Nanoco Group plc.

In accordance with the requirements of the Panel, Resolution 2 to approve the Waiver will be taken on a poll of Independent Shareholders.

The attention of Shareholders is also drawn to the recommendations and voting intentions of the Directors as set out in paragraph 25 of this letter.

23. ACTION TO BE TAKEN

A Form of Proxy is enclosed for use at the General Meeting. Whether or not you intend to be present at the meeting you are requested to complete, sign and return the Form of Proxy to the Company's registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU as soon as possible but in any event so as to arrive not later than 3.30 p.m. on 20 March 2009. The completion and return of a Form of Proxy will not preclude you from attending the meeting, speaking at the General Meeting and/or voting in person should you subsequently wish to do so.

24. FURTHER INFORMATION

Your attention is drawn to the further information set out in Parts III to IX of this document which provide financial and additional information on the Enlarged Group, and in particular to the Risk Factors relating to the Enlarged Group and relating to any investment in Ordinary Shares set out in Part II of this document.

25. RECOMMENDATION AND VOTING INTENTIONS

The Directors, who have been so advised by Zeus Capital, consider that the Proposals are fair and reasonable and in the best interests of the Company and its Independent Shareholders as a whole. In giving its advice to the Directors, Zeus Capital has taken into account the Directors' commercial assessment of the Proposals. Accordingly, the Directors unanimously recommend you vote in favour of the Resolutions as they have irrevocably undertaken to do in respect of their own beneficial share holdings which amount in aggregate to 312,311 Ordinary Shares representing 1.20 per cent. of the existing ordinary issued share capital of the Company.

In addition to the Directors, Shareholders who in aggregate have a beneficial interest in 9,564,338 Ordinary Shares representing 36.86 per cent. of the Existing Issued Share Capital, have irrevocably undertaken to vote in favour of the Resolutions.

Further details of the undertakings and intentions given by Directors and holders of Existing Ordinary Shares can be found in paragraph 6.8 of Part IX of this document.

Yours faithfully

David Philip Bloxham
Chairman

PART II

RISK FACTORS RELATING TO THE ENLARGED GROUP

In addition to the other relevant information set out in this document, the following specific risk factors should be considered carefully in evaluating whether to make an investment in the Company. If you are in any doubt about the action you should take, you should consult a person authorised under FSMA who specialises in advising on the acquisition of shares and other securities.

In addition to the usual risks associated with an investment in a business, the Directors and Proposed Directors consider that the factors and risks described below are the most significant and should be carefully considered, together with all the information contained in this document, prior to stating your voting intentions. It should be noted that the risks described below are not the only risks faced by the Company, and there may be additional risks that the Directors and Proposed Directors currently consider not to be material or of which they are currently not aware.

If any of the events described in the following risks actually occur, the Enlarged Group's business, financial condition, results or future operations could be materially affected. In such circumstances, the price of the Ordinary Shares could decline and investors could lose all or part of their investment. All statements, other than statements of historical facts, included in this document, including, without limitation, those regarding the Company's or Enlarged Group's financial position, business strategy, plans and objectives of management for future operations or statements relating to expectations in relation to dividends or any statements preceded by, followed by or that include the words "targets", "believes", "expects", "aims", "intends", "plans", "will", "may", "anticipates", "would", "could" or similar expressions or the negative thereof, are forward looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the Company's or Enlarged Group's control that could cause the actual results, performance, achievements of or dividends paid by the Company to be materially different from actual results, performance or achievements, or dividend payments expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Enlarged Group's net asset value, present and future business strategies and income flows and the environment in which the Enlarged Group will operate in the future.

These forward-looking statements speak only as of the date of this document. The Enlarged Group expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained herein to reflect any change in the Company's expectations with regard thereto, any new information or any change in events, conditions or circumstances on which any such statements are based, unless required to do so by law or any appropriate regulatory authority.

BUSINESS RISKS

Technology risks

Investors should be aware that there are a number of technical challenges for Nanoco to overcome before potential and existing customer requirements have been satisfied.

The main practical advantages of Nanoco's quantum dots compared to competing technology are believed to be the manufacture of high precision quantum dots created in high volumes at low cost. The ability to tailor the quantum dot surface so that it might combine effectively with application specific surfaces presents an additional challenge, as does the ability to manufacture both cadmium containing, and cadmium free, quantum dots.

If these technical specifications are not met, there remains a risk that;

- existing and potential customers may not purchase Nanoco's quantum dots;
- requirements of Nanoco's existing contracts may not be fulfilled; and,
- milestone and royalty payments associated with existing contracts may not be paid.

Further detail of Nanoco's technical ability to meet certain product specifications can be found in Part III of this document.

The plan to ramp production batch size up to 1kg and later to 25kg comprises several elements, including some design, technology, and broader management challenges. Meeting the specifications for the more demanding applications in display and lighting technology will require further manufacturing process optimization and careful control of a number of parameters during the scale up.

Nanoco has good technical and intellectual property strength but will need to remain focused on its key customer specifications. In particular, the Proposed Directors believe that one of the most challenging technical targets for Nanoco will be the achievement of sufficient life expectancy of its quantum dots in order to satisfy the requirements of its customers.

History of intellectual property and associated risk factors

Nanoco has core technology patents that are granted or progressing to grant in key geographic regions following international patent applications. A report by Marks and Clerk on the patent portfolio of Nanoco is included in Part IV of this document.

Nanoco's IP portfolio is based around the continued development of its technology and currently contains 15 patent families (nine published, six unpublished) containing four granted patents and 55 pending patent applications.

Nanoco's earliest patent family dates back to 1995 and contains granted patents in the US, Germany, France and the UK relating to the use of metal complexes to produce nanocrystalline material known as the Single Source Precursor technology. The Single Source Precursor technology was developed by Professor Paul O'Brien while he was at Imperial College, London and all IP was subsequently assigned to Nanoco.

Nanoco's next oldest patent family dates from 2004 and relates to a scalable process for producing nanoparticles using a molecular cluster compound to seed and control nanoparticle growth thereby enabling the production of large quantities of high quality nanoparticles. This family currently contains pending applications in Australia, Canada, China, Europe, Hong Kong, Israel, India, Japan, South Korea and USA. The scale up technology was initially developed by Nanoco's Chief Technology Officer; Dr Nigel Pickett while at University of Manchester and subsequently all IP was assigned to Nanoco. This methodology was further developed and refined over the next three years resulting in two further patent families which contain pending applications in a number of countries.

A number of prior art documents have been cited against the scale up technologies during examination and these are discussed in more detail within the Marks and Clerk report in Part IV of this document. It is Marks and Clerk's current view that the fundamental technology that Nanoco currently employs and which underpins all three of the scale-up patent families should be patentable in the light of the prior art documents currently cited in respect of these applications.

More recently, numerous patents have been filed by Nanoco on the next generation cadmium free materials and methods to manufacture them, other novel semi-conductor nanoparticles, semi conducting metal oxides and methods for stabilising and fabricating the quantum dots into an easy to use bead format.

Other areas of patent filing have been in using the Nanoco developed nanoparticles in devices. One such area is next generation thin film solar cells.

As Nanoco grows and develops its technology, products and methods of producing products the company will continue with its strategy of filing patents to protect the technology.

Intellectual property protection

The commercial success of the Enlarged Group will depend in part on its ability to protect and enforce its IP so as to preserve its exclusive rights in respect of its technology and to preserve the confidentiality of its own and collaborators' know-how. The Enlarged Group may not be able to protect and preserve its IP or to exclude competitors with competing technology products.

The Enlarged Group will seek to rely on patents to protect its market position. Patents are a monopoly right and are territorial. They grant to the successful applicant the exclusive right in the country or territory in which the patent is granted to prevent others from, amongst other things making, offering, putting on the market or using a product, which is the subject matter of a patent, and from using a process which is the subject matter of a patent. No assurance can be given that others will not gain access to the Enlarged Group's un-patented proprietary technology and/or disclose such technology or that the Enlarged Group can ultimately protect meaningful rights to such un-patented technology. No assurance can be given that the claims of patents will be fully upheld by a court. Part of the Enlarged Group's IP portfolio comprises some applications for patents. There is no guarantee the Enlarged Group will obtain patents for inventions in which patent applications have been or will be filed, or that it will develop other patentable products or processes. In addition, there can be no assurance that any future patents will prevent other persons or companies from developing similar products or that other persons or companies will not be issued patents that may prevent the sale of Enlarged Group's products or that will require licensing and the payment of significant fees or royalties by the Enlarged Group. Furthermore, issued patents may be held by a court of law to be invalid or unenforceable. Patent litigation is costly and time consuming and there can be no assurance that the Enlarged Group will have, or will be able to devote, sufficient resources to pursue such litigation. Potentially unfavourable outcomes in such proceedings could limit the Enlarged Group's IP and activities.

No assurances can be given that any pending or future trade mark applications will result in granted trade mark registrations, that the scope of any copyright, trademark protection will exclude competitors or provide advantages to the Enlarged Group, that third parties will not be in the future claim rights in or ownership of the copyright, patents and other proprietary rights from time to time held by the Enlarged Group.

Further, there can be no assurances that others have not developed or will not develop similar or competing products, duplicate any of the products of the Enlarged Group or design around any pending patent application or patents (if any) subsequently granted in favour of the Enlarged Group. Other persons may hold or receive patents which contain claims having a scope that covers products developed by the Enlarged Group (whether or not patents are issued to the Enlarged Group).

A substantial cost may be incurred if the Enlarged Group is required to defend its IP including any patents or trade marks against third parties. There is no assurance that obligations to maintain the Enlarged Group's or its own or its collaborators' know-how would not be breached or otherwise become known in a manner which provides the Enlarged Group with no recourse. The commercial success of the Enlarged Group may also depend in part on non-infringement by the Enlarged Group of IP owned by third parties, including compliance by the Enlarged Group with the terms of any licences granted to it. If this is the case, the Enlarged Group may have to obtain appropriate intellectual property licences or cease or alter certain activities or processes or develop or obtain alternative products or challenge the validity of such IP in the courts.

Any claims made against the Enlarged Group's IP, even without merit, could be time consuming and expensive to defend and could have a materially detrimental effect on the Enlarged Group's resources. A third party asserting infringement claims against the Enlarged Group and its customers could require the Enlarged Group to cease the infringing activity and/or require the Enlarged Group to enter into licensing and royalty arrangements. The third party could also take legal action which could be costly. In addition, the Enlarged Group may be required to develop alternative non-infringing solutions that may require significant time and substantial unanticipated resources. There can be no assurance that such claims will not have a material adverse effect on the Enlarged Group's business, financial condition or results.

Attraction and retention of key employees

The Enlarged Group will depend on the continued service and performance of the Directors, the Proposed Directors and other key employees and whilst it has entered into or will, prior to Admission, enter into, contractual arrangements with these individuals with the aim of securing the services of each of them, retention of these services cannot be guaranteed. The loss of the services of any of the Directors, the Proposed Directors or other key employees could damage the Enlarged Group's business. The Company hopes to mitigate this risk by implementing key man insurance in respect of the relevant employees and directors. However, there is no certainty that key man insurance will be available to the Company on commercially acceptable terms. Equally the ability to attract new employees and in particular senior executives for the business with the appropriate expertise and skills cannot be guaranteed. The Enlarged Group may experience difficulties in hiring appropriate employees and the failure to do so may have a detrimental effect upon the trading performance of the Enlarged Group.

Trading history

The Enlarged Group's future success will depend on the ability of the Proposed Directors to implement their objectives and strategy. Whilst the Proposed Directors are confident about the Enlarged Group's prospects, there is no certainty that anticipated revenues or growth can be achieved.

Both the Company and Nanoco have a limited trading history. Potential investors should be aware of the risks associated with an investment in companies with limited trading histories.

Due to the limited financial trading of Nanoco the sales and implementation cycle currently varies and is a risk. There can be no assurance that the Enlarged Group will operate profitably or remain solvent and if the Enlarged Group's strategy proves unsuccessful, Shareholders could lose all or part of their investment.

Product development

Although the information in Part I of this document suggests that further product development is being undertaken by the Nanoco Companies, the Company cannot guarantee that further products will be developed, successfully launched, or accepted by the market.

Competition

Although the Directors and Proposed Directors have stated above that they believe there to be very little direct competition within the market, there may be products and competitors that they are currently unaware of which could have a detrimental effect on the trading performance of the Enlarged Group following Admission. In addition, there is a further risk in respect of Nanoco whereby its key customers may elect to do the work Nanoco currently carries out for them in-house instead of interacting with Nanoco.

Strategy

There can be no certainty that the Enlarged Group will be able to implement successfully the strategy set out in this document. The ability of the Enlarged Group to implement its strategy in a competitive market will require effective management planning and operational controls. The Enlarged Group's future growth may depend, in part, on its ability to identify suitable targets. There can be no assurance that any targets identified will be available at prices which make them suitable for acquisition at the relevant time or that third party finance required to fund the acquisition will be available on acceptable terms.

Employees

The Enlarged Group will depend on the technical and specialist skills and experience of many employees for the development, implementation and sale of its products, particularly given the specialist nature of the market in which Nanoco's business currently operates. The Enlarged Group's ability to recruit and retain suitably qualified and experienced staff is important for the Enlarged Group's ongoing success.

Early stage of operations

The Enlarged Group will, immediately following Admission, still be at a relatively early stage of development. The commencement of the Enlarged Group's material revenues is difficult to predict and there is no guarantee that the Enlarged Group will generate any material revenues in the foreseeable future. The Enlarged Group will have a limited operating history upon which its performance and prospects can be evaluated and will face the risks frequently encountered by developing companies. The risks include the uncertainty as to which areas to target for growth. There can be no assurance that the proposed operations of the Enlarged Group will be profitable or produce a reasonable return, if any, on investment.

Research and development risk

The Enlarged Group will be engaged in developing new technology solutions to address specific market needs identified by the directors of the Enlarged Group from time to time. The Enlarged Group will therefore be involved in complex scientific areas and industry experience indicates a very high incidence of delay or failure to produce results. The Enlarged Group may not be able to develop new technology solutions or identify specific market needs that can be addressed by technology solutions developed by the Enlarged Group. The ability of the Enlarged Group to develop new technology relies partly on the recruitment of appropriately qualified staff as the Enlarged Group grows. The Enlarged Group may be unable to find a sufficient number of appropriately highly trained individuals to satisfy its growth rate which could affect its ability to develop new technologies as planned. In addition, novel chemical reagents may face potential regulatory barriers which, by their nature, will vary, for example, by application, geography, volume of business and thus which are difficult to anticipate at present.

GENERAL RISKS

AIM

The Enlarged Issued Share Capital will be admitted to AIM and it is emphasised that no application is being made for admission of any Ordinary Shares to the Official List or to any other stock exchange at this time. An investment in shares quoted on AIM may be less liquid and may carry a higher risk than an investment in shares quoted on the Official List. The rules of AIM are less demanding than those of the Official List of the UK Listing Authority. Further, the London Stock Exchange has not itself examined or approved the contents of this document. 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 authorised for the purposes of FSMA who specialises in the acquisition of shares and other securities.

Liquidity and possible price volatility

Following Admission, the market price of the Ordinary Shares may be subject to significant fluctuations in response to many factors, including variations in the results of the Enlarged Groups, divergence in financial results from analysts' expectations, changes in earnings estimates by stock market analysts, general economic conditions, legislative changes in the Enlarged Group's sector and other events and factors outside of the Enlarged Group's control.

In addition, stock market prices may be volatile and may go down as well as up. The price at which investors may dispose of their Ordinary Shares in the Enlarged Group may be influenced by a number of factors, some of which may pertain to the Enlarged Group and others of which are extraneous. These factors could include the performance of the Enlarged Group's business, changes in the values of its investments, changes in the amount of distributions or dividends, changes in the Enlarged Group's operating expenses, variations in and the timing of the recognition of realised and unrealised gains or losses, the degree to which the Enlarged Group encounters competition, large purchases or sales of Ordinary Shares, liquidity (or absence of liquidity) in the Ordinary Shares, legislative or regulatory or taxation changes and general economic conditions.

The value of the Ordinary Shares will therefore fluctuate and may not reflect their underlying asset value. Investors may realise less than the original amount invested.

Admission 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 an investment in the Enlarged Group than in a company whose shares are quoted on the Official List. In addition, the market price of the Ordinary Shares may not reflect the underlying value of the Enlarged Group's net assets.

Future funding

Whilst the Proposed Directors have no current plans for raising additional capital immediately after the issue of the Consideration Shares and are of the opinion that the working capital available to the Enlarged Group will be sufficient for its present requirements, it is possible that the Company will need to raise extra capital in the future to develop fully the Enlarged Group's business or to take advantage of acquisition opportunities. No assurance can be given that any such additional financing will be available or that, if available, it will be available on terms favourable to the Company or to the Company's shareholders.

If further financing is obtained by issuing equity securities or convertible debt securities, the existing shareholders' holdings of Ordinary Shares may be diluted and the new securities may carry rights, privileges and preferences superior to the Ordinary Shares. The Proposed Directors may seek debt finance to fund all or part of any future acquisition. There can be no assurance that the Company will be able to raise those debt funds, whether on acceptable terms or at all. If debt financing is obtained, the Company's ability to raise further finance and its ability to operate its business may be subject to restrictions.

A number of factors (including changes in interest rates, conditions in the banking market and general economic conditions which are beyond the Company's control) may make it difficult for the Company to obtain new financing on attractive terms or even at all. If the Company's borrowings become more expensive, then the Company's profits will be adversely affected.

Investment risk

Potential investors should be aware that the value of shares can rise or fall and that there may not be proper information available for determining the market value of the Ordinary Shares at all times. An investment in a share which is traded on AIM, such as the Ordinary Shares, is likely to be difficult to realise and carries a high degree of risk. The ability of an investor to sell Ordinary Shares will depend upon there being a willing buyer for them at an acceptable price. Consequently, it might be difficult for an investor to realise his/her investment in the Enlarged Group and he/she may lose all his/her investment. The Ordinary Shares therefore may not be suitable as a short term investment.

Economic, political, judicial, administrative, taxation or other regulatory matters

The Company may be adversely affected by changes in economic, political, judicial, administrative, taxation or other regulatory factors, as well as other unforeseen matters.

Taxation

The attention of potential investors is drawn to paragraph 9 of Part IX headed "Taxation". The tax rules and their interpretation relating to an investment in the Company may change during the life of the Company.

Any change in the Enlarged Group's tax status or in taxation legislation or its interpretation could affect the value of the investments held by the Enlarged Group or the Enlarged Group's ability to provide returns to its shareholders or alter the post-tax returns to shareholders. Representations in this document concerning the taxation of the Enlarged Group and its investors are based upon current tax law and practice which is, in principle, subject to change.

Legislation and tax status

This document has been prepared on the basis of current legislation, regulation, rules and practices and the Directors and the Proposed Directors' interpretation thereof. Such interpretation may not be correct and it is always possible that legislation, rules and practice may change. Any change in legislation and in particular in tax status or tax residence of the Enlarged Group or in tax legislation or practise may have an adverse effect on the returns available on an investment in the Enlarged Group.

Currency risk

The majority of Nanoco's revenue is obtained in US$. Due to the unpredictable nature of currency exchange rates, the Company cannot guarantee against any losses which may be incurred as a result and its performance might therefore be subject to exchange rate fluctuations.

PART III

TECHNICAL REPORT ON NANOCO

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for itself as Nominated Adviser and Broker.

25 February 2009

Dear Sirs,

Re: Nanoco Technologies Limited
Technical Report

1. Introduction

Pira International is a technology and strategy consultancy based at Leatherhead, Surrey in the UK. It was set up over 75 years ago as a research association for the printing and associated industries. It subsequently diversified its expertise into several more or less related sectors including nanomaterials, organic electronics, solid state lighting, displays, photovoltaics and security printing.

Pira was commissioned by Evolutec to carry out a review of Nanoco's quantum dot technology and its business plan for exploiting this technology. At Evolutec's direction, this work has focused mainly on two aspects; Nanoco's plans to scale up its output by four orders of magnitude from the 100 grams of commercial product envisaged in 2009 to volumes in excess of 1,000 kgs by 2013, and the likely end-use markets for the quantum dots produced from the expanded facility.

When reviewing the scale-up plans, Pira was asked to consider particularly whether the quantum dots produced in larger batches would be likely to achieve the same properties as those currently manufactured on a laboratory scale. The anticipated cost and timing of the proposed scale-up project was also reviewed. When considering potential end-uses for Nanoco's quantum dots, particular attention was paid to high brightness white light LEDs for solid state lighting applications. This is the first and single most important of Nanoco's target markets. Applications in photovoltaic solar panels, flat panel displays, medical imaging and security printing were also considered.

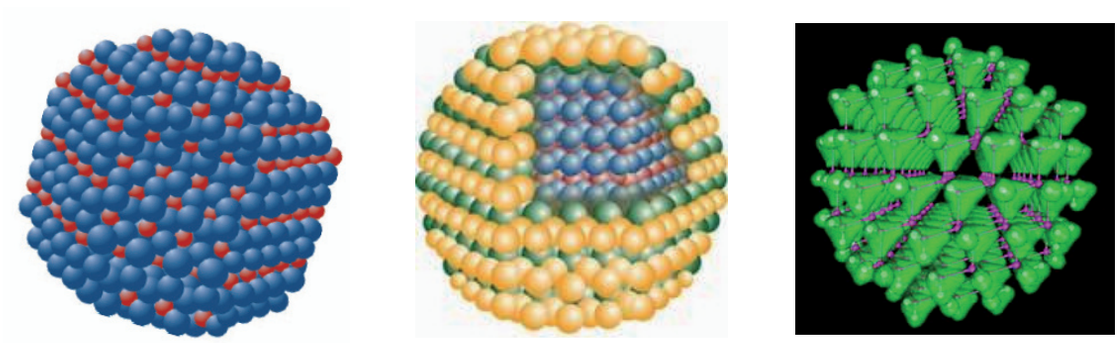
The conclusions from Pira's work were reported to the Directors of Evolutec and their advisers in a comprehensive report submitted on 5 February 2009. This section of the Admission Document is a summary taken from that longer report with Pira's consent.

2. Technical background

2.1 What are quantum dots?

Quantum dots are extremely small particles manufactured from a wide range of different semiconductors. Although it is possible to make quantum dots from silicon (the first commercially important semiconductor) in most cases they are made from more recently developed compound semiconductors which are usually based on a 50:50 mixture of two different elements, examples being gallium arsenide and indium phosphide. They typically have a roughly spherical shape with diameters in the range 2-10 nanometres. These dimensions correspond to 10-50 atoms from side to side, which means that each quantum dot may contain a total of less than 1,000 individual atoms.

Computer models of some typical quantum dot structures are shown in Figure 1. The first image is a simple quantum dot made from a compound semiconductor such as cadmium selenide. The second shows the same 'core' with an outer 'shell' applied which has a different composition. Core/shell structures can be used to confer a desired combination of properties. The third image, created at the Lawrence Berkeley Laboratory, is a simulation of a quantum dot made from 465 atoms of gallium-arsenide. It is more realistic in that it shows very small atomic nuclei (pink) surrounded by electron clouds (green). In simple terms, the unique physical properties of quantum dots derive from the fact that they contain a 'cloud' of electrons confined into a very small volume which makes them subject to certain 'quantum' effects.



A **B** **C**

Figure 1: computer models of the atomic structure in typical QDs

A is a simple core, B a core shell structure and C models the electron clouds (green).

Light energy consists of discrete 'photons'. The electrons in quantum dots can absorb the energy from photons and become excited. After an electron has been excited it will normally release the energy again as a new photon. Regardless of the frequency (which translates to colour) of the light which excited the electron in the first place, the re-emitted light will always be of one particular colour, which is determined by the chemical composition of the quantum dot and its size. Smaller sized dots tend to emit higher frequency (bluer) light while larger ones emit lower frequency (redder) light. This property, which is called 'photoluminescence', means that when quantum dots are illuminated with broad spectrum light they convert the energy present at a wide range of different frequencies into one single frequency, as demonstrated in Figure 2. Quantum dots display a particular type of photoluminescence called fluorescence; the other type is called phosphorescence. One practical application of quantum dots is to replace conventional fluorophores and phosphors, the most important example being in solid state lighting (see Section 4.1 of this Part III).

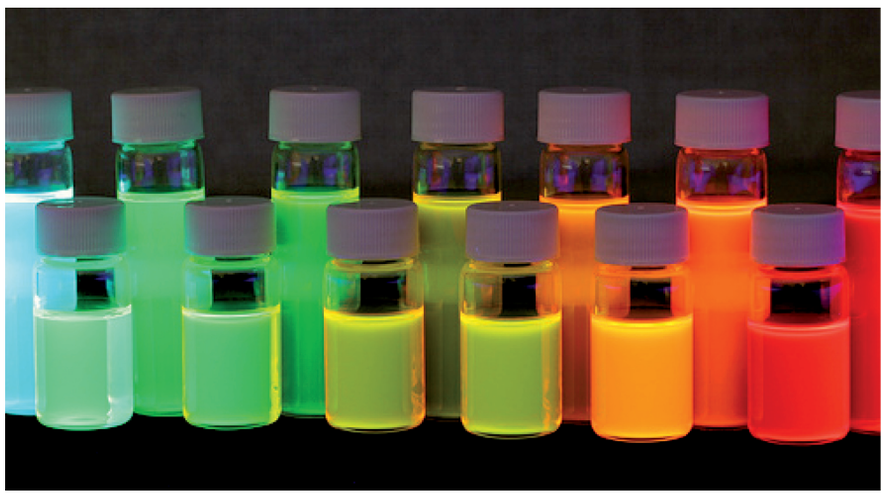


Figure 2: QDs displaying photoluminescence at different frequencies

Some of the most important ways in which quantum dots differ from traditional photoluminescent materials relate to the way in which their electrons obtain sufficient energy to become excited. In almost all conventional phosphors, the incoming photons (light) which provide an electron with this energy must have available significantly more energy than the electron needs. Therefore, only the higher frequencies in the light can be used to excite the phosphor. This is referred to as having a narrow 'excitation spectrum' and means that a high proportion of the energy in the incoming light is wasted. In contrast, electrons in a quantum dot can typically be excited by a wide range of different frequencies. If the photon has available considerable amounts of excess energy, it may be able to excite more than one electron. This is referred to as 'multiple exciton generation' (MEG) and is an important property when considering quantum dots for photovoltaic applications.

The electrons in quantum dots can also be excited when an electric current (literally a stream of energetic electrons) passes through them. As before, they will release the energy absorbed from the electricity as a photon of characteristically coloured light. This property is called electroluminescence. While excited electrons normally emit light as just described, it is also possible that they will remain excited and leave the quantum dot to become part of an electric current. This means that quantum dots can be used as photovoltaic materials – they absorb light energy and turn it into a current (electrical energy). This is the direct opposite of the electroluminescent effect in which electrical energy is absorbed and turned into light. Both forms of behaviour can be used to practical advantage. Flat panel displays turn electrical energy into light while solar panels turn light into electrical energy; quantum dots can be used in both.

2.2 How are quantum dots made?

There are various synthetic routes for the manufacture of quantum dots which are either already used to produce small quantities of commercial products or are currently being developed commercially. These can be broadly categorised into two main groups; physics-based approaches and wet chemical based approaches.

The physics-based approaches differ from the wet chemical ones in a number of important respects. They are often used to develop arrays of quantum dots permanently fixed onto a substrate. These are being studied for applications such as solid state lasers, memory chips, quantum computers and telecommunications components which are not the target markets being addressed by Nanoco. The wet chemistry approaches produce colloidal solutions of quantum dots (a colloidal solution is a suspension of solid particles within a liquid in which the particles remain uniformly dispersed, never settling at the bottom, even if they are denser than the liquid). These solutions of quantum dots can survive temperatures up to 400°C and can be handled and processed like any other liquid reagent. This includes ink-jet printing,

spin coating and incorporation into master batches for adding to bulk materials such as polymers, coatings, fibres or paper.

Some of the physics-based approaches take a 'top down' approach to manufacturing quantum dots; starting with a large mass of solid material and breaking it down into nano-sized bits. The wet chemistry approaches always take a 'bottom up' approach – starting with individual atoms and molecules and building them into the quantum dots. The wet chemistry approaches are therefore generally better for producing very small quantum dots and for controlling important parameters such as their size distribution. Because the frequency of the light re-emitted by an individual fluorescing quantum dot depends on its size, in order to achieve a narrow range of colours it is necessary that all the quantum dots in a given solution are the same size.

All wet chemical approaches involve two important steps – 'nucleation' and 'growth'. The nucleation step involves creating in solution a fine distribution of atomic clusters ('precipitation nuclei') composed of the inorganic atoms from which the quantum dot will eventually be assembled. This is usually achieved by the rapid injection of one chemical precursor into another at high temperature. Once the precipitation nuclei have been formed they start to grow by adding further atoms from the surrounding solution. When they have reached the desired size to be quantum dots, the growth is somehow arrested, usually by rapidly reducing the temperature ('quenching'). In order to achieve a narrow size distribution in the quantum dots it is necessary for all the precipitation nuclei to start growing at the same time, to grow at the same rate and then to stop growing at the same time. This is difficult to achieve in practice and this is an area where Nanoco's proprietary manufacturing route is particularly advantageous.

After the quantum dots have stopped growing they are finished off by depositing a 'capping layer'. This is typically just one layer of molecules thick, and its main function is to make the quantum dots compatible with whatever type of solution, matrix or encapsulant is required for the target end-use application. One end of the capping agent molecules binds to the quantum dot while the other end is chosen to be compatible with the surrounding medium. The capping agent also improves the optoelectronic properties of the quantum dots and their stability. Simple quantum dots made from a single semiconductor are called 'cores'. Sometimes additional 'shell' layers are added made from a semiconductor which is different from that used in the core. Core/shell structures can be used to achieve improved brightness and efficiency.

2.3 Novelty of the Nanoco technology

Nanoco was spun out of the Department of Chemistry at Manchester University in 2005 and its core intellectual property (IP) is based on patents assigned to the company by this university and Imperial College. Nanoco's earliest quantum dot patent family dates back to 1995 and relates to the use of metal complexes to produce nanocrystalline material.

As described in Section 2.2 of this Part III, a number of wet chemical approaches to manufacturing quantum dots exist. In the widely used 'dual injection' method, separate chemical precursors are added to supply the two or more chemical constituents that form the quantum dot compound. To initiate nucleation, the mixture is raised to a high temperature (typically 250°C), following which the temperature is reduced to a level at which the growth of the particles can be more accurately controlled (typically 150°C). Since both nucleation and growth steps occur in the same mixture, they overlap in time. This overlap of processes means that particle growth starts over a longer period of time, with the result that a broad distribution of particle sizes is produced. Also, because the nucleation uses a high temperature, the growth is initially very fast, slowing only when it is controlled by cooling the mixture. This makes it very difficult to control the growth of small particle sizes, such as are needed to make quantum dots that emit blue light.

Nanoco has developed further important methods and IP in relation this process. One approach is the use of an endpoint technique to control quantum dot particle size. By using an optical instrument called a photoluminescence (PL) probe, the emission wavelength is monitored over time and the growth process stopped when the desired quantum dot size is reached. Another method to achieve good control of mean particle size is to add precursor reagents in a 'dropwise' manner. In this way the growth rate is slowed down

and controlled accurately at the critical stage. Once the growth step is complete the process is quenched and some post-processing steps are carried out which improve the crystalline quality of the quantum dots and avoid them agglomerating together. The Nanoco IP describes some of these steps, defining the chemicals used and the process sequences.

For some applications two layers of different materials are grown to form a core-shell structure. Use of core-shell structures improves the emission efficiency and therefore brightness of the quantum dots significantly; Nanoco has developed IP in this area. Control of the surface chemistry is another area of technological importance which affects the emission efficiency of the quantum dots, as well as their robustness, lifetime and compatibility with the wide variety of solid and liquid media required for different applications. Choice of capping agents and the process for applying the capping coating is one way to optimise these features. Nanoco has developed IP relating to certain capping agents that are well suited to display applications and water soluble capping agents for bioscience applications. Another way to improve lifetime is through encapsulating the product into a chemically resistant polymer matrix. Nanoco has developed a methodology using encapsulation into polymer beads which may prove important in achieving good quantum dot product reliability.

A variety of semiconducting materials can be used to form quantum dots. The most widely used have been cadmium (Cd) compounds which emit light across the visible range. Safety restrictions associated with Cd (under the EU Restriction of Hazardous Substances (RoHS) directive) have led many potential users of quantum dots to prefer semiconductors that do not include Cd. Although Nanoco has developed processes for Cd-based quantum dots, and does supply these products, the company has also put strong emphasis on developing Cd-free quantum dots. These are based on semiconductors such as zinc selenide (ZnSe) and indium phosphide (InP) which can be optimised to give strong photoemission and good wavelength control. The cadmium free quantum dot processes have proved harder to develop with conventional techniques (such as dual injection) and developing a molecular seed approach to make them has been an important break through.

Nanoco has a strong in-house applications activity with teams working on displays, photovoltaics and solid state lighting. This has allowed the Company to develop more detailed knowledge of the processing needed to make quantum dots that suit these end-uses and also to develop some IP that relates specifically to these applications.

As can be seen from the range of potential end-use markets considered in Sections 4 and 5 of this Part III, Nanoco's novel approach to growing quantum dots is truly a platform technology. With core IP that protects methods for both growing the quantum dots and optimising their performance, competitive advantages are achieved that are relevant to a range of applications. Some of these require precise control of the quantum dot product characteristics, such as narrow spectral width of emission, which is achieved by the Nanoco molecular seeding approach. Others require a Cd-free chemistry, while still others do not require tight control of properties but will only use quantum dot technology if the cost is low. The Nanoco method offers both tight process control and low cost manufacture. The ability to tailor surface chemistry, thereby allowing compatibility with different media, solutions and encapsulants, is another requirement for the realisation of various end-uses. The core competency within Nanoco in the surface chemistry area therefore also offers competitive advantage.

3. Scale-up plans

This section summarises the plans and risks associated with the proposed scale-up of Nanoco's quantum dot manufacturing process. The analysis is based on two visits by Pira consultants to the Nanoco site, discussions with Nanoco management, and data and plans that they have provided. The current quantum dot manufacturing capability is reviewed, as well as the plans and targets for increasing production output and the possible risks associated with scaling-up the production batch size.

Quantum dots are currently produced in various batch sizes ranging from 10mg (milligrams) up to 50g. This figure refers to the dry weight of pure quantum dots, although the product is usually stored and sold either embedded in a solid matrix or suspended in a colloidal solution. Each batch has a specific quantum dot particle size and fluorescence wavelength, and therefore has a characteristic colour which can be seen clearly under an ultraviolet lamp. For simple Cd-based quantum dots the process can be completed in two days, while for Cd-free and more complex core-shell structures it can take one week to complete a batch. Each production lot or sample is checked upon completion using in-house analytical methods such as photoluminescence spectroscopy (PLS).

Nanoco has carried out process optimisation across a range of quantum dot materials and collected some statistical process control (SPC) data on Cd-based quantum dots as part of its customer qualifications. Pira has reviewed some of these data to assess the current level of process control. The data show the following:

- Emission peak wavelength (colour) control within +/-5nm. This depends on quantum dot particle size and shows that the control of mean size is very accurate;
- Peak spectral width (colour purity) in the range 30-40nm. This depends on the distribution of quantum dot particle sizes and shows a very tight distribution is achieved;
- Efficiency (quantum yield or brightness) in the range of 30-65 per cent.. This depends on quantum dot structure and purity. The data are more variable, but levels are acceptable.

The above data shows good control of the current process and high quality quantum dot product at the current batch size for Cd-based quantum dots. This performance illustrates some of the advantages of the Nanoco production method that were described in Section 2 of this Part III.

The first phase of production scale-up within Nanoco's business plan is targeted to enable batch sizes of 1kg. This will be based in a new dedicated production area within Nanoco's existing facility. The equipment will be optimised and improved to enable a further increase in batch size to 2kg over the following year. Beyond that, a second phase of expansion, with a target of 25kg, is expected to be carried out in 2011-2012. This equipment is expected to be located at a new site, yet to be determined but possibly in the UK or Japan.

In assessing the technical risk of the scale-up to 1kg batch size, and later to 25kg, it is necessary first to consider the requirements of different target markets. The degree of precision and control of different applications varies considerably, as will be discussed in Section 4 of this Part III. The Nanoco process offers competitive advantage for applications that require very tight control and the SPC data summarised above shows that very tight parametric control is achieved at the current small batch sizes. For display backlighting, high end solid state lighting and some photovoltaic and bioscience applications, these tight specifications will offer differentiation if Nanoco can retain them as batch size is scaled-up. Emission peak, spectral width and quantum yield represent the most important performance parameters and have therefore been assessed individually. The other product characteristics of commercial importance are lifetime of the product (both shelf-life before use and robustness and lifetime in operation) and the flexibility with which the quantum dot can be integrated into the solid or liquid media required by various end-use applications.

- The emission peak wavelength (colour) depends on the mean quantum dot particle size. Control of +/-5 nm requires single atomic layer precision. This is very challenging for most manufacturing methods but Nanoco have developed some important IP to enable this level of precision. Therefore, with careful process control and good automation achieving similar control of peak wavelengths should be attainable at the higher batch sizes.
- The spectral width (colour purity) depends on the distribution of quantum dot particle sizes. Again, key Nanoco IP offers advantage here: the patented approach of 'seeding' the mixture using molecular cluster compounds means that all quantum dots start growing at the same time and a tighter distribution results. However, uniformity of growth rate will still depend on uniformity of chemical precursor concentrations and temperature. These become harder to maintain as the size of the reaction vessel increases, making this a key area of risk for the scale-up. Advanced methods of

mixing that are used in standard chemical processing should be applicable. However, the spectral width specifications requested from some key Nanoco customers have been challenging to achieve, even at small batch sizes. Therefore, good execution of the design project and careful process optimisation will be required to deliver the control required.

- Efficiency (quantum yield or brightness) depends on the crystal structure and purity of the quantum dots and can be improved by using core-shell structures. The quality of the interface between the core and shell layers then becomes key, with the avoidance of lattice strain between the materials important. As with spectral width, some important customer specifications appear challenging based on Nanoco's current data. However, Nanoco has shown examples of development work where very high efficiencies have been achieved, even on Cd-free applications, by careful engineering of the core-shell structure and optimising the chemical post-treatments. This parameter is not expected to be adversely affected by the scale-up, as long as quantum dot purity is maintained.

- Lifetime of the product depends on the chemical stability of the quantum dots, and in particular their resistance to oxidation when exposed to intense light. The quantum dots are coated with a passivating layer called a capping agent and may then be encapsulated in a layer of resistant polymer. To meet specifications for some markets, lifetimes >10,000 hours are needed and significant development is still required to meet these levels. However, Nanoco has good expertise in controlling the surface chemistry of quantum dots, and has developed IP protecting ingenious approaches to encapsulation that should offer a good path of continuous improvement. This work will be closely related to that on application flexibility, where choice of capping agents is a key element in making the product compatible with the variety of solutions and substrates needed by different applications. These challenges are not expected to be significantly affected by scaling-up batch size.

