

# AQUAFFIRM LIMITED

## ORDINARY SHARE ISSUE

OFFER FOR SUBSCRIPTION BY PRIVATE PLACEMENT TO RAISE AN AGGREGATE £1,000,000 BY ISSUES OF ORDINARY SHARES AT AN OFFER PRICE OF FIFTY PENCE (£0.50) EACH

## INFORMATION MEMORANDUM WITH APPLICATION FORMS



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This Information Memorandum ("this Information Memorandum") is published in connection with an Offer for Subscription by

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# AQUAFFIRM LIMITED

*(registered in England and Wales under the Companies Act 2006 with registered number 9188375)*

*to raise up to £1,000,000  
by the issue, at an Offer Price of fifty pence (£0.50) per share, of up to  
2,003,200 new Ordinary Shares representing, on issue at maximum subscription,  
approximately 20% percentage of the fully diluted issued share capital of the Company.*

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To the best of the knowledge of the Company and the Directors (who have taken all reasonable care to ensure that such is the case) the information contained in this Information Memorandum is in accordance with the facts and does not omit anything likely to materially affect the import of such information.

This Information Memorandum is published by AquAffirm Limited (the "Company", "AquAffirm", "we" or "us") and has been approved for the purposes of section 21 of the Financial Services and Markets Act 2000 ("FSMA") by SPNV Limited, a private limited company incorporated in England with the registered number 07455644, whose registered office is at 29 Lincolns Inn Fields, London WC2A 3EG and which is authorised by the Financial Conduct Authority under FCA registration number 610217 ("SPNV"). This Information Memorandum does not constitute an approved prospectus within the meaning of section 85(7) of FSMA and nor does it constitute an offer to the public within the meaning of section 756 Companies Act 2006 as the Offer for Subscription is available only to those to whom this Information Memorandum is distributed or, where it can be properly regarded, in all the circumstances, as a private concern of the person receiving the Offer and of the Promoter, or of a restricted number of intermediaries authorised by the Promoter to distribute this Information Memorandum on behalf of the Promoter to its clients.

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Prospective Investors should not regard the contents of this Information Memorandum as constituting advice relating to legal, taxation or investment matters.

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If you wish to invest under the Offer, either (i) you and your financial intermediary (whether advisory or 'execution only') should both complete the Intermediary Application Form, or (ii) if you wish to invest directly (without an intermediary) you will need to provide some information about your investment experience and financial circumstances by completing the Direct Investor Application

Form. The Application Forms are on pages 70-85 of this Information Memorandum and are also available from Amberside Capital Limited, call: 01442 910 064. AquAffirm reserves the right not to accept any Application Form as it deems appropriate for any reason in its absolute discretion.

Acceptances of applications to subscribe Shares will be restricted to: (i) investors whose financial intermediary (whether advisory or 'execution only') is able, to provide the appropriateness assessment certificate within the Intermediary Application Form; and (ii) investors who invest directly (without an intermediary) where they are able to provide information about their investment experience and financial circumstances by completing the Direct Investor Application Form which is sufficient to enable SPNV to assess that an investment would be suitable for the investor. Accordingly, as any acceptance of an application is subject to a prior assessment of the investor, either by their financial intermediary or by SPNV, this Information Memorandum does not constitute a direct offer financial promotion (that is, an offer by AquAffirm which is capable of being accepted or an invitation to apply under the Offer which will be accepted by AquAffirm, in either case on an unconditional basis) under FCA rules.

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Your attention is drawn to the risk factors set out on pages 38 to 49 of this document. If you are in doubt as to the action you should take, you should consult an independent financial adviser authorised under FSMA.

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## EXECUTIVE SUMMARY

### Introduction

Over 140 million people in 70 countries drink arsenic-contaminated water, killing tens of thousands annually. AquAffirm has developed the first simple, quick, reliable, digital field test for arsenic which is web-enabled. With an experienced successful founder team, AquAffirm is commercialising a rapid low-cost, easy-to-use disposable strip to measure concentrations of toxins in water, starting with arsenic. Results will be digitally-analysed and GPS-/web-enabled to facilitate mapping of contamination hot-spots. The team is already selling the base electrode (manufactured in batches of 4,000x) into the research market.

AquAffirm is seeking £1 million funding in this investment round (EIS advance assurance has been received from HMRC). The Directors reserve the right to increase the size of the Offer at their discretion.

**AquAffirm Technology:** With IP based on a modification of the technology behind the everyday blood glucose self-test, AquAffirm identifies and develops proprietary molecules such as enzymes which react with toxins to create nano-scale currents proportional to the water contamination detected, which is measured digitally through a handheld web-connected meter.

**AquAffirm Patents & Manufacturing:** The Company has US and European patents granted for the first enzyme, which reacts with arsenic. AquAffirm is now producing its first electrode-based test strips in commercial volumes using a highly scalable manufacturing process; these test strips (without our proprietary chemistry) are already being sold into the scientific research market. These sales can be rapidly increased.

**AquAffirm Financial Forecasts:** The financial forecasts show sales of £4.1m (gross margin: £1.5m) in YE Feb 2021, growing to £20.2m (gross margin: £8.5m) in YE Feb 2023 and anticipate a future valuation in excess of £100 million in 3-5 years' time.

**Arsenic Test Market:** The market for arsenic test equipment in the developing world is driven by major arsenic mitigation programs funded by national governments (Bangladesh) and managed by specific governmental departments (e.g. Dept of Public Health Engineering, DPHE) with many NGOs (UNICEF, WaterAid) participating and purchasing test kits, currently from competing water analysis instrumentation companies including Hach (EZ Arsenic™), Merck (MQuant™), Palintest (DigiPAS™/Arsenator™). Current test equipment is slow, difficult to use, results in toxic by-products (e.g. arsine gas) and is only semi-quantitative (with significant test-to-test variability). The main distributors (DPHE, UNICEF & WaterAid) have indicated strong interest to switch their source of supply to AquAffirm because of its accuracy, speed, ease-of-use and web-enabled connectivity (to radically improve problem management). AquAffirm's lead product, AquAffirm-As™, has achieved lab proof-of-concept and AquAffirm will shortly demonstrate it in Bangladesh, where up to 57m people are exposed to excessive levels of arsenic, which can lead to arsenic poisoning, various cancers, and death. The estimated number of individuals affected by arsenic in the worst-affected countries are: India (78.7m), Bangladesh