To summarise the technical risks; the most challenging parameter to control as batch size is scaled-up is expected to be the spectral width, associated with good processing uniformity. Significant technical challenges have also been highlighted in achieving specifications for efficiency and lifetime. However, it is noted that it is only for the most challenging applications that these targets are difficult to achieve, and these challenges also offer an opportunity for Nanoco to differentiate itself against competing companies based on less effective IP.

In parallel with scaling-up batch size, Nanoco is working to reduce chemical costs. Currently it purchases precursors from speciality chemical suppliers, paying high prices for high purity specifications. Nanoco believes that lower purity chemicals could be used and is working to qualify them. This would allow the company to source chemicals from lower cost suppliers or manufacture them in-house. This initiative will require careful qualification to ensure there is no adverse effect on quantum dot product quality or manufacturing process control. There is also potential for recycling some chemicals, such as solvents. Depending on the ultimate location of the longer term 25kg scale production facility, local regulation may impact or limit chemical disposal and disposal costs may increase. ISO14001 certification should be obtained to demonstrate good environmental management.

Environment, health and safety is an area that will require continued focus. The production process uses some toxic and pyrophoric chemicals (ie ones which burn spontaneously), as well as large volumes of solvent, which represent a significant fire risk. Pira reviewed briefly the current laboratory safety arrangements and these were judged to be well managed, with appropriate procedures, training, equipment and documentation. Some additional measures have been recommended as the chemical volumes are scaled-up and the workforce increases in size.

The timeline to achieve the 1kg batch size within 2009 is aggressive but achievable. At the time of review, few details were available of the project timeline and strong management focus will be required to complete the planning, equipment design work, laboratory upgrade, process development and product qualification during this period. With many customer and applications related projects in progress, there will be

competition for technical resources to complete the production ramp. In parallel with this project, other elements of the business will also need ramping-up. New business processes will be required to migrate the culture from a research-based start-up to a speciality chemical manufacturer. To access some markets and larger customers ISO9001 certification will be needed, and achieving this certification of quality management will be a useful stimulus to implementing the more formal structure and procedures needed to support a larger business.

While this review has focused on the scale-up project to 1kg, Pira expects the ramp to 25kg to present similar challenges in terms of project methodology and business scale-up, without any fundamentally new potential barriers. The most significant additional challenge would be the substantial project to create a new manufacturing facility, which seems most likely to be based either in the UK or in Japan to serve the emerging Japanese market. In this respect, the need for well documented and automated processes will be even greater, and there will be the expected management and cultural challenges associated with multiple sites and an international workforce.

In summary; the plan to ramp production batch sizes up to 1kg and later 25kg comprises several elements, including some design and technology challenges and some broader management challenges. To meet the specifications for the more challenging applications in displays and lighting will require further process optimisation of a number of parameters, and careful control of those parameters during the scale-up. Nanoco has good technical strength and some valuable IP in these areas, but will need to remain focused on the key customer specifications. The timescale to achieve the scale-up plan is achievable, but will require good planning, allocation of resources and strong management focus.

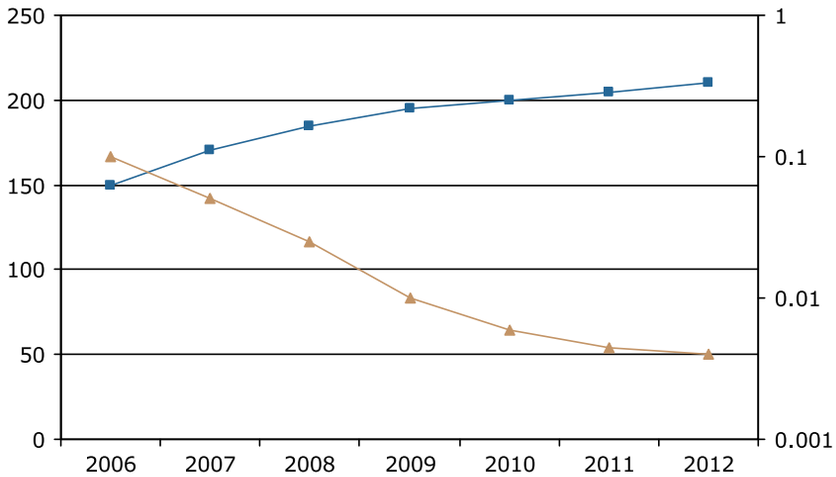
4. End use market in solid state lighting

4.1 Potential uses for quantum dots in solid state lighting

Between 1880 and 1900 the key technical developments took place which allowed light to be generated using electricity. These fell into two main categories; incandescent bulbs and fluorescent discharge tubes. Within 50 years the generation of light by the local burning of fuels (eg candle wax, lamp oil and gas) was replaced almost entirely in the developed world by electrical lighting. Today, lighting is a very significant end-use for electrical power, accounting for about 22 per cent. of generation in most developed countries. In the early 1960s, scientific discoveries were made which lay the foundations for a third fundamental mechanism for converting electrical power into light. These were based on the study of electroluminescence in a number of compound semiconductors, most notably gallium arsenide (GaAs). The light generating devices based on these semiconductors were called Light Emitting Diodes (LEDs).

By the end of the 1960s LEDs were being produced commercially by a number of suppliers. These early LEDs were low power devices and very expensive to manufacture. Their first applications were therefore as indicators and displays for what were then high value products such as electronic calculators and digital watches. However, being based on a semiconductor technology, LED performance proved to be capable of improvement at the exponential rates familiar from digital memory capacity or computer processor speeds, with attendant progressive reductions in cost. By the late 1990s, high brightness (‘HB’) LED performance had reached the point where it was considered for use in specialist applications as a source of illumination rather than just indication. The use of LEDs for illumination purposes is referred to as solid state lighting (SSL).

Whereas the two other main electrical lighting technologies (ie incandescent bulbs and discharge tubes) are essentially fully mature, LED developments continue at a rapid pace, as illustrated in Figure 3. Note that the right-hand scale on this graph is logarithmic, implying that costs (US$/Lumen) will fall by a factor of more than 20 between 2006 and 2012. This has led many commentators to believe that SSL will progressively replace earlier technologies in a succession of different applications. This has already started to occur in niche applications such as torches, vehicle rear lights and traffic signals. In the near future SSL will offer mainstream solutions in architectural lighting and street lanterns.



Source: iSuppli – 'Solid state lighting: LEDs poised to drive a new lighting revolution' Report published October 2007

Figure 3: efficiency improvements in HB-LEDs

The current performance of the various forms of electrical lighting technology is compared in Table 1. Note that two types of discharge tubes are listed; the low pressure sodium (LPS) tubes which produce a monochromatic (ie single frequency) yellow light and are mainly used for street lanterns, and the fluorescent tubes which produce white light and are used in homes and offices. All of the figures in the table are estimates of the best reasonably attainable performance and typical retail costs; actual performance and price paid will vary over a relatively wide range depending on the precise lighting configuration and the end-use environment.

Technology	Efficiency (Lumens/Watt)	Capital cost (US$/lumen)	Lifetime (hours)	Operating cost (US$/million lumen-hours)	Total cost of ownership (US$/million lumen-hours)
Incandescent	20	0.030	2,000	5.00	20.96
LPS discharge	180	0.002	18,000	0.56	0.73
Fluorescent tube	100	0.002	15,000	1.00	1.20
SSL (white light)	150	0.080	50,000	0.67	4.82

Table 1: Comparative performance for different types of electrical lighting

Table 1 includes estimates for operating cost based on a very simple model. This assumes an electricity cost of US$0.1/kWhr, which represents connection to the grid. In applications powered by local generators or batteries this electricity cost would be much higher, increasing the attraction of a low power consumption technology such as SSL. The cost of ownership is based on a 7 per cent. cost of capital and the assumption that the lighting operates for six hrs/day. Obviously if the use if less intensive the capital component of the cost of ownership will be higher as the original investment is committed for a longer period. The cost of ownership does not include the maintenance cost of changing the lighting unit, which can be considerable for inaccessible locations. In such applications the long lifetimes offered by SSL would be very attractive.

It is possible that SSL could eventually replace earlier electrical technologies almost completely in the same way that they replaced those based on direct combustion. Given that SSL potentially offers reduced power consumption, and therefore greenhouse gas emissions, the threat of global warming is likely to act as a further stimulus to its widespread adoption. In some countries, for example, sales of new incandescent bulbs will be banned from 2012 onwards. As a result, there is now considerable commercial interest in the key technologies which will enable future SSL products, among which could be quantum dots.

SSL lighting is already far superior to the earlier forms of electric lighting in terms of compact size, shock resistance and long service life. Its colour rendition is superior to discharge tubes and can rival that of incandescent bulbs. Unlike fluorescent tubes, which contain mercury, LEDs do not contain toxic materials.

This is an increasingly important consideration for end of life disposal. Power consumption is already an order of magnitude lower than for incandescent bulbs and is now competitive with most discharge tubes, although the low pressure sodium (LPS) lamps used in street lighting are currently still more efficient. In Table 1, power consumption to produce a given level of lighting is, of course, inversely proportional to the number of Lumens (a measure of perceived light output) per watt of power consumed.

SSL lamps last around three times as long as discharge tubes and 20 times longer than incandescent bulbs. When they do fail they tend to do so progressively via a drop off in light intensity (the figure of 50,000 hours in Table 1 is the typical period before output falls to half its original level) whereas the other two forms of lighting display sudden failure. This can give SSL an advantage in safety critical applications. The relatively high cost of manufacturing SSL means that it is not yet cost effective for grid connected mass market applications such as home and office lighting where lamps can readily be replaced. However, for inaccessible locations, where the cost of changing the lamp can be many times the cost of the lamp itself, SSL already offers the most cost effective solution available. Furthermore, as shown in Figure 3, costs are rapidly coming down and this should make SSL the lighting of choice for an increasing number of applications. Improvement in efficiency will undergo more modest improvements, but comparing the eventual level of 200 Lumens/Watt in Figure 3 with the operating cost figures in Table 1 calculated on a basis of 150 Lumens/Watt shows that SSL should soon become not only affordable, but also the most energy efficient form of lighting available.

Because LEDs are based on semiconductors, they emit light at a single frequency. This is for the same quantum mechanical reasons that quantum dots fluoresce at a single frequency. The first LEDs emitted red light but green and yellow versions soon became available. LEDs emitting higher frequency blue light took somewhat longer to develop. Given that individual LEDs emit monochromatic light, one of the challenges in developing SSL products has been to produce white light devices which must by definition emit at multiple frequencies. Early attempts at this involved mixing the monochromatic light from different types of LED (usually one red, one green and one blue), but is was not a particularly practicable solution for mass market applications because it requires sophisticated (and expensive) electro-optical design.

The key breakthrough came in the early 1990s when the Nichia Corporation in Japan developed a high powered blue LED based on gallium nitride (GaN). The blue LED was encapsulated in a transparent plastic (epoxy) package containing a cerium-doped YAG (yttrium aluminium garnet) photoluminescent material (or 'phosphor'). A proportion of the blue light from the LED was emitted through the encapsulation and a proportion was adsorbed by the phosphor and then re-emitted as lower frequency yellow light. The mixture of the original blue light with the yellow light appears white to the human eye.

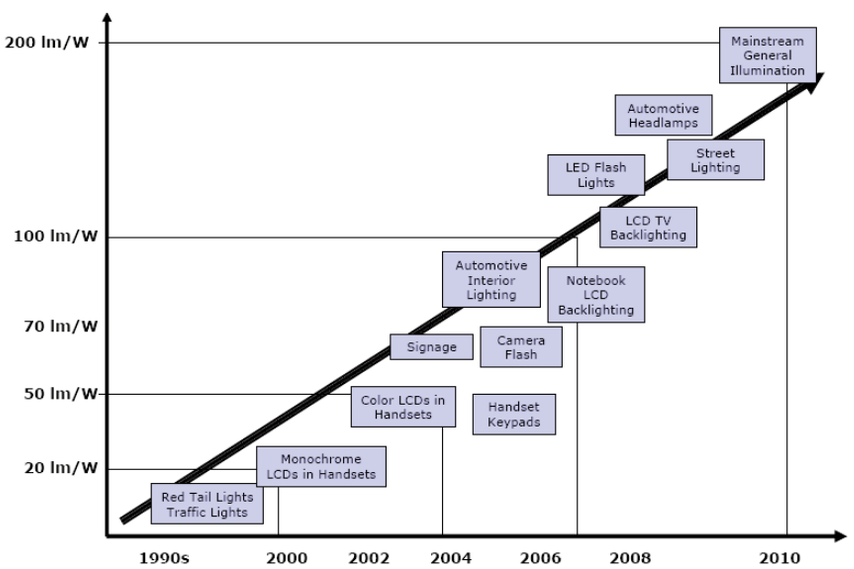
Quantum dots are photoluminescent and can therefore act in the same way as phosphors to shift the frequency of a proportion of the blue or UV light from an LED to lower frequencies in order to create a white light mixture. In this application, quantum dots offer certain advantages over conventional phosphors, including the following:

- The different phosphors used to achieve good colour rendition tend to degrade with heat and age, but at different rates causing deterioration in the quality of the white light over time.
- To accomplish equivalent levels of performance using quantum dots requires only about 1 per cent. of the mass needed with conventional phosphors. Quantum dots are currently much more expensive than phosphors on a per gram basis, but this is offset by the fact that 100x less material is required. Technologies such as those developed by Nanoco should see quantum costs reduced by up to two orders of magnitude, making them more cost-effective overall.
- Vertically integrated LED manufacturers such as Nichia and Osram (part of Siemens) have blocking patents on key phosphors which make it difficult for competitors to enter the market for high power white LEDs. Companies wishing to enter the market are likely to explore the use of quantum dots from merchant suppliers to overcome these barriers.

The market opportunity for quantum dots in SSL is therefore as replacements for the phosphors used in the manufacture of white HB-LEDs. The size of the total available market will depend on the volume of such LEDs sold for SSL applications. The share of this photoluminescent materials market won in future by quantum dots will depend on their price and performance relative to existing phosphors.

4.2 Development of markets in SSL

The global market for lighting units of all kinds (collectively referred to as 'lamps') is worth around US$18 billion per year. Within this figure, the market for replacement incandescent bulbs, which over the next few years will be substantially superseded by compact fluorescent lamps and SSL, is worth about US$6 billion. However, because LEDs are not directly interchangeable with existing lamps, it does not make sense to use displacement values to estimate the total available market. For some years to come the SSL proposition will involve selling lamps which cost more than existing bulbs and tubes, but which have much longer lives and lower costs of ownership (maintenance and power). LED revenue projections should therefore be based on the predicted total number of LEDs sold and their predicted average selling price. Some of the most promising early adopter markets are shown in Figure 4.



Source: iSuppli – 'Solid state lighting: LEDs poised to drive a new lighting revolution' Report published October 2007

Figure 4: early adopter markets for SSL based on performance enhancement

In this report, Pira has focused on two key areas where LED uptake is both increasing rapidly and has a significant market value; liquid crystal display (LCD) backlights and vehicle lights.

LCD backlights

Historically, the backlights used in LCDs have been cold cathode fluorescent lamps (CCFLs). These have the advantage of being relatively thin tubes which can be formed into shapes designed to create an even distribution of light across the panel. However, they also suffer from a number of disadvantages. The most important of these is a relatively short life, particularly for smaller diameter tubes. Whereas 5mm tubes may last for 20,000 hours, tubes with a diameter of 2mm will typically last for only about half this time. In an application such as a laptop screen or PC monitor, which may be in use for 3,000 or more hours per year, this implies a product lifetime of as little as three years. CCFLs also contain mercury, which can be a problem for end of life disposal.

Because of the shortcomings of CCFLs, most major LCD manufacturers are developing alternative products based on LED backlights. Samsung, one of the world's leading LCD manufacturers, has

developed the 'Xmitter LED backlight' system which operates at a much lower temperature than the CCFL modules it will replace and in a large television consumes at least 40W less power. In September 2008, Sharp, another leading player in the LCD market, announced commercial versions of its Aquos X television screens with LED backlights. The reduced power consumption and shock-resistant properties of LED backlights will be particularly attractive for laptop screens. The dramatic growth in the numbers of LCDs sold over the past decade and the significant advantages offered by LEDs, means that this is a very important target market for SSL producers.

Estimates for the value of the overall LED backlight market vary, but generally lie in the range from US$4-8bn by 2012. Part of this wide variation will be due to different interpretations of the components included in the value calculation (eg the LED alone or its mounting and power contacts). The majority of this figure relates to the very large (>40") LCD panels used for televisions, which incorporate large numbers of backlight units and are required to offer service lives of ten years or more.

The electroluminescent material will, of course, capture only a proportion of the total HB-LED sale price. This is difficult to estimate for the phosphors currently used but is likely to be around one percentage. It will also vary depending on whether the phosphor is protected by IP and the associated licensing arrangements. Going forward, the total market for electroluminescent material will be split between traditional phosphors and quantum dots, with the latter taking an increasing share. The aspiration of quantum dot manufacturers such as Nanoco is to develop robust IP which enables superior backlighting products and then to charge a royalty on each unit sold which is not related to the open market value of the photoluminescent material supplied.

Vehicle lighting

Starting with centrally mounted auxiliary brake lights and interior lights, LEDs are now being used for an increasingly wide range of applications on road vehicles. Most car manufacturers now offer LED main brake lights, side lights and rear lights on their premium models. Last year the Audi R8 became the first car in the world to offer LED main headlights as standard fittings. The lighting units consists of 22 ultra-high-performance LEDs arranged in seven groups of two or four, performing the various tasks of the low-beam and high-beam headlights. The key attribute of LEDs in this application is not reduced power consumption. The energy consumption of the Audi R8 LED headlights is 60W (50W for the LEDs, 7W for the actuating electronics and 3W for the cooling fan). In comparison, xenon headlights for the same car would be rated at 42W and halogen headlights at 68W. Rather, the advantages of the LEDs are much whiter light, a longer service life and progressive failure so that the driver never suffers a complete failure of a headlight while out at night.

Like carbon fibre composites in structural components, LEDs may well be used in vehicle lighting applications to support the brand values of premium priced or 'ultra high performance' products even when their particular properties are not really required, or are not cost-effective in performance terms. It is well known that features which first appear on premium cars migrate to mid-market models within a decade and eventually become ubiquitous, particularly if there is a safety dimension to them. In the case of LEDs this will be facilitated by the anticipated significant future price reductions. The widespread use of HB white LEDs for main headlights, as opposed to the red LEDs already used in rear and brake lights, therefore represents an important potential market for a company such as Nanoco.

One factor that will certainly have an impact on the European market is the Daylight Running Lights (DRL) legislation. DRL is already compulsory in some, but not all, European countries. The European Union is going to standardise DRL legislation based on its demonstrated effectiveness in reducing road casualties. Proposals for the introduction of mandatory dedicated DRLs have been adopted for all vehicle categories excluding trailers. The lamps will be built into new cars and vans from February 2011 and all other vehicle categories, including trucks, from August 2012. Unlike the Audi main headlight units, LED DRLs do offer potential energy savings, which translate into improved fuel economy. There are no plans to require DRL to be retrofitted or for older vehicles to use other lights when driving in daylight.

Recent estimates from iSuppli and Strategies Unlimited agree that the total value of the LED vehicle lighting market should exceed US$1 billion by 2012. As with LED backlights, the electroluminescent materials will capture only a relatively small proportion of this total value, but could potentially achieve high margins on the back of suitable IP protection.

5. Other end use markets

5.1 Photovoltaics

The photovoltaic (PV) conversion of sunlight into electricity requires three things:

1. A material that can be manufactured in large areas and in which pairs of electric charges (called 'excitons') are generated by the absorption of energy from photons (ie sunshine);
2. Some structure or process occurring within the material that separates these positive and negative electric charges before they can recombine;
3. A connection between the material and an external electric circuit through which the separated charges (electricity) can flow.

The high cost of 'first generation' PV technology based on conventional silicon crystalline solar cells is a well known issue. Limiting factors for crystalline silicon PV cost reduction based upon normal 'learning curve' approaches are:

- The cost and availability of the 'ultra-pure' silicon. In order to make silicon cheap enough for the large area application of PV, prices need to be in the region of US$20-US$30/kg. Several consortia worldwide are addressing this issue based upon alternative methods of silicon purification and by efforts to use less material such as thinner wafers and recycling.
- The need to interconnect many individual and fragile silicon solar cells using wires in order to create solar panels (or modules) that give a useful voltage and current. This process is being highly automated but still remains a source of cost and wastage.
- The requirement to protect the silicon from the external environment for many years of operation.

The other key issue for all PV technologies is their efficiency at converting the solar energy that falls on them into useable electricity. For typical silicon solar module systems this is around 15 per cent. This combination of cost and conversion efficiency makes the cost of electricity generated from silicon solar modules approximately £0.1-0.15 per kWh.

It was the above issues of silicon availability and the need for more continuous manufacturing processes that prompted many researchers to investigate the use of new 'thin films' of material such as amorphous and micro-crystalline silicon, cadmium telluride (CdTe) and copper indium gallium diselenide (CIGS). These thin film approaches are often referred to as 2nd generation PV, since they offer the potential to move down the cost vs efficiency curve. Solar cells made from single layers of these PV materials have shown efficiencies approaching 20 per cent. in the laboratory but struggle to exceed 9-12 per cent. when used in 'real world' systems.

A 3rd generation of PV is also in development. These move further down the cost vs efficiency curve, either by generating efficiencies >30 per cent. or by achieving very low manufacturing costs. Use of more exotic semiconductor layers, such as multi-layers of GaAs and InP based semiconductors, can lead to high absorption across a wider spectral range and efficiencies as high as 40 per cent. have been achieved. These materials are expensive, so sunlight is usually focused down onto a smaller area, an approach referred to as 'concentration'.

The other next generation approach (sometimes termed 4th generation) is to accept moderate efficiencies but move to very low cost manufacturing methods. One such approach is to print solar panels on to polymer sheets using printing methods in a roll-to-roll format.

All the conventional materials used to make existing solar cells have a fixed band gap and therefore can only absorb one ‘colour’ region of the available sunlight spectrum. Sunlight that has lower energy (more towards the red end of the spectrum) or higher energy (more towards the blue end) than this will not generate excitons and is therefore wasted.

Quantum dot technology offers the potential to make solar cells from several layers of material containing quantum dots of different sizes, each size giving rise to absorption of light of a different colour, therefore ‘wasting’ less of the available sunlight. Thin film solar cells with efficiencies of 40 per cent. have already been made using three layers of material that absorb different parts of the spectrum. The quantum dot approach in principle allows the use of simpler manufacturing processes and lower processing temperatures to achieve the same result.

Quantum dots typically re-emit light of a different colour (wavelength) from the light shining on them. This effect could also be used for harvesting more light from the solar spectrum than is currently possible. A system can be imagined where quantum dots are combined with a more conventional solar cell material. The sunlight could be absorbed by the quantum dots from regions of the spectrum where the conventional material would not be sensitive and re-emitted at the right colour for the solar cell to absorb it.

An extension of this idea is to disperse the quantum dots in a flat sheet of polymer material that guides light emitted inside it to its edges. The quantum dots absorb light entering the face of the sheet but when this energy is re-emitted it is trapped by total internal reflection and travels to the edge of the sheet. In principle, this would allow the solar energy falling on a large area of sheet to be concentrated onto the surface of conventional solar cells mounted at the edges, thereby greatly reducing the area of expensive solar cell material needed to harvest it. This principle has already been demonstrated by a system that used conventional optics to split the incoming sunshine into three different colour regions, each of which was then guided to one of three solar cells that absorbed these colours. This gave a combined sunshine-to-electricity conversion efficiency of nearly 43 per cent.

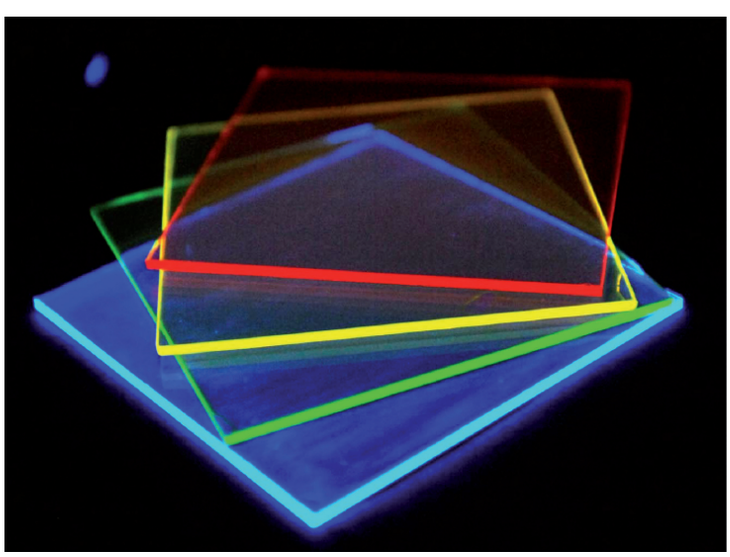


Figure 5: photograph of sheets showing how re-emitted light is guided to the edges

From the above trends and concepts there are a number of potential opportunities for the practical application of quantum dots to solar cells:

- Quantum dot absorber layers in solar cell devices
- Use of quantum dots to down shift the wavelength to increase the absorption efficiency of conventional PVs

- Quantum dot absorbers dispersed in a light-guide to act as concentrators for conventional PVs
- Use of quantum dots to make thin films of PV layer

This last opportunity has been addressed by Nanoco. The concept is to use quantum dots in the manufacturing process to make thin films. To deposit thin films of CdTe or CIGS currently requires large and expensive gas phase processing equipment. Nanoco has developed some IP that describes an alternative manufacturing approach in which these materials are deposited by printing using ink that contains the materials in quantum dot form. The printing step is then followed by high temperature treatment to remove the unwanted ink solvent and fuse the quantum dot particles into a continuous layer of active material. The approach could also be used to fine-tune the composition of the layers. In some PV systems there is an advantage to varying the composition through the layer, from top to bottom, and this composition gradient could be achieved by using mixtures of different amounts of quantum dots of different compositions in multiple layers.

Market

The future development of the total available PV market is the subject of considerable speculation, since it remains primarily driven by the availability of government subsidies. The European Photovoltaic Industry Association predicts growth of installed PV generation capacity from 2.4GW in 2007, to between 4.7 and 7 GW in 2010. At a conservative sales value of approximately US$6/Watt of peak generation capacity this implies a total market of US$14.4 billion in 2007 rising to US$28-42 billion in 2010. In 2007, BCC projected that the global market for photovoltaics would increase from US$12.9 billion that year to an estimated US$16 billion by the end of 2008 and US$32 billion by 2012; a CAGR of about 15 per cent.. Annually shipped generation capacity in 2013 would be 13.7GW. The US Department of Energy predicts that the US market alone will be worth US$27 billion by 2012. Other observers are more bullish, with revenue predictions reaching as high as US$274 billion by 2012. Thin film technology historically holds less than 10 per cent. of the market, implying a value of US$1.4 billion in 2007. However, it is widely expected that thin film technology will increase its market share substantially. Assuming thin films take 25 per cent. of a US$28 billion PV market in 2010, the total value of thin film PV systems sold would be around US$7 billion.

The solar panel typically accounts for half of the cost of a system and the thin film typically a quarter of the module cost:

Total 2010 Market	Thin Film Share	Solar panel value	Thin film value
US$28 billion	US$7 billion	US$3.5 billion	US$875 million

This implies an addressable world-wide PV market for QDs of US$875 million in 2010. This is attractive, but will be occupied by incumbent thin film technology, requiring QDs to displace them by demonstrating significant new benefits such as much higher sunlight to electricity conversion efficiencies or significantly cheaper and simpler manufacturing processes.

Another 'reasonableness' test is to estimate how many m^2 of 1μm thick absorbing thin film material would be required per GW of PV power generation:

PV Power generated	System conversion efficiency	Sunshine Watts/m^2	Number of m^2 needed	Grams of thin film material/m^2	Implied weight of thin film material (kg)
1 GW	10 per cent.	1000	10,000,000 (10 km^2)	2g	20,000 (20 tonnes)
	20 per cent.	1000	5,000,000 (5 km^2)	2g	10,000 (10 tonnes)

Thus even a small penetration of the addressable PV market would imply significant sales revenue for quantum dots. However, while manufacturing costs remain at the >US$50/g level, the quantum dot absorber layer alone will account for >US$100/$m^2$ of solar panel cost. Quantum dots would therefore initially appear too expensive to use directly in continuous films of PV device absorber layers, suggesting their early applications will be in the dispersed film mode.

5.2 Flat panel displays

In less than a decade, LCDs have come to dominate the market for TVs in the developed world and in 2008 for the first time accounted for more than half of TV production worldwide, replacing the existing technology based on cathode ray tubes (CRTs). Meanwhile, at the smaller end of the market the availability of low cost LCD screens has enabled a host of new consumer electronic products to be developed including PDAs, handheld games machines, MP3 players, portable DVD players, satellite navigation devices, digital cameras and digital photo frames.

There are, in fact, four main commercial display configurations competing for market share. In addition to CRTs and LCDs, there are Plasma Display Panel (PDPs) and Organic Light Emitting Diodes (OLEDs). Of these technologies, LCDs and PDPs have already established strong positions in the market while OLEDs are creating a niche and are viewed as having considerable long term potential. The application of quantum dots in LED backlights for LCDs is described in Section 4.2 of this Part III. An alternative use of quantum dots in display applications would be as a competitor to existing OLED technologies.

The pixels in OLEDs are made from organic molecules which display electroluminescence – emitting light when an electric current is passed through them. OLEDs potentially offer considerable advantages over LCDs. Because they actually emit light, rather transmitting backlight, the displays can be much thinner. They also consume less power because the pixels only light up when needed, whereas in LCDs the back light is kept on even when the shutter is closed. Even when the shutter is open, the colour filters in LCDs absorb a significant amount of the light. The absence of backlighting and colour filters means that costs are potentially lower than for LCDs. In the longer term, the pixels in OLEDs could be ink jet printed onto flexible polymer substrates which not only offers a potentially very cheap way of making displays, but could also allow those displays to be folded or rolled when not in use.

Quantum dots are also electroluminescent, and could therefore be used to form the pixels in novel inorganic electroluminescent (EL) displays. Although OLEDs already offer superior properties to LCDs in terms of compactness, flexibility, power consumption and cost of manufacture, they also suffer from certain drawbacks. If quantum dots can lift the performance of inorganic EL displays above that of OLEDs, then they would become an important new competitor for LCDs, initially at smaller screen sizes and eventually across the entire size range. Pira estimates that OLEDs will achieve a 10 per cent. share of the overall flat panel display market in unit terms by 2015, which implies sales of around 500m screens, almost all of them in the small size category used widely for handheld devices such as mobile phones. Assuming that 10 per cent. of these OLED screens were to incorporate quantum dots, either instead of or alongside the currently used organic molecules, then the market for quantum dot displays would be about 50m units with a total area of about 50,000 m^2. The device architecture of quantum dot displays is not yet fixed, so it is difficult to assess the thickness of the quantum dot layer required to fabricate the pixels. However, Pira estimates that 50m small displays would require between 2kg and 20kg of quantum dots.

5.3 Medical applications

Researchers in the life sciences and medical professionals often need to detect the presence and distribution of particular macromolecules within a cell or organism. This analysis may need to be carried out ‘in vivo’ or ‘in vitro’. In the case of a clinical diagnosis, the molecules of interest may be proteins that are indicative of cancer or some other disease state or DNA which indicates the presence of a particular pathogen (collectively called ‘disease markers’). This may be important in treatment as well as diagnosis. In the case of fundamental scientific research, the molecules may be any species of interest to a researcher who is trying to elucidate a biochemical pathway or mechanism. The movement of the molecules over time may also be of importance.

In order to detect the presence and distribution of designated macromolecules, very extensive use is made of 'tags' consisting of fluorescent molecules or particles which bind preferentially to the molecule or entity which needs to be detected. The presence of the tag can be detected in a light microscope by illuminating the sample with light which excites the fluorescent tag and is re-emitted at a different frequency (this helps to distinguish the fluorescent emissions from simple reflection).

There are few, if any, naturally occurring tag molecules which are simultaneously fluorescent and bind preferentially to a macromolecule of practical interest. It is therefore necessary to create these tags by combining a fluorescent section with a binding portion to confer the required specificity (or 'bioactivity'). The development and sale of tags for particular applications is a large and well established business.

Traditionally, there have been two different sources for the fluorescent portion of the tag; naturally occurring fluorescent proteins which are 10-20nm in size and synthetic dyes based on organic molecules or rare earth metal chelates (ie complexes) which are generally about ten times smaller than this. Quantum dots are of a similar size to synthetic dyes and are extremely effective fluorophores. Quantum dots offer the following important advantages:

- The spherical morphology and core and shell structure of quantum dots makes them very amenable to the attachment of molecules to their surfaces (referred to as 'ligands') which can in turn provide a link to the biological molecules needed to confer the binding specificity.
- Quantum dots are intrinsically more efficient that the other two types of fluorophores, leading to brighter emissions that are more easily detected.
- Quantum dots are highly resistant to 'photobleaching', meaning that they retain their photoluminescent properties for very long periods under continuous illumination.
- Quantum dots are not metabolised or dispersed by living cells and therefore remain fixed in place.
- By adjusting their size, quantum dots with the same chemistry can be designed to fluoresce at different colours. By associating quantum dots of different colours with different binding agents, it is possible to detect the presence of multiple biological molecules in a single image obtained using a single source of illumination.

The use of quantum dots for medical imaging was first seriously considered in 1998. Subsequent research led to the first ever commercial applications for quantum dots. The practical requirement is for quantum dots which remain dispersed in aqueous media over a wide range of pH (ie acidity) and in the presence of other dissolved ions. Early research considered aqueous phase synthesis which naturally produces water soluble quantum dots. These methods have, however, produced lower quality materials than methods using organic co-ordinating solvents. There are now numerous effective methods available for creating hydrophilic quantum dots post-synthesis which can be divided into two main categories; complete cap exchange or native surface modification. The main uses for these products are reviewed briefly below.

Cell labelling

This involves colouring the different features and structures within a cell so that they can be distinguished in an image. The prevalence of quantum dots in these applications has increased dramatically with the availability of commercial labelling kits. Despite their popularity and success, commercial materials currently have somewhat limited potential due to the use of specific proprietary coatings and surface ligands to passivate and stabilise the nanoparticles.

Biosensing

Colloidal quantum dots have been used to develop new methods of biosensing through their unique physical and optical properties. By attaching biomolecules to the quantum dot surface, it is possible to generate complex bioconjugates that merge biological specificity and function with the desirable optical characteristics of quantum dots. In many cases the nanometre size of the quantum dots allows them to

become a central structural component that can accommodate numerous copies of a particular biomolecule (e.g. a protein or DNA) or several different biomolecules simultaneously; as a result, these bioconjugates are sometimes referred to as 'nanosensors'. A number of methods have been described that show the versatility and functionality of quantum dots in fluorescence biosensors. Many of the reported methods are still preliminary demonstrations, but they highlight the potential offered by quantum dots in this area.

In vivo imaging

The ability to visualise the processes occurring in living organisms is invaluable for clinical diagnostic applications. However, despite continued research, visualisation remains difficult to achieve because of conventional imaging limitations and the availability of suitable fluorescence markers. The problems with existing fluorophores already noted are compounded by tissue autofluorescence which can exhibit similar spectroscopic characteristics. This makes it difficult to resolve the desired signal from unwanted background. Non-invasive, real time in vivo fluorescence imaging requires the use of superior fluorophores and detecting their emission through tissue. Quantum dots offer considerable promise for such applications. Although CdSe-ZnS quantum dots are among the most widely available, their visible fluorescence is not well suited for imaging through tissue. However, quantum dots can be excited and observed in the near infrared through the use of a different semiconductor core material and a carefully controlled size. A key hurdle to the widespread adoption of quantum dots for in vivo imaging in humans is the toxicity issues associated with most quantum dot materials.

Diagnostics

One medical area where quantum dots may have significant impact is in diagnostics and clinical assays. The unique properties of quantum dots have been investigated almost exclusively for two techniques that require the use of diagnostic fluorophores: immunolabeling and nucleic acid detection.

Immunolabeling

Numerous studies have been undertaken where quantum dots and immunolabeling have been used for mostly proof-of-concept diagnostic purposes. Many of these studies have been based on the detection of various cancer markers within cells. Other uses have included intracellular viral monitoring, blood cell antigen typing, visualising drug therapy effects on cellular metabolism and the monitoring of cell markers. Many of these studies have used commercially available quantum dots purchased pre-coated with streptavidin or some type of species-specific IgG (immunoglobin G) protein. The greatest potential of quantum dots in this area is 'multiplexing' or the simultaneous detection of multiple targets, since multiple colours of quantum dots can be excited with a single wavelength. Based on the typical emission spectra of quantum dots, it is reasonable to anticipate that ten or more colours of quantum dots could be used simultaneously.

Nucleic acid detection

Quantum dots have been used in this area primarily as a visualisation tool for nucleic acid array detection, in homogenous mutation arrays, or as the fluorophore in fluorescence in situ hybridisation. Much of the research to date has been largely 'proof of concept' with several different bioconjugation strategies tested.

Future outlook

Quantum dots are already having an impact in molecular pathology. Ventana Medical Systems in the US is marketing a quantum dot map family of products. These are immunohistochemistry reagent kits for automated slide processing and fluorescent detection of fixed specimens. Invitrogen has successfully commercialised the Qdot® range of quantum dot fluorophores. However, the lack of consistent reproducible methods to conjugate many different biomolecules to quantum dots in a systematic manner with control over their ratio, orientation, and strength of antibody-antigen binding will continue to hinder their further use in clinical diagnostics. As the ability to couple biological recognition agents to quantum

dots improves, more commercialisation of quantum dot products can be expected. Toxicity issues may mean that quantum dot use in biomedical imaging will be restricted mainly to research purposes in cellular and animal models.

Opportunity for Nanoco

The ability to produce cadmium free quantum dots could be a key advantage for Nanoco if the diagnostic techniques currently developed for in vitro use are to receive regulatory approval to be used in vivo. In order to address this opportunity, the Company recently recruited a senior technologist from Invitrogen, a leading player in the area. It has recently signed a collaboration agreement with Signalomics, an Austrian biotechnology company which is studying the use of quantum dots to tag colon cancer cells in vivo.

With the continued need for improved diagnostic procedures and an expanding global market created by the rise of emerging economies such as China, the market potential for quantum dots as bioimaging reagents is good. Estimates indicate a US$8 billion global diagnostic reagent market overall, with growth rates in China, for example, of 20 per cent.

However, there are available a number of potentially competitive imaging reagent types to quantum dots. Therefore the likely opportunities for quantum dots will rise from specifically developed applications, for example in the diagnosis of specific types of cancer.

5.4 Security and authentication

The increasing use of authentication to combat both terrorism and fraud provides market opportunities for a number of advanced technologies, including nanotechnology. It is in the creation of ‘difficult to copy but easy to read’ features that many advanced technologies are finding applications. The feature in question may be incorporated into the item or document during manufacture, or applied subsequently either directly (eg by printing) or by attaching a tag or label. Quantum dots are an attractive generic technology because they are invisible to the naked eye, can readily be incorporated in inks, fibres or papers and have very specific properties which are difficult to replicate without access to sophisticated manufacturing equipment. However, when seeking to carry out an authentication ‘in the field’ they are very easy to detect by excitation with a single low cost light source. Some specific applications of quantum dots are:

quantum dot ‘barcodes’ – a method for identifying and locating products in which quantum dots are utilised effectively as barcodes. The intensity of the emission at a particular wavelength can be varied to produce a binary or higher coding scheme. The security tag can be used for consumer items such jewellery, vehicles and confidential paper. Nanoco has patented an approach based on the synthesis of polymer beads containing different types of quantum dots in various proportions.

Nanomaterials – nano-sized particles of titanium dioxide and zinc oxide are well known ultraviolet blockers. The Canadian Bank Note Company Ltd has utilised this property to provide enhanced security features for documents such as birth-certificates, driver's licences and bank notes. Nanoco claim to be able to manufacture nano-sized zinc oxide using their colloidal process.

Nanocomposites – a polymer nanocomposite material based on multi-dyes has been reported for applications in security labelling. Quantum dots can potentially be used as replacements for organic dyes.

Holographic features – Research has demonstrated the possibility of using luminescent nanoparticles in photopolymerisable composites for holographic security technology. The advantage of the luminescent nanoparticles is that they provide an additional level of security for the hologram. It would presumably be possible to use Quantum dots as the luminescent nanoparticle in such applications.

Optical Fibres – random arrangements of fluorescent optical fibres have been suggested as a solution for anti-counterfeiting. A number of alternatives to fluorescent markers including fluorescent quantum dots have been proposed. This approach has been considered for pharmaceuticals and branded clothing.

Organic nanofibres – organic nanofibres have been suggested for application as security features in banknotes. These organic nanofibres have been reported to have novel optical properties such as a characteristic fluorescence under UV excitation. Conventional microfibres made from polymers containing quantum dots would presumably behave in a similar way.

Diffractive nanostructures – these can change colour when tilted and are therefore useful for applications in anti-counterfeiting and brand protection. A practical device can be manufactured which comprises an array of parallel lines with spacing of over 100nm produced from a material with high refractive index surrounded by one with low refractive index. It has been suggested that a layer of fluorophores (such as quantum dots) would enhance the colour effect.

Opal based nanocomposites – natural opals have a microstructure which consists of stacked silica spheres. As a result interference of light with the silica lattice planes the opals appear iridescent (also described as 'opalescent'). Synthetic opals can be made from quantum dot-doped polymers by the compression moulding of flexible films.

Market opportunity

Counterfeiting is, and will continue to be, a major global problem. Not surprisingly, exact statistics on the value of counterfeit goods are difficult to find. A credible estimate is that pirated or fake products could account for as much as 10 per cent. of all world trade. The International Chamber of Commerce in Geneva believes worldwide sales of counterfeit goods are US$650 billion a year. Worryingly, the World Health Organization estimates that 25 per cent. of the medicines sold in developing countries and 8-10 per cent. of medicine on the world market are counterfeit, with an estimated value of US$32 billion a year. Copyright industries are especially vulnerable to piracy. The International Intellectual Property Association has estimated that piracy costs are close to US$16 billion.

Globally, the brand protection market grew by 23 per cent. between 2005 and 2007 to reach US$5.6 billion. The market in Western Europe grew by 19 per cent. over the same period to reach US$1.4 billion. Nanotechnologies will not capture the entire authentication market because there are a wide range of alternative approaches which can be employed. Quantum dot-based nanotechnologies are at a relatively early stage of development compared with a number of the other nanotechnologies. However, a number of quantum dot suppliers in addition to the market leader Evident Technologies are already offering products for use in this sector.

Nanoco is actively working on the use of quantum dots as anti-counterfeiting tags. The basic principle is that a quantum dot or dots are imbedded into the item to be protected in a covert manner and by using a simple probe measuring photo-luminescence, the presence of the quantum dot containing tag can be established.

While the security and authentication sector is clearly attractive in terms of its growth prospects and size, it is very competitive and one in which prospective customers have a very wide choice of options in terms of technologies and suppliers. Security inks are perhaps the most obvious way for a new quantum dot manufacturer to enter the brand protection market, probably by an alliance with an existing ink manufacturer. Sales of security inks in Western Europe amounted to US$281 million in 2007 and are forecast to grow at a rate of 12.4 per cent. per year over the next five years.

6. Summary and conclusions

Pira has reviewed Nanoco's technology, its existing fabrication facility in Manchester and its plans to scale-up production output by an ambitious four orders of magnitude over four years. Potential markets for the quantum dots produced from the expanded facility have been reviewed with particular emphasis on replacements for the phosphors currently used in HB-LEDs. Certain other markets have been considered in less detail.

Nanoco has proprietary technology for the manufacture of quantum dots which it claims offers a number of important advantages over competing processes. These include a narrow and infinitely tuneable emission frequency profile, high stability during secondary processing and subsequently while in service, high efficiency and brightness, chemistry potentially free from cadmium (and therefore RoHS compliant) and the potential for cost effective manufacture in high volumes. Nanoco has presented summary technical data to Pira which would tend to support these assertions. Evolutec has directed Pira to accept these data without independent experimental verification, and the validation of such data did not form part of the remit for the work reported herein.

Pira does not consider there to be inherent difficulties in scaling up the Nanoco production process to the levels envisaged in the current plan. The final batch size will be 25kg, which is not large in absolute terms. There are some technical reasons to believe that the Nanoco process would be more amenable to scaling-up than certain competing processes.

Until the new equipment has actually been built and trial batches produced, there remains a technical risk that the performance of the quantum dots produced on the larger scale will not match that currently produced on the laboratory scale. However, there are no theoretical reasons why this should be the case. If problems are encountered Nanoco will be able to meet its anticipated demand using its existing equipment for some time, allowing it time to trouble-shoot the new line.

Nanoco anticipates that it can reduce manufacturing costs significantly for the larger production volumes. This is based mainly on the assumptions that increased use of automation will allow less skilled (and therefore less expensive) technicians to carry out the manufacturing, and that using less pure precursors will reduce input costs. Pira believes that both assumptions are valid.

Nanoco has a genuine ‘platform’ technology which offers a superior manufacturing route for a wide range of quantum dots, including those developed by others. The significant levels of prior activity in the sector could be beneficial to Nanoco – helping to condition the market to use quantum dots which will then be manufactured commercially based on Nanoco’s technology.

There is an energy efficiency or ‘green tech’ aspect to many of the intended applications of quantum dots. SSL uses ten time less energy than incandescent bulbs to generate the same amount of light output and is already more efficient than most of the compact fluorescent lamps which will replace incandescent bulbs in the short term for domestic lighting. Further energy savings come from reduced shipment and replacement costs caused by their compact form and long life. Electroluminescent displays use considerably less energy than LCDs where most of the rated power of the display is wasted by absorption in the colour filter and generating backlight regardless of whether the pixel is ‘on’ or ‘off’. Photovoltaics offer the ‘emission free’ generation of electricity but are unlikely to be economically viable for large scale power generation without progress in next generation technologies, where quantum dots could play a role.

External estimates for the total value of quantum dots sold suggest figures in the order of several hundred million dollars by 2014. Pira’s evaluation of the likely applications for these quantum dots tends to support the plausibility of these figures when viewed against the procurement budgets of key potential end-users. However, in order to win share in these markets, quantum dot manufacturers will have to establish strategic alliances with influential channel partners. Nanoco appears to have a well developed strategy in this respect and claims to be in advanced negotiations with some highly appropriate partners.

PART IV

PATENT REPORT ON NANOCO

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for itself as Nominated Adviser and Broker.

25 February 2009

Dear Sirs,

Re: Nanoco Technologies Limited
Patent Attorney's Report

1. Introduction

1.1. Marks & Clerk (''M&C'') is a partnership of some 100 European Patent Attorneys, Chartered Patent Agents and Trade Mark Agents supported by a total of about 300 employees. The firm, which was founded in 1887, has a Head Office in London, with further British offices in Aberdeen, Birmingham, Cambridge, Cheltenham, Edinburgh, Glasgow, Leeds, Leicester, Liverpool, London, Manchester and Oxford. M&C has further Offices in Beijing, Hong Kong, Luxembourg, Paris, Ottawa, Shanghai and Singapore.

1.2. Marks & Clerk ("M&C") has been asked to report on the patent portfolio of Nanoco Technologies Limited ("Nanoco") and its Intellectual Property ("IP") strategy.

1.3. This report sets out Nanoco's IP position as of 19 February 2009. The report comprises the following sections: 2. Executive Summary; 3. The Relationship between M&C and Nanoco; 4. The IP Strategy of Nanoco; and 5. The Status of the Patent Rights of Nanoco.

2. Executive Summary

2.1. Nanoco's current technology focuses on the development of scaleable methods for the production of high quality, mono-disperse quantum dots ("QDs"); QD-based materials, for example, QD core/shell structures, QD surface binding ligands and polymer-encapsulated QDs; and QD-based electronic devices and methods for fabricating such devices.

2.2. Nanoco's IP portfolio based around the above technology currently contains 15 patent families (nine published, six unpublished).

2.3. Nanoco's earliest patent family dates back to 1995 and contains granted patents in the US, Germany, France and the UK relating to the use of metal complexes to produce nanocrystalline material (see Section 5.2). A key feature of this methodology that distinguishes it from prior art methods is that the metal complex incorporates at least two of the ions to be contained in the final nanocrystalline material rather than having to use two or more separate sources.

2.4. Nanoco's next oldest patent family dates from 2004 and relates to a scaleable process for producing nanoparticles using a molecular cluster compound to seed and control nanoparticle growth thereby enabling the production of large quantities of high quality nanoparticles (Section 5.3). This family currently contains pending applications in Australia, Canada, China, Europe, Hong Kong, Israel, India, Japan, South Korea and the US. This methodology was further developed and refined over the next two to three years, with this later work becoming the subject of two further patent families, which contain pending patent application in a number of different countries (Sections 5.5 and Sections 5.7).

2.5. Each prior art document cited in relation to the three Scale-Up patent families, as well as three closely related cases naming M. G. Bawendi as an inventor which are also known to Nanoco and M&C and predate Nanoco's Scale-Up patent families, are discussed in detail in Section 5.17. The potential relevance of each document to all three Scale-Up patent families is also provided in that section of the report. In brief, it is M&C's current view, which we understand we share with Nanoco, that the fundamental technology that Nanoco currently employs and which underpins all three of the Scale-Up patent families should be patentable in the light of the prior art documents currently cited in respect of these applications and the three Bawendi cases, even though it is conceivable that the broadest definition of the inventive concept included in one or more of the Scale-Up applications may require some degree of modification to obtain patent grant.

2.6. Development work to produce new core/multishell nanoparticles exhibiting improved optical performance led to the filing of a patent family in 2005 relating to nanoparticle architectures *per se*, as well as methods for their production based on Nanoco's original scaleable process methodology (Section 5.4). This patent family currently contains pending patent application in all of the countries listed above. In parallel with this work, Nanoco also developed methods for embedding nanoparticles in polymer beads which is the subject of a pending US patent application that is close to proceeding to grant (Section 5.6).

2.7. In order to improve the performance of QDs and the ease with which they may be used in commercial processes Nanoco developed a series of materials and methods directed at nanoparticles incorporating metal oxide layers (Section 5.8). This patent family dates from 2007 and is currently unpublished. The family currently contains a pending International ("PCT") patent application as well as pending patent applications in the US and Taiwan.

2.8. In a move towards developing new QD-based electronic devices, Nanoco developed materials and methods for the production of electrically active thin films (Section 5.9) and photovoltaic cells (Section 5.10), as well as new methods for the production of nanoparticles which can be employed in such applications (Section 5.11). Each of these three patent families currently contains pending PCT, US and Taiwanese patent applications. The first two patent families are published, while the third patent family is unpublished.

2.9. More recently, Nanoco have developed a series of methods to functionalize the surface of nanoparticles to adapt them for use in a wide range of different technologies, such as, but not limited to, display devices, biomedical applications and LED-based light emitting devices (Sections 5.12, 5.13, 5.14, 5.15, 5.16). The earliest of these patent families contains a pending US patent application (see Section 5.12), while three of the later patent families all contain pending US and UK provisional patent applications, which are likely to be superceded 12 months from their filing date with PCT, Taiwanese and non-provisional US patent applications. The most recently filed patent family currently contains just a UK provisional patent application but it is anticipated that a US provisional application will be filed shortly. All five of these patent families are currently unpublished.

2.10. In undertaking the work to prepare this report we have not been made aware of any potential or pending IP-related litigation involving Nanoco, or any specific third party rights, other than those mentioned herein, that may hamper Nanoco's ability to commercialise their technology. Moreover, we not aware of any third party engaged in commercial activities falling within the scope of Nanoco's IP portfolio.

3. THE RELATIONSHIP BETWEEN MARKS & CLERK AND NANOCO

3.1. M&C has acted as IP advisers to Nanoco since its foundation. Another firm of patent agents was responsible, until 2005, for the preparation and prosecution of patent applications claiming priority dates before 2001. This technology and patents and patent applications relating thereto has been assigned from the original owners to Nanoco in 2005, at which point M&C assumed responsibility for these cases. Since October 2006, the US firm of Goodwin Procter LLP ("G-P") has been responsible for the prosecution of Nanoco's US patent applications and takes instructions directly from Nanoco. M&C advise when requested in relation to US prosecution.

3.2. Notwithstanding the relationship currently enjoyed between Nanoco and M&C explained above, other than where explicitly stated below, the present report has been prepared by M&C independently of Nanoco for and on behalf of Evolutec. The analysis of patent office search reports, written opinions, examination reports and cited prior art references presented herein has been undertaken without the involvement of Nanoco. As such, the conclusions reached in the light of this analysis are those of M&C and represent our objective view of the validity of Nanoco's patent portfolio as of 19 February 2009.

4. THE IP STRATEGY OF NANOCO

4.1. M&C routinely establishes a priority date for a new invention by filing a patent application at the United Kingdom patent office and a provisional patent application in the United States of America. This is an approach which was instigated in 2007. Prior to this date, priority applications were filed in the UK only. It is standard practice for all of Nanoco's UK patent applications to be filed with a request for the United Kingdom Intellectual Property Office ("UK-IPO") to conduct a preliminary patentability search.

4.2. As of 2007, Nanoco now routinely files a PCT application, a Taiwanese national patent application and a full (i.e. non-provisional) US patent application within 12 months of the filing of the UK and US priority applications. Prior to 2007, Nanoco typically filed just a PCT application.

4.3. Nanoco's current strategy (initiated in 2007) is to file patent applications derived from each PCT application in Australia, Canada, China, India, Israel, Japan, South Korea, Europe (designating all contracting states) and Hong Kong (a registration based on the European equivalent). These applications supplement Nanoco's patent applications in Taiwan and the US filed at the 12 month stage.

4.4. To date, we have not been instructed by Nanoco to conduct any form of patent infringement or clearance searches on its behalf.

4.5. Nanoco entrust Computer Patent Annuities LLP ("CPA") of St Helier, Jersey, Channel Islands with the responsibility for the payment of renewal fees as and when they fall due in respect of the patent portfolio managed by M&C. We understand that all maintenance and renewal fees applicable to each of the patents and patent applications listed in the tables in Section 5 which have fallen due have been or are in the course of being paid within the due date.

5. THE STATUS OF THE PATENT RIGHTS OF NANOCO

5.1. The Patent Portfolio

5.1.1. The patents and patent applications are grouped as patent families (i.e. cases claiming priority from common priority filings). It should be borne in mind that any one family may include patent applications which claim more than one invention, which means that individual patent applications may need to be divided (without loss of priority), in order to protect the different inventions. Thus, one application may eventually lead to two or more patents in the same family. According to our current knowledge and belief, the patents and patent applications listed below do or will, assuming that they are granted, give enforceable protection for the key technologies of Nanoco.

5.2. Nanoparticle precursors in the form of single molecular species "Single Source Precursor"

5.2.1. This family of cases originated with a UK priority application, which was superceded at the 12 month stage by the PCT patent application set out in the table above. The PCT application was then nationalised in Europe and the US, which resulted in the granted patents shown in the table above, with the European patent being validated in the UK, Germany and France.

5.2.2. The technology underpinning this family of applications is a process for the production of nanocrystalline material by contacting a metal complex containing at least two types of ions to be incorporated in the nanocrystalline material with a dispersing medium at a temperature to allow formation of the nanocrystalline material by pyrolysis.

5.2.3. Notwithstanding the fact that the broadest independent claim contained in the PCT application was deemed novel and inventive by the EPO acting as the PCT searching authority, during subsequent prosecution of the exPCT national phase applications in the US and Europe, different amendments to the broadest claim were required in the US and Europe to secure granted patent protection.

5.2.4. The US and European patents are all currently in force and shall remain in force until 9 August 2016, subject to the payment of all necessary maintenance fees, which we understand have been paid up to date at this time.

5.2.5. The granted patents and the pending European divisional patent application (discussed in more detail below) each include eight examples of producing nanoparticles using the Single Source Precursor methodology.

5.2.6. In view of the amendments required to the claims of the initial European patent application to secure grant, it was decided to file a European divisional patent application to try to secure a broader or different scope of patent protection. The scope of protection achieved in the US was broader than that obtained under the initial European patent and so the filing of a second US patent application may not have been necessary for commercial reasons.

5.2.7. The European divisional patent application was originally filed containing the very broad claims contained in the PCT application. The EPO have issued three examination reports

which have resulted in amendments being required to the scope of the divisional claims. A response to the latest examination report was filed at the EPO by the end of January 2009 including a series of amended claims for consideration by the EPO examiner one after the other to try to obtain the broadest possible scope of protection.

5.3. Large-scale production of monodisperse nanoparticles "Scale-Up 1 – Molecular Clusters"

Title: Preparation of Nanoparticle Materials
Inventors: Paul O'Brien and Nigel Pickett
Earliest Claimed Priority Date: 30 April 2004
Publication status: Published

Country	Status	Application No.	Application Date	Next Renewal
WO	NATIONALISED	PCT/GB2005/001611	27-Apr-05	
AU	PENDING	2005238271	27-Apr-05	27-Apr-10
CA	PENDING	2563995	27-Apr-05	27-Apr-09
CN	PENDING	200580021311.5	27-Apr-05	
EP	PENDING	05747017.1	27-Apr-05	27-Apr-09
HK	PENDING	8100250.7	09-Jan-08	
IL	PENDING	178874	27-Apr-05	
IN	PENDING	6609/DELNP/2006	08-Nov-06	
JP	PENDING	2007-510108	27-Apr-05	
KR	PENDING	10-2006-7024639	27-Apr-05	
US	PENDING	11/579050	27-Oct-06	

5.3.1. This family of cases originally contained a UK priority filing. A request for a preliminary patentability search was filed very shortly after the UK application was filed. Shortly thereafter a request for substantive examination of the UK application was filed to obtain a more formal opinion regarding the potential patentability of the invention. The UK patent application was then superceded at the 12 month stage by the PCT patent application set out in the table above. The PCT application was then nationalised in Australia, Canada, China, Europe, Hong Kong (based on the European application), Israel, India, Japan, South Korea and the US. M&C did not conduct any form of pre-filing patentability search.

5.3.2. The technology underpinning this family of applications is the production of nanoparticles using a molecular cluster compound to seed and control nanoparticle growth. The nanoparticles are grown under conditions in which the structural integrity of the clusters is retained thereby enabling the production of large quantities of high quality nanoparticles.

5.3.3. The exPCT national phase applications each include nine examples of producing nanoparticles using the Scale-Up I cluster methodology.

5.3.4. The UK-IPO issued a combined search and examination report listing three documents (WO 03/099708, US 6,660,379 and WO 2004/033366) which were considered to anticipate the subject matter of the broadest independent claim contained in the UK priority application, as well as certain other dependent claims. Still further dependent claims were considered obvious in the light of US 6,660,379. That being said, certain other dependent claims were not objected to on the basis of novelty or obviousness. For example, a claim which was not objected to and which may therefore be patentable according to the UK-IPO recited that the molecular cluster compound and nanoparticle precursor composition are dissolved at a first temperature after which the temperature is then increased to initiate nanoparticle seeding and growth on the molecular cluster compound.

5.3.5. A search report and written opinion issued in respect of the PCT application cited four different documents to the UK-IPO search and examination report (Micic, O. I.; et al., J. *Phys. Chem.*, 1995, 99, 7754 ("Micic"); Cumberland, S. L.; et al., *Chem. Mater.* 2002, 14, 1576 ("Cumberland"); US 2003/106488; and Peng X. G., et al., Nature 2000, 404, 59 ("Peng")). The PCT examiner concluded that these four documents were prejudicial to the patentability of the Scale-Up I invention as set out in the claims of the PCT application. The Micic and Cumberland documents were considered to render the broadest independent claim and certain dependent claims not novel, while a combination of each of these documents with the Peng document was considered as rendering certain other dependent claims obvious.

5.3.6. A description of Cumberland, Micic, Peng and US 2003/106488 is presented below in Section 5.17, which includes a consolidated discussion of the relevance of all of the prior art cited against the pending applications contained in all three of Nanoco's Scale-Up patent families.

5.3.7. A first examination report has been received in respect of the Chinese national phase application. The Chinese patent office examiner was of the opinion that the invention was novel but lacked inventive step over Peng taken in combination with Cumberland. It was encouraging none the less that the Chinese patent office examiner had correctly interpreted the Scale-up I invention as novel over Peng and Cumberland, and had not mentioned Micic. M & C's Hong Kong office has been instructed to respond to the examination report by refuting the examiner's conclusion and arguing that the invention is both novel and inventive.

5.3.8. It is currently intended that, as and when objections to the claims of the national phase applications are raised based on Micic, Cumberland and/or any of the other cited prior art references, they can be overcome with appropriate argumentation, supported, if needed, by amendments to the independent claim to clarify the distinction between the Scale-Up I methodology and the processes described in the prior art. It is anticipated that any outstanding obviousness objections would also be overcome by this argumentation and amendment.

5.4. Core/multishell nanoparticles and methods for their production "Ultrabright"

Title: Nanoparticles
Inventors: Nigel Pickett, Steven Daniels and Paul O'Brien
Earliest Claimed Priority Date: 12 August 2005
Publication status: Published

Country	Status	Application No.	Application Date	Next Renewal
GB	PENDING	516598	12-Aug-05	
WO	NATIONALISED	PCT/GB2006/003028	14-Aug-06	
AU	PENDING	2006281232	14-Aug-06	14-Aug-11
CA	PENDING	2617972	14-Aug-06	14-Aug-09
CN	PENDING	200680037939.9	14-Aug-06	
EP	PENDING	6765279.2	14-Aug-06	14-Aug-09
HK	PENDING	8104769.3	30-Apr-08	
IL	PENDING	189346	14-Aug-06	
IN	PENDING	1105/delnp/2008	14-Aug-06	
JP	PENDING	2008-525647	14-Aug-06	
KR	PENDING	10-2008-7005822	14-Aug-06	
US	PENDING	11/997973	05-Feb-08	

5.4.1. This family of cases originally contained a UK priority filing (filed with a request for a preliminary patentability search). A PCT patent application was then filed at the 12 month stage, with the UK priority application retained pending to provide two opportunities of obtaining patent protection in the UK, once via the UK priority application and once via an exPCT European patent application. The PCT application was then nationalised in Australia, Canada, China, Europe, Hong Kong (based on the European application), Israel, India, Japan, South Korea and the US. M&C did not conduct any form of pre-filing patentability search.

5.4.2. The technology upon which this family of applications is based is core/multishell nanoparticles and methods for their manufacture. In 2004/5 preliminary work carried out by Nanoco suggested that core/multishell nanoparticles were likely to exhibit improved optical characteristics compared to core and core/shell nanoparticles. This class of materials was also perceived by Nanoco in 2005 as being largely unpatented. As a result, we understand that Nanoco felt that this area represented a potentially valuable commercial opportunity at that time.

5.4.3. At the time of filing the UK priority application Nanoco were aware of the production of a limited range of core/multishell nanoparticle materials, all of which were mentioned in the introduction to the UK priority application and all of which were cadmium-containing materials. In light of these materials having already been disclosed, the UK priority application contained a series of relatively long, complicated claims to try to claim as broad a range of core/multishell architectures (and methods for their production) as possible whilst not encompassing these known materials.

5.4.4. The UK-IPO search report listed a total of five documents which were adjudged to be prejudicial to the potential patentability of the inventions claimed in the Ultrabright UK priority application. One of the documents was Nanoco's Scale-Up I PCT patent application. Since this application was filed before the Ultrabright UK priority filing but not published until after the UK priority filing this document is relevant in terms of novelty but not inventive step. As such, any difference between the claims of the Ultrabright UK priority application and contents of the Scale-Up I PCT application will be sufficient to render the subject matter claimed in the Ultrabright priority application patentable over the Scale-Up I PCT application. The Scale-Up I application mentions core/multi-shell nanoparticles in passing and provides separate long lists of possible materials for use in the core and each shell of the core/multishell nanoparticles. The Scale-Up I application does not explicitly disclose any specific core/shell/shell architectures. Accordingly, the Scale-Up I application should not be deemed relevant to the novelty of the architectures claimed in the Ultrabright UK priority application according to standard UK patent practice.

5.4.5. Three other prior art documents listed in the UK-IPO search report (Va Fonoberov et. al. Cao et. al., MT Harrison et. al.) relate to core/multishell architectures which were not covered by the claims of the UK priority application. As such, it is presumed that these documents were cited on the grounds that they rendered the claimed invention obviousness rather than disclosing materials falling within the scope of the claims of the Ultrabright UK priority application.

5.4.6. The one remaining document listed in the UK-IPO search report was WO2004/066361 which described a number of core/multishell architectures falling within the claims of the Ultrabright UK priority application. Amendment to the claims of the UK priority application will therefore ultimately be required to distinguish the claimed invention from WO2004/066361 if it is decided to continue prosecuting the UK priority application. A decision in this regard is likely to be taken when the first examination report is received.

5.4.7. In light of WO2004/066361 an amended set of claims was included in the Ultrabright PCT application, including new independent claims. The independent claims contained in the

PCT application were retained in the current exPCT national phase applications, but the number of dependent claims was reduced to lower national phase filing costs.

5.4.8. The PCT application included a number of examples and reference examples demonstrating how core/multishell nanoparticles can be produced using the cluster methodology as claimed in the broadest independent claim contained in the PCT and exPCT national applications (which is based on the Scale-Up I concept described above in Section 5.3).

5.4.9. A search report and written opinion issued in respect of the PCT application and cited three documents which were believed to be relevant to the novelty and/or obviousness of the invention defined in the independent claims contained in the Ultrabright PCT application. The first of these documents was Nanoco's Scale-Up I PCT application, and the second and third documents were papers published by Stephen Daniels (S. Daniels et al., *Chem. Abstracts* retrieved from STN Database accession no. 2004:424074) and Tito Trindade (*Chem. Mater*., 2001, 13(11), 3843-3858).

5.4.10. Nanoco's Scale-Up I PCT application should only be relevant to the novelty of the broadest independent claim contained in the Ultrabright exPCT applications, but may be relevant to the novelty and obviousness of second and third independent claims in these applications which relate to specific core/shell/shell architectures and a method for producing such nanoparticles. Since the discussion of core/multishell structures in the Scale-Up I application is so vague and is not exemplified in any way it is arguable whether the Ultrabright concepts described in the second and third independent claims are in fact obvious.

5.4.11. With regard to the second and third documents cited in the PCT search report, the PCT examiner reached the conclusion that each document disclosed nanoparticle materials which were encompassed by a second independent claim contained in the application and so this claim was not novel. We believe that the examiner was wrong in this regard. It should be recalled that a PCT written opinion is not binding upon the national phase patent office examiners of exPCT national phase applications and so we are hopeful that the exPCT national phase applications derived from the Ultrabright PCT application will not face a novelty objection based on the second or third documents listed in the PCT search report. That being said, it is still possible that national phase examiners may object to this claim on the basis that it is obvious in the light of the second and third documents, which we can seek to overcome with appropriate argumentation and, if necessary, claim amendments.

5.5. Improved method for producing nanoparticles "Scale-Up 2 – Dropwise Addition"

Title: Controlled Preparation of Nanoparticle Materials
Inventors: Nigel Pickett
Earliest Claimed Priority Date: 28 October 2005
Publication status: Published

Country	Status	Application No.	Application Date	Next Renewal
WO	NATIONALISED	PCT/GB2006/004003	27-Oct-06	–
AU	PENDING	2006307668	27-Oct-06	27-Oct-11
CA	PENDING	2626281	27-Oct-06	27-Oct-09
CN	PENDING	200680049071.4	27-Oct-06	–
EP	PENDING	6808360.9	27-Oct-06	27-Oct-09
IL	PENDING	190837	27-Oct-06	–
IN	PENDING	3726/DELNP/2008	01-May-08	–
JP	PENDING	2008-537195	27-Oct-06	–
KR	PENDING	10-2008-7012137	21-May-08	–
US	PENDING	11/588880	27-Oct-06	–

5.5.1. This family of cases originally contained a UK priority filing (filed with a request for a preliminary patentability search). The UK priority application was superceded at the 12 month stage by the PCT patent application shown in the above table. The PCT application was then nationalised in Australia, Canada, China, Europe, Israel, India, Japan, South Korea and the US. M&C did not conduct any form of pre-filing patentability search.

5.5.2. The technology upon which this family of applications is based is an improvement to the basic cluster methodology (see Section 5.3) for the large-scale production of high quality QDs. The fundamental concept of the present invention is to add the nanoparticle precursor composition in portions while periodically increasing the reaction temperature.

5.5.3. The PCT application included five examples of producing QDs using the Scale-Up II methodology. The first two examples describe the production of cadmium-containing and cadmium-free core QDs, while the next three examples describe the production of cadmium-containing and cadmium-free core/shell QDs. The last two examples of producing cadmium-free core/shell QDs employ slightly different experimental conditions but both are encompassed by the Scale-Up II method.

5.5.4. The UK-IPO patentability search cited a single prior art document as being potentially relevant to the patentability of the Scale-Up II methodology as defined in the independent claims of the application. The prior art document was Nanoco's Scale-Up I PCT patent application which was filed before the Scale-Up II priority filing but not published until after the Scale-Up II priority filing. As such, the Scale-Up I application is only relevant to the novelty of the claims of the Scale-Up II application, but not the obviousness of the claims. Any slight difference between the claims of the Scale-Up II application and the contents of the Scale-Up I application will therefore be sufficient to overcome an objection relating to the patentability of the Scale-Up II technology based on the Scale-Up I application.

5.5.5. The potential overlap between the contents of the Scale-Up I application and the subject matter that it was wished to claim in the Scale-Up II application was identified by M&C before the Scale-Up II priority application was filed. As a result, action was taken by M&C on behalf of Nanoco to ensure that any affect of the Scale-Up I application would be minimised. The action taken is described below in Section 5.17.6.

5.5.6. A search report and written opinion issued in respect of the PCT application was very encouraging even though it might have initially appeared quite negative. Three prior art documents were listed in the search report, including, as expected, Nanoco's Scale-Up I application, WO 2004/008550 and S. Cumberland, et al., *Chem. Mater.*, 2002, 14, 1576-1584 ("Cumberland")). All of the claims contained in the PCT application were adjudged to lack novelty and inventive step over the cited prior art documents, however, there are two important points to note in this regard.

5.5.7. Firstly, in each independent claim of the Scale-Up II PCT application it is only an option of heating a dispersing medium containing a nanoparticle precursor composition after the addition of the nanoparticle precursor composition which was concluded to lack novelty and inventive step. Other options of applying heating *before* or *during* addition of the or each further portion of the nanoparticle precursor composition were held to be new, which was pleasing since these latter options are really the core of the Scale-Up II methodology.

5.5.8. Secondly, it is our view at this stage that neither Cumberland nor WO2004008550 actually describes the use of a molecular cluster compound in the manner defined in the Scale-Up II independent claims, and so there are in fact arguments in favour of the novelty and inventiveness of the option of heating after the addition of the nanoparticle precursor composition.

5.5.9. A description of Cumberland, Nanoco's Scale-Up I application and WO2004008550 is presented in Section 5.17, which also includes a consolidated discussion of the relevance of all of the prior art cited against the pending applications contained in all three of Nanoco's Scale-Up patent families.

5.5.10. It is conceivable that one or more national patent offices might raise similar objections to those set out in the PCT written opinion. It is currently intended that as a first response to such objections, we would argue in favour of the novelty and inventiveness of the independent claims without making any amendments. If such arguments were not found to be persuasive then the second response would probably be to amend the independent claims to remove the option of heating the dispersing medium containing the precursor composition after addition of the or each portion of the precursor composition. Even if such an amendment was ultimately required, for the reasons outlined above, it is our view that the resulting claims would still provide Nanoco with commercially valuable patent protection for the Scale-Up II methodology.

5.6. Polymeric beads encapsulating QD-containing beads "Digitally Encoded Beads"

Title: Labelled Beads
Inventors: Nigel Pickett and Andrew Sutherland
Earliest Claimed Priority Date: 5 April 2006
Publication status: Published

Country	Status	Application No.	Application Date	Next Renewal
US	PENDING	11/784174	05-Apr-07	–

5.6.1. This family of cases originally contained just a UK priority filing, with a request for a preliminary patentability search filed very shortly after the application was filed. No corresponding US priority application was filed. This approach was taken because this family of applications was initiated before Nanoco's strategy to file parallel UK and US priority filings had been devised. The UK priority application was superceded at the 12 month stage by just the full US patent application shown in the above table. A decision was taken not to pursue protection via a PCT or Taiwanese patent application in view of the perceived commercial value of the scope of protection which it seemed at the 12 month stage Nanoco might be able to obtain.

5.6.2. The technology relates to labelled polymeric beads containing well defined populations of reporter moieties. The reporter moieties are preferably QDs, but may be any other suitable type of detectable label, for example, a luminescent dye, phosphor, fluorescent compound, coloured/chromophoric compound, Raman active compound, or NMR distinguishable isotopic label.

5.6.3. M&C did not conduct any form of pre-filing patentability search. We understand from Nanoco that prior art reporter species, such as biolabels, generally contain one or more types of fluorescent dye or QD in a particular concentration within an encapsulating particle, typically some sort of polymeric bead. This can, however, make it difficult to distinguish one bead from another and so relatively sophisticated sorting protocols are often required in order to generate well-defined populations of makers. The present invention is distinguished on the basis that reporter moieties are incorporated into a first particle, and one or more first particles are entrapped within a second particle. In this way, the population of reporter moieties within the second particle can be defined more accurately and more easily than if the reporter moieties were incorporated directly into the second particle.

5.6.4. The full US application includes a number of different examples demonstrating the general methodology of incorporating QDs into polymeric beads and then encapsulating the QD-containing beads within larger polymeric beads. All examples employ QDs as the reporter moieties. Two types of copolymer are investigated as potential bead materials.

5.6.5. The UK priority filing originally contained broader independent composition of matter and method claims than are currently pending in the US application. The UK-IPO patentability search cited just one prior art document, US 4,609,689 as being potentially relevant to the patentability of the broadest independent composition of matter claim contained in the UK priority application. During the 12 month period following filing of the UK priority application, Nanoco identified a second document (WO 2006/017125) which, upon inspection, was also relevant to the patentability of the invention defined in the broadest independent claims contained in the UK priority application. After having taken both prior art documents into consideration, the independent claims were subtly revised to introduce a limitation with the aim of finding favour with a USPTO examiner but without unduly limit the scope of protection being sought. Thus, from an infringement point of view, it was generally agreed that the amendment was unlikely to allow competitors to easily circumvent the eventual patent, while hopefully being acceptable to the USPTO on the basis that it clearly delineated the present invention from the two prior art documents of which we were aware.

5.6.6. The full US application has now been through two rounds of examination at the USPTO. The only document cited against the US application is US 4,609,689, which is one of the two documents of which we were already aware when we filed the full US application. The USTPO has issued a Notice of Allowance based on the independent claims currently contained in the application and so a US patent will grant shortly, subject to the payment of requisite USPTO official fees.

5.7. Using II-VI molecular clusters to prepare III-V QD cores "Scale-Up III"

Titles:	Nanoparticles (US App.) and Preparation of Nanoparticle Materials
Inventors:	Nigel Pickett, Steven Daniels and Imrana Mushtaq
Earliest Claimed Priority Date:	30 April 2004 (US App.) and 31 July 2007
Publication status:	Published

Country	Status	Application No.	Application Date	Next Renewal
WO	PENDING	PCT/GB2008/002560	28-Jul-08	–
US	PENDING	11/852748	10-Sep-07	–
TW	PENDING	97129037	31-Jul-08	–

5.7.1. This family of cases originally contained a UK priority filing (filed with a request for a preliminary patentability search) and a US Continuation-In-Part application ("C-I-P") based on the "Scale-Up I" US patent application described above in Section 5.3. The UK priority application was superceded at the 12 month stage by the PCT and Taiwanese patent applications shown in the above table. It was decided to file the US application as a C-I-P of Nanoco's Scale-Up I US application to limit the possibility of the Scale-Up I application being cited against the Scale-Up III US application during prosecution. M&C did not conduct any form of pre-filing patentability search.

5.7.2. The technology upon which this family of applications is based relates to the use of cheap and readily available II-VI molecular clusters (i.e. compounds containing small, well-defined clusters of ions, including ions from groups 12 and 16 of the Periodic Table) to seed and control growth of III-V nanoparticle cores (i.e. semiconducting nanoparticle core materials containing ions from groups 13 and 15 of the Periodic Table). The technology covers nanoparticles *per se*, as well as methods employing II-VI clusters to seed growth of III-V cores.

5.7.3. M&C did not conduct any form of pre-filing patentability search. We understand from Nanoco that prior art methods for producing III-V nanoparticles either did not employ molecular clusters as seeds, or employed III-V clusters. While this is not suggested in the prior art of which Nanoco is aware, it is believed that the assumption that a III-V cluster must be used might be because it was thought that the lattice strain between non-III-V clusters and III-V cores would be too great for nanoparticle growth to take place. The differentiating feature of this invention is therefore the use of cheap, robust, readily available II-VI clusters as seeds to initiate and control growth of commercially valuable III-V semiconductor nanoparticle cores.

5.7.4. The PCT and Taiwanese applications include many examples of using II-VI clusters to produce III-V cores, and many examples where cores thus formed are then provided with a shell of a different semiconductor material. In view of the US C-I-P having been filed almost a year earlier, the US C-I-P contains fewer relevant examples, but the invention is still well exemplified in that the US application contains three examples of producing III-V cores using II-VI clusters, and a single example in which a III-V core is provided with a shell of a semiconductor material.

5.7.5. The UK-IPO patentability search cited two prior art documents, Nanoco's Scale-Up I and Scale-Up II PCT patent applications. The search examiner reached the conclusion that the independent claims contained in the Scale-Up III UK priority application (which were the same as the independent claims contained in the present PCT and Taiwanese applications) were not new in the light of the general discussion in Nanoco's two earlier applications relating to the use of molecular clusters to seed growth of nanoparticle cores. Long lists of possible clusters and core materials were included in the Scale-Up I and Scale-Up II applications, as one would expect. As a result, with hindsight of the present invention it would be possible to select a II-VI cluster and III-V core material from the long lists included in the two earlier applications. However, there is no explicit description or exemplification in either of the earlier applications of the concept that a II-VI cluster can be used to produce a III-V core. M&C's view at the 12 month stage was therefore that it would be worthwhile continuing with this patent family and, as a result, Nanoco instructed the filing of the PCT and Taiwanese applications that are currently pending.

5.7.6. A search report and written opinion has now issued in respect of the PCT application and has concluded that all 51 claims contained in the PCT application are novel and inventive. The only other issues raised in the PCT written opinion relate to matters of clarity and support for the breadth of protection currently being claimed, which, if raised subsequently by national patent offices, should be addressable without unduly limiting the scope of protection afforded by the eventual patent(s).

5.7.7. A first USPTO examination report has issued in respect of the US C-I-P arguing that the claims of the application either lack novelty or are obvious in the light of the Cumberland paper mentioned above in Section 5.5. In our opinion, the Scale-Up III methodology should be deemed novel and inventive over Cumberland. A response to the first examination report has been submitted along these lines and we currently await the examiner's further comments.

5.7.8. Further comments relating to Cumberland are presented below in Section 5.17, which includes a consolidated discussion of the relevance of all of the prior art cited against the pending applications contained in all three of Nanoco's Scale-Up patent families.

5.8. QDs materials containing metal oxides and method for their production "METAL OXIDES"

5.8.1. The technology underpinning this family of cases relates to metal oxide containing QDs and methods for their production.

5.8.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.9. Methods for fabricating electrically active thin films "THIN-FILM PV"

Title: Fabrication of Electrically Active Films Based on Multiple Layers
Inventors: Nigel Pickett and James Harris
Earliest Claimed Priority Date: 18 April 2007
Publication status: Published

Country	Status	Application No.	Application Date	Next Renewal
WO	PENDING	PCT/GB2008/001349	17-Apr-08	–
US	PENDING	12/104902	17-Apr-08	–
TW	PENDING	97114381	18-Apr-08	–

5.9.1. This family of cases originally contained a US priority filing prepared by the US attorney firm representing Nanoco. Nanoco did not instruct M&C to file a corresponding UK priority application. The US priority application was superceded at the 12 month stage by the PCT, full US and Taiwanese patent applications shown in the above table.

5.9.2. The technology relates to electrically active QD-containing thin films which are eminently suitable for use in photovoltaic cells, LEDs, transistors and other semiconductor devices. More specifically, the invention provides methods for printing multilayer QD-containing thin films in which the composition of the QDs is variable between layers.

5.9.3. Neither M&C nor the US attorney firm representing Nanoco conducted any form of pre-filing patentability search. We understand from Nanoco that most current methods for producing thin films for use in photovoltaic ("PV") applications are relatively complex due to the tight manufacturing tolerances required to produce reliable devices. By way of example, relatively expensive vacuum based technologies are commonly employed. One of the important features which distinguishes the present invention over earlier methods is the use of a plurality of printable inks containing different dispersions of QDs which can be selectively printed and annealed to produce a thin film having the desired QD composition.

5.9.4. The PCT, full US and Taiwanese applications include examples describing the fabrication of a graded QD-based thin film structure for use as a photovoltaic cell. An example is described in which the composition of the QD material varies progressively across the thin film structure. Different methods are described for producing the nanoparticles employed therein, such as the methodology described in Section 5.11 below.

5.9.5. As expected given the age of this family of patent applications, first examination reports have not yet been received in respect of the full US or Taiwanese applications, however, an international search report and accompanying written opinion has been received in respect of the PCT application. The PCT search report listed three documents which the PCT examiner felt might be relevant to the patentability of the present invention as set out in the three independent claims included in this application.

5.9.6. At this stage, it seems the PCT examiner is of the opinion that all of the three documents listed in the search report describe or suggest methods and printing compositions falling within the scope of the three independent claims contained in the PCT application. The PCT examiner may be correct and so it is currently envisaged that the independent claims

contained in the PCT application will require amendment at a later stage to secure patent protection based on this application. It may also be prudent to amend the independent claims contained in the full US and Taiwanese applications at an appropriate later stage to take into account the three documents identified by the PCT examiner.

5.10. Photovoltaic cells containing QDs "HYBRID PHOTOVOLTAIC CELLS"

5.10.1. This family of cases originally contained a US priority filing prepared by the US attorney firm representing Nanoco. Nanoco did not instruct M&C to file a corresponding UK priority application. The US priority application was superceded at the 12 month stage by the PCT, full US and Taiwanese patent applications shown in the above table.

5.10.2. The technology relates to solar cells and their fabrication, more specifically, nanorod-nanocrystal-polymer hybrid solar cells.

5.10.3. Neither M&C nor the US attorney firm representing Nanoco conducted any form of pre-filing patentability search. We understand from Nanoco that many different photovoltaic systems have been developed to try to maximise the efficiency with which incident light is converted to electricity. Exemplary devices include crystalline inorganic solar cells, nanocrystalline dye-sensitized solar cells, semiconductor-polymer solar cells, nanoparticle solar cells and, more recently, systems incorporating a combination of components from these systems. The differentiating feature of the present invention is the use of nanocrystals as both light absorber and heterojunction. The resulting proximity of exciton generation and splitting affords a significant reduction in recombination losses compared to conventional polymer PV cells and consequently results in higher conversion efficiencies of photons into electricity.

5.10.4. The PCT, full US and Taiwanese applications include examples describing the fabrication of a nanorod-nanoparticle-polymer hybrid structure for use as a photovoltaic cell according to the present invention. Different methods are described for producing the nanoparticles employed therein, such as the methodology described in Section 5.11 below.

5.10.5. As would be expected at this early stage, first examination reports have not yet been received in respect of the full US or Taiwanese applications, however, an international search report and accompanying written opinion has been received in respect of the PCT application. The PCT search report listed a total of seven documents which the PCT examiner felt might be relevant to the patentability of the present invention as set out in the two independent claims included in this application.

5.10.6. While the PCT examiner considers that some of the features of the photovoltaic cell defined in the claims of the PCT application are not patentable in light of the seven documents listed in the search report, it appears that a photovoltaic cell incorporating nanorods bound to a nanocrystal by a functional capping agent in the form of mercaptoacetic acid is both novel and inventive. The examiner also considers that a method of fabricating a semiconductor structure as defined in the independent method claim of the PCT application is novel and inventive. The examiner's reasoning in concluding that the method claims are patentable is based largely on the fact that "none of the prior art discloses or fairly suggest the use of a bifunctional capping agent to bind the nanorods to the nanocrystals". One might therefore conclude that a photovoltaic cell incorporating nanorods bound to a nanocrystal by a bifunctional capping agent of any kind might therefore be patentable. It therefore seems that there will be a number of opportunities to obtain commercially worthwhile patent protection based on the current PCT, full US and Taiwanese patent applications.

5.11. Methods of Producing CIGS-type QD materials
"CIGS"

5.11.1. The technology underpinning this patent family relates to methods for producing QDs for use in QD-containing printing inks, thin films and photovoltaic devices.

5.11.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.12. QD Surface Binding Ligands
"QD Capping agents"

5.12.1. The technology relates to QD surface binding ligands and methods for producing such ligands, particularly, but not exclusively to make the QDs susceptible for use in displays.

5.12.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.13. Aqueous compatible QDs
"WATER SOLUBLE QDS"

5.13.1. The technology in this patent family relates to a method for producing aqueous compatible QDs.

5.13.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.14. The surface functionalisation of QDs
"QD TOTAL DESIGN" and "QD TOTAL DESIGN (SILICONE)"

5.14.1. The work underpinning this patent family relates to QD surface modifications which can be used in a broad range of potential applications, including but not limited to, the incorporation of QDs into LED encapsulants.

5.14.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.15. Encapsulation of QDs in beads for use in light emitting devices
"QD-BEAD LED"

5.15.1. The technology underpinning this family of cases relates to formulations for use in the fabrication of quantum dot-based light emitting devices and methods for producing such devices employing said formulations.

5.15.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.16. Encapsulation of QDs
"QD Encapsulation"

5.16.1. The technology underpinning this family of cases relates to encapsulated nanoparticles and methods for producing encapsulated nanoparticles.

5.16.2. Since this family of cases has not yet been published no further details relating to this patent family will be provided.

5.17. Discussion of Prior Art and its Relevance to Nanoco's Scale-Up Technology

5.17.1. Overview

5.17.1.1. Set out below is a discussion of the prior art currently cited in relation to Nanoco's pending Scale-Up applications and one further patent family of which Nanoco and M&C are aware, which predates the earliest priority dates of the Scale-Up patent families. An outline of each prior art document is provided, followed by a consolidated discussion of the potential relevance of each prior art document to Nanoco's Scale-Up technology.

5.17.1.2. As explained above in previous sections of this report, Nanoco currently has three patent families directed to their improved methods for the large scale production of high quality quantum dots: Scale-Up I (see Section 5.3); Scale-Up II (5.5); and Scale-Up III (5.7). Scale-Up I is the oldest patent family and has an earliest priority date of April 2004.

5.17.1.3. The search report and written opinion issued in respect of the Scale-Up I PCT application cited five documents in total, with the following four documents considered as being potentially relevant to the novelty or inventiveness of the Scale-Up I invention in broadest terms:

1. Micic, O. I.; et al., J. *Phys. Chem.*, 1995, 99, 7754 ("Micic");
2. Cumberland, S. L.; et al., *Chem. Mater.* 2002, 14, 1576 ("Cumberland");
3. US 2003/106488; and
4. Peng X. G., et al., *Nature 2000*, 404, 59 ("Peng").

5.17.1.4. The fifth document (Trindade et al., *Advanced Materials*, 1996, 8, 161 ("Trindade")) was cited in the PCT search report for background information purposes only and was not deemed to be relevant to the novelty or inventive step of the Scale-Up I invention and so shall not be further discussed.

5.17.1.5. The search report and written opinion issued in connection with Nanoco's Scale-Up II PCT patent application listed three documents as being potentially relevant to the novelty or inventiveness of the Scale-Up II invention. One of the documents was the Cumberland paper mentioned above and the two other documents were as follows:

5. WO2005106082 (Nanoco's Scale-Up I PCT application); and
6. WO2004008550.

5.17.1.6. The Scale-Up III PCT search report and written opinion listed five documents but none were considered relevant to the novelty or inventiveness of the Scale-Up III invention. As discussed above in Section 5.7, a USPTO examiner considers the Scale-Up III concept to be obvious in the light of the Cumberland paper. A consideration of relevance of the Cumberland paper to the potential patentability of the Scale-Up III invention is therefore warranted and is set out below.

5.17.1.7. A further patent family of which Nanoco, and therefore M&C, are aware, but which has not been cited by any Patent Office in respect of the potential patentability of the Scale-Up patent cases, is a patent family naming Moungi G. Bawendi from the Massachusetts Institute of Technology ("MIT") as one of the

inventors. The patent family has an earliest priority date of 1997 and includes a European patent application (EP1034571A1); and two granted US patents (US 6,207,229B1 and US 6,322,901B1).

5.17.2. **Micic**

5.17.2.1. This academic paper from 1995 describes the synthesis of three cadmium-free semiconductor QDs in essentially two steps. Separate sources of the nanoparticle ions are first mixed together at room temperature to produce a "precursor species", and then the precursor species is introduced into a high boiling point solvent and the temperature increased to support growth of the final QDs.

5.17.2.2. Heating the precursors causes them to partially or fully fragment and thereby liberate the requisite ions to support QD growth. The paper's authors suggest that the growth process relies upon the decomposition of the precursors and that the reason their method produces QDs of relatively narrow size distribution is because, "the rate of QD formation is controlled by the rate of decomposition of the precursor" (see Results and Discussion, page 7755), and that the specific precursors used in their method decompose relatively slowly facilitating greater control than previous methods.

5.17.2.3. The process explained in Micic is different to Nanoco's Scale-Up technology because the Micic process requires fragmentation of the precursor species, which one might consider a "molecular cluster compound", whereas the fundamental principle underpinning the Scale-Up technology is to combine separate sources of the ions to be incorporated in the final QDs in the presence of a molecular cluster compound whose structural integrity is retained during nanoparticle growth. Moreover, the Scale-Up technology employs a molecular cluster compound and separate sources for the various QD ions, whereas in Micic the ions sources and cluster compound are essentially one in the same species.

5.17.2.4. It is our current view that the Micic paper should not prevent Nanoco securing patent protection based on the current Scale-Up I national phase applications for the most fundamental aspects of the Scale-Up technology. The Scale-Up II technology differs from the Micic process for the same reasons as set out above in relation to the Scale-Up I applications and, additionally, in that Micic makes no mention of adding the QD ion sources in portions, which underpins the Scale-Up II methodology. Micic also makes no reference to combining different classes of semiconductor materials in a single QD in the manner defined in the Scale-Up III applications. The Micic paper should not therefore prevent the Scale-Up II or III methods from being patentable.

5.17.3. **Cumberland**

5.17.3.1. The Cumberland paper describes the use of two single source precursors for the preparation of two specific nanocrystal materials.

5.17.3.2. In order for nanocrystal growth, at least partial fragmentation of the precursor material must occur when the temperature of the reaction medium is increased to provide the free ions which can then be scavenged by other species derived from the initial single source precursor material. At least a proportion of the species upon which nanocrystal growth initiates cannot therefore be intact inorganic clusters. Heating the initial precursor material must generate a variety of nucleation points for nanocrystal growth. Indeed, the Cumberland paper suggests that QD growth is achieved by fragmentation of the precursors via ring opening followed by subsequent ligand exchange (see Discussion, page 1584).

5.17.3.3. Moreover, since the Cumberland method employs clusters as the sole source for the ions making up the final nanoparticles and the ratio of the ions in the clusters does not match the desired ratio in the final nanoparticles, there is an inherent and unavoidably large deficiency of one type of ion compared to the other type. As a result it is likely to be difficult to accurately control growth of a homogenous population of nanoparticles of low size dispersity using the Cumberland method.

5.17.3.4. The Cumberland paper is an example, like the Micic paper, of a process for producing QDs which relies upon fragmentation of single source precursors (which might be considered molecular clusters) to support QD growth and so it is our current view that the Cumberland method is fundamentally different to Nanoco's Scale-Up I method. The Scale-Up II differs from Cumberland for the reasons set out above in relation to Scale-Up I and also in that Cumberland does not describe adding separate QD ions sources portion-by-portion or adjusting the temperature of the growth medium before, during or after adding each portion of the QD ion sources. Given that Cumberland employs a single source precursor as the only source of ions for the growing nanocrystals, it is not evident how a nanoparticle could be formed incorporating a cluster of one semiconductor material and a core of a different second semiconductor material. Accordingly, the Scale-Up III QD structure and method should not be prevented from being patentable by Cumberland.

5.17.3.5. It is noted that the Scale-Up II PCT written opinion indicated that the Cumberland method fell within the claims of the Scale-Up II PCT application in view of the reference to heating the growth medium "after" the addition of some of the nanoparticle precursor composition. While our current view is that the Examiner is wrong to interpret the claims of the Scale-Up II PCT application in this way for the reasons explained above, the options of heating the growth medium which we understand Nanoco currently employ and which really lie at the heart of the Scale-Up II methodology are heating the growth medium "before" or "during" the addition of the or each further portion of the nanoparticle precursor composition (i.e. not "after" each addition). The PCT examiner indicated, quite correctly in our view, that Cumberland does not describe the options of heating before or during adding further portions of the precursor composition and so a method incorporating these options should be patentable.

5.17.4. **US 2003/106488**

5.17.4.1. This US patent application was only cited in relation to the Scale-Up I PCT application. It was not cited in respect of novelty, i.e. the PCT examiner did not allege that this document described a process which fell within the scope of the broadest claims contained in the Scale-Up I PCT application, rather, the examiner alleged that certain specific features of the Scale-Up I method were potentially obvious in the light of US 2003/106488 when it was read in combination with Micic. As mentioned above in Section 5.17.2, it is our current view that the Scale-Up I, II and III methodologies should all be considered novel and inventive in the light of Micic. The following arguments advanced in support of the patentability of the Scale-Up technology over US 2003/106488 are therefore strengthened by the arguments distinguishing the Scale-Up technology over Micic.

5.17.4.2. US 2003/106488 was published in June 2003 and relates to the production of semiconductor nanocrystals by first reacting sources of the ions to be incorporated in the final nanocrystals in an essentially conventional manner and then atomising the resulting solution containing growing nanocrystals under

tightly controlled conditions to produce ultra-fine liquid droplets containing a small number of the growing nanocrystals with the aim of constraining or terminating further growth. The liquid droplets are then contacted by a suitable agent to cap, passivate and/or protect the nanocrystals, followed isolation from the growth medium using standard techniques.

5.17.4.3. The method described in US 2003/106488 therefore differs significantly from the Scale-Up I, II and III methods explained more fully above in that the US 2003/106488 method does not involve the reaction of separate ions sources in the presence of a molecular cluster compound. US 2003/106488 does mention the term "clusters", but it is used when referring to the nanocrystals formed upon reaction of the sources of ions, and is therefore used to refer to the product of the reaction of the ions sources rather than a species employed in combination with the ions sources.

5.17.4.4. It will be recalled that US 2003/106488 was cited in respect of obviousness, but not novelty, and that it was cited in combination with Micic. It is our view at this time that the skilled person would not combine US 2003/106488 and Micic to arrive at the Scale-Up technology as suggested by the PCT examiner. Moreover, neither prior art document mentions or suggests the concept of using intact molecular cluster compounds to seed and control nanoparticle growth and so, even if the two documents were read in combination, we do not believe that the combined disclosure renders the inventions defined in Nanoco's Scale-Up I, II or III applications obvious.

5.17.4.5. For the avoidance of doubt, US 2003/106488 has been considered for its potential relevance to the patentability of Nanoco's three Scale-Up patent families. No analysis has been undertaken to determine if any granted patents have or might result from US 2003/106488 which might be relevant to Nanoco's freedom to operate.

5.17.5. **Peng**

5.17.5.1. This academic paper, published in March 2000, was only cited in relation to the Scale-Up I PCT application, and, like US 2003/106488, Peng was not cited in respect of novelty, but instead was cited on the basis that a limited number of specific features of the Scale-Up I method were potentially obvious in the light of Peng when read in combination with Micic. In the case of Peng, the PCT examiner only alleged that four of the 116 claims contained in the Scale-Up I PCT application were rendered obvious by Peng taken together with Micic. The four claims all relate to methods for controlling the size of the QDs produced using the Scale-Up I method and, as far as we are aware, these methods are not of significance to Nanoco.

5.17.5.2. Peng describes methods for controlling the shape of cadmium-containing nanoparticles in which a solution containing the cadmium and other ions is injected into a hot solvent essentially in line with other prior art methods, and shape control of the resulting nanoparticles is achieved by various methods.

5.17.5.3. Peng discusses conventional methods for controlling the size dispersity of populations of growing nanoparticles but makes no reference to the use of molecular clusters to seed, control or support nanoparticle growth. Consequently, the method described in Peng is fundamentally different to the methods described and claimed in Nanoco's Scale-Up I, II and III patent

applications. We would submit at this time that a combination of Peng and Micic should not be deemed to render the Scale-Up I, II or III methods as defined most broadly in the independent claims contained in each application non-patentable.

5.17.5.4. As mentioned above in Section 5.3, the examiner responsible for the Chinese Scale-Up I patent application has issued a first examination report arguing that the skilled person would consider modifying the method described in Peng to employ the single source precursors used in Cumberland's method so as to control more precisely nanoparticle nucleation and, consequently, nanoparticle growth to produce a more monodisperse nanoparticle population. As mentioned in Section 5.3, it is currently intended to respond to the Chinese examination report by refuting the examiner's conclusion. The basis for our arguments is likely to be as follows.

5.17.5.5. Peng describes the use of essentially conventional pyrolysis methods whereby separate sources of the requisite ions are injected into a very hot solvent and growth occurs by the ions first aggregating together and then at least some aggregates fragmenting to liberate ions which may then combine with other aggregates to support nanoparticle growth, but without reference to any form of separate molecular cluster seed upon which to initiate nanoparticle growth. Cumberland's method, as described in detail above in Section 5.17.3, is intended to represent a step forward from such prior art pyrolysis methods by employing single source precursors incorporating all of the requisite ions which are fragmented under controlled temperature conditions to liberate ions that then recombine to support nanoparticle growth, but without reference to using additional ions sources. Cumberland can therefore be considered as teaching away from a method such as that employed in Peng.

5.17.5.6. As such, it is our current view that not only does neither document contemplate combining separate ions sources in the presence of a molecular cluster compound, but in fact, Cumberland actively discourages the skilled person from even considering using separate sources for the nanoparticle ions, whether on their own or in combination with molecular clusters as single source precursors. Thus, it is our current view that neither Peng nor Cumberland taken individually or together provides any motivation or suggestion for the skilled person to consider combining a cluster compound with separate sources for the first and second ions to produce nanoparticles. Such a combination would only be made in hindsight and with knowledge of the Scale-Up I concept, which is not an appropriate approach to determining the obviousness of an invention.

5.17.6. **Nanoco's Scale-Up I PCT application**

5.17.6.1. As explained above, the technology underpinning Nanoco's Scale-Up I patent family is the production of nanoparticles using a molecular cluster compound to seed and control nanoparticle growth, and the Scale-Up II methodology builds on this by refining the manner in which the QD ion sources are combined and the temperature of the reaction mixture modified during addition of the ion sources. The Scale-Up I application was cited by the PCT examiner in relation to the novelty of the Scale-Up II process in view of a specific example in Scale-Up I employing Scale-Up II methodology.

5.17.6.2. The overlap between the contents of the Scale-Up I application and Scale-Up II methodology was identified sufficiently early by M&C so that the Scale-Up II priority application could be prepared and filed before the Scale-Up I PCT application was published, thereby ensuring that the Scale-Up I application

would be relevant only in terms of novelty and not inventive step, and so that a series of specific disclaimers could be included in the Scale-Up II priority filing to explicitly disclaim details of the example in the Scale-Up I application which employs Scale-Up II methodology so that, if need be, details of the example can be explicitly excluded from the scope of the claims contained in the Scale-Up II application. This should thereby restore the novelty of the Scale-Up II invention, albeit excluding the specific example in the Scale-Up I application, and avoid the Scale-Up I application causing any further problems with prosecution of the Scale-Up II applications.

5.17.6.3. With regard to Scale-Up III, the PCT search report issued in respect of the Scale-Up III PCT application makes reference to Nanoco's Scale-Up I application but only cites the Scale-Up I application as providing general background information and not in relation to the novelty or inventiveness of the Scale-Up III methodology. In the written opinion that accompanied the search report the PCT examiner stated that "the [Scale-Up I PCT application] document does not disclose the growth of such nanoparticles on [the type of] metallic clusters . . . as in the independent claims of the [Scale-Up III] application.", which has always been the view of both M&C and Nanoco.

5.17.7. **WO2004008550**

5.17.7.1. WO2004008550 is a PCT patent application that was published in January 2004 and therefore predates all of Nanoco's Scale-Up patent families. WO2004008550 has only been cited in relation to the potential patentability of Nanoco's Scale-Up II PCT application.

5.17.7.2. WO2004008550 describes methods for producing coated QDs using relatively gentle thermal and/or sonochemical methods. The methods all involve the combination of conventional sources of QD ions with a QD surface binding ligand followed by relatively gentle heating and/or sonication to increase the temperature of the growth medium to support nanoparticle growth.

5.17.7.3. The processes described in WO2004008550 do not mention the use of a molecular cluster compound to seed and control growth of QDs as in the Scale-Up I process. As a result, it is our view that the Scale-Up I methodology is fundamentally different to that described in WO2004008550. With regard to the Scale-Up II methodology, WO2004008550 does not describe adding separate QD ions sources portion-by-portion or adjusting the temperature of the growth medium before, during or after adding each portion of the QD ion sources. WO2004008550 contemplates different types of QDs, each incorporating a particular type of semiconductor material, but does not seem to contemplate combinations of these materials in a single nanoparticle. WO2004008550 therefore does not mention or suggest the materials or methods defined in Nanoco's Scale-Up III patent applications.

5.17.7.4. For the avoidance of doubt, WO2004008550 has been considered for its potential relevance to the patentability of Nanoco's three Scale-Up patent families. No analysis has been undertaken to determine if any granted patents have or might result from WO2004008550 which might be relevant to Nanoco's freedom to operate.

5.17.8. **The Bawendi Cases**

5.17.8.1. The European patent application and two US patents are very closely related in that they all claim priority from the same US patent application (08/969,302) filed in November 1997. The subject matter contained in the three cases which

is relevant to the potential patentability of Nanoco's Scale-Up methodology is the same and so the three Bawendi cases can be discussed together.

5.17.8.2. The three Bawendi cases describe the production of monodisperse core/shell QDs. The core/shell QDs are produced by a two step process starting with the injection of sources for the QD core ions into a hot solvent. The temperature of the solvent initially falls following injection but is then raised again by the application of heating to a sufficient temperature to support QD core growth. The shell is then provided by injecting sources for the QD shell ions into a solution of the QD cores maintained at a predetermined temperature for a sufficient period of time to produce the desired final core/shell QDs which can then be isolated and characterised using standard techniques.

5.17.8.3. The Bawendi cases make no reference to the use of molecular cluster compounds to seed and control nanoparticle growth. There are therefore fundamental differences between the Bawendi cases and the methodology underpinning all three of Nanoco's Scale-Up patent families, which therefore leads us to conclude that the Bawendi cases are unlikely to be cited against any of the applications in Nanoco's Scale-Up I, II or III patent families. The Bawendi cases make no reference to producing QD cores by adding the QD core ion sources in portions or increasing the temperature of the growth medium before, during or after addition portions of the QD core ions sources. In fact, Example 1 of each of the Bawendi cases actually states that the QD core ion sources were injected in "a single continuous injection", thus teaching away from the Scale-Up II methodology. The Bawendi cases exemplify their method with reference only to producing QD cores of one type of semiconductor material. There is no explicit reference to other types of materials. Moreover, there is no description or suggestion that semiconductor materials of different types can be combined in the same QD. It is our view therefore that the Nanoco Scale-Up III methodology is both novel and inventive over the Bawendi cases.

5.17.8.4. For the avoidance of doubt, the three Bawendi cases have been considered for their potential relevance to the patentability of Nanoco's three Scale-Up patent families. No analysis has been undertaken to determine if the two granted US patents are in force or what they protect, or if the European patent application has or might result in a granted European patent which might be relevant to Nanoco's freedom to operate.

Yours faithfully

Mark Peter Dauncey
MARKS & CLERK

PART V

HISTORICAL FINANCIAL INFORMATION ON EVOLUTEC GROUP PLC

The financial information set out in this part V has been extracted without material adjustment from the audited financial statements for Evolutec Group plc for the three years ended 31 December 2008, 31 December 2007 and 31 December 2006.

The consolidated financial statements of Evolutec Group plc were audited by Grant Thornton LLP. The auditors' report was made under section 235 of the Companies Act 1985.

The audited financial statements of Evolutec Group plc for the three years ended 31 December 2008, 31 December 2007 and 31 December 2006 are available for download from the Company's website www.evolutec.co.uk.

Consolidated income statement

	Year ended 31 December 2008 £'000	Year ended 31 December 2007 £'000	Year ended 31 December 2006 £'000
Revenue	–	82	14
Cost of sales	–	(1)	(1)
Gross profit	–	81	13
Selling and marketing costs	–	(160)	(189)
Research and development expenditure	(205)	(1,050)	(10,509)
Administration expenses	–	(1,159)	(2,172)
Operating loss	(205)	(2,288)	(12,857)
Finance income – bank interest receivable	301	375	749
Finance costs	–	(12)	(364)
Profit/(loss) before tax	96	(1,925)	(12,472)
Tax on profit/(loss) on ordinary activities	(19)	162	645
Profit/(loss) for the period	77	(1,763)	(11,827)
Basic and diluted profit/(loss) per share from continuing activities	0.3p	(6.8)p	(49.3)p

Consolidated balance sheets

	31 December 2008 £'000	31 December 2007 £'000	31 December 2006 £'000
Assets			
Non-current assets			
Property, plant and equipment	–	–	140
	–	–	140
Current assets			
Research and development tax credits	–	162	645
Trade and other receivables	85	28	203
Cash and cash equivalents	6,033	5,797	8,682
	6,118	5,987	9,530
Total assets	6,118	5,987	9,670
Liabilities			
Current liabilities			
Trade and other payables	(88)	(34)	1,355
	(88)	(34)	1,355
Non-current liabilities			
Provision for NI on share options	–	–	(34)
Total liabilities			
Net assets	6,030	5,953	8,281
Capital and reserves			
Share capital	27,037	27,037	27,037
Other reserves	8,518	8,518	9,083
Retained earnings	(29,525)	(29,602)	(27,839)
Total equity and liabilities	6,030	5,953	8,281

Consolidated cash flow statements

	Year ended 31 December 2008 £'000	Year ended 31 December 2007 £'000	Year ended 31 December 2006 £'000
Cash flows from operating activities			
Profit/(loss) for the period	77	(1,763)	(11,827)
Taxation	19	(162)	(645)
Depreciation	–	140	87
Interest received	(301)	(375)	(595)
Unrealised foreign exchange losses	–	–	81
Share options – value of employee services	–	(565)	290
(Increase)/Decrease in trade and other receivables	(57)	174	616
Increase/(decrease) in trade and other payables	35	(1,354)	(526)
Cash used by operations	(227)	(3,905)	(12,519)
Taxation received	162	645	502
Net cash outflow from operating activities	(65)	(3,260)	(12,017)
Cash flows from investing activities			
Purchase of property, plant and equipment	–	–	(66)
Interest received	301	375	595
Decrease/(increase) in held-to-maturity investments	–	–	15,877
Net cash generated from investing activities	301	375	16,406
Cash flows from financing activities			
Proceeds from issuance of shares	–	–	2,635
Net cash generated from financing activities	–	–	2,635
Net (decrease)/increase in cash and cash equivalents	236	(2,885)	7,024
Cash and cash equivalents at the start of the period	5,797	8,682	1,739
Exchange losses on cash and bank overdrafts	–	–	(81)
Cash and cash equivalents at the end of the period	6,033	5,797	8,682

Related party disclosures

During the three years ended 31 December 2008, 31 December 2007 and 31 December 2006, Evolutec had no related party transactions other than in respect of compensation payments to key management (including directors). The components of that financial information which relates to directors were:

	2008 £'000	2007 £'000	2006 £'000
Salary and short-term employee benefits	53	676	620
Pensions	–	49	32
Share based payments	–	(416)	214
	53	309	866

The salary and short-term employee benefits relating to the highest paid director were £21,000 (2007: £329,000, 2006: £267,000) and pension contributions were £nil (2007: £28,000, 2006: £18,000).

PART VI

HISTORICAL FINANCIAL INFORMATION ON NANOCO TECH PUBLIC LIMITED COMPANY

Accountants' Report on Nanoco Tech Public Limited Company

The Directors
Evolutec Group plc
3 More London Riverside
London
SE1 2AQ

25 **February 2009**

Dear Sirs

Nanoco Tech plc

We report on the financial information for the years ended 31 July 2006, 2007 and 2008 set out on pages 88 to 112 (the "Financial Information"). Our report does not extend to the unaudited financial information in respect of the five month period ended 31 December 2008 and we express no opinion in respect of that financial information. The Financial Information has been prepared for inclusion in the AIM admission document dated 25 February 2009 of Evolutec Group plc on the basis of the accounting policies set out in note 2 of the Financial Information. This report is required by Schedule Two of the AIM Rules for Companies and is given for the purpose of complying with that schedule and for no other purpose.

Save for any responsibility arising under Schedule Two of the AIM Rules for Companies to any person as and to the extent there provided, to the fullest extent permitted by law we do not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with Schedule Two of the AIM Rules for Companies, consenting to its inclusion in the AIM admission document.

Responsibilities

The Directors of Nanoco Tech plc are responsible for preparing the Financial Information on the basis of preparation set out in note 2 to the Financial Information and in accordance with International Financial Reporting Standards as adopted by the European Union.

It is our responsibility to form an opinion as to whether the Financial Information gives a true and fair view, for the purposes of the AIM admission document, and to report our opinion to you.

Basis of opinion

We conducted our work in accordance with Standards for Investment Reporting issued by the Auditing Practices Board in the United Kingdom. Our work included an assessment of evidence relevant to the amounts and disclosures in the Financial Information. It also included an assessment of significant estimates and judgments made by those responsible for the preparation of the Financial Information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

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.

Our work has not been carried out in accordance with auditing or other standards and practices generally accepted in other jurisdictions and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices.

Opinion

In our opinion, the Financial Information gives, for the purposes of the AIM admission document dated 25 February 2009, a true and fair view of the state of affairs of Nanoco Tech plc as at the dates stated and of its profits, cash flows and changes in equity for the periods then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

This report does not cover, and we express no opinion on, the financial information for the five month period ended 31 December 2008 set out alongside the Financial Information, which is marked unaudited.

Declaration

For the purposes of Paragraph (a) of Schedule Two of the AIM Rules for Companies we are responsible for this report as part of the AIM admission document and declare that we have taken all reasonable care to ensure that the information contained in this report is, to the best of our knowledge, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the AIM admission document in compliance with Schedule Two of the AIM Rules for Companies.

Yours faithfully

Ernst & Young LLP

Nanoco Tech plc – Historical financial information

Consolidated income statement

	Notes	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Revenue	4	1,740,648	1,077,859	575,761	203,955
Cost of sales		(54,198)	(117,713)	(180,081)	(69,432)
Gross profit		1,686,450	960,146	395,680	134,523
Administrative expenses		(893,028)	(1,745,197)	(1,239,827)	(405,968)
Other income		–	–	–	39,000
Operating profit/(loss)	5	793,422	(785,051)	(844,147)	(232,445)
Finance income – bank interest receivable		37,101	122,209	112,811	13,672
Finance costs	6	(11,017)	(35,206)	–	–
Profit/(loss) on ordinary activities before taxation		819,506	(698,048)	(731,336)	(218,773)
Tax on profit/(loss) on ordinary activities	8	62,500	146,559	176,192	–
Profit/(loss) on ordinary activities after taxation attributable to members of parent entity		882,006	(551,489)	(555,144)	(218,773)

Consolidated statement of changes in equity

	Attributable to equity holders						
	Issued capital £	Share premium £	Treasury shares £	Share based payment reserve £	Merger reserve £	Retained earnings £	Total £
Loss for the year	–	–	–	–	–	(218,773)	(218,773)
Acquisition of subsidiary	–	–	–	–	(1,242,314)	(94,733)	(1,337,047)
Issue of share capital	2,966,013	873,218	–	–	–	–	3,839,231
At 1 August 2006	2,966,013	873,218	–	–	(1,242,314)	(313,506)	2,283,411
Loss for the year	–	–	–	–	–	(555,144)	(555,144)
Issue of share capital	185,185	814,815	–	–	–	–	1,000,000
Share based payments	–	–	–	42,197	–	–	42,197
At 31 July 2007	3,151,198	1,688,033	–	42,197	(1,242,314)	(868,650)	2,770,464
Loss for the year	–	–	–	–	–	(551,489)	(551,489)
Issue of share capital	258,363	1,446,834	(545,298)	–	–	–	1,159,899
Share based payments	–	–	–	53,350	–	–	53,350
At 31 July 2008	3,409,561	3,134,867	(545,298)	95,547	(1,242,314)	(1,420,139)	3,432,224
Unaudited profit for the period	–	–	–	–	–	882,006	882,006
Share based payments	–	–	–	31,250	–	–	31,250
Unaudited as at 31 December 2008	3,409,561	3,134,867	(545,298)	126,797	(1,242,314)	(538,133)	4,345,480

Consolidated balance sheet

Assets	Notes	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Non-current assets					
Plant and equipment	9	1,237,880	1,150,858	1,056,032	31,678
Intangible assets	10	321,752	279,439	153,453	103,393
		1,559,632	1,430,297	1,209,485	135,071
Current assets					
Inventories	11	8,806	8,806	14,425	–
Trade and other receivables	12	1,753,162	382,758	260,242	126,290
Cash and cash equivalents	13	1,792,875	2,527,681	2,415,701	2,413,642
		3,554,843	2,919,245	2,690,368	2,539,932
Total assets		5,114,475	4,349,542	3,899,853	2,675,003
Liabilities					
Current liabilities					
Trade and other payables	14	(262,328)	(378,985)	(529,389)	(391,592)
Short-term financial liabilities	15	(63,333)	(63,333)	(61,667)	–
		(325,661)	(442,318)	(591,056)	(391,592)
Non-current liabilities					
Long-term financial liabilities	15	(443,334)	(475,000)	(538,333)	–
Total liabilities		(768,995)	(917,318)	(1,129,389)	(391,592)
Net assets		4,345,480	3,432,224	2,770,464	2,283,411
Capital and reserves					
Share capital	16	3,409,561	3,409,561	3,151,198	2,966,013
Share premium account	16	3,134,867	3,134,867	1,688,033	873,218
Treasury shares	16	(545,298)	(545,298)	–	–
Share based payment reserve		126,797	95,547	42,197	–
Merger reserve	18	(1,242,314)	(1,242,314)	(1,242,314)	(1,242,314)
Retained earnings		(538,133)	(1,420,139)	(868,650)	(313,506)
Total equity and liabilities		4,345,480	3,432,224	2,770,464	2,283,411

Consolidated balance sheet (continued)

Equity share capital and share premium

The balance classified as share capital and share premium includes the total net proceeds on issue of the Company's equity share capital, comprising 10p ordinary shares. The share premium accounts can only be used for bonus issues, to provide for the premium payable on redemption of debentures or to write off preliminary expenses, or expenses of, or commissions paid on, or discounts allowed on, any issues of shares or debentures of the company.

Treasury shares

Treasury shares represents the cost of Nanoco Tech plc shares held by the Employee Benefit Trust to satisfy future exercise of options.

Merger reserve

The merger reserve is calculated as the difference between the nominal value of the ordinary shares of Nanoco Technologies Limited, together with the capital and reserves of Nanoco Technologies Limited and the fair value of the shares issued in Nanoco Tech plc at the time of the pooling of interests.

Share based payment reserve

The share based payment reserve represents the cumulative expense representing the extent to which the vesting period of share options has expired and management's best estimate of the achievement or otherwise of non-market conditions and the number of equity instruments that will ultimately vest.

Consolidated statement of cash flows

	Notes	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Cash flows from operating activities					
Cash flows generated from operations	17	(581,406)	(781,963)	(746,809)	16,083
Research and development tax credit received and receivable		–	135,106	176,192	–
Net cash (used)/generated from operating activities		(581,406)	(646,857)	(570,617)	16,083
Cash flows from investing activities					
Purchases of plant and equipment	9	(180,566)	(312,084)	(1,211,744)	(32,618)
Related grant received	9	–	50,000	135,000	–
Disposal of plant and equipment		89,260	–	–	–
Net purchases of plant and equipment		(91,306)	(262,084)	(1,076,744)	(32,618)
Purchase consideration settled in cash		–	–	–	(265,433)
Purchases of intellectual property	10	(56,512)	(145,164)	(63,391)	(14,880)
Interest received		37,101	103,059	112,811	13,672
Net cash used in investing activities		(110,717)	(304,189)	(1,027,324)	(299,259)
Cash flows from financing activities					
Net proceeds from issue of ordinary share capital	16	–	1,159,899	1,000,000	2,350,000
Proceeds from borrowings		–	–	600,000	–
Loan repayment		(31,666)	(61,667)	–	–
Interest paid		(11,017)	(35,206)	–	–
Net cash (used)/generated from financing activities		(42,683)	1,063,026	1,600,000	2,350,000
Net increase/(decrease) in cash and cash equivalents		(734,806)	111,980	2,059	2,066,824
Cash and cash equivalents at the start of the period		2,527,681	2,415,701	2,413,642	346,818
Cash and cash equivalents at the end of the period	13	1,792,875	2,527,681	2,415,701	2,413,642

Notes to the historical financial information

1. Authorisation of financial statements and statement of compliance with IFRSs

Nanoco Tech plc ("the Company") is a public limited liability company incorporated and domiciled in the UK.

The historical financial information have been prepared in accordance with International Financial Reporting Standards (IFRSs) and International Financial Reporting Committee ("IFRIC") interpretations as they apply to the financial statements of the Group for the three years ended 31 July 2008.

The principal accounting policies adopted by the Group are set out in note 2.

2. Accounting policies

Basis of preparation

The historical financial information has been prepared in accordance with International Financial Reporting Standards (IFRS) and International Financial Reporting Committee ("IFRIC") interpretations as adopted by the European Union as they apply to the financial statements of the group for the three years ended 31 July 2008 and applied in accordance with the Companies Act 1985.

The accounting policies which follow set out those policies which apply in preparing the historical financial information for the three years ended 31 July 2008.

The historical financial information has been prepared under the historical cost convention, except where otherwise stated.

Basis of consolidation

The historical financial information consolidates the financial statements of Nanoco Tech plc and the entities it controls drawn up to 31 July each year.

Pooling of interests method of consolidation

On 27 June 2006, the Company became the legal parent of Nanoco Technologies Limited.

The historical financial information is presented as if the entities had always been combined. No goodwill arises on the combination, and the difference between the fair value of shares issued by Nanoco Tech plc and the nominal value of the ordinary shares of Nanoco Technologies Limited, together with the capital and reserves of Nanoco Technologies Limited at the time of the pooling of interests, are shown as "merger reserve" in the consolidated financial statements.

Segment reporting

A business segment is a group of assets and operations engaged in providing products or services that are subject to risks and returns that are different from those of other business segments.

Cash and cash equivalents

Cash and short- term deposits in the balance sheet and for the purpose of the cash flow statement comprise cash at banks and at hand and short- term deposits with an original maturity of three months or less.

Provisions

Provisions are recognised when the group has a present obligation (legal or constructive) as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The expense relating to any provision is presented in the income statement, net of any expected reimbursement, but only where recoverability of such reimbursement is virtually certain.

If the effect of the time value of the money is material, provisions are discounted using a current pre tax rate that reflects, where appropriate, the risk specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

Financial assets

Financial assets are recognised when the Group becomes party to the contracts that give rise to them and are classified as financial assets at fair value through the profit and loss; loans and receivables; held-to-maturity investments; or as available-for-sale financial assets, as appropriate. The Group determines the classification of its financial assets at initial recognition and re-evaluates this designation at each financial year end. When financial assets are recognised initially, they are measured at fair value, being the transaction price plus, in the case of financial assets not at fair value through the profit and loss, directly attributable transaction costs.

Derecognition of financial assets and liabilities

A financial asset or liability is generally derecognised when the contract that gives rise to it is settled, sold, cancelled or expires.

Revenue recognition

Revenue is recognised to the extent that it is probable that economic benefits will flow to the Group and the revenue can be reliably measured. Revenue is measured at the fair value of the consideration received or receivable for the sale of goods or services, excluding discounts, rebates, VAT and other sales taxes or duty.

The following criteria must also be met before revenue is recognised:

Sale of goods

Revenue from the sale of goods is recognised when the significant risks and rewards of ownership of the goods have passed to the buyer, usually on dispatch of the goods.

Rendering of services

Revenue is recognised in line with the contractual terms of each agreement, reflecting the Group's right to consideration.

Interest income

Interest income is recognised as interest accrues up to the balance sheet date.

Leases

Rental payable under operating leases, which are leases where the lessor retains a significant proportion of the risks and benefits of the asset, are charged in the income statement on a straight line basis over the expected lease term.

Taxation

Current income tax

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the balance sheet date.

Deferred income tax

Deferred income tax is recognised on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. with the following exceptions:

- where the temporary difference arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination that at the time of the transaction affects neither accounting nor taxable profit nor loss;
- in respect of taxable temporary differences associated with investments in subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future; and
- deferred income tax assets are recognised only to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, carried forward tax credits or tax losses can be utilised.

Deferred income tax assets and liabilities are measured on an undiscounted basis using the tax rates and tax laws that have been enacted or substantially enacted by the balance sheet date and which are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Foreign currency translation

Transactions in foreign currencies are initially recorded in the functional currency by applying the spot rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the sterling rate of exchange ruling at the balance sheet date. All differences are taken to the income statement.

Plant and equipment

Plant and equipment is recognised initially at cost. After initial recognition, these assets are carried at cost less any accumulated depreciation and any accumulated impairment losses. Cost comprises the aggregate amount paid and the fair value of any other consideration given to acquire the asset and includes cost directly attributable to making the asset capable of operating as intended.

Depreciation is computed by allocating the depreciable amount of an asset on a systematic basis over its useful life and is applied separately to each identifiable component.

The following bases and rates are used to depreciate classes of assets:

Laboratory equipment	–	10 per cent. per annum straight line method
Plant and machinery, fixtures and fittings	–	20 per cent. per annum straight line method
Office equipment	–	33.3 per cent. per annum straight line method

The carrying values of plant and equipment are reviewed for impairment if events or changes in circumstances indicate the carrying value may not be recoverable, and are written down immediately to their recoverable amount. Useful lives and residual values are reviewed annually and where adjustments are required these are made prospectively.

An item of plant and equipment is derecognised on disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the derecognition of the of the asset is included in the income statement in the period of derecognition.

Impairment of assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the Group makes an assessment of the asset's recoverable amount.

An asset's recoverable amount is the higher of an asset's or cash-generating unit's fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying value of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used, these calculations corroborated by valuation multiples, or other available fair value indicators. Impairment losses on continuing operations are recognised in the income statement in those expense categories consistent with the function of the impaired assets.

An assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the income statement unless the asset is carried at revalued amount, in which case the reversal is treated as a valuation increase. After such a reversal the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

Intangible assets

Intangible assets acquired as part of a business combination are recognised separately from goodwill provided they are separable or arise from contractual or other legal rights and their fair value can be measured reliably. Expenditure on internally developed intangible assets, excluding development costs, is taken to the income statement in the year in which it is incurred. Expenditure relating to clearly defined and identifiable development projects is recognised as an intangible asset only after all the following criteria are met:

- the project's technical feasibility and commercial viability can be demonstrated;
- the availability of adequate technical and financial resources and an intention to complete the project have been confirmed; and
- the correlation between development costs and future revenues has been established.

Where intangible assets recognised have finite lives, after initial recognition their fair value is amortised on a straight line basis over those lives. The nature of those intangibles recognised and their estimated useful lives are as follows:

Patents	–	straight line over ten years

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost includes all costs incurred in bringing each product to its present location and condition. Net realisable value is based on estimated selling price less any further costs expected to be incurred to disposal. Provision is made for slow moving or obsolete items.

Trade and other receivables

Trade receivables, which generally have 30 to 60 day terms, are recognised and carried at the lower of their original invoiced value and recoverable amount. The time value of money is not material.

Provision is made when there is objective evidence that the group will not be able to recover balances in full. Significant financial difficulties in the customer, probability that the customer will enter bankruptcy or financial reorganisation and default in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. The carrying value of the asset is reduced through the use of an allowance account, and the amount of the loss is recognised in the income statement within administrative expenses.

When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against administrative expenses in the income statement.

Government grants

Government grants are recognised when it is reasonable to expect that the grants will be received and that all related conditions are met, usually on submission of a valid claim for payment.

Government grants of a revenue nature are deferred and recognised in the income statement in line with the terms of the underlying grant agreement.

Government grants relating to capital expenditure are deducted in arriving at the carrying amount of the asset.

Borrowings

Borrowings are recognised when the Group becomes party to the related contracts and are measured initially at fair value, net of directly attributable transaction costs incurred. After initial recognition, borrowings are stated at amortised cost.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Shares

Proceeds on issue of shares are included in Shareholder's equity, net of transaction costs. The carrying amount is not remeasured in subsequent years.

Share based payments

The group undertakes equity settled share based payment transactions with certain employees.

Equity settled share based payment transactions are measured with reference to the fair value at the date of grant, recognised on a straight line basis over the vesting period, based on the Company's estimate of shares that will eventually vest. Fair value is measured using the Black-Scholes-Merton model.

At each balance sheet date before vesting, the cumulative expense is calculated, representing the extent to which the vesting period has expired and management's best estimate of the achievement or otherwise of non-market conditions and the number of equity instruments that will ultimately vest. The movement in cumulative expense since the previous balance sheet date is recognised in the income statement, with a corresponding entry in equity.

Where the terms of an equity-settled award are modified or a new award is designated as replacing a cancelled or settled award, the cost based on the original award terms continues to be recognised over the original vesting period. In addition, an expense is recognised over the remainder of the new vesting period for the incremental fair value of any modification, based on the difference between the fair value of the original award and the fair value of the modified award, both as measured on the date of the modification. No reduction is recognised if this difference is negative.

Accounting standards and interpretations not applied

At the date of authorisation of this historical financial information, the following Standards and Interpretations that have not been applied in this historical financial information were in issue but not yet effective or endorsed (unless otherwise stated):

- IFRS 1: Amendments - Cost of Investment in Separate Financial Statements
- IFRS 2: Share based payment – Amendments relating to vesting conditions and cancellations
- IFRS 3: Business Combinations – Amendments
- IFRS 7: Financial Instruments: Disclosures – Consequential amendments arising from amendments to IAS32
- IFRS 8: Operating Segments
- IAS 1: Presentation of Financial Statements – Revised
- IAS 1: Presentation of Financial Statements – Amendments relating to Puttable Financial Instruments and obligations arising on liquidation
- IAS 23: Borrowing Costs – Amendment
- IAS 27: Consolidated and separate Financial Statements – Consequential amendments arising from amendments from IFRS3
- IAS 28: Investments in Associates – Consequential amendments arising from amendments to IFRS3
- IAS 31: Interest in Joint Ventures – Consequential amendments arising from amendments to IFRS3
- IAS 32: Financial Instruments: Presentation – Amendments relating to Puttable Financial Instruments and obligations arising on liquidation
- IAS 39: Financial Instruments: Recognition and Measurement – Consequential amendments arising from amendments to IAS 32
- IFRIC 2: Members' Shares in Co-operative Entities and Similar Instruments – Consequential amendments arising from amendments to IAS 32
- IFRIC 12: Service Concession Arrangements
- IFRIC 13: Customer loyalty programmes
- IFRIC 14: IAS 19 - The limit on a defined benefit asset, minimum funding requirements and their interaction

The Directors anticipate that the adoption of these Standards and Interpretations in future periods will have no material impact on the financial statements of the Group.

3. Judgements and key sources of estimation uncertainty

The preparation of financial statements requires management to make estimates and assumptions that affect the amounts reported for assets and liabilities as at the balance sheet date and the amounts reported for revenues and expenses during the year. The nature of estimation means that actual amounts could differ from those estimates. Estimates and assumptions used in the preparation of the financial statements are continually reviewed and revised as necessary. While every effort is made to ensure that such estimates and assumptions are reasonable, by their nature they are uncertain and, as such, changes in estimates and assumptions may have a material impact on the financial statements.

The key sources of estimation uncertainty that have a significant risk of causing material adjustment to the carrying amount of assets and liabilities within the next financial year are discussed below.

Provisions for irrecoverable receivables

Provisions for irrecoverable receivables are based on extensive historical evidence, and the best available information in relation to specific issues, but are nevertheless inherently uncertain.

Equity settled share based payments

The estimation of share based payment costs requires the selection of an appropriate valuation method, consideration as to the inputs necessary for the valuation model chosen and the estimation of the number of awards that will ultimately vest, inputs for which arise from judgements relating to the future volatility of the share price of comparable companies, the Company's expected dividend yields, risk free interest rates and expected lives of the options. The Directors draw on a variety of sources to aid in the determination of the appropriate data to use in such calculations.

Impairment of intangibles

The Group assesses whether there are any indicators of impairment for all intangible assets at each reporting date. Patents are tested for impairment annually and at other times when such indicators exist. When considering impairment, management is using its judgement in regards to future anticipated cash flows.

Deferred tax assets

Management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of future taxable profits together with an assessment of the effect of future tax planning strategies. Further details of these can be found in note 8.

4. Segmental information

Primary reporting format – business segments

Throughout the three years ended 31 July 2008 the Group operated in one business segment, being the provision of high performance nano particles for research and development purposes.

Secondary reporting format – geographical segments

The Group operates in four main geographic areas, although all are managed in the UK.

The Group's revenue has arisen as follows:

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
UK	2,100	86,090	6,327	4,785
Europe	70,000	14,938	1,093	–
Asia	1,647,723	946,027	559,118	168,468
USA	20,825	30,804	9,223	30,702
	1,740,648	1,077,859	575,761	203,955
Split as:				
Sale of goods	48,006	97,890	113,761	22,995
Rendering of services	1,692,492	979,969	462,000	180,960

All the Group's assets are held in the UK and all capital expenditure has arisen in the UK.

5. Operating loss

This is stated after charging/(crediting):

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Depreciation on plant and equipment	93,284	167,258	52,390	940
Operating lease rentals	89,583	100,000	35,737	–
Auditors' remuneration	14,083	46,300	23,450	7,000
Amortisation of intangible assets	21,668	19,178	13,331	11,488
(Gain)/loss on foreign exchange transactions	(25,201)	4,854	3,037	931
Grants receivable	(70,000)	(84,000)	–	(39,000)
Research and development expense	558,259	939,950	761,442	236,487

Auditors' remuneration is made up as follows:

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Audit of the financial statements – current auditors	6,000	14,500	–	–
Audit of the prior year financial statements – previous auditors	–	3,025	18,650	4,000
	6,000	17,525	18,650	4,000
Other fees to auditors – taxation services – current auditors	8,083	28,025	–	–
Other fees to auditors – taxation services – previous auditors	–	750	4,800	3,000
	14,083	46,300	23,450	7,000

6. Finance costs

	2008 £	2007 £	2006 £
Other loan interest payable	35,206	–	–

7. Staff costs

	2008 £	2007 £	2006 £
Wages and salaries	793,244	596,619	166,528
Social security costs	81,969	60,035	10,345
	875,213	656,654	176,873

Included in wages and salaries is a total expense in respect of share based payments of £53,350 (2007: £42,197, 2006: £nil), all of which arose from transactions accounted for as equity-settled share based payment transactions.

The average number of employees during the year, including executive directors, was as follows:

	2008 No.	2007 No.	2006 No.
Executive directors	2	3	3
Laboratory and administrative staff	16	8	5
	18	11	8

Directors' remuneration included in the aggregate remuneration above comprised:

	2008 £	2007 £	2006 £
Emoluments for qualifying services	243,750	185,000	79,342
Equity settled share based charges	42,255	38,561	–

The equity settled share based charges relate to increases during the year in the fair value of the share options granted to two executive directors.

The emoluments of the highest paid director were: 2008: £165,764, 2007: £134,789, 2006: £62,667.

8. Tax

(a) Tax on profit on ordinary activities
Tax (credited)/charged in the income statement

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Current income tax				
UK Corporation tax:				
Corporation tax on losses for the year –				
Research and development tax credit receivable	(62,500)	(146,559)	(176,192)	–
	(62,500)	(146,559)	(176,192)	–
Deferred income tax				
Relating to origination and reversal of temporary differences	–	–	–	–
	–	–	–	–
Income tax (income)/expenses recorded in the income statement	(62,500)	(146,559)	(176,192)	–
Consolidated statement of changes in equity				
Deferred income tax related to items	–	–	–	–
Charged or credited directly to equity during the year	–	–	–	–
Share based payments	–	–	–	–
Income tax (income)/expenses reported in equity	–	–	–	–

(b) Factors affecting total tax charges
The tax assessed on the loss on ordinary activities for the year is less than the standard rate of corporation tax in the UK of 29.33 per cent. (2007: 30 per cent., 2006: 30 per cent.). The differences are reconciled below:

	2008 £	2007 £	2006 £
Accounting loss before tax	(698,048)	(731,336)	(218,773)
Loss on ordinary activities multiplied by effective rate of Tax of 29.33 per cent. (2007: 30 per cent., 2006: 30 per cent.)	(204,737)	(219,401)	(65,632)
Effects of:			
(Non-taxable income)/non-deductible expenses	38,681	12,659	12,930
Capital allowances in excess of depreciation	(6,590)	(145,498)	(4,533)
Enhanced research and development relief	(89,615)	(114,216)	(35,473)
Surrender of research and development relief for repayable tax credit	268,844	670,464	89,524
Research and development tax credit receivable	(146,559)	(587,307)	–
Tax losses brought forward	–	(23,304)	(20,120)
Tax losses carried forward	(6,583)	230,411	23,304
At the effective rate of income tax of 21 per cent. (2008: 24 per cent., 2007: 0 per cent.)	(146,559)	(176,192)	–

8. Tax (continued)

The effective rate of tax of 29.33 per cent. in the year ended 31 July 2008 takes account of the decrease in the standard rate of corporation tax in the UK to 28 per cent. from 30 per cent. from April 2008.

(c) Deferred tax
The deferred tax included in the Group balance sheet is as follows:

	2008	2007	2006
	£	£	£
Deferred tax liability			
Accelerated depreciation for tax purposes	(147,757)	(151,571)	–
	(147,757)	(151,571)	–
Deferred tax asset			
Tax losses	147,757	151,571	–
	147,757	151,571	–
Deferred tax liabilities net	–	–	–
The deferred tax in the Group income statement is as follows:			
Accelerated depreciation for tax purposes	(3,814)	–	–
Tax losses	3,814	–	–
Deferred tax (income)/expense	–	–	–

The Group has UK tax losses of £845,342 (2007: £822,898, 2006: £77,680) that are available indefinitely for offset against future taxable profits of the subsidiary company. These losses have only been recognised to the extent that they offset the accelerated depreciation for tax purposes. There are no income tax consequences attaching to the payment of dividends by the Group to its shareholders.

9. Plant and equipment

	Laboratory equipment £	Office equipment, fixtures and fittings £	Plant and machinery £	Total £
Cost:				
Additions	–	2,605	30,013	32,618
At 1 August 2006	–	2,605	30,013	32,618
Additions	904,664	25,896	146,184	1,076,744
At 31 July 2007	904,664	28,501	176,197	1,109,362
Additions	–	171,527	140,557	312,084
Grant received	(50,000)	–	–	(50,000)
At 31 July 2008	854,664	200,028	316,754	1,371,446
Additions	21,938	13,305	145,323	180,566
Disposals	–	(644)	–	(644)
Unaudited at 31 December 2008	876,602	212,689	462,077	1,551,368
Depreciation:				
Provided during year	–	664	276	940
At 1 August 2006	–	664	276	940
Provided during year	32,925	3,188	16,277	52,390
At 31 July 2007	32,925	3,852	16,553	53,330
Provided during year	86,883	36,940	43,435	167,258
At 31 July 2008	119,808	40,792	59,988	220,588
Provided during period	32,710	31,983	28,591	93,284
On disposals	–	(18)	(366)	(384)
Unaudited at 31 December 2008	152,518	72,757	88,213	313,488
Net book value				
Unaudited at 31 December 2008	724,084	139,932	373,864	1,237,880
At 31 July 2008	734,856	159,236	256,766	1,150,858
At 31 July 2007	871,739	24,649	159,644	1,056,032
At 31 July 2006	–	1,941	29,737	31,678

10. Intangible assets

	Patents £	Total £
Additions	114,881	114,881
At 1 August 2006	114,881	114,881
Additions	63,391	63,391
At 31 July 2007	178,272	178,272
Additions	145,164	145,164
At 31 July 2008	323,436	323,436
Additions	56,145	56,145
Unaudited at 31 December 2008	379,581	379,581
Amortisation:		
Impairment charge	11,488	11,488
At 1 August 2006	11,488	11,488
Impairment charge	13,331	13,331
At 31 July 2007	24,819	24,819
Impairment charge	19,178	19,178
At 31 July 2008	43,997	43,997
Impairment charge	13,832	13,832
Unaudited at 31 December 2008	57,829	57,829
Net book value:		
Unaudited at 31 December 2008	321,752	321,752
At 31 July 2008	279,439	279,439
At 31 July 2007	153,453	153,453
At 31 July 2006	103,393	103,393

11. Inventories

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Raw materials and consumables	8,806	8,806	14,425	–

12. Trade and other receivables

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Trade receivables	1,396,920	11,672	7,290	8,998
Less: provision for doubtful debts	(5,133)	(5,133)	(4,143)	(4,143)
Net trade receivables	1,391,787	6,539	3,147	4,855
Prepayments	116,707	188,091	52,185	115,073
Other receivables	244,668	188,128	204,910	6,362
	1,753,162	382,758	260,242	126,290

Trade receivables are denominated in the following currencies:

Sterling	–	688	312	–
US dollars	4,496	5,851	356	4,855
Euros	–	–	374	–
Yen	1,387,291	–	2,105	–
	1,391,787	6,539	3,147	4,855

At 31 July the analysis of trade receivables that were past due but not impaired was as follows:

	Total £	Neither past due nor impaired £	<30 £	Past due but not impaired 30 to 60 £
2008	6,539	6,539	–	–
2007	3,147	3,147	–	–
2006	4,855	4,855	–	–

Movements in the provision for doubtful debts were as follows:

	2008 £	2007 £	2006 £
At 1 August	4,143	4,143	–
Amounts written off	(5,366)	–	–
Provided in year	6,356	–	4,143
	5,133	4,143	4,143

13. Cash and cash equivalents

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Cash at bank and on hand	1,792,875	2,527,681	2,415,701	2,413,642

Cash at bank earns interest at floating rates based on daily bank deposit rates.

14. Trade and other payables

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Trade payables	138,341	149,353	451,007	57,488
Other creditors	–	62,743	6,357	6,357
Accrued expenses	123,987	166,889	72,025	327,747
	262,328	378,985	529,389	391,592

15. Financial liabilities

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Non-current				
Other loan	443,334	475,000	538,333	–
Current				
Other loan	63,333	63,333	61,667	–
	506,667	538,333	600,000	–

The other loan bears interest at 2 per cent. above base rate and is repayable in instalments over ten years.

16. Share capital and share premium

	Number Of shares	10p Ordinary shares £	Share premium £	Total £
On incorporation	20	2	1	3
Issue of shares	29,660,112	2,966,011	873,217	3,839,228
At 31 July 2006	29,660,132	2,966,013	873,218	3,839,231
Issue of shares	1,851,851	185,185	814,815	1,000,000
At 31 July 2007	31,511,983	3,151,198	1,688,033	4,839,231
Issue of shares	2,583,632	258,363	1,446,834	1,705,197
At 31 July 2008	34,095,615	3,409,561	3,134,867	6,544,428
Unaudited at 31 December 2008	34,095,615	3,409,561	3,134,867	6,544,428

During the year ended 31 July 2008 the Company issued 2,583,632 ordinary shares of £0.10 at a premium £0.56 each.

Cash flows on issues of shares

Of the 2,583,632 shares issued in the year, 826,209 shares were issued as the result of the grant of options under the unapproved share option scheme (see below), for total proceeds of £545,298. These shares were immediately transferred to the Employee Benefit Trust for the same proceeds and are described in the balance sheet as treasury shares. For the purposes of the Group cash flow statements, this transaction was a non-cash transaction therefore net proceeds on issue of shares in the year was £1,159,899.

Share options and shares held in employee benefit trust

The company operates an approved EMI scheme for the benefit of all employees. The exercise price of the options is equal to the estimated market price of the shares on the date of grant. The options vest three years from the date of grant. The options are accounted for as equity settled share based payment transactions. Options cannot be exercised at a year end. Share options have also been granted to non-employees, these have been measured using the indirect method whereby the fair value of the services rendered by the non-employees was measured by reference to the fair value of the share options granted.

During the year, unapproved options were granted to two employees and were transferred to the Employee Benefit Trust. The options will be exercised by the employees when two commercial contracts are signed.

The following table illustrates the number and weighted average exercise prices (WAEP) of, and movements in, share options during the year.

	EMI No.	Unapproved No.	EBT No.	2008 Total No.	2007 No.
Outstanding at 1 August	1,515,000	851,209	–	2,366,209	–
Granted during the year	125,000	60,000	–	185,000	2,441,209
Forfeited during the year	(30,000)	–	–	(30,000)	(75,000)
Transferred during the year	–	(826,209)	826,209	–	–
Outstanding at 31 July	1,610,000	85,000	826,209	2,521,209	2,366,209

16. Share capital and share premium (continued)

Weighted average exercise price of options

	2008 pence	2007 pence
Outstanding at 1 August	17.9	–
Granted during the year	66.0	17.8
Forfeited during the year	66.0	16.0
Transferred during the year	66.0	–
Outstanding at 31 July	20.8	17.9

Share options and shares held in employee benefit trust

The fair value of equity-settled share options granted is estimated as at the date of grant using the Black-Scholes-Merton model, taking into account the terms and conditions upon which the options were granted. The following table lists the inputs to the model used for the two years ended 31 July 2008 and 31 July 2007.

	Granted year to July 2008	Granted year to July 2007
Dividend yield	–	–
Expected volatility	50.0	50.0
Risk free interest rate	4.5	4.5
Expected vesting life of options (years)	3.0	3.0
Weighted average exercise price (pence)	66.0	17.9
Weighted average share price at date of grant (pence)	66.0	17.9

During the year ended 31 July 2008 826,209 shares obtained under unapproved options were transferred to the Employee Benefit Trust at 66 pence per share (£545,298) (2007: £nil).

The expected life of the options is based on historical data and is not necessarily indicative of exercise patterns that may occur. The expected volatility reflects the assumption that the historical volatility is indicative of future trends, which may also not necessarily be the actual outcome.

No other features of options grant were incorporated into the measurement of fair value.

17. Cash flows generated from operating activities

	Unaudited Period ended 31 December 2008 £	Year ended 31 July 2008 £	Year ended 31 July 2007 £	Year ended 31 July 2006 £
Profit/(Loss) before interest and tax	793,422	(785,051)	(844,147)	(232,445)
Adjustments for:				
Depreciation	85,815	167,258	52,390	940
Amortisation of intangible assets	21,668	19,178	13,331	11,488
Gain on disposal	(89,000)	–	–	–
Movement in share based payment reserve	31,250	53,350	42,197	–
Changes in working capital (excluding the effects of acquisition)				
Inventories	–	5,619	(14,425)	–
Trade and other receivables	(1,307,904)	(91,913)	(133,952)	(107,469)
Trade and other payables	(116,657)	(150,404)	137,797	343,569
Cash flows generated from operating activities	(581,406)	(781,963)	(746,809)	16,083

18. Business combinations

Acquisition of Nanoco Technologies Limited

On 27 June 2006, Nanoco Tech plc completed the acquisition of Nanoco Technologies Limited. This transaction was accounted for under the "pooling of interest" method.

Nanoco Technologies Limited is a wholly owned legal subsidiary of Nanoco Tech plc.

At the date of the acquisition, the cost of acquisition and resulting merger reserve comprised:

	£
Purchase consideration	
Cash paid	223,278
Direct costs relating to the acquisition	42,155
Fair value of shares issued	1,489,231
Total purchase consideration	1,754,664
Analysed as follows:	
Share capital and reserves at date of transaction	470,195
Costs associated with the transaction	42,155
Merger reserve	1,242,314
	1,754,664

19. Commitments

Operating lease commitments

The Company leases premises under non-cancellable operating lease agreements. The future aggregate minimum lease and service charge payments under non-cancellable operating leases are as follows:

	2008 £	2007 £	2006 £
Land and buildings:			
Expiring in more than five years	100,000	100,000	–

20. Related party transactions

The financial statements include the financial statements of Nanoco Tech plc and the subsidiary listed:

Name	Country of incorporation	% equity interest
Nanoco Technologies Limited	UK	100

Nanoco Tech plc is the legal parent entity.

Terms and conditions of transactions with related parties:

There are no sales to related parties. Purchases from related parties are made at normal market prices. Outstanding balances at the year end are unsecured, interest free and settlement occurs in cash.

20. Related party transactions (continued)

Included within borrowings is an amount of £538,333 (2007: £600,000, 2006: Nil) owing to The University of Manchester, a shareholder in Nanoco Tech plc. There is a formal interest-bearing loan agreement in place which confirms that the loan is wholly repayable by 2017.

During the year ended 31 July 2008, consultancy fees of £36,000 (2007: £36,000, 2006: £14,000) have been charged through the income statement in respect of Paul O'Brien, a director of the Company. There are no outstanding consultancy fees as at 31 July 2008 (2007: Nil, 2006: £3,000).

During the year ended 31 July 2008, monitoring fees of £16,867 (2007: £109,633) have been charged through the income statement in respect of Ora Capital Partners plc, a shareholder in Nanoco Tech plc. There are no amounts included within prepayments as at 31 July 2008 (2007: £16,867).

During the year ended 31 July 2008, monitoring fees of £13,145. (2007: £11,666, 2006: £Nil) have been charged through the income statement in respect of Aquarius Equity Partners Limited. As at 1 July 2008 outstanding monitoring fees amounted to £12,500 (2007: Nil, 2006: £Nil). Aquarius Equity Partners Limited is the manager of a seed fund, which is a shareholder in Nanoco Tech plc.

The key management are also directors in the company. Details of management compensation are given in Note 7, directors' emoluments. These emoluments are all short-term emoluments.

21. Financial instruments

The Group's principal financial liabilities comprise trade payables and loans given. The main purpose of these financial liabilities is to raise finance for the Group's operations. The Group has various financial assets such as trade receivables and cash and short-term deposits, which arise directly from its operations.

The Group does not enter into derivative transactions such as interest rate swaps and forward currency contracts.

The main risks arising from the Group's financial instruments are credit risk and foreign currency risk. The Board of Directors reviews and agrees policies for managing each of these risks which are summarised below.

Other loans are subject to interest at base rate plus 2 per cent., however as the company's cash deposits which attract interest at floating rates, are of a greater amount, any increase in base rate and thus interest payable would be more than offset by higher interest income.

Credit risk

The Group trades only with recognised, creditworthy third parties. Receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. The maximum exposure is the carrying amount as disclosed in Note 13. There are no significant concentrations of credit risk within the Group.

With respect to credit risk arising from the other financial assets of the Group, which comprise cash and cash equivalents, the Group's exposure to credit risk arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these instruments.

Foreign currency risk

The Group has transactional currency exposures. Such exposure arises from sales or purchases in currencies other than the functional currency. There are no material sensitivities which require disclosure as assets held in foreign currency are only held for short periods.

21. Financial instruments (continued)

Maturity profile

Set out below is the maturity profile of the Group's financial liabilities at 31 July 2008 based on contractual undiscounted payments.

2008	Less than 3 months £	3 to 12 months £	1 to 5 years £	Greater than 5 years £	Total £
Financial liabilities					
Trade payables	149,353	–	–	–	149,353
Other loans	15,833	47,500	253,333	221,667	538,333
	165,186	47,500	253,333	221,667	687,686

2007	Less than 3 months £	3 to 12 months £	1 to 5 years £	Greater than 5 years £	Total £
Financial liabilities					
Trade payables	451,007	–	–	–	451,007
Other loans	15,000	46,667	253,333	285,000	600,000
	466,007	46,667	253,333	285,000	1,051,007

2006	Less than 3 months £	3 to 12 months £	1 to 5 years £	Greater than 5 years £	Total £
Financial liabilities					
Trade payables	57,488	–	–	–	57,488
	57,488	–	–	–	57,488

The Directors do not consider that the business is significantly exposed to liquidity risks due to the Group having significant cash reserves and having loans with fixed repayment terms.

Cash deposits, which are held in sterling, are fixed over periods ranging from one month to one year.

PART VII

UNAUDITED PRO FORMA STATEMENT OF CONSOLIDATED NET ASSETS OF THE ENLARGED GROUP

The unaudited pro forma financial information below has been prepared to illustrate the impact of the transaction on the consolidated balance sheet of Evolutec Group plc as if the transaction had occurred on 31 December 2008. The unaudited pro forma financial information has been prepared for illustrative purposes only, and because of its nature, addresses a hypothetical situation and, therefore, does not represent Evolutec Group plc's actual financial position or results. No adjustments have been made to take account of the trading or other changes in the financial position of Evolutec Group plc or other changes in the financial position of Evolutec Group plc after 31 December 2008. In addition, no adjustments have been made to take account of trading or other changes in the financial position of Nanoco after 31 July 2008 or to reflect any goodwill that may arise on the transaction. The only adjustment made is to allow for the estimated expenses of the proposals of £425,000.

	Evolutec 31 December 2008 £'000	**Nanoco 31 July 2008 £'000**	**Adjustments £'000**	**Pro forma £'000**
Assets				
Non-current assets				
Plant and equipment	–	1,151	–	1,151
Intangible assets	–	279	–	279
	–	1,430	–	1,430
Current assets				
Inventories	–	9	–	9
Trade and other receivables	85	383	–	468
Cash and cash equivalents	6,033	2,527	(425)	8,135
	6,118	2,919	(425)	8,612
Total assets	6,118	4,349	(425)	10,042
Liabilities				
Current liabilities				
Trade and other payables	(88)	(379)	–	(467)
Short- term financial liabilities	–	(63)	–	(63)
	(88)	(442)	–	(530)
Non-current liabilities				
Long term financial liabilities	–	(475)	–	(475)
Total liabilities				
Net assets	6,030	3,432	(425)	9,037

PART VIII

INFORMATION ON THE CONCERT PARTY

SECTION A

1. Responsibility Statement

Each of the members of the Concert Party accept responsibility for the information contained in this document relating to themselves. To the best of the knowledge and belief of each of the members of the Concert Party (who have taken all reasonable care to ensure that such is the case) the information contained in this document for which they are respectively responsible (as above) is in accordance with the facts and does not omit anything likely to affect the import of such information.

2. Members of the Concert Party

The Concert Party comprises ORA Capital, ORA Guernsey, James Lawrence Ede-Golightly and Michael Anthony Bretherton.

ORA Guernsey is a wholly owned subsidiary of ORA Capital.

James Lawrence Ede-Golightly and Michael Anthony Bretherton are directors of ORA Capital and holders of Nanoco Shares and as such are being treated, for the purposes of the Takeover Code, to be acting in concert with ORA Guernsey.

There are no relationships (personal, financial or commercial), arrangements or understandings between the Concert Party and any of the Directors (or their close relatives or related trusts).

There are no relationships (personal, financial or commercial), arrangements or understandings between the Concert Party and any of the Shareholders or any person who is, or is presumed to be, acting in Concert with any such Shareholder.

2.1 ORA Guernsey and ORA Capital

ORA Guernsey is a company incorporated and domiciled in Guernsey and is a wholly owned subsidiary of ORA Capital.

ORA Capital is a holding and management company, incorporated and domiciled in the UK, the principal activity of which is the development and growth of trading businesses within the technology, resources and financial services sectors. ORA Capital may also develop businesses in other sectors that provide appropriate value enhancing opportunities.

2.2 James Lawrence Ede-Golightly

James graduated in Economics from St John's College, Cambridge. He joined Merrill Lynch Investment Managers where he worked as an analyst covering European credit and equity markets. James subsequently joined Commerzbank as an analyst and trader within the Special Situations proprietary trading team. James is a CFA Charter holder and a non-executive director of Obtala Resources plc. James joined ORA Capital on incorporation and was appointed to the ORA board in October 2007.

2.3 Michael Anthony Bretherton

Michael will join the board of Evolutec upon Completion. Further information on Michael can be found in paragraph 14 of Part I of this document.

3. Concert Party interests in Evolutec

Following the issue of the Consideration Shares, the Concert Party would be interested in 70,630,848 Ordinary Shares representing 38.37 per cent. Of the Enlarged Issued Share Capital.

The relevant interests of the members of the Concert Party and their maximum potential controlling position, now and following completion of the Proposals, will be as follows;

	Number of Shares in Evolutec	Percentage holding in Evolutec	Number of Shares in Nanoco	Percentage holding in Nanoco	Number of Consideration Shares	Total number of Shares in the Company following Completion	Percentage of Shares in the Company following Completion
ORA Guernsey	Nil	Nil	14,702,437	42.30	66,896,088	66,896,088	36.34
ORA Capital*	2,870,260	11.06	Nil	Nil	Nil	2,870,260	1.56
Michael Anthony Bretherton	Nil	Nil	50,000	0.14	227,500	227,500	0.12
James Lawrence Ede-Golightly	Nil	Nil	140,000	0.40	637,000	637,000	0.35
Total	**2,870,260**	**11.06**	**14,892,437**	**42.84**	**67,760,588**	**70,630,848**	**38.37**

* ORA Capital has a contract for difference interest in Evolutec over 2,870,260 Ordinary Shares representing 11.06 per cent. of the issued share capital of the Company. This contract does not give ORA Capital any voting rights or any option to purchase these Ordinary Shares in the future.

4. Information on ORA Guernsey and ORA Capital

4.1 Directors

The Directors of ORA Guernsey are as follows:

Marlborough Trust Company Limited
Marlborough Nominees Limited
James Lawrence Ede-Golightly

The Directors of ORA Capital are as follows:

Richard Ian Griffiths (*Executive Chairman*)
Michael Anthony Bretherton (*Finance Director*)
James Lawrence Ede-Golightly (*Executive Director*)
Beatrice Hannah Millicent Hollond (*Non-executive Director*)

4.2 Incorporation and registered office

4.2.1 ORA Guernsey was incorporated and registered in Guernsey with registered number 49949 on 23 January 2009.

4.2.2 ORA Guernsey is domiciled in Guernsey. The registered office and principal place of business of ORA Guernsey Limited is Albert House PO Box 19, South Esplanade St Peter Port Guernsey, GY1 3AJ.

4.2.3 ORA Guernsey's principal activity is that of a holding company.

4.2.4 ORA Capital was incorporated and registered in England and Wales with registered number 5614046 on 7 November 2005. On 17 April 2007 ORA Capital was admitted to trading to AIM.

4.2.5 ORA Capital is domiciled in the United Kingdom. The registered office and principal place of business of ORA Capital, James Lawrence Ede-Golighty and Michael Anthony Bretherton is Martin House, 26-30 Old Church Street, London, SW3 5BY.

4.2.6 ORA Capital is a holding and management company, the principal activity of which is the development and growth of trading businesses within the technology, resources and financial services sectors. ORA Capital may also develop businesses in other sectors that provide appropriate value enhancing opportunities.

4.3 Share Capital

4.3.1 ORA Guernsey has an unlimited authorised share capital, of which two ordinary shares had been issued to ORA Capital at the date of this document.

4.3.2 ORA Capital has an authorised share capital of £1,750,000 divided into 175,000,000 ordinary shares of 1 pence each of which 100,000,000 had been issued at the date of this document.

4.4 Material change

Save as disclosed in this document, there have been no material changes in the financial or trading position of ORA Guernsey and ORA Capital since incorporation and 31 January 2008 (the date to which the latest audited accounts of ORA Capital were prepared).

4.5 Interests and Dealings in Evolutec Shares

4.5.1 ORA Capital hold a contract for difference ("CFD") interest in 2,870,260 Evolutec shares held through Cantor Fitzgerald Europe ("Cantor") representing 11.06 per cent. of the issued share capital of the Company. This holding was purchased over 12 months prior to the date of this document. The CFD contract with Cantor does not give ORA Capital any voting rights or any option to own these Evolutec Shares in the future.

ORA Capital had previously held a CFD interest in an additional 2,915,339 Evolutec shares held through Kaupthing Singer and Friedlander Limited ("KSF"). Dealings in these positions were frozen on 8 October 2008 when KSF entered administration and have since been closed out by the administrator.

This former CFD interest in 2,915,339 shares was built up by purchases of 1,600,339 shares prior to December 2007 and 1,315,000 shares between December 2007 and April 2008. The last CFD entered into by ORA Capital over 125,000 Evolutec shares took place on 28 April 2008 at a price of 19.375 pence per Evolutec share. The CFD contract with KSF did not give ORA Capital any voting rights or any option to own the shares in the future. All of these holdings were purchased prior to any discussions between Evolutec and Nanoco.

4.5.2 save as disclosed in this document, as at close of business on 24 February 2009 (being the latest practicable date prior to the posting of this document), neither any member of the Concert Party nor any of its associates (including any director of ORA Capital or ORA Guernsey who is not himself a member of the Concert Party) had any interest, directly or indirectly, in relevant Evolutec Shares, nor has any such person borrowed, lent or dealt in relevant Evolutec Shares during the 12 month period prior to the date of this document.

4.5.3 further information required by the Takeover Code is set out in paragraph 3 of Part IX of this document.

4.6 Material contracts

The following contracts, not being contracts entered into in the ordinary course of business, have been entered into by ORA Capital or an ORA Capital subsidiary within the two years immediately preceding the date of this document and are, or may be, material:

4.6.1 on 27 January 2009, ORA Capital announced details of the acquisition of its entire issued capital by ORA Capital Partners Limited ("New ORA"); a company limited by shares incorporated in Guernsey with registered number 49907, to be effected by way of a scheme of arrangement. If the scheme of arrangement is implemented, New ORA will become the new holding company of ORA Capital and its subsidiary undertakings through a High Court approved scheme of arrangement under sections 895 to 899 of the Companies Act.

Following the implementation of the scheme of arrangement, an application will be made for New ORA's shares to be admitted to trading on AIM. There will be no substantive changes to corporate governance and investor protection measures. In particular, the Takeover Code will apply to New ORA and New ORA intends to comply with the Combined Code to the same extent that ORA Capital does currently. If the scheme of arrangement is approved and becomes effective, it will result in ORA Capital shareholders holding New ORA shares in precisely the same proportions in which they hold ORA Capital shares immediately prior to the scheme of arrangement becoming effective and in ORA Capital becoming a wholly-owned subsidiary of New ORA.

4.6.2 On 27 January 2009, ORA Capital Partners Limited ("New Ora") entered into an agreement with Smith & Williamson pursuant to which New ORA appointed Smith & Williamson to act as nominated adviser and broker to New ORA, from the time of its admission to trading on AIM, subject to termination on the giving of three months' notice by either party. In consideration of its services New ORA will pay Smith & Williamson an annual retainer.

4.6.3 a placing agreement dated 10 April 2007 between ORA Capital (1), Smith & Williamson (2), Singer Capital Markets Limited ("Singer" then incorporated as Kaupthing Singer & Friedlander Capital Markets Limited) (3) and the ORA Capital Directors (4) (the "Placing Agreement'') under which Singer agreed to use its reasonable endeavours to procure places on behalf of ORA Capital to subscribe for ORA Capital shares at the placing price of 120p. The directors of ORA Capital at the time the agreement was entered into gave certain representations, warranties and indemnities as to the accuracy of the information contained in the admission document dated 10 April 2007 and other matters in relation to ORA Capital and its business. This agreement provided that those directors agreed not to dispose of any interest in their ORA Capital Shares for a period of two years from the date of admission of ORA Capital, save in the event of an intervening court order, a takeover offer relating to ORA Capital's shares becoming or being declared unconditional or on the death of the director. This agreement has been supplemented by a supplemental agreement dated 27 January 2009 entered into between ORA Capital (1), New ORA (2), Smith & Williamson (3) and the ORA Capital directors (4) (whereby, conditional on the admission of New ORA to AIM taking place on or before 30 June 2009 the lock-in arrangements described above accepted by the ORA Capital directors under the Placing Agreement will apply to the New ORA shares to be received by them pursuant to the scheme of arrangement (and not to the ORA Capital shares currently held by them). The lock-in arrangements described above expire on 17 April 2009 and, accordingly, the ORA Capital directors will be required to retain their New ORA shares until 17 April 2009. The supplement agreement provides that David Norwood, who was a director of ORA Capital at the time of its admission to AIM, but is no longer an ORA Capital director, is released from his obligations under the Placing Agreement once the supplemental agreement becomes unconditional.

4.6.4 on 10 April 2007 ORA Capital entered into an agreement with Smith & Williamson (the "2007 Nominated Adviser Agreement"), pursuant to which ORA Capital appointed Smith & Williamson to act as nominated adviser to ORA Capital for a fixed period of twelve months from the date of the agreement and thereafter subject to termination on the giving of three months' notice by either party. In consideration of its services, ORA Capital pays Smith & Williamson an annual retainer. An addendum to the 2007 Nominated Adviser Agreement, dated 23 January 2009 ("the Addendum"), appointed Smith & Williamson to also act as broker to ORA Capital. The 2007 Nominated Adviser Agreement and the Addendum terminate on the delisting of ORA Capital from AIM.

4.6.5 on 10 April 2007 ORA Capital entered into an agreement with Singer (the "2007 Broker Agreement"), pursuant to which ORA Capital appointed Singer to act as financial adviser and broker to ORA Capital. Such appointment was subject to termination by either party on the giving of 10 days' notice. The 2007 Broker Agreement was terminated by ORA Capital on 23 January 2009.

4.6.6 an agreement dated 28 March 2007 made between Oxford Advanced Surfaces Group plc ("OAS") (then incorporated as Kanyon Plc) (1) and ORA Capital, Richard Griffiths, Barnard Nominees Limited, David Norwood, Alan Aubrey, James Ede Golightly, Michael Bretherton and Thames Investment Club (together the ''Solar Labs Vendors'') (2) whereby OAS agreed to purchase the entire issued share capital of Oxford Energy Technologies Limited ("OETL"). The consideration was approximately £4.3 million (which was be satisfied by the allotment by OAS of 433,841,307 new ordinary shares in OAS to the Solar Labs Vendors credited as fully paid at 1p per share. The agreement contained restrictive covenants from the Solar Labs Vendors. The agreement contained certain warranties and indemnities from the Solar Labs Vendors to OAS. Such warranties were given on a several basis. The agreement contained certain warranties and indemnities from OAS to the Solar Labs Vendors. The agreement contained a maximum liability of the Solar Labs Vendors for breach of the warranties given by them and a maximum liability of OAS for breach of the warranties given by it. The liability of the Solar Labs Vendors and of OAS under the warranties given by each of them ceased three months after the publication of the audited accounts of OAS and its subsidiaries for a period which ended not earlier than 30 September 2007.

4.6.7 lock in agreements dated 23 March 2007 between Zimmerman Adams (1), Hichens Harrison (2), OAS (3) and each of Richard Griffiths, David Norwood, Alan Aubrey, Barnard Nominees Limited and ORA Capital (4) pursuant to which such persons agreed with Zimmerman Adams, Hichens Harrison and OAS have undertaken to OAS, Zimmerman Adams and Hichens Harrison that they would not sell or dispose of, except in certain limited circumstances (as permitted by the AIM Rules), any interest in ordinary shares in OAS held by them at any time before the first anniversary of completion of the acquisition of Solar Lab plc, save in certain limited circumstances and, for the 12 months immediately following, will effect a sale only through the brokers for the time being of OAS with a view to maintaining an orderly market in the ordinary shares in OAS.

4.6.8 a relationship agreement dated 3 October 2006 made between OAS (then incorporated as Kanyon plc)) (1) and ORA Capital (2), pursuant to its terms ORA Capital agreed: to exercise its rights as a shareholder to ensure that all transactions, relationships and agreements between OAS and ORA Capital or any associate of ORA Capital (as defined in Appendix I to the Listing Rules of the FSA) are on arm's length terms; that neither ORA Capital nor its associates would acquire, agree to acquire or announce any intention to acquire shares in OAS nor make a general offer for all or part of the share capital of OAS; to give OAS 2 days notice of any intention of ORA Capital, or an associate, to dispose of any interest in the share capital of OAS which would reduce ORA Capital and its associates aggregate shareholding to less than 25 per cent.; to procure (as far as it is able) that "Non-Independent Directors" (as defined in the agreement do not vote at a board meeting of OAS on any resolution relating to any proposed contract or arrangement with ORA Capital and/or its associates; and to procure (so far as it is able) that it will not vote at meetings of shareholders of OAS on any resolution relating to any proposed contract or arrangement with ORA Capital and/or its associates. The relationship agreement is effective for so long as ORA Capital, together with its associates, hold (whether directly or indirectly) in aggregate, shares in the capital of OAS representing 25 per cent. or more of OAS's entire issued ordinary share capital.

On 23 March 2007 OAS and ORA Capital entered into a new relationship agreement (the "First Restated and Amended OAS Relationship Agreement") which replaced the relationship agreement dated 3 October 2006. The new relationship agreement was on the same substantive terms as the agreement dated 3 October 2006 except: (i) it reflects the ongoing investment strategy of OAS; and (ii) David Norwood, Byron Lloyd and Michael Bretherton will all be deemed to be non-independent directors for the purposes of the new relationship agreement.

On 12 December 2007 OAS and ORA Capital entered into a restated and amended relationship agreement dated (the "Restated OAS Relationship Agreement") pursuant to which ORA Capital and OAS agreed to amend and replace the terms of the First Restated and Amended OAS Relationship Agreement. The Restated OAS Relationship Agreement amends the business activity which OAS would be carrying out, the authorised share capital of OAS and removed Mr Lloyd from its remit as he ceased to be a director of OAS.

4.6.9 a subscription agreement dated 12 December 2007 between OAS (1) and ORA Capital (2) under which ORA Capital agreed to subscribe for 12,000,000 ordinary shares in OAS at a price of 25 pence per share. The subscription agreement contained certain warranties from OAS and various confirmations and warranties from the ORA Capital.

4.6.10 a relationship agreement dated 12 December 2006 made between Oxeco plc ("Oxeco") (1) and ORA Capital (2), pursuant to its terms which ORA Capital had agreed: to exercise its rights as a shareholder to ensure that all transactions, relationships and agreements between Oxeco and ORA Capital or any associate of ORA Capital (as defined in Appendix I to the Listing Rules of the FSA) were on arm's length terms; that neither ORA Capital nor its associates would acquire, agree to acquire or announce any intention to acquire shares in Oxeco nor make a general offer for all or part of the share capital of Oxeco; to give Oxeco two days' notice of any intention of ORA Capital, or an associate, to dispose of any interest in the share capital of Oxeco which would reduce ORA Capital and its associates aggregate shareholding to less than 25 per cent.; to procure (as far as it is able) that "Non-Independent Directors" (as defined in the agreement) do not vote at a board meeting of Oxeco on any resolution relating to any proposed contract or arrangement with ORA Capital and/or its associates; and to procure (so far as it is able) that it would not vote at meetings of shareholders of Oxeco on any resolution relating to any proposed contract or arrangement with ORA Capital and/or its associates. The relationship agreement was to be effective for so long as ORA Capital, together with its associates, hold (whether directly or indirectly) in aggregate, shares in the capital of Oxeco representing 25 per cent. or more of Oxeco's entire issued ordinary share capital.

On 23 March 2007 Oxeco and ORA Capital entered into a new relationship agreement which replaced the relationship agreement dated 12 December 2006. The new relationship agreement was on the same substantive terms as the agreement dated 12 December 2006 except: (i) it reflects the ongoing investment strategy of Oxeco; and (ii) David Norwood and Michael Bretherton will both be deemed to be non-independent directors for the purposes of the new relationship agreement.

4.6.11 a share exchange agreement dated 29 February 2008 between ORA Capital and others (1), Obtala Limited (2) and Obtala Resources plc ("Obtala") (3) pursuant to which Obtala acquired the entire issued share capital of Obtala Limited for a total consideration of £18,000,000 satisfied by the issue by Obtala of 159,999,998 ordinary shares in Obtala to the sellers of Obtala Limited credited as fully paid at 11.25 pence per share such that the issued share capital of Obtala immediately subsequent to the share exchange replicated (by reference to the number of shares held by each shareholder) the issued share capital of Obtala Limited immediately prior to the share exchange agreement. Under the terms of the share exchange agreement, the sellers of Obtala Limited gave limited warranties as to title to the shares they held in Obtala Limited.

4.6.12 lock-in agreement dated 17 April 2008 between Obtala, Zimmerman Adams and ORA Capital pursuant to which ORA Capital agreed that they would not (save in certain specific circumstances in accordance with the AIM Rules) dispose of, or agree to dispose of any ordinary shares in Obtala or interests in ordinary shares in Obtala for a period of one year following the admission of Obtala to AIM, and then for a further period of one year thereafter, to only dispose of ordinary shares in Obtala through Obtala's broker from time to time, in a such manner as the broker may reasonably require in order to maintain a orderly market in the ordinary shares in Obtala.

4.6.13 an investment agreement dated 10 March 2007 between Nanoco (1), Paul O'Brien, Nigel Pickett and Michael Edelman (together, the "Managers") (2), and The North West Seed Fund LP, The University of Manchester, Imperial College Innovations Limited, UVL Investments Ltd, The University of Manchester, The North West Business Investment Scheme and ORA Capital (together, the "Original Investors") together with James Ede-Golightly, David Norwood, Michael Bretherton, Peter Rowley and Mitsubishi UFJ Capital Co Limited (3) governing the business and affairs of Nanoco. The agreement contains lock-in provisions for the Managers and contained drag-along and tag-along rights which are triggered when there is a sale of 75 per cent. or more of the issued share capital of Nanoco. This agreement superseded and replaced the investment agreement dated 27 June 2006 which contained lock-in provisions for certain shareholders and contains drag-along and tag-along rights which are triggered when there is a sale of 75 per cent. or more of the issued share capital of Nanoco.

4.6.14 conditional upon Admission, a relationship agreement to be entered into between Evolutec (1) and ORA Guernsey (2), pursuant to which ORA Guernsey will agree: to exercise its rights as a shareholder to ensure that all transactions, relationships and agreements between the Company and ORA Guernsey or any associate of ORA Guernsey (as defined in Appendix I to the Listing Rules of the FSA) are on arm's length terms; that neither ORA Guernsey nor its associates would acquire, agree to acquire or announce any intention to acquire shares in the Company nor make a general offer for all or part of the share capital of the Company; to give the Company two days' notice of any intention of ORA Guernsey, or an associate, to dispose of any interest in the share capital of the Company which would reduce ORA Guernsey and its associates aggregate shareholding to less than 25 per cent.; to procure (as far as it is able) that "Non-Independent Directors" (as defined in the agreement) do not vote at a board meeting of the Company on any resolution relating to any proposed contract or arrangement with ORA Guernsey and/or its associates; and to procure (so far as it is able) that it would not vote at meetings of shareholders of the Company on any resolution relating to any proposed contract or arrangement with ORA Guernsey and/or its associates. The relationship agreement will be effective for so long as ORA Guernsey, together with its associates, hold (whether directly or indirectly) in aggregate, shares in the capital of the Company representing 25 per cent. or more of the Company's entire issued ordinary share capital.

SECTION B

1. Financial information on ORA Capital

1.1 Source of Financial Information

The financial information set out in this Part XIII does not constitute full statutory financial statements within the meaning of Section 240 of the Act. The financial information has been extracted without material adjustment from the audited consolidated financial statements of ORA and its subsidiaries for the year ended 31 January 2008, the 14 months and 23 days ended 31 January 2007 and the unaudited six month period ended 31 July 2008.

1.2 ORA Capital Financial Statements

Group Income Statement

	Audited 14 months and 23 days ended 31 January 2007 £'000	Audited year ended 31 January 2008 £'000	Unaudited six month period ended 31 July 2008 £'000
Revenue	1,759	42,429	40,764
Administrative expenses	(501)	(2,134)	(2,035)
Depreciation charges	(27)	(122)	(75)
Net operating expenses	(528)	(2,256)	(2,110)
Operating profit	1,231	40,173	38,654
Net interest income/(expense)	779	789	(140)
Taxation	(602)	(429)	(334)
Profit/(loss) for the period from continuing operations	1,408	40,533	38,180
Profit/(loss) after tax from discontinued operations	(11)	58	–
Profit for the period	1,397	40,591	38,180
Attributable to:			
Equity holders of parent	1,426	40,475	37,880
Minority interest	(29)	116	300
	1,397	40,591	38,180
Earnings per share			
Basic and diluted on profit for the period	2.68p	43.08p	37.88p
Basic and diluted on profit from continuing operations	2.70p	43.03p	37.88p

Group Balance Sheet

	Year to 31 January 2008 £'000
Assets	
Non-current assets	
Investment portfolio	60,283
Property, plant and equipment	503
Intangible assets – goodwill	2,047
	62,833
Current assets	
Trade and other receivables	827
Investments in trading securities	3,964
Derivative trading assets	2,931
Cash and cash equivalents	44,863
	52,585
Total Assets	115,418
Liabilities	
Current liabilities	
Trade and other payables	(770)
Current tax liabilities	(372)
Derivatives trading liabilities	(3,822)
	(4,964)
Non-current liabilities	
Deferred tax liabilities	(46)
Total Liabilities	(5,010)
Net Assets	110,408
Equity	
Issued share capital	1,000
Share premium	65,554
Retained earnings	41,901
Equity attributable to equity holders of parent	108,455
Minority interest	1,953
Total Equity	110,408

Consolidated Cash Flow Statement

	Year to 31 January 2008 £'000
Operating Activities	
Operating profit from continuing operations	40,173
Profit before tax from discontinued operations	78
Adjustment for non- cash items:	
Depreciation of property, plant and equipment	122
Unrealised profit on partial disposal of subsidiary	(357)
Unrealised profit on deconsolidation disposals	(1,179)
Unrealised gain on revaluation of portfolio investments	(38,906)
Unrealised profits on other trading investments	(633)
Operating cash outflow	(702)
Purchase of trading securities	(2,037)
Increase in trade and other receivables	(667)
Increase in trade and other payables	621
Interest paid	(1,535)
Taxation paid	(613)
Net cash outflow from operations	(4,933)
Investing Activities	
Interest received	2,324
Purchases of property, plant and equipment	(463)
Purchase of portfolio investments	(10,413)
Sale of portfolio investments	310
Acquisitions of subsidiaries	(8,934)
Cash and bank in subsidiaries at acquisition	9,004
Cash and bank in deconsolidated subsidiaries	(9,227)
Net cash outflow from investing activities	(17,399)
Financing Activities	
Proceeds from issue of share capital	35,214
Expense of issue of share capital	(437)
Net cash inflow from financing activities	34,777
Increase in cash and cash equivalents	12,445
Cash and cash equivalents at start of period	32,418
Cash And Cash Equivalents At End Of Period	44,863

1.3 Accounting policies

Basis of Accounting

The financial statements have been prepared under the historical cost convention in accordance with International Financial Reporting Standards ("IFRS") as adopted in the EU.

Consolidation

The consolidated financial statements incorporate those of Ora Capital Partners Plc and all of its subsidiary undertakings for the year.

Subsidiaries

Subsidiaries are all entities over which the group has the power to govern the financial and operating policies generally accompanying a shareholding of more than half of the voting rights. The existence and effects of potential voting rights are considered when assessing whether the Group controls the entity. Subsidiaries are fully consolidated from the date control passes.

Associates and significant investments

Associates are entities over which the group has significant influence, but does not control, generally accompanied by a participating interest of between 20 per cent. and 50 per cent. in the voting rights.

Equity accounting is not applied for investments in associates which are instead held at fair value in the balance sheet. This treatment is permitted by IAS 28 "Investments in Associates" which allows investments held by entities which are akin to that of venture capital organisations to be excluded from its scope and for such investments in associates to be accounted for in accordance with IAS 39 Financial Instruments: Recognition and Measurement and designated at fair value through the income statement in line with the accounting policy applied to the Group's Investment Portfolio Assets as detailed below.

Revenue Recognition

Revenue is measured at the fair value of the consideration received or receivable in the normal course of business, net of discounts, VAT and other sales related taxes and is recognised to the extent that it is probable that the economic benefits associated with the transaction will flow in to the Group.

(i) Business portfolio return

Business portfolio return represents the sum of realised profit and losses over fair value on the disposal of investment portfolio assets and the movement in fair value of those investments and any related investment income received and receivable.

Realised profits and losses over value on the disposal of investments is the difference between the fair value of the consideration received less any directly attributable costs on the sale and the fair value of the investments at the start of the accounting period or acquisition date if later.

Unrealised profits and losses on the revaluation of investments is the movement in carrying value of investments between the start of the accounting period or acquisition date if later and the end of the accounting period.

Fee income earned from investee companies is recognised to the extent that it is probable that the economic benefit will flow in to the Group and the income can be reliably measured.

Dividends from investments are recognised when the Shareholders' rights to receive payment have been established.

(ii) Advisory fees

Fees for advisory work are recognised in the income statement when the related services are performed.

(iii) Financial services revenues

Financial service revenues comprise corporate finance fees and stockbroking commissions, together with profits and losses arising on sales of and positions held in the securities of customer companies from which securities have been received in settlement of corporate finance fees.

(iv) Financial trading income

Income from securities and derivatives trading activities comprises all realised gains and losses on trading and unrealised changes in the fair value of financial assets and liabilities held for trading, together with any related dividend income on positions held.

Investment Portfolio Assets

Investment assets that are held by the Group with a long-term view to the ultimate realisation of capital gains, are classified as investment portfolio assets and are stated at the ORA directors' estimate of their fair value on the following basis:

(i) Listed investments and quoted shares for which an active market exists are valued at closing bid-market price at the reporting date.

(ii) Unquoted investments are valued by the ORA directors as follows:

- new investments are generally valued at cost until the first set of accounts for a full financial period subsequent to investment, are received.
- other investments are valued based on an estimate of the fair value for the investee company derived using various methodologies which include applying an average sector earnings multiple to operating profits, valuation by reference to net asset base, sales basis and the price of recent subscriptions and investments made in the investee company.
- investments in companies that are still in a development phase and are incurring losses, are generally valued at cost unless there have been more recent benchmark subscriptions and investments which give a guide to fair value, or where there are factors that indicate an impairment in value has occurred.

Movements in the carrying value of investment portfolio assets between the start of the accounting period or acquisition date if later and the end of the accounting period, are recognised as unrealised profits and losses in the income statement.

Intangible Assets – Goodwill

Goodwill arising on consolidation of subsidiaries represents the excess of the fair value of the cost of acquisition over the Group's interest in the fair value of the identifiable assets and liabilities at the date of acquisition.

Goodwill is tested for impairment annually and whenever there is an indication that the asset may be impaired.

1.4 Material notes to ORA Capital's accounts

1.4.1. Revenue Analysis

ORA Capital

	Audited 14 months and 23 days ended 31 January 2007 £'000	Audited year ended 31 January 2008 £'000	Unaudited six month period ended 31 July 2008 £'000
Unrealised profits on revaluation of portfolio investments	60	38,906	41,775
Realised losses on portfolio investment disposals	–	–	(589)
Unrealised profit on partial disposal of subsidiary	–	357	(30)
Unrealised profit on deconsolidation of subsidiaries	–	1,179	–
Profit on disposal of shares in subsidiary	–	83	–
Gross portfolio return	60	40,525	41,156
Advisory fees and other revenues	234	158	71
Financial services revenues	–	1,562	2,438
Financial trading income	1,465	184	(2,901)
Total revenue	1,759	42,429	40,764

1.4.2. Investment Portfolio

	Unquoted Equity Shares £'000	Quoted Equity Shares £'000	Total Equity Shares £'000
Book value at 31 January 2007	3,221	–	3,221
Additions	1,820	8,593	10,413
Disposals	(310)	–	(310)
Transfer between quoted and unquoted	(500)	500	–
Transfers from investment in subsidiaries on deconsolidation	2,968	5,085	8,053
Unrealised (losses)/profits on the revaluation of investments	7,417	31,489	38,906
Book value at 31 January 2008	14,616	45,667	60,283

At 31 July 2008 the Group has portfolio investments where it holds 20 per cent. or more of the issued share capital of the following companies.

Undertaking	31 January 2008 Issued Capital per cent.
Ansco Petroleum Ltd	48.1
Nanoco Tech Plc	43.0
Obtala Resources Plc	37.1
Oxeco Plc	45.3
Oxford Advanced Surfaces Group plc	28.1

In addition, at 31 January 2008 the Group has within portfolio investments 5,000,000 units in the Rock Island Investments Limited fund which represented 49.7 per cent. of that fund.

1.5 Significant Change

ORA Capital and its subsidiaries note the volatility in equity markets, which has adversely impacted the value of the ORA quoted strategic holdings by approximately £16 million in the financial year to 31 January 2009. Whilst further losses have been incurred in the financial trading activities in line with the levels reported for the six months to 31 July 2008, ORA and its subsidiaries retain significant cash balances. ORA and its subsidiaries continue to take advantage of new investment opportunities and all of the principal trading companies within the business portfolio are well capitalised and making good progress on executing their respective business plans. The New ORA board remains confident that ORA and its subsidiaries can make considerable further progress through these difficult times. ORA and its subsidiaries continue to run a low cost base and retains the management disciplines and shareholder alignment around which it was founded.

PART IX

ADDITIONAL INFORMATION

1. RESPONSIBILITY

1.1 The Directors and the Proposed Directors, whose names appear on page 7 of this document, and the Company accept responsibility for the information contained in this document. To the best of the knowledge and belief of the Directors and Proposed Directors and the Company (who have taken all reasonable care to ensure that such is the case), 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. All the Directors and the Proposed Directors accept individual and collective responsibility for compliance with the AIM Rules. The Directors accept sole responsibility for the recommendations set out in paragraph 25 of Part I of this document.

1.2 Each of the members of the Concert Party accept responsibility for the information contained in this document relating to themselves. To the best of the knowledge and belief of each of the members of the Concert Party (who have taken all reasonable care to ensure that such is the case) the information contained in this document for which they are respectively responsible (as above) is in accordance with the facts and does not omit anything likely to affect the import of such information.

1.3 Ernst & Young LLP accepts responsibility for its reports contained in Parts V, VI and VII of this document. To the best of its knowledge and belief and having taken all reasonable care to ensure that such is the case the information contained in those reports is in accordance with the facts and does not omit anything likely to affect the import of such information.

2. THE COMPANY

2.1 The Company was incorporated and registered in England and Wales with registered number 5067291 on 9 March 2004 as a private company limited by shares under the name Newinco 338 Limited. On 29 April 2004, its name was changed to Evolutec Group Limited. On 17 June 2004, the Company re-registered as a public company limited by shares and changed its name to Evolutec Group plc.

2.2 The principal legislation under which the Company operates is the Acts and regulations made under the Acts. The liability of the Company's members is limited.

2.3 The Company is domiciled in the United Kingdom. The registered office and principal place of business of the Company is at 3 More London Riverside, London, SE1 2AQ where the telephone number is 020 7283 6000. Following Admission the registered office and principal place of business of the Company will be 46 Grafton Street, Manchester, M13 9NT where the telephone number is 0161 603 7900.

2.4 The Company is the holding company of the Group. The Company currently has one subsidiary, Evolutec Limited, details of which are set out below:

Name	*Authorised Share Capital*	*Country of Incorporation*	*Principal Activity*	*Percentage Owned by the Company*
Evolutec Limited	£7,000,000	England and Wales	Dormant	100

2.5 Following Completion, the Company will have three wholly owned subsidiaries, namely Evolutec Limited, as per paragraph 2.4 above and the Nanoco Companies, details of which are set out below:

Name of business	*Authorised Share Capital*	*Country of Incorporation*	*Principal Activity*	*Percentage Owned by the Company following the acquisition*
Nanoco Tech Public Limited Company	£10,000,000	England and Wales	Holding Company	100
Nanoco Technologies Limited	£454,286.66	England and Wales	Development of applications incorporating semi conductor nanoparticles	100

2.6 On the basis of the figures available as at 24 February 2009, and assuming that, by the date of Admission, no staff have left or joined the employment of any member of the Enlarged Group, the Enlarged Group will, immediately following Admission, employ 28 permanent staff who undertake the following categories of activity.

Activity	*As at 24 February 2009*
Management	4
Scientists	21
Other	3

3. SHARE AND LOAN CAPITAL

3.1 Set out below are details of the authorised and issued share capital of the Company (i) as at the date of this document and (ii) as it will be immediately following Admission:

	(i) At the date of this document		*(ii) Immediately following Admission*	
Ordinary Shares	*Number*	*Nominal value (£)*	*Number*	*Nominal value (£)*
Authorised	77,000,000	7,700,000	250,000,000	25,000,000
Issued	25,949,996	2,594,999.60	184,088,032	18,408,803.20

3.2 On incorporation, the authorised share capital of the Company was £1,000 divided into 1,000 Ordinary Shares of £1.00 each.

3.3 On incorporation, the issued share capital was £1 divided into one Ordinary Share.

3.4 On 29 April 2004, the Company resolved by written resolution that:

3.4.1 the authorised share capital of the Company be increased from £1,000 to £7,000,000 by the creation of 6,999,000 new ordinary shares of £1 each;

3.4.2 each of the issued and unissued ordinary shares of £1 each in the capital of the Company be subdivided into 10 Ordinary Shares of £0.10 each.

3.5 On 17 June 2004, the Company resolved by ordinary and special resolutions that:

3.5.1 the 70,000,000 issued and unissued ordinary shares of 10 pence each be consolidated so as to become 7,000,000 ordinary shares of £1 each;

3.5.2 each of the ordinary shares created pursuant to resolution 3.7.1 be sub-divided to and re-designated as one ordinary share of 10 pence and nine deferred shares of 10 pence each;

3.5.3 the Company's authorised share capital be increased from £7,000,000 to £14,000,000 by the creation of an additional 70,000,000 Ordinary Shares;

3.6 On 26 April 2006, the Company resolved by ordinary resolution that the authorised share capital of the Company be diminished from £14,000,000 to £7,700,000 by cancellation of 63,000,000 deferred shares of £0.10 each.

3.7 At the General Meeting the Shareholders will be asked to pass resolutions in relation to the Company's share capital to:

3.7.1 increase the Company's authorised share capital from £7,700,000 to £25,000,000 by the creation of 173,000,000 new Ordinary Shares;

3.7.2 authorise the Directors under Section 80 of the Act to allot Ordinary Shares and other relevant securities up to an aggregate nominal value of £21,406,944.72;

3.7.3 disapply the statutory pre-emption rights contained in Section 89(1) of the Act in connection with the allotment of the Consideration Shares, the Long Term Incentive Plan and otherwise up to 10 per cent. of the Enlarged Issued Share Capital.

3.8 As at 24 February 2009 (the latest practical date prior to the date of this document) there were no Ordinary Shares under option.

3.9 Following Admission there will be 8,317,400 Ordinary Shares under option.

3.10 The Ordinary Shares in issue following Admission will be in registered form and will be capable of being held in uncertificated form. In the case of Ordinary Shares held in uncertificated form, the Articles permit the holding and transfer of Ordinary Shares under CREST. CREST is a paperless settlement procedure enabling securities to be evidenced otherwise than by certificate and transferred otherwise than by written instrument. The Directors have applied for the Ordinary Shares to be admitted to CREST. The records in respect of Ordinary Shares held in uncertificated form will be maintained by Euroclear UK & Ireland Limited and the Company's registrar, Capita Registrars (details of whom are set out on page 8 of this document).

3.11 It is anticipated that, where appropriate, share certificates in respect of the Consideration Shares will be despatched by first class post by 14 May 2009. Temporary documents of title will not be issued. Prior to the despatch of definitive share certificates, transfers will be certified against the register.

3.12 The Ordinary Shares in issue following Admission will rank *pari passu* in all respects with the Existing Ordinary Shares including the right to receive all dividends and other distributions declared, made or paid after Admission on the Ordinary Share capital.

3.13 The International Security Identification Number ("ISIN") of the Ordinary Shares is GB00B01JLR99.

3.14 The legislation under which the New Ordinary Shares have been created is the Act and regulations made under the Act.

3.15 The Ordinary Shares are denominated in sterling.

3.16 Save as disclosed in this paragraph 3 and in paragraph 5 below, as at the date of this document:

3.16.1 the Company did not hold any treasury shares;

3.16.2 no shares have been issued otherwise than as fully paid;

3.16.3 the Company had no outstanding convertible securities, exchangeable securities or securities with warrants;

3.16.4 there are no acquisition rights and/or obligations over the authorised but unissued share capital of the Company and the Company has given no undertaking to increase its share capital; and

3.16.5 no capital of the Company is under option or is agreed, conditionally or unconditionally, to be put under option.

3.16.6 there are no shares in the Company not representing capital; and

3.16.7 there are no shares in the Company held by or on behalf of the Company itself or by subsidiaries of the Company.

3.17 The allotment and issue of the Consideration Shares will result in a dilution of approximately n per cent. to the holders of the Existing Ordinary Shares.

3.18 The following table lists the closing middle market quotations for Ordinary Shares (as derived from the AIM Appendix to the Daily Official List of the London Stock Exchange) for the first dealing day of each of the six months before the date of this document and on 24 February 2009 (the last practicable date prior to the publication of this document):.

Date	*Market Value (p)*
24 February 2009	21.00
2 February 2009	22.50
2 January 2009	25.00
1 December 2008	25.75
3 November 2008	25.75
1 October 2008	27.00
1 September 2008	25.75

3.19 Interests in Evolutec Shares

3.19.1 For the purposes of this paragraph 3.19:

(A) "acting in concert" has the meaning given in the Takeover Code;

(B) "arrangement" includes indemnity or option arrangements, and any agreement or understanding, formal or informal, of whatever nature, relating to securities which may be an inducement to deal or refrain from dealing;

(C) "associate" of any company means, unless otherwise stated:

(i) its parent, subsidiaries and fellow subsidiaries, and their associated companies, and companies of which such companies or associated companies (for this purpose ownership or control of 20 per cent. or more of the equity share capital of a company is regarded as the test of associated company status);

(ii) connected advisers and persons controlling, controlled by or under the same control as such connected advisers;

(iii) the directors (together with their close relatives and related trusts) of the company or any company covered in sub-paragraph (i); and

(iv) the pension fund of the company or any company covered in sub-paragraph (i);

(D) "connected adviser" has the meaning given in the Takeover Code;

(E) "control" means an interest, or interests, in shares carrying 30 per cent. or more of the voting rights attributable to the share capital of a company which are currently exercisable at a general meeting, irrespective of whether the holding or holdings give(s) *de facto* control;

(F) "dealing" has the meaning given in the Takeover Code

(G) "derivative" has the meaning given in the Takeover Code

(H) "exempt fund manager" has the meaning given in the Takeover Code;

(I) "exempt principal trader" has the meaning given in the Takeover Code;

(J) "interest" or "interests" in relevant securities shall have the meaning given in the Takeover Code and references to interests of ORA directors or interests of Evolutec directors in relevant securities shall include all interests, short positions and borrowings of any other person whose interests in shares the relevant ORA director or, as the case may be, the relevant Evolutec director, would be required to disclose pursuant to Part 22 of the 2006 Act;

(K) "relevant Evolutec securities" mean relevant securities (such term having the meaning given in the Takeover Code in relation to an offeree) of Evolutec including equity share capital of Evolutec (or derivatives referenced thereto) and securities convertible into, rights to subscribe for and options (including traded options) in respect thereof;

(L) "relevant ORA securities" mean relevant securities (such term having the meaning given in the Takeover Code in relation to an offeror) of ORA Capital and ORA Guernsey including equity share capital in ORA Capital and ORA Guernsey (or derivatives referenced thereto) and securities convertible into, rights to subscribe for and options (including traded options) in respect thereof; and

(M) "short position" means any short position (whether conditional or absolute and whether in the money or otherwise), including any short position under a derivative, any agreement to sell or any delivery obligation or right to require another person to purchase or take delivery;

3.19.2. Save as disclosed in this document:

(A) neither ORA Capital nor any of its subsidiaries had any interest in, right to subscribe in respect of, or any short position in relation to relevant Evolutec securities neither has ORA Capital nor any of its subsidiaries dealt for value in any relevant Evolutec or relevant ORA securities during the period from 1 February 2008;

(B) none of the ORA Capital or ORA Guernsey directors, their immediate families and related trusts and, insofar as is known to them or could with reasonable diligence be ascertained by them, persons connected (within the meaning of Part 22 of the 2006 Act) with the ORA Capital or ORA Guernsey directors, had any interest in, right to subscribe in respect of, or any short position in relation to relevant ORA securities, or relevant Evolutec securities nor has any such person dealt for value in any relevant ORA securities, or relevant Evolutec securities during the period from 1 February 2008;

(C) no person deemed to be acting in concert with ORA Capital or ORA Guernsey had any interest in, right to subscribe in respect of, or any short position in relation to relevant ORA securities, or relevant Evolutec securities nor has any such person dealt for value in any relevant ORA securities, or relevant Evolutec securities during the period from 1 February 2008;

(D) neither ORA Capital nor ORA Guernsey, nor any person acting in concert with ORA Capital or ORA Guernsey, has borrowed or lent any relevant ORA securities or relevant Evolutec securities during the period from 1 February 2008, save for any borrowed shares which have been either on-lent or sold;

(E) neither James Lawrence Ede-Golightly, his immediate family and related trusts and, insofar as is known to him or could with reasonable diligence be ascertained by him, persons connected (within the meaning of Part 22 of the 2006 Act) with him had any interest in, right to subscribe in respect of, or any short position in relation to relevant Evolutec securities, or

relevant ORA securities nor has any such persons dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(F) neither Michael Anthony Bretherton, his immediate family and related trusts and, insofar as is known to him or could with reasonable diligence be ascertained by him, persons connected (within the meaning of Part 22 of the 2006 Act) with him had any interest in, right to subscribe in respect of, or any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such persons dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(G) no person deemed to be acting in concert with James Lawrence Ede-Golightly or Michael Anthony Bretherton had any interest in, right to subscribe in respect of, or any short position in relation to relevant ORA securities, or relevant Evolutec securities nor has any such person dealt for value in any relevant ORA securities, or relevant Evolutec securities during the period from 1 February 2008;

(H) neither James Lawrence Ede-Golightly nor Michael Anthony Bretherton, nor any person acting in concert with them, has borrowed or lent any relevant ORA securities or relevant Evolutec securities during the period from 1 February 2008, save for any borrowed shares which have been either on-lent or sold; and

(I) no person who has an arrangement with the Concert Party or any person acting in concert with the Concert Party had any interest, right to subscribe in respect of or any short position in relation to relevant Evolutec securities, or relevant ORA securities, nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008.

3.19.3. Save as disclosed in this document, as at 24 February 2009 (the latest practicable date prior to the date of this document):

(A) no member of the Evolutec Group had any interest in, right to subscribe in respect of or any short position in relation to relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities or relevant ORA securities during the period from 1 February 2008;

(B) none of the Directors had any interest in, right to subscribe in respect of, or any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(C) no companies which are associates of Evolutec by virtue of sub-paragraph (i) of paragraph 3.8.1 (C) above had any interest, right to subscribe in respect of or any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(D) no pension funds of Evolutec (excluding, in either case, pension funds which are independently managed) or of any company which is an associate of Evolutec by virtue of sub-paragraph (i) of paragraph 3.19.1 (C) above, in either case, had any interest, right to subscribe in respect of or any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(E) no employee benefit trusts of Evolutec or of any company which is an associate of Evolutec by virtue of sub-paragraph (i) of paragraph 3.19.1 (C) above had any interest, right to subscribe in respect of or any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(F) no connected advisers (including any person controlling, controlled by or under the same control as any connected adviser (except for an exempt principal trader or an exempt fund manager)) to Evolutec, or to any company which is an associate of Evolutec by virtue of sub-paragraph (i) of paragraph 3.19.1 (C) above had any interest, right to subscribe in respect of any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008;

(G) no person who has an arrangement with Evolutec or of any company which is an associate of Evolutec by virtue of sub-paragraph (i) of paragraph 3.19.1 (C) above had any interest, right to subscribe in respect of or any short position in relation to relevant Evolutec securities, or relevant ORA securities nor has any such person dealt for value in any relevant Evolutec securities, or relevant ORA securities during the period from 1 February 2008; and,

(H) neither Evolutec, nor any person acting in concert with Evolutec, has borrowed or lent any relevant Evolutec securities save for any borrowed shares which have been either on-lent or sold.

4. MEMORANDUM AND ARTICLES OF ASSOCIATION

Memorandum of association

The principal objects of the Company are set out in paragraph 4 of its memorandum of association (which is available for inspection at the address specified in paragraph 18 of this Part IX) and include the carrying on of business as a general commercial company.

Articles of association

The Articles include provisions to the following effect:

4.1 *Dividends*

The Company may, by ordinary resolution, declare dividends in accordance with the respective rights of members, and may fix the time for payment of such dividends but no dividend shall exceed the amount recommended by the Directors. There are no fixed dates on which entitlement to dividend arises. Any dividend declared shall (as regards any shares not fully paid throughout the period in respect of which the dividend is paid) be apportioned and paid pro rata according to the amounts paid on the shares during any portion or portions of the period in respect of which the dividend is paid. Any dividend which remains unclaimed for a period of 12 years from the date when it becomes due for payment shall, if the Board so resolves, be forfeited and shall cease to remain owing by the Company.

4.2 *Distribution of assets on a winding up*

On a winding up (whether the liquidation is voluntary, under supervision or by the Court) the liquidator may, with the authority of an extraordinary resolution and any other sanction required by law: (i) divide among the members *in specie* the whole or any part of the assets of the Company; and/or (ii) vest the whole or any part of the assets in trustees on such trusts for the benefit of members as the liquidator, with the like authority, shall think fit but so that no member shall be compelled to accept any assets in respect of which there is any liability.

4.3 *Voting rights*

Subject to the Articles and to any special rights or restrictions as to voting for the time being attached to any class of shares in the Company, on a show of hands every member present in person shall have one vote and on a poll every member present in person or by proxy shall have one vote for every share held by him. A member present by proxy shall not be deemed to be present in person.

Any corporation which is a member of the Company may (by resolution of its board or other governing body) authorise any person to act as its representative at any meeting of the Company. A person so authorised shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it were an individual member including a power to vote on a show of hands or on a poll and to demand or concur in demanding a poll.

Unless the board of directors otherwise determines, a member shall not be entitled to vote at a general meeting either personally or by proxy or (if the member is a corporation) by authorised representative in respect of any share held by him or to exercise any other rights conferred by membership in relation to meetings of the Company if any call or other sum presently payable by him to the Company in respect of that share remains unpaid.

4.4 ***Variation of rights***

Whenever the share capital of the Company is divided into different classes of shares, then subject to the provisions of the Statutes, all or any of the rights attached to any class of shares in the Company may be varied or abrogated in such manner as those rights may provide for, or (if no provision is made) either with the consent of the holders of not less than three-quarters in nominal value of the issued shares of that class or with the authority of an extraordinary resolution passed at a separate meeting of the holders of the shares of that class (but not otherwise) and may be so varied or abrogated either whilst the Company is a going concern or during or in contemplation of a winding up. The provisions of the Articles relating to general meetings of the Company apply, *mutatis mutandis*, to such meetings except that the quorum shall be two persons holding or representing by proxy at least one-third in nominal value of the issued shares of the relevant class (but at an adjourned meeting any one holder of shares of the relevant class present in person shall be a quorum), any holder of shares of the class present in person may demand a poll and on a poll every such holder shall have one vote for every share of the class held by him.

4.5 ***Transfer of shares***

All transfers of certificated shares shall be effected by an instrument in any usual or common form, or in any other form acceptable to the board of directors. 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. The board of directors may, in its absolute discretion and without assigning any reason for its decision, refuse to register any transfer of a certificated share which is not a fully paid share and any transfer of a share on which the Company has a lien (provided that in the case of any class of shares which is admitted to trading on AIM the refusal does not prevent dealings in those shares from taking place on an open and proper basis).

Transfers of an uncertificated share shall be effected in accordance with the Statutes and the requirements and facilities of CREST (or any other "relevant system" approved under the Uncertificated Securities Regulations 2001).

In addition, the board of directors may, in its absolute discretion and without assigning any reason for its decision, decline to register the transfer of a certificated share unless the instrument of transfer:

(i) is in respect of only one class of share;

(ii) is duly stamped or adjudged or certified as not chargeable to stamp duty and is deposited at the registered office of the Company or at such other place as the board of directors may determine; and

(iii) (except where the shares are registered in the name of a market nominee and no certificate has been issued) is accompanied by the relevant share certificate and such other evidence as the board of directors may reasonably require to show the right of the transferor to make the transfer (and if the transfer is executed by some other person on his behalf, the authority of that person to sign).

The registration of transfers may be suspended and the register closed at such times and for such periods (not exceeding 30 days in any year) as the board of directors may from time to time determine and either generally or in respect of any class of shares, except that the registration of the transfer of any participating security may only be suspended as permitted by the Statutes.

4.6 ***Share capital, changes in capital and purchase of own shares***

The Company may from time to time by ordinary resolution increase its capital by such sum to be divided into shares of such amounts as the resolution shall prescribe. All new shares created under the Articles shall be subject to the provisions of the Statutes and of the Articles with reference to allotment, payment of calls, lien, transfer, transmission, forfeiture and otherwise and shall be unclassified unless otherwise provided by the Articles, by the resolution creating the shares or by the terms of allotment of the shares.

The Company may by ordinary resolution:

(i) consolidate, or consolidate and then divide, all or any of its share capital into shares of a larger amount that its existing shares;

(ii) cancel any shares which at the date of the passing of the resolution, have not been taken or agreed to be taken by any person and reduce the amount of its capital by the amount of the shares so cancelled;

(iii) sub-divide its shares or any of them into shares of smaller amount than is fixed by the memorandum of association or the Articles (subject to the provisions of the Statutes).

Subject to the Statutes and the rights attached to any class of shares, the Company may purchase any of its own shares (including redeemable shares).

Subject to the Statutes and any rights attached to any class of shares, the Company may by special resolution reduce its share capital or any capital redemption reserve, share premium account or other undistributable reserve in any manner.

4.7 ***Pre-emption rights***

In certain circumstances, Shareholders may have statutory pre-emption rights under the Acts in respect of the allotment of new shares in the Company. These statutory pre-emption rights would require the Company to offer new shares for allotment by existing Shareholders on a *pro rata* basis before allotting them to other persons. In such circumstances, the procedure for the exercise of such statutory pre-emption rights would be set out in the documentation by which such shares would be offered to Shareholders.

4.8 ***General meetings***

4.8.1 The Company shall hold an annual general meeting in accordance with the provisions of the Statutes.

4.8.2 The board of directors may convene an extraordinary general meeting whenever it thinks fit. An extraordinary general meeting shall also be convened by the board of directors upon requisition by members in accordance with the Statutes.

4.8.3 Notice of every general meeting (specifying, amongst other things, the date, time and place of the meeting and the general nature of the business to be transacted at the meeting) shall be given to all members, the directors and the auditors (other than those not entitled to receive such notice), and to each of the directors and the auditors.

4.8.4 The quorum for a general meeting is two members present in person or by proxy and entitled to vote.

4.8.5 The board of directors and, at any general meeting, the chairman of the meeting may make any arrangement and impose any requirement or restriction which it or he considers appropriate to ensure the security of the meeting. This may include requirements for evidence of identity to be produced by those attending, the searching of their personal property and the restriction of items which may be taken into the meeting place.

4.9 ***Appointment of directors***

4.9.1 Unless and until otherwise determined by the Company by ordinary resolution, there shall be a maximum of ten directors and a minimum of two directors.

4.9.2 Subject to the Articles, the Company may by ordinary resolution appoint any person either as an additional director or to fill a vacancy. The board of directors may also appoint any person as an additional director or to fill a casual vacancy. Any person appointed by the board of directors as a director will hold office only until the next annual general meeting of the Company and shall then be eligible for election.

4.10 ***Remuneration of directors***

4.10.1 The fees paid to the directors for their services must not exceed in aggregate £100,000 in any financial year, unless otherwise determined by ordinary resolution.

4.10.2 The salary or remuneration of any director who holds an executive office and who serves on any committee or acts as a trustee of a retirement benefits scheme or employees' share scheme or otherwise performs services which, in the opinion of the board of directors, are beyond the ordinary duties of a director may be paid such extra remuneration by way of salary, commission or otherwise as the board of directors may determine.

4.10.3 Each director is entitled to be repaid all proper and reasonable expenses incurred by him in attending and returning from meetings or otherwise in connection with the business of the Company or in the performance of his duties as a director.

4.11 ***Retirement and removal of directors***

4.11.1 At each annual general meeting of the Company, at least one-third of the directors (or if the number of directors is not three or an integral multiple of three, the number rounded up or down nearest to one-third) shall retire from office. In addition, any director who has been a director at each of the preceding two annual general meetings shall also retire. Each such director may, if eligible, offer himself for re-election. If the Company, at the meeting at which a director retires, does not fill the vacancy the retiring director shall, if willing, be deemed to have been reappointed unless it is resolved not to fill the vacancy or a resolution for the reappointment of the director is put to the meeting and lost.

4.11.2 The provisions of the Acts restricting the appointment of a director or requiring him to stop being a director because he has attained the age of 70 do not apply to the Company.

4.11.3 Without prejudice to the provisions of the Acts, the Company may by ordinary resolution remove any director before the expiration of his period of office and may by ordinary resolution appoint another director in his place.

4.12 ***Directors' interests***

4.12.1 Subject to the Acts and provided that he has disclosed to the directors the nature and extent of any interest, a director is able to enter into contracts or other arrangements with the Company, hold any other office (except auditor) with the Company or be a director, employee or otherwise interested in any company in which the Company is interested. Such a director shall not be liable to account to the Company for any profit, remuneration or other benefit realised by any such office, employment, transaction or arrangement.

4.12.2 Save as otherwise provided by the Articles, a director shall not vote on, or be counted in the quorum in relation to, any resolution of the board of directors concerning any contract, arrangement, or other proposal in which he (together with any person connected with him) is to his knowledge materially interested. Interests arising purely as a result of an interest in the Company's shares, debentures or other securities are disregarded. However, a director can vote and be counted in the quorum where the resolution relates to any of the following:

4.12.2.1 the giving of any guarantee, security or indemnity in respect of (i) money lent or obligations incurred by him or by any other person at the request of or for the benefit of the Company or any of its subsidiary undertakings or (ii) a debt or obligation of the Company or any of its subsidiary undertakings for which the director himself has assumed responsibility in whole or in part under a guarantee or indemnity or by the giving of security;

4.12.2.2 any contract concerning the subscription or purchase by him of shares, debentures or other securities of the Company under an offer or invitation to members or debenture holders of the Company, or any class of them, or to the public or any section of them;

4.12.2.3 any contract concerning any issue or offer of shares or debentures or other securities of or by the Company or any of its subsidiary undertakings, including participation in the underwriting or sub-underwriting of the offer;

4.12.2.4 any contract concerning another company in which he has a direct or indirect interest whether as an officer shareholder or otherwise, unless he holds an interest in shares representing one per cent. or more of any class of equity share capital, or the voting rights, in such company;

4.12.2.5 any contract for the benefit of employees of the Company or of any of its subsidiary undertakings which does not award the director any privilege or benefit not generally awarded to the employees to whom such contract or arrangement relates; and

4.12.2.6 any contract concerning the purchase or maintenance of any insurance policy for the benefit of any director or for persons who include directors.

4.12.3 A director shall not vote or be counted in the quorum on any resolution of the board of directors concerning his own appointment (including fixing or varying the terms of his appointment or its termination) or as the holder of any office or place of profit with the Company or any company in which the Company is interested.

4.12.4 The board of directors may authorise any matter proposed to it which, if not authorised, would involve a breach by a director of his duty to avoid conflicts of interest under the Statutes. Such provisions of the Articles do not apply where a conflict of interest arises in relation to a transaction or arrangement with the Company. The board of directors may make such authorisation subject to any limits or conditions it expressly imposes, but the authorisation is otherwise to be given to the fullest extent permitted. The authorisation may be terminated by the board of directors at any time.

4.13 ***Powers of the directors***

4.13.1 The business of the Company shall be managed by the board of directors, which, subject to the Statutes, the memorandum of association of the Company and any direction given by ordinary resolution may exercise all the powers of the Company.

4.13.2 Subject to the provisions of the Acts, the board of directors may exercise all the powers of the Company to borrow money, to mortgage or charge all or any part of its undertaking,

property and assets (present and future) and uncalled capital, and, subject to the Statutes, to issue debentures and other securities, and to give security, either outright or as collateral security for any debt, liability or obligation of the Company or of any third party. The board of directors shall restrict the borrowings of the Company and exercise all voting and other rights or powers of control exercisable by the Company in relation to its subsidiary undertakings, so as to secure that the aggregate principal amount outstanding in respect of borrowings by the Group shall not, without an ordinary resolution of the Company, exceed the greater of £25,000,000 and an amount equal to two and a half times the adjusted capital and reserves of the Company.

4.13.3 The board of directors may exercise all the powers of the Company to pay, provide or procure the grant of retirement, death or disability benefits, annuities or other allowances, emoluments, benefits or gratuities to any person who is, or has at any time been, a director of or employed by or in the service of the Company or of any company which is or was at some time (i) a parent undertaking of the Company, or (ii) a subsidiary undertaking of the Company, its parent undertaking, or (iii) otherwise associated with the Company or any such parent or subsidiary undertaking, or (iv) of any predecessor in business of the Company or any such parent or subsidiary undertaking or associate ("Relevant Company") and to the families and other relatives and dependants of any such person.

4.14 ***Directors' indemnity and insurance***

4.14.1 Subject to the Acts, every director or other officer of the Company is entitled to be indemnified out of the funds of the Company against all costs, charges, losses, expenses and liabilities incurred by him for negligence, default, breach of duty or breach of trust or otherwise in relation to the affairs of the Company or of an associated company, or in connection with the activities of the Company or an associated company as trustee of an occupational pension scheme.

4.14.2 The board of directors may purchase or maintain insurance for the benefit of any person who is or was at any time a director or officer of a Relevant Company or trustee of any pension fund or retirement, death or disability scheme for the benefit of any employee of a Relevant Company or employees' share scheme in which employees of the Relevant Company are interested.

4.15 ***Suspension of rights***

If a member or any person appearing to be interested in a share has been duly served with a notice under section 793 of the 2006 Act and has failed in relation to any shares to give the Company the information thereby required within the prescribed period from the date of the service of the notice, then, unless the board of directors otherwise determines, the member shall not be entitled to attend or vote at any general meeting or any separate meeting of the holders of that class of shares or on a poll. Where the holding represents more than 0.25 per cent. of the issued shares of that class, the payment of dividends shall be retained by the Company and such member shall not be entitled to transfer such shares unless the member himself is not in default, or the transfer is an approved transfer or the registration of the transfer is required under the Uncertificated Securities Regulations 2001.

4.16 ***Untraced shareholders***

The Company is entitled to sell at the best price reasonably obtainable any share of a member who is untraceable, provided that:

4.16.1 the share has been in issue for at least the previous twelve years and during that period at least three cash dividends have become payable in respect of the shares;

4.16.2 during that twelve year period, no cash dividend payable in respect of the share has been claimed, no cheque, warrant or amount payable in respect of the share has been cashed or otherwise paid and no communication received by the Company from the member;

4.16.3 the Company has, at the end of such twelve year period, published advertisements in at least one leading national newspaper and one newspaper circulating in the area of the last known address of the member, or address at which notice under the Articles is located, notifying of the intention to sell the shares;

4.16.4 the Company has not, during a further three month period following the publication of advertisements, received any communication in respect of the share from the member or any person entitled by transmission.

5. SHARE SCHEMES

5.1 *Nanoco Long Term Incentive Plan*

The Company proposes to adopt and operate a Long Term Incentive Plan which, if approved by the Shareholders, will be established immediately following Admission and the re-commencement of trading on AIM and administered by the Remuneration Committee ("Committee") of the Company. The Long Term Incentive Plan is designed to contain the parameters expected for a scheme operated by a quoted company and to ensure that the awards are made in the most tax efficient manner. Awards made under the Long Term Incentive Plan ("Awards") will not be pensionable.

5.1.1 ***Eligibility***

Any person who is a director or an employee of any member of the Enlarged Group is eligible to participate in the Long Term Incentive Plan. On and following Admission, the Committee has an absolute discretion as to the selection of employees to whom awards may be made.

5.1.2 ***Grant of Awards***

Awards (which may relate to new and/or existing Ordinary Shares of the Company) may be made at any time save where the making of such an Award would be in contravention of the AIM Rules.

5.1.3 ***Performance Criteria***

At the time of making an Award, the Committee will set challenging performance targets in order to align the interests of employees with shareholders and which must be satisfied before the Award vests.

Performance targets once set will not be amended unless an event occurs which causes the Committee to consider that an amended target would be a fairer measure of performance and is not materially less difficult to satisfy.

It is expected that the Committee's overall policy will be to make Awards under the Long Term Incentive Plan using performance conditions and target levels which will be stretching and will provide value to the participants commensurate with the performance achieved. It is further expected that the policy when deciding on performance measures will be to use measures the participants can, by their actions, influence, in order to provide effective motivation.

5.1.4 ***Vesting of Awards***

In normal circumstances, an Award will only vest in accordance with the vesting dates as set out in the participants' award certificate.

Awards may continue to vest if the employee dies or ceases employment by reason of or cessation of employment or service of the Company or any member of the Enlarged Group by reason of:

(i) injury, ill health or disability;

(ii) redundancy;

(iii) retirement;

(iv) the employing company leaving the Enlarged Group; or

(v) any other reason as determined by the Committee.

However, the Company may determine that the Awards vest immediately on cessation of employment and that the number of Ordinary Shares that vest can be reduced *pro rata* according to the number of months between the employee ceasing employment and the date that the Award vests.

5.1.5 ***Rights attaching to shares***

All shares allotted when an award vests or is exercised under the Long Term Incentive Plan will rank *pari passu* with all other Ordinary Shares of the Company for the time being in issue (save as regards any rights attaching to such shares by reference to a record date prior to the date of vesting).

5.1.6 ***Variation of capital***

In the event of any variation of share capital of the Company, the number of the shares subject to Awards may be adjusted in such manner as Committee may deem appropriate.

5.1.7 ***Alterations to the Long Term Incentive Plan***

The Committee may, at any time, alter or amend the provisions of the Long Term Incentive Plan, save that alterations which would materially increase the rights of option holders shall not be made without the prior approval by ordinary resolution of the shareholders of the Company in general meeting. For the avoidance of doubt, any alteration which constitutes a minor amendment to benefit the administration of the plan, to take account of changes in legislation or to obtain or maintain favourable tax treatment for the Company, existing option holders or prospective option holders shall not require the prior approval from the shareholders of the Company.

Alterations to the terms of an option or the rules of the Long Term Incentive Plan which have materially decreased the rights of subsisting options shall not be made without the relevant option holders written consent.

5.1.8 ***Limits on the issue of shares under the Long Term Incentive Plan***

No Awards may be made under the Long Term Incentive Plan which would cause the number of Ordinary Shares which have been or may be issued in pursuance of Awards made under the Long Term Incentive Plan or any other employees' share scheme over a ten year period to exceed 10 per cent. of the Company's issued ordinary share capital from time to time.

5.1.9 ***Events Occurring on the Winding Up or Takeover of the Company***

Ordinary Shares subject to allocations may be transferred to participants in the event of a takeover, court sanctioned compromise or arrangement resulting in the change of control of the Company, or winding-up of the Company subject to the achievement of a pro-rated performance target. In addition, unless the Committee decides otherwise, the number of Ordinary Shares under allocation that will vest will be pro-rated to reflect the period of time that has elapsed between the date of grant and the date of the relevant event. Any remainder of the allocation will lapse.

5.2 ***Nanoco Share Incentive Plan***

In accordance with the rules of the Nanoco Share Incentive Plan, the Company has agreed to offer holders of options under the Nanoco Share Incentive Plan the opportunity to release their unexercised options in consideration of the grant to them of new options over Evolutec Shares equivalent (as nearly as practicable without involving fractions of shares) to 4.55 Ordinary Shares for every one Nanoco Share the subject of the existing option ("Rollover Option").

Any such Rollover Options taken up by option holders will remain subject to the rules of the Nanoco Share Incentive Plan and, in accordance with such rules, will become exercisable at any time more than six months following Admission (provided that any such option so exercised less than three years after the date of grant of the original option by Nanoco, will only be exercisable in respect of a proportion of the total number of shares being subject to the option, such proportion being equivalent to the proportion of three years elapsed since the original date of grant).

In respect of those EMI Options granted pursuant to the Nanoco Share Incentive Plan, confirmation has been obtained from the Shares and Assets Division of HM Revenue & Customs that such Rollover Option will be of equivalent value and as such will continue to be treated as qualifying EMI Options.

6. DIRECTORS' AND OTHER INTERESTS

6.1 As at the date of this document and immediately following Admission, the interests (all of which are beneficial unless otherwise stated), whether direct or indirect, of the Directors and Proposed Directors and their families (within the meaning set out in the AIM Rules) in the issued share capital of the Company and the existence of which is known to or could, with reasonable diligence, be ascertained by that Director or Proposed Director (as the case may be) and which have been notified to the Company pursuant to Chapter 3.1.2 of the Disclosure and Transparency Rules, are as follows:

	Before Admission		*Following Admission*	
Director	*Number of Ordinary Shares*	*Percentage of Existing Shares*	*Number of Ordinary Shares*	*Percentage of Enlarged Share Capital*
David Bloxham	103,572	0.40	103,572	0.05
Gordon Hall	Nil	Nil	Nil	Nil
Graeme Hart	208,739	0.80	208,739	0.11
Mark Hawtin	Nil	Nil	Nil	Nil
Peter Rowley	Nil	Nil	1,571,820*	0.85*
Michael Edelman	Nil	Nil	9,272,940**	5.03**
Nigel Pickett	Nil	Nil	10,451,931***	5.67***
Michael Bretherton	Nil	Nil	227,500	0.12

* Includes 206,820 Ordinary Shares held by Dr. Rowley's wife.

** Includes 3,229,162 Ordinary Shares held jointly by Dr. Edelman and Appleby Trust (Jersey) Limited ("Appleby").

*** Includes 530,088 Ordinary Shares held jointly by Dr. Pickett and Appleby.

6.2 The Company will make the following grant of EMI options to directors following their agreement to exchange their options in Nanoco pursuant to the Nanoco Share Incentive Plan on the terms of the Rollover Option noted in paragraph 5.2:

Director	*Number of Nanoco Shares subject to option under the Nanoco Share Incentive Plan*	*Number of Ordinary Shares under Rollover Option*
Michael Edelman	625,000	2,843,750
Nigel Pickett	625,000	2,843,750

6.3 The Evolutec Employee Benefit Trust was established on 27 September 2005 and currently holds 12,222 Shares. It has been proposed that following Admission the Ordinary Shares will be transferred to the current Nanoco Employee Benefit Trust which was established on 7 April 2008. The Ordinary Shares will then be used to satisfy future awards under the Long Term Incentive Plan.

6.4 Save as disclosed in paragraphs 6.1 and 6.2 above, none of the Directors or Proposed Directors has any interest in the share capital of the Company nor does any member of his or her family (within the meaning set out in the AIM Rules) have any such interest, whether beneficial or non-beneficial.

6.5 As at 24 February 2009 (being the last practicable date prior to the publication of this document) and so far as the Directors are aware, the only persons (other than any Director) who are or will be interested, directly or indirectly, in three per cent. or more of the issued share capital of the Company prior to and immediately following Admission are as follows:

	Before Admission		*Following Admission*	
Shareholder	*Number of Ordinary Shares*	*Percentage of Existing Shares*	*Number of Ordinary Shares*	*Percentage of Enlarged Share Capital*
ORA Guernsey*	Nil	Nil	66,896,088	36.34
Gartmore Investment Management Limited	6,743,999	25.99	29,635,362	16.10
Mitsubishi UFJ	Nil	Nil	11,872,888	6.45
Paul O'Brien	Nil	Nil	9,921,843	5.39
Manchester Technology Fund	Nil	Nil	6,860,330	3.73
Nora Powell	Nil	Nil	5,997,723	3.26
BlueHone Investors LLP	3,156,276	12.16	3,156,276	1.71
ORA Capital**	2,870,260	11.06	2,870,260	1.56
GAM International	2,820,339	10.87	2,820,339	1.53
Close Asset Management	1,316,667	5.07	1,316,667	0.72
Charles Stanley	1,100,589	4.24	1,100,589	0.60

*ORA Guernsey is a wholly owned subsidiary of ORA Capital.

**ORA Capital has a contract for difference interest in Evolutec over 2,870,260 Ordinary Shares representing 11.06 per cent. of the issued share capital of the Company. This contract does not give ORA Capital any voting rights or any option to purchase these Ordinary Shares in the future.

6.6 Save as disclosed in paragraph 6.5 above, the Company, the Directors and the Proposed Directors are not aware of (i) any persons who, directly or indirectly, jointly or severally, exercise or could exercise control over the Company, nor (ii) any arrangements the operation of which may, at a subsequent date, result in a change in control of the Company.

6.7 The voting rights of the persons listed in paragraph 6.5 above do not differ from the voting rights of any other holder of Ordinary Shares.

6.8 Irrevocable undertakings to vote, or (where applicable) to procure that the registered holder votes, in favour of the Resolutions have been given to the Company by the Directors in respect of their entire beneficial holdings (including certain holdings by their spouses and holdings through trustees and nominees) of 312,311 Ordinary Shares representing, in aggregate, approximately 1.20 per cent. of the issued Ordinary Shares. The irrevocable undertakings are also in respect of Ordinary Shares that may be issued to, or acquired by, such persons after the date of this document.

Name	**Number of Ordinary Shares**
David Bloxham	103,572
Graeme Hart	208,739

These irrevocable undertakings cease to be binding if the General Meeting has not been held on or before 12 midnight on 30 April 2009.

Irrevocable undertakings to vote, or (where applicable) to procure that the registered holder votes, in favour of the Resolutions have been given to the Company by certain institutional and other significant shareholders of the Company representing, in aggregate, approximately 36.86 per cent. of the issued Ordinary Shares.

Name	**Number of Ordinary Shares**
Gartmore Investment Management Limited	6,743,999
GAM International	2,820,339

These irrevocable undertakings cease to be binding if the General Meeting has not been held on or before 12 midnight on 30 April 2009.

6.9 There are no outstanding loans granted by the Company to any Director or Proposed Director nor are there any guarantees provided by the Company for the benefit of any Director or Proposed Director.

6.10 No Director or Proposed Director or any member of a Director's or Proposed Director's family has a related financial product referenced to the Ordinary Shares.

6.11 The Company is not aware of any arrangements which may at a subsequent date result in a change of control of the Company.

6.12 The Directors hold the following directorships and are partners in the following partnerships and have held the following directorships and been partners in the following partnerships within the five years prior to the date of this document:

Director	*Current*	*Previous*
David Philip Bloxham	Evolutec	Provalis plc
	Evolutec Limited	Cobra Bio-Manufacturing plc
	Limegrove Limited	The Babraham Institute
		Bravacs Limited
		Oxford Vacs Limited
		Vacs of Life Limited
		Optevol Limited
Gordon James Hall	Evolutec	Firstafrica Oil Limited
	Evolutec Limited	Osmetech Aesop Trustee Limited
	International Brand Licensing plc	Osmetech plc
		Plectrum Petroleum Limited

Director	*Current*	*Previous*
Graeme Manson Hart	Corin Group plc Heartswell Lodge Limited Evolutec Evolutec Limited Clinphone Limited* Neuropharm Group plc Independent Clinical Services Holdings Limited United Medical Holdings Limited ICS Group (Bidco) Limited ICS Group Limited	Huntleigh Technology Limited SOC Group plc Limbs & Things Limited Exomedica Limited Chamberpoint Limited Shanning Group Limited
Mark Barrie Hawtin	Evolutec Limited Evolutec	Marshall Wace Asset Management Limited 27 The Little Boltons Limited

The Proposed Directors hold the following directorships and are partners in the following partnerships and have held the following directorships and been partners in the following partnerships within the five years prior to the date of this document:

Director	*Current*	*Previous*
Peter John Rowley	Hylomar Limited Nanoco Tech Plc	None
Michael Albert Edelman	Nanoco Nanoco Technologies	None
Nigel Leroy Pickett	Nanoco Nanoco Technologies	Exchange Building Management Company Limited
Michael Anthony Bretherton	Nanoco ORA Capital Obtala Resources plc Oxford Advanced Surfaces Group plc Oxeco Plc Novum Securities Limited Novum Group Limited	Novum Private Clients Limited

6.13 Michael Bretherton was a non-executive director of BRIMLEY & Co. Limited ("Brimley"), a wholly owned subsidiary of Bridgend Group plc, until the reverse acquisition of the company by Hemscott Holdings Limited on 15 August 2000, at which time he resigned from the board of the enlarged Hemscott company and all its subsidiaries, including Brimley. Subsequent to that acquisition and Mr Bretherton's resignation, the business and certain assets of Brimley were sold, its name was changed to XLIV Limited and it was then placed into creditors voluntary liquidation on 31 October 2000 with an estimated deficiency as regards external creditors of £168,000.

6.14 Peter Rowley was a non-executive director of QBrasserie (Holdings) Limited and its wholly owned subsidiary QBrasserie Limited. These companies were placed into creditors voluntary liquidation on 25 September 2001 with an estimated deficiency as regards external creditors of £70,000.

6.15 Save as disclosed in paragraphs 6.13 and 6.14 above, as at the date of this document no Director or Proposed Director:

6.15.1 has any unspent convictions in relation to any indictable offences; or

6.15.2 has been bankrupt or entered into an individual voluntary arrangement; or

6.15.3 was a director of any company at the time of or within 12 months preceding any receivership, compulsory liquidation, creditors voluntary liquidation, administration, company voluntary arrangement or any composition or arrangement with that company's creditors generally or with any class of its creditors; or

6.15.4 has been a partner in a partnership at the time of or within 12 months preceding any compulsory liquidation, administration or partnership voluntary arrangement of such partnership; or

6.15.5 has had his assets the subject of any receivership or has been a partner of a partnership at the time of or within 12 months preceding any assets thereof being the subject of a receivership; or

6.15.6 has been subject to any public criticism by any statutory or regulatory authority (including any recognised professional body) nor has ever been disqualified by a court from acting as a director of a company or from acting in the management or conduct of the affairs of a company.

7. DIRECTORS' SERVICE AGREEMENTS

7.1 The following agreements have been entered into by the Directors and Proposed Directors:

7.1.1 a letter of appointment between (1) the Company and (2) Gordon James Hall pursuant to which Gordon Hall was appointed as a non-executive director of the Company at an annual fee (subject to annual review) of £10,000 commencing on 6 July 2007 for an initial term of three years. On 1 September 2008 the annual fee was increased to £12,000 with immediate effect. Conditional upon Admission, Gordon Hall will enter into a new letter of appointment with the Company on similar terms with his annual fee remaining at £12,000.

7.1.2 a letter of appointment between (1) the Company and (2) David Philip Bloxham pursuant to which David Philip Bloxham was appointed as a non-executive director of the Company at an annual fee (subject to annual review) of £20,000 commencing on 6 July 2007 for an initial term of three years. On 1 September 2008 the annual fee was increased to £24,000 with immediate effect. David Philip Bloxham is also entitled to claim an additional £750 per day where his duties extend over and above the normal duties of a non-executive director. Conditional upon Admission, David Philip Bloxham will resign as a director of the Company and will receive the sum of £9,750 under a letter of termination.

7.1.3 a letter of appointment between (1) the Company and (2) Mark Barrie Hawtin pursuant to which Mark Barrie Hawtin was appointed as a Non-executive Director of the Company at an annual fee (subject to annual review) of £10,000 commencing on 6 July 2007 for an initial term of three years. On 1 September 2008 the annual fee was increased to £12,000 with immediate effect. Conditional upon Admission, Mark Barrie Hawtin will resign as a director of the Company and will receive the sum of £3,000 under a letter of termination.

7.1.4 a letter of appointment between (1) the Company and (2) Graeme Manson Hart pursuant to which Graeme Manson Hart was appointed as a Non-executive Director of the Company at an annual fee (subject to annual review) of £10,000 commencing on 6 July 2007 for an initial term of three years. On 1 September 2008 the annual fee was increased to £12,000 with immediate effect. Conditional upon Admission, Graeme Manson Hart will resign as a director of the Company and will receive the sum of £3,000 under a letter of termination.

7.1.5 a service agreement between (1) Nanoco and (2) Michael Albert Edelman dated 27 June 2006 pursuant to which Michael Albert Edelman was appointed Chief Executive Officer of Nanoco, the appointment commencing on 27 June 2006 and then terminable by either party on 12 months' written notice. Michael Albert Edelman's appointment under the service agreement is at a current annual salary (subject to annual review) of £117,344. Michael Albert Edelman will also be eligible to participate in a bonus scheme on terms determined by the remuneration committee from time to time. Conditional upon Admission, Michael

Albert Edelman will vary the terms of his service agreement with Nanoco such that his annual salary will be increased to £120,000.

7.1.6 a service agreement between (1) Nanoco and (2) Nigel Pickett dated 27 June 2006 pursuant to which Nigel Pickett was appointed Chief Technical Officer of Nanoco, the appointment commencing on 27 June 2006 and terminable by either party on 12 months' written notice. Nigel Pickett's appointment under the service agreement is at a current annual salary (subject to annual review) of £81,120. Nigel Pickett is also eligible to participate in a bonus scheme on terms determined by the remuneration committee from time to time. Conditional upon Admission, Nigel Pickett will vary the terms of his service agreement with Nanoco such that his annual salary will be increased to £85,000.

7.1.7 a conditional service agreement between (1) the Company and (2) Michael Anthony Bretherton dated 24 February 2009 pursuant to which, conditional upon Admission, Michael Bretherton was appointed the Company's Chief Financial Officer, the appointment to take effect on Admission and to be terminable by either party on six months' written notice. Michael Bretherton's appointment under the agreement is at a current annual salary (subject to annual review) of £12,000. Michael Bretherton is also eligible to participate in a bonus scheme on terms determined by the remuneration committee from time to time.

7.1.8 a letter of appointment between (1) Nanoco and (2) Peter John Rowley dated 13 July 2006 pursuant to which Peter John Rowley was appointed as Non-executive Chairman of Nanoco at an annual fee of £10,000 (subject to deduction of tax and national insurance contributions) commencing on 13 July 2006 and terminable in accordance with the articles of association of Nanoco or by either party on six months' written notice. Conditional upon Admission, Peter John Rowley will vary the terms of his letter of appointment with the Company such that his annual fee will be increased to £12,000.

7.2 Save as disclosed in paragraph 7.1 above, there are no existing or proposed service agreements or consultancy agreements between any of the Directors and Proposed Directors and the Company which cannot be terminated by the Company without payment of compensation within 12 months.

7.3 Save as disclosed in paragraph 7.1 above, there has been no amendment to any service agreement or consultancy agreement with any of the Directors or Proposed Directors within the last six months prior to publication of this document.

8. RELATED PARTY TRANSACTIONS

Save as set out in this document, the Company has not entered into any related party transactions (being those set out in the standards adopted according to the Regulation (EC No. 1606/2002) since 1 January 2006.

9. TAXATION

United Kingdom Taxation

The following statements are intended only as a general guide to current UK tax legislation and to the current practice of HM Revenue & Customs ("HMRC") and may not apply to certain shareholders in the Company, such as dealers in securities, insurance companies and collective investment schemes. They relate (except where stated otherwise) to persons who are resident and ordinarily resident in the UK for UK tax purposes, who are beneficial owners of Ordinary Shares and who hold their Ordinary Shares as an investment. Any person who is in any doubt as to his or her tax position, or who is subject to taxation in any jurisdiction other than that of the UK, should consult his or her professional advisers immediately.

Taxation of dividends

No tax will be withheld by the Company when it pays a dividend. A UK resident individual shareholder who receives a dividend from the Company will be entitled to a tax credit, currently at the rate of one ninth

of the cash dividend paid (or 10 per cent. of the aggregate of the net dividend and related tax credit). The individual is treated as receiving for tax purposes gross income equal to the cash dividend plus the tax credit. The tax credit is set against the individual's tax liability on that gross income. The rate of income tax on dividends is 10 per cent. for starting and basic rate taxpayers.

An individual shareholder who is not liable to income tax at a rate greater than the basic rate (currently 22 per cent. for 'earned income') will have no income tax to pay in respect of the dividend.

The higher rate of income tax on dividends is currently 32.5 per cent. This means that a shareholder who is a higher rate taxpayer (currently 40 per cent. for 'earned income') will have further income tax to pay at a rate of 22.5 per cent. of the cash dividend paid plus the related tax credit (or 25 per cent. of the net dividend). For example, a dividend of £90 will carry a tax credit of £10. The income tax payable by a higher rate taxpayer would be 32.5 per cent. of £100, namely £32.50 less the tax credit of £10 leaving a net tax liability of £22.50.

Special rules apply in respect of dividends received by trustees. Shareholders who hold their Ordinary Shares on trust should consult their professional advisers. UK resident shareholders who do not pay income tax or whose liability to income tax on the dividend and related tax credit is less than the tax credit, including pension funds, charities and certain individuals are not generally entitled to claim repayment of any part of the tax credit associated with the dividend from HMRC.

A UK resident corporate shareholder will not generally be liable to corporation tax on any dividend received from the Company.

Whether a shareholder who is not resident in the UK for tax purposes is entitled to a tax credit in respect of dividends paid by the Company and to claim payment of any part of the tax credit will depend, in general, on the provisions of any double taxation convention which exists between the shareholders' country of residence and the UK. A non-UK resident shareholder may also be subject to foreign taxation on dividend income.

Persons who are not resident in the UK should consult their own tax advisers on the possible application of such provisions or what relief or credit may be claimed in the jurisdiction in which they are resident.

Taxation of chargeable gains

The Ordinary Shares so allotted will, for the purpose of tax on chargeable gains, be treated as acquired on the date of allotment. The amount paid for the Ordinary Shares will usually constitute the base cost of a shareholder's holding. If a shareholder disposes of all or some of his Ordinary Shares, a liability to tax on chargeable gains may arise, depending on their circumstances.

For UK resident shareholders within the charge to corporation tax, an indexation allowance may be available to reduce the amount of the chargeable gain realised on a disposal of the Ordinary Shares

Stamp duty and stamp duty reserve tax

No stamp duty or stamp duty reserve tax (SDLT) will generally be payable on the issue of the Consideration Shares. Special rules apply in relation to depository arrangements and clearance services.

If you are in any doubt as to your tax position, or are subject to tax in a jurisdiction other than in the UK, you should consult your professional adviser immediately.

10. WORKING CAPITAL

The Directors and the Proposed Directors are of the opinion, having made due and careful enquiry, taking into account the bank and other facilities available to the Enlarged Group, that the working capital available to the Enlarged Group is sufficient for its present requirements, which is for at least the next 12 months from the date of Admission.

11. SIGNIFICANT CHANGE

11.1 There has been no significant change in the financial or trading position of the Group since the financial period end as set out in the financial information contained in Part V of this document.

11.2 There has been no significant change in the financial or trading position of the Nanoco Companies since the financial period end as set out in the financial information contained in Part VI of this document.

12. LITIGATION

12.1 The Group is not, nor has it been, involved in any legal or arbitration proceedings, nor are any such proceedings pending or threatened, of which the Group is aware, which may have or may have had during the 12 months prior to the date of this document, a significant effect on the Group's financial position.

12.2 The Nanoco Companies are not, nor have been involved, in any legal or arbitration proceedings, nor are any such proceedings pending or threatened, of which the Nanoco Companies are aware, which may have or have had during the 12 months prior to the date of this document, a significant effect on either of the Nanoco Companies' financial position.

13. ADMISSION AGREEMENT

The Admission Agreement is conditional inter alia on Admission occurring no later than 30 June 2009. The principal terms of the Admission Agreement are as follows:

13.1 the Company has agreed to pay Zeus Capital, provided the Admission Agreement becomes unconditional, a corporate finance fee of £100,000 (plus any applicable VAT);

13.2 the Company has agreed to pay all of the costs and expenses of and incidental to the Admission and related arrangements together with any applicable value added tax;

13.3 the Company, Gordon James Hall the Proposed Directors and Professor Paul O'Brien have given certain warranties to Zeus Capital as to the accuracy of the information in this document and as to other matters relating to the Enlarged Group. The liability of Gordon James Hall, the Proposed Directors and Professor Paul O'Brien under these warranties is limited in time and amount. The Company has given an indemnity to Zeus Capital against any losses or liabilities arising out of the proper performance by Zeus Capital of its duties under the Admission Agreement; and

13.4 the Admission Agreement can be terminated at any time prior to Admission by Zeus Capital in certain limited circumstances including where there has been a breach of warranty in the Admission Agreement.

14. THE SCHEME OF ARRANGEMENT

The Acquisition is being implemented by means of a scheme of arrangement between Nanoco and its shareholders under Part 26 of the 2006 Act.

The purpose of the Scheme of Arrangement is to enable the Company to become the owner of the entire issued share capital of Nanoco. This is to be achieved by the cancellation of all the Nanoco Shares held by Nanoco Shareholders by way of a reduction of capital approved by the Court and the application of the reserve arising from such cancellation in paying up in full a number of new ordinary shares in Nanoco (which is equal to the number of shares cancelled under the reduction) and issuing them to the Company. In consideration for the issue of these new Nanoco Shares, the Company will, pursuant to the terms of the Scheme of Arrangement, issue the Consideration Shares to the holders of those Nanoco Shares which were cancelled.

Under the terms of the Scheme of Arrangement, Nanoco Shareholders on the register of members of Nanoco at the appropriate record time will be entitled to receive for every one Nanoco Share they hold (as nearly as practicable without involving fractions of shares), 4.55 Ordinary Shares.

Assuming there are no changes in the Existing Issued Share Capital prior to Completion, a maximum number of 158,138,036 Ordinary Shares will be issued under the Scheme, so that Nanoco Shareholders will, immediately following Admission, hold Ordinary Shares representing approximately 85.90 per cent. of the Enlarged Issued Share Capital.

In order to become effective, the Scheme of Arrangement requires, amongst other things, the approval at a Court meeting (such meeting to be convened by an order of the Court pursuant to section 896 of the 2006 Act) of a majority in number representing not less than three-fourths in value of those Nanoco Shareholders present and voting, either in person or by proxy, at the Court meeting, and the passing of a special resolution necessary to approve matters to give effect to the Scheme of Arrangement at a separate extraordinary general meeting of Nanoco.

In addition the Acquisition (and accordingly, the Scheme) are subject to a number of conditions. In summary, the implementation of the Scheme is conditional upon, *inter alia:*

(a) the necessary resolutions required to approve and implement the Scheme being passed by the requisite majority at the Court meeting and at the Nanoco extraordinary general meeting;

(b) the sanction (with or without modification) of the Scheme of Arrangement and confirmation of the associated reduction of capital by the Court and the delivery and registration of the necessary Court orders with the Registrar of Companies; and

(c) the approval by the Shareholders of the Shareholder Resolutions; and

(d) the other conditions set out in the document enclosed with the Scheme of Arrangement having been satisfied and/or waived, including there having been no material adverse change or deterioration in the business, assets, financial or trading position or profits of either the Nanoco Companies or the Group.

To the extent that options granted over Nanoco Shares pursuant to the Nanoco Share Incentive Plan are exercised prior to and conditional upon the Scheme of Arrangement being sanctioned by the Court, amendments have been proposed to Nanoco's articles of association (which form part of those resolutions being sought at the extraordinary general meeting of Nanoco Shareholders), such that any Nanoco Shares which are allotted and issued pursuant to the exercise of options but which are not subject to the Scheme will be subject to automatic compulsory purchase by the Company (or its nominee(s)) in return for the issue by the Company (as nearly as practicable and without involving fractions of shares) of 4.55 Ordinary Shares for every one Nanoco Share which is transferred.

15. MATERIAL CONTRACTS

The following contracts (not being contracts entered into in the ordinary course of business) have been entered into in the two years preceding the date of this document by any member of the Enlarged Group and are, or may be, material to the Enlarged Group or have been entered into by any member of the Enlarged Group and contain any provision under which the Enlarged Group has any obligation or entitlement which is material to the Enlarged Group at the date of this document:

15.1 the Admission Agreement summarised at paragraph 13 above;

15.2 the Scheme summarised at paragraph 14 above;

15.3 an implementation agreement between the Company and Nanoco dated 24 February 2009 pursuant to which the parties regulate certain aspects of the implementation of the Acquisition, including setting out the obligations of the parties and an indicative timetable in relation to the procedural steps required to implement the Acquisition.

The agreement may be terminated (i) for material breach, (ii) if any of the conditions to the Scheme become incapable of satisfaction and cannot be waived or the Company notifies Nanoco it is unwilling to waive it, (iii) if any of the conditions to the Scheme are not satisfied or waived by 30 June 2009, (iv) if the Company elects to announce a unilateral unrecommended offer or mandatory offer under the Takeover Code for Nanoco, (v) if a competing offer is made and not matched by the Company and (vi) if the Directors withdraw their recommendation of the offer.

Nanoco has agreed that it shall not solicit competing proposals and that it will inform the Company as soon as reasonably practicable if Nanoco becomes aware of a competing proposal or provides any information to a third party with a view to that party investigating or entering into any competing proposal.

Nanoco has also agreed with the Company that if it receives an approach relating to a competing proposal which it intends to recommend instead of the offer from the Company it will notify the Company of the terms of that competing proposal and shall not withdraw or adversely modify its recommendation of the Company's offer for a period of five days from the date of announcement of the competing offer.

15.4 heads of terms dated 6 February 2009 between the Company and Nanoco in relation to the Acquisition pursuant to which each party agrees to pay an inducement fee to the other in the event a party withdraws from the Acquisition before 30 April 2009. Where Nanoco is the withdrawing party a sum of £187,566 is payable by Nanoco to the Company. Where Evolutec is the withdrawing party a sum of £40,000 is payable by Evolutec to Nanoco.

15.5 lock in and ordererly market agreements dated February 2009 between the Restricted Shareholders, Zeus Capital and the Company pursuant to which certain Restricted Shareholders, who include the Proposed Directors, agree they will not, save as set out below, dispose of 124,188,804 of the Consideration Shares (or any Ordinary Shares held or acquired anytime before the second anniversary of Admission) for a period of 15 months following Admission, and thereafter for a further 9 months have agreed only to dispose of Ordinary Shares with the prior consent of the Company's broker and in an orderly manner.

Certain Restricted Shareholders agree they will only (save as set out below) dispose of 22,891,363 of the Consideration Shares and 6,743,999 of the Existing Ordinary Shares (or any Ordinary Shares held or acquired anytime before the second anniversary of Admission) for a period of 24 months following Admission with the prior consent of the Company's broker and in an orderly manner.

The Restricted Shareholders (who include the Proposed Directors) will have an aggregate interest in Ordinary Shares immediately following Admission amounting to 153,824,166 Ordinary Shares representing 83.56 per cent. of the Enlarged Issued Share Capital.

The circumstances in which the lock-in and orderly market arrangements will not apply are, *inter alia,* as follows:

(i) in acceptance of a general offer made to the Company's shareholders (made in accordance with the Takeover Code) to acquire the entire issued share capital of the Company;

(ii) for a disposal by the personal representative of the Restricted Shareholders if any of them shall die during the period of such restrictions;

(iii) in the event of an intervening court order; and

(iv) in the case of a disposal pursuant to any compromise or arrangement or any takeover effected under Part 26 of the 2006 Act.

15.6 the nominated adviser and broker agreement dated 2 December 2008 between Zeus Capital and the Company. The appointment of Zeus Capital shall continue until terminated by either party giving to the other not less than one month's notice. Under the terms of the engagement, the Company will pay a retainer fee of £30,000 plus VAT per annum to Zeus Capital.

15.7 a commercial product development agreement between Nanoco Technologies and a Japanese corporation pursuant to which the parties agreed to carry out a work programme.

The agreement is valid from 16 February 2009 for a period of 12 months, subject to extension by agreement between the parties. If further lifetime testing is required on material produced during the term, Nanoco will continue to evaluate for an additional three months.

15.8 a supply and licence agreement between Nanoco Technologies and a Japanese corporation dated 19 November 2008 pursuant to which the Japanese corporation purchase quantum dots from Nanoco Technologies. Subject to termination by either party giving three months' written notice, such notice not to be given prior to the 15th anniversary of 19 November 2008.

Nanoco Technologies may terminate the Agreement in the event that the Japanese corporation comes under the direct or indirect control of any person who is manufacturing or marketing goods in competition with the quantum dots supplied by Nanoco Technologies.

15.9 a distributorship agreement between Nanoco Technologies and Kisco Limited ("Kisco") dated 16 May 2008 pursuant to which Kisco is appointed (i) sole distributor of quantum dots and other nano materials produced by Nanoco Technologies at the date of the agreement ("Products"), in Japan, South Korea, Taiwan, Cambodia, Indonesia, Laos, Philippines, Singapore, Thailand, East Timor, Vietnam, Brunei and Malaysia (and Nanoco Technologies will not appoint any additional distributor in such territories except that Sigma Aldrich will continue to have the right to sell and distribute small quantities), (ii) non-exclusive distributor for the sale of the Products in China, and (iii) to distribute the Products in China to Japanese, Korean and Taiwanese companies who already have an established relationship with Kisco in Japan, Korea or Taiwan and have manufacturing operations in China. Subject to early termination, the agreement is for an initial term of five years expiring on 15 May 2013.

15.10 a grant for research and development between a regional development agency and Nanoco Technologies dated 5 February 2008 pursuant to which the regional development agency offered Nanoco Technologies a grant up-to a sum not exceeding £369,091 or 35 per cent. of the net eligible costs (as defined under section 5 of the Science and Technology Act 1965), whichever is the lesser. The grant is to enable Nanoco Technologies to develop an innovative scale up process for the production of quantum dots ("the Project"). Nanoco Technologies should claim regular quarterly (three months) payments of the grant.

The terms of the offer detail the Project must be completed by 31 October 2009.

Nanoco Technologies may be required to repay all or part of the grant if, inter alia, (i) the Project is not completed by 31 October 2009 or (ii) within the term of the offer and three years after the date on which the final grant payment is made, Nanoco Technologies ceases to be a subsidiary of a company of which it was a subsidiary at the date of the offer or there is a change of control of ownership of Nanoco Technologies.

15.11 an agreement for the marketing and sale of chemicals between Nanoco Technologies and Aldrich Chemical Company Inc ("Aldrich") dated 10 September 2007 pursuant to which Aldrich are appointed by Nanoco Technologies as the non-exclusive distributor of specific Nanoco Technologies products in research quantities (defined as less than 1 gram).

Subject to early termination, the agreement is for a term of three years expiring on 9 September 2010, and may be extended from that date by mutual agreement for two consecutive 12 month periods. Either party may terminate the agreement upon six months notice.

15.12 an investment agreement dated 10 March 2007 between Nanoco (1), Paul O'Brien, Nigel Pickett and Michael Edelman (together, the "Managers") (2), and The North West Seed Fund LP, The University of Manchester, Imperial College Innovations Limited, UVL Investments Ltd, The University of Manchester, The North West Business Investment Scheme and ORA Capital (together, the "Original Investors") together with James Ede-Golightly, David Norwood, Michael Bretherton, Peter Rowley and Mitsubishi UFJ Capital Co Limited (3) governing the business and affairs of Nanoco. The agreement contains lock-in provisions for the Managers and contained drag-along and tag-along rights which are triggered when there is a sale of 75 per cent. or more of the issued share capital of

Nanoco. This agreement superseded and replaced the investment agreement dated 27 June 2006 which contained lock-in provisions for certain shareholders and contains drag-along and tag-along rights which are triggered when there is a sale of 75 per cent. or more of the issued share capital of Nanoco.

15.13 a term loan facility of £600,000 between Nanoco Technologies and the Manchester Incubator Company Limited ("MIC") dated 21 March 2007 pursuant to which the term loan facility is made available to Nanoco Technologies by MIC, and is to be drawn on completion of a lease between Nanoco Technologies (as tenant) and MIC (as lender).

If control of Nanoco Technologies passes to a person who is not a shareholder in Nanoco Technologies immediately after 21 March 2007, or there is a change of control without the prior written consent of MIC, there is an event of default resulting in MIC ceasing to be under any further commitment to Nanoco Technologies and entitling MIC to declare the loan immediately due and payable on demand.

15.14 a consultancy agreement dated 15 August 2005 between (1) Nanoco Technologies and (2) Dr Nobuaki Tamagawa pursuant to which Dr Nobuaki Tamagawa agreed to provide independent advisory and consulting services to Nanoco Technologies and its group companies from 15 August 2005 for an initial period of three months terminable by either party on 30 days' notice in writing and renewable by mutual agreement. Under the consultancy agreement, Dr Nobuaki Tamagawa is entitled to a consultancy fee of US$5,500 (exclusive of VAT) per calendar month plus reasonable expenses up to £200 per month.

15.15 a consultancy agreement dated 31 January 2006 between (1) Nanoco Technologies and (2) Dr Andrew Sutherland pursuant to which Dr Andrew Sutherland agreed to provide independent advisory and consulting services to Nanoco Technologies and its group companies from 2 January 2006 for an initial period of six months terminable by either party on 30 days' notice in writing and renewable by mutual agreement. Under the consultancy agreement, Dr Andrew Sutherland is entitled to a consultancy fee of £500 (exclusive of VAT) per calendar month plus reasonable expenses up to £200 per month.

15.16 a consultancy agreement dated 1 May 2007 between (1) Nanoco Technologies and (2) David Binks pursuant to which David Binks agreed to provide independent advisory and consulting services to Nanoco Technologies and its group companies from 1 May 2007 for an initial period of 3 months terminable by either party on 15 days' written notice and renewable by mutual agreement. Under the consultancy agreement, David Binks is entitled to a consultancy fee of £650 (exclusive of VAT) per calendar month plus reasonable expenses up to £200 per month.

15.17 a grant between a regional development agency and Nanoco Technologies dated 20 September 2006 pursuant to which the regional development agency offered Nanoco/Nanoco Technologies a grant of up to £249,000 under section 7 of the Industrial Development Act 1982. The grant is to enable the provision of quantum dot manufacturing at 48 Grafton Street, Manchester M13 9XX and is to be paid in three instalments, subject to certain conditions being met by Nanoco/Nanoco Technologies as set out in the grant agreement.

Nanoco/Nanoco Technologies may be required to repay the grant if, at any time during the five years immediately following payment of the first instalment of the grant or the 18 month period immediately following the payment of the final instalment of the grant, *inter alia*, (i) progress on the project is not satisfactory (ii) there is a change of ownership or control of Nanoco/Nanoco Technologies. The regional development agency have given their consent to the Proposals.

15.18 conditional upon Admission, a relationship agreement to be entered into between Evolutec (1) and ORA Guernsey (2), pursuant to which ORA Guernsey will agree: to exercise its rights as a shareholder to ensure that all transactions, relationships and agreements between the Company and ORA Guernsey or any associate of ORA Guernsey (as defined in Appendix I to the Listing Rules of the FSA) are on arm's length terms; that neither ORA Guernsey nor its associates would acquire,

agree to acquire or announce any intention to acquire shares in the Company nor make a general offer for all or part of the share capital of the Company; to give the Company two days' notice of any intention of ORA Guernsey, or an associate, to dispose of any interest in the share capital of the Company which would reduce ORA Guernsey and its associates aggregate shareholding to less than 25 per cent.; to procure (as far as it is able) that "Non-Independent Directors" (as defined in the agreement) do not vote at a board meeting of the Company on any resolution relating to any proposed contract or arrangement with ORA Guernsey and/or its associates; and to procure (so far as it is able) that it would not vote at meetings of shareholders of the Company on any resolution relating to any proposed contract or arrangement with ORA Guernsey and/or its associates. The relationship agreement will be effective for so long as ORA Guernsey, together with its associates, hold (whether directly or indirectly) in aggregate, shares in the capital of the Company representing 25 per cent. or more of the Company's entire issued ordinary share capital.

15.19 a conditional letter of appointment between (1) the Company and (2) Professor Paul O'Brien dated 25 February 2009 pursuant to which, conditional upon Admission, Professor O'Brien was appointed the Company's chief scientific adviser, the appointment to take effect on Admission and to be terminable by either party on six months' written notice. Professor O'Brien's appointment is at a current annual fee of £12,000.

16. CONSENTS

16.1 Pira International as technical expert has given and not withdrawn its consent to the issue of this document with the inclusion herein of its report in Part III of this document and the references to such report and to its name in the form and context in which they appear and has authorised the contents of Part III of this document.

16.2 Marks & Clerk as patent attorney has given and not withdrawn its consent to the issue of this document with the inclusion herein of its report in Part IV of this document and the references to such report and to its name in the form and context in which they appear and has authorised the contents of Part IV of this document.

16.3 Ernst & Young has given and not withdrawn its consent to the issue of this document with the inclusion herein of its report in Part VI of this document and the references to such reports and to its name in the form and context in which they appear.

16.4 Zeus Capital has given and not withdrawn its consent to the issue of this document with the inclusion of its name and references to it in the form and context in which they appear.

16.5 Grant Thornton UK LLP has given and not withdrawn its consent to the issue of this document with the inclusion of its name and references to it in the form and context in which they appear.

17. GENERAL

17.1 The total costs and expenses of, or incidental to, the Proposals, all of which are payable by the Company, are estimated to be approximately £425,000 (exclusive of value added tax). This amount includes the fees referred to in paragraph 13.1 of this Part IX.

17.2 Following Admission, the Enlarged Group will have net funds of £8.1 million to be applied to the execution of the Enlarged Group's strategy as set out in paragraph 7 of Part I of this document

17.3 Save as disclosed in this document, no person (other than the Group's professional advisers named in this document and trade suppliers) has at any time within the 12 months preceding the date of this document received, directly or indirectly, from the Group or entered into any contractual arrangements to receive, directly or indirectly, from the Group on or after Admission any fees, securities in the Company or any other benefit to the value of £10,000 or more.

17.4 No proceeds have been raised pursuant to this document.

17.5 Where information and statements have been sourced from a third party, this information has been accurately reproduced. So far as the Company, the Directors and the Proposed Directors are aware and are able to ascertain from information provided by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.

17.6 The auditors of the Group are Grant Thornton UK LLP, chartered accountants and registered auditors who have audited the Group accounts for the three years ended 31 December 2008.

17.7 The auditors of the Nanoco Companies are Ernst and Young LLP who have audited the Nanoco Companies accounts for the year ended on 31 July 2008. The audit report was unqualified and did not contain a statement under sections 273 (2) or 273 (3) of the Act.

17.8 Save as disclosed in this document, the Group currently has no significant investments in progress and the Group has made no firm commitments concerning future investments.

17.9 Save as disclosed in Parts I, III, IV and IX of this document, the Proposed Directors are not aware of any patents or other intellectual property rights, licences, particular contracts or manufacturing processes on which the Enlarged Group is dependent.

17.10 The Directors and the Proposed Directors are not aware of any environmental issues that may affect the Group's utilisation of its tangible fixed assets.

17.11 Save in connection with the application for Admission, none of the Ordinary Shares has been admitted to dealings on any recognised investment exchange and no application for such admission has been made and it is not intended to make any other arrangements for dealings in the Ordinary Shares on any such exchange.

17.12 There have been no takeover bids by third parties in respect of the Company's equity, which have occurred during the last financial year or the current financial year.

17.13 There are no provisions in the Company's Articles which would have the effect of delaying, deferring or preventing a change of control of the Company.

17.14 The Company's website address is www.evolutec.co.uk. Following Admission, the Enlarged Group's website will be www.nanocotechnologies.co.uk.

17.15 Part 28 of the 2006 Act came into force on 6 April 2007 and governs "squeeze-out" and "sell-out" provisions, which are triggered when a person acquires 90 per cent. of both the issued shares and voting rights in the Company. Under this new regime, such an acquirer may serve a notice on the remaining minority shareholder stating that it desires to buy their shares ("squeeze-out") and, conversely, the remaining minority shareholder may exercise in writing its right to require the acquiror to acquire its shares ("sell-out"). The consideration offered to the minority shareholder whose shares are compulsorily acquired must, in general, be the same as the consideration that was available under the takeover offer. Both squeeze-out and sell-out rights are exercisable within a three month period from the end of the period within which the takeover offer can be accepted. Under the squeeze-out provisions, the acquirer must, at the end of the six weeks from the date of the notice, send a copy of its notice and an executed transfer for the shares to the Company and pay the consideration for the shares to the Company, whereupon the shares will be registered in the name of the acquirer. The consideration is then held on trust by the Company for the minority shareholder. Under the sell-out provisions, the acquiror is entitled and bound to acquire the shares on the terms of the takeover offer or on such other terms as may be agreed.

17.16 The financial information concerning the Group contained in this document does not constitute statutory accounts within the meaning of Section 240 of the Act. Statutory accounts of the Group for the three financial years ending 31 December 2008, on which the auditors gave an unqualified report and which did not contain statements made under Section 237(2) or (3) of the Act, have been delivered to the Registrar of Companies.

17.17 Save as disclosed in the document, the directors of Evolutec are not aware of any material change in the financial or trading position of Evolutec since 31 December 2008, the date to which its last audited accounts were published.

18. DOCUMENTS AVAILABLE FOR INSPECTION

Copies of this and the following documents will be available for inspection free of charge during usual business hours on any day (Saturdays, Sundays and public holidays excepted) at the offices of Zeus at 3 Ralli Courts, West Riverside, Manchester M3 5FT for a period of one month from the date of this document:

18.1 the memorandum and articles of association of the Company, Nanoco and ORA Guernsey;

18.2 the report relating to Nanoco prepared by Ernst & Young in Part VI of this document;

18.3 the audited accounts of the Company for the three financial years ended 31 December 2008;

18.4 the audited accounts of ORA Capital for the period since inception ended 31 January 2008;

18.5 the audited accounts of Nanoco for the period since inception ended 31 July 2008;

18.6 the consent letters referred to in paragraph 16 of Part IX of this document;

18.7 the Directors and Proposed Directors service contracts and letters of appointment referred to in paragraph 7 of Part IX of this document;

18.8 the material contracts referred to in paragraph 15 of Part IX and paragraph 4.6 of Part VIII of this document;

18.9 the contract for difference in relation to ORA Capital referred to in paragraph 3 of Part VIII of the document;

18.10 the rules of the Long Term Incentive Plan and the rules of the Nanoco Share Incentive Plan;

18.11 the Technical Report on Nanoco in Part III of this document;

18.12 the Patent Report on Nanoco in Part IV of this document;

18.13 the Irrevocable undertakings referred to in paragraph 25 of Part I of this document; and

18.14 the heads of agreement evidencing the inducement fee referred to in paragraph 15 of Part IX of this document.

Dated 25 February 2009

NOTICE OF GENERAL MEETING

EVOLUTEC GROUP PLC

(Incorporated and registered in England and Wales under the Companies Act 1985 with registered number 5067291)

NOTICE IS HEREBY GIVEN that a GENERAL MEETING of the members of Evolutec Group plc (the "Company") will be held at 7 Devonshire Square, London EC2M 4YH on 24 March 2009 at 3.30 p.m. for the purpose of considering, and, if thought fit, passing the following resolutions of which resolutions numbered 1 to 5 will be proposed as ordinary resolutions and resolutions 6 to 9 will be proposed as special resolutions:

ORDINARY RESOLUTIONS

1. THAT the acquisition by the Company of the entire issued share capital of Nanoco Tech Public Limited Company (the "Acquisition") to be effected by means of a Scheme of Arrangement under Part 26 of the Companies Act 2006 be and is hereby approved for all purposes including, without limitation, section 180 of the Companies Act 2006 and Rule 14 of the AIM Rules for Companies and that the Directors be and are hereby authorised to take all steps necessary to effect the Acquisition with such minor modifications, variations, amendments or revisions and to do or procure to be done such things in connection with the Acquisition as they consider to be in the best interests of the Company;

2. THAT, subject to Resolution 1 being duly passed by the Shareholders as an ordinary resolution, the grant of a waiver by the Panel on Takeover and Mergers of the requirement under Rule 9 of The City Code on Takeovers and Mergers for any member of the Concert Party (as defined in the admission document of the Company dated 25 February 2009 (the "Admission Document")) to make a mandatory general offer to the shareholders of the Company that would otherwise arise as a result of the allotment and issue by the Company of the Consideration Shares (as defined in the Admission Document) pursuant to the Proposals whereby the Concert Party will become interested in 70,630,848 ordinary shares of 10p each in the capital of the Company representing up to 38.37 per cent. of the issued share capital of the Company be and is hereby approved (on a poll);

3. THAT, subject to Resolutions 1 and 2 being duly passed by the Shareholders as ordinary resolutions, the Nanoco Group Long Term Incentive Plan (''Long Term Incentive Plan") (a copy of the rules of which was produced to the meeting) be and are hereby approved and the rules of the Long Term Incentive Plan be adopted and the Directors be and are hereby authorised to do all such acts and things which they consider necessary or expedient to give effect to the Long Term Incentive Plan (including, but not limited to, making any amendment to the rules);

4. THAT, subject to Resolutions 1 and 2 being duly passed by the Shareholders as ordinary resolutions, the authorised share capital of the Company be increased from £7,700,000 to £25,000,000 by the creation of 173,000,000 ordinary shares of 10 pence each such shares to form one class and to rank *pari passu* in all respects with the existing ordinary shares of 10 pence each in the Company's share capital and having the rights and being subject to the restrictions set out in the Company's articles of association;

5. THAT, subject to Resolutions 1 to 4 being duly passed by the Shareholders as ordinary resolutions, in substitution of all existing authorities, the Directors be and are generally and unconditionally authorised pursuant to section 80 of the Companies Act 1985 (the "Act") to exercise all the powers of the Company to allot relevant securities (as defined in section 80(2) of the Act) up to an aggregate nominal amount of £21,406,944.72 provided that this authority shall (unless previously renewed, revoked or varied by the Company in general meeting) expire at the conclusion of the next Annual General Meeting of the Company or 15 months after the date of the passing of this Resolution (whichever is earlier), save that the Company may before such expiry make an offer or enter into an

agreement which would or might require relevant securities to be allotted after such expiry and the Directors may allot relevant securities in pursuance of such offer or agreement as if the authority conferred hereby had not expired.

SPECIAL RESOLUTIONS

6. THAT, subject to Resolutions 1 to 5 being duly passed by the Shareholders as ordinary resolutions, the Directors be authorised and empowered pursuant to section 95 of the Act to allot equity securities (as defined in section 94(2) of the Act), pursuant to the section 80 authority conferred by resolution number 5 above, as if section 89(1) of the Act did not apply to any such allotment, provided that such powers shall be limited to the allotment of equity securities:

   (a) up to a maximum nominal amount of £15,813,803.60 to such persons as may be entitled to receive Consideration Shares (as defined in the Admission Document) under the terms of the Acquisition;

   (b) up to a maximum nominal amount of £990,940.30 in order to satisfy the exercise of options under the Nanoco Long Term Incentive Plan; and

   (c) otherwise than pursuant to the authorities contained in (a) and (b) of this Resolution, up to an aggregate nominal amount of £1,840,880.30,

   provided that this authority shall (unless previously renewed, revoked or varied by the Company in general meeting) cease to have effect when the authority conferred by Resolution 5 is revoked or expires, save that the Company may before such expiry make an offer or enter into an agreement which would or might require relevant securities to be allotted after such expiry and the Directors may allot relevant securities in pursuance of such offer or agreement as if the authority conferred hereby had not expired and this power shall be in substitution for all subsisting powers to the extent unused.

7. THAT, subject to Resolution 4 being duly passed by the Shareholders as an ordinary resolution, the memorandum of association of the Company be altered by amending the note to paragraph 6 contained therein to reflect the changes to the authorised share capital of the Company pursuant to Resolution 1.

8. THAT, subject to Resolution 4 being duly passed by the Shareholders as an ordinary resolution, the articles of association of the Company be amended by the deletion of article 3 and the insertion of a new article 3 as follows:

   "3. the authorised share capital of the Company is £25,000,000 divided into 250,000,000 ordinary shares of 10 pence each."

9. THAT, subject to Resolutions 1 and 2 being duly passed by the Shareholders as ordinary resolutions, the name of the Company be changed to Nanoco Group plc.

BY ORDER OF THE BOARD

David Philip Bloxham
Chairman

Authorised signatory of
Evolutec Group plc
Registered office:
3 More London Riverside
London
SE1 2AQ

Dated 25 February 2009

NOTES TO THE NOTICE OF GENERAL MEETING:

1. As a member of the Company, you are entitled to appoint a proxy or proxies of your own choice to exercise all or any of your rights to attend, speak and vote on your behalf at the General Meeting and you should have received a proxy form. You can only appoint a proxy using the procedures set out in these notes and the notes to the proxy form.

2. A proxy does not need to be a member of the Company but must attend the General Meeting to represent you. Details of how to appoint the Chairman of the General Meeting or another person as your proxy using the proxy form are set out in the notes to the proxy form.

3. You may appoint more than one proxy provided each proxy is appointed to exercise rights attached to different shares. You may not appoint more than one proxy to exercise rights attached to any one share. To appoint more than one proxy you may photocopy the Form of Proxy. Please indicate the proxy holder's name and the number of shares in relation to which they are authorised to act as your proxy. Please also indicate if the proxy instruction is one of multiple instructions being given. All forms must be signed and should be returned together in the same envelope.

4. If you do not give your proxy an indication of how to vote on any resolution, your proxy will vote or abstain from voting at his or her discretion. Your proxy will vote (or abstain from voting) as he or she thinks fit in relation to any other matter which is put before the General Meeting.

5. In order to facilitate voting by corporate representatives at the General Meeting, arrangements will be put in place at the General Meeting so that (i) if a corporate shareholder has appointed the Chairman of the meeting as its corporate representative to veto on a poll in accordance with the directions of all of the other corporate representatives for that shareholder at the meeting, then on a poll those corporate representatives will give voting directions to the Chairman and the Chairman will vote (or withhold a vote) as corporate representative in accordance with those directions; and (ii) if more than one corporate representative for the same shareholder attends the meeting but the corporate shareholder has not appointed the Chairman of the meeting as its corporate representative, a designated corporate representative will be nominated, from those corporate representatives who attend, who will vote on a poll and the other corporate representatives will give voting directions to that designated corporate representative. Corporate shareholders are referred to the guidance issued by the Institute of Chartered Secretaries and Administrators on proxies and corporate representatives (www.icsa.org.uk) for further details of this procedure. The guidance includes a sample form of appointment letter if the Chairman is being appointed as described in (i) above.

6. Pursuant to Regulation 41 of the Uncertificated Securities Regulations 2001, the Company has specified that only those shareholders registered on the register of members of the Company at 3.30 p.m. on 20 March 2009, or if the General Meeting is adjourned, on the register of members not less than 48 hours before the time of any adjourned meeting, shall be entitled to attend and vote at the meeting in respect of the number of ordinary shares in the Company registered in their name at the relevant time. Changes to entries on the register of members after 3.30 p.m. on 20 March 2009 or, if the General meeting is adjourned, on the register of members not more than 48 hours before the time of any adjourned meeting, will be disregarded in determining the right of any person to attend and vote at the meeting.

Appointment of proxy using hard copy proxy form

7. The notes to the proxy form explain how to direct your proxy on how to vote on each resolution or withhold their vote.

   To appoint a proxy using the proxy form, the form must be:

   - completed and signed;
   - sent or delivered to the Company's registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckeham, Kent BR3 4TU; and
   - received by the Company no later than 3.30 p.m. on 20 March 2009.

In the case of a member which is a company, the proxy form must be executed under its common seal or signed on its behalf by an officer of the company or an attorney for the company.

Any power of attorney or any other authority under which the proxy form is signed (or duly certified copy of such power of authority) must be included with the proxy form.

Changing your proxy instructions

8. To change your proxy instructions simply submit a new proxy appointment using the methods set out above. Note that the cut-off time for receipt of proxy appointments (see above) also apply in relation to amended instructions; any amended proxy appointment received after the relevant cut-off time will be disregarded.

   Where you have appointed a proxy using the hard-copy proxy form and would like to change the instructions using another hard-copy proxy form, please contact the Company's registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU.

   If you submit more than one valid proxy appointment, the appointment received last before the latest time for the receipt of proxies will take precedence.

Termination of proxy appointments

9. In order to revoke a proxy instruction you will need to inform the Company by sending a signed hard copy notice clearly stating your intention to revoke your proxy appointment to the Company's registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU. In the case of a member which is a company, the revocation notice must be executed under its common seal or signed on its behalf by an officer of the company or an attorney for the company. Any power of attorney or any other authority under which the revocation notice is signed (or a duly certified copy of such power of authority) must be included with the revocation notice.

10. The revocation notice must be received by the Company no later than 48 hours before the time and date scheduled for the meeting.

11. Appointment of a proxy does not preclude you from attending the meeting and voting in person. If you have appointed a proxy and attend the meeting in person, your proxy appointment will automatically be terminated.

Appointment of proxy using CREST electronic proxy appointment service

12. CREST members who wish to appoint a proxy or proxies through the CREST electronic proxy appointment service may do so for the meeting to be held on 20 March 2009 and any adjournment(s) thereof by using the procedures described in the CREST Manual. CREST personal members or other CREST sponsored members and those CREST members who have appointed a voting service provider should refer to their CREST sponsor or voting service provider, who will be able to take the appropriate action on their behalf.

13. In order for a proxy appointment or instruction made using the CREST service to be valid, the appropriate CREST message (a "CREST Proxy Instruction") must be properly authenticated in accordance with Euroclear's specifications and must contain the information required for such instructions, as described in the CREST Manual. The message, regardless of whether it relates to the appointment of a proxy, the revocation of a proxy appointment or an amendment to the instruction given to a previously appointed proxy, must, in order to be valid, be transmitted so as to be received by the issuer's Agent (ID: RA10) by the latest time(s) for receipt of proxy appointments specified in this notice of meeting. For this purpose, the time of receipt will be taken to be the time (as determined by the timestamp applied to the message by the CREST Applications Host) from which the issuer's Agent is able to retrieve the message by enquiry to CREST in the manner prescribed by CREST. After this time, any change of instructions to a proxy appointed through CREST should be communicated to the appointee by other means.

14. CREST members and, where applicable, their CREST sponsors or voting service providers should note that Euroclear does not make available special procedures in CREST for any particular messages. Normal system timings and limitations will therefore apply in relation to the input of CREST Proxy Instructions. It is the responsibility of the CREST member concerned to take (or, if the CREST member is a CREST personal member or sponsored member or has appointed a voting service provider, to procure that his CREST sponsor or voting service provider takes) such action as shall be necessary to ensure that a message is transmitted by means of the CREST system by any particular time. In this connection, CREST members and, where applicable, their CREST sponsors or voting service providers are referred, in particular, to those sections of the CREST Manual concerning practical limitations of the CREST system and timings.

15. The Company may treat as invalid a CREST Proxy Instruction in the circumstances set out in Regulation 35(5)(a) of the Uncertificated Securities Regulations 2001.

Communications

16. No form of electronic communication shall be accepted.

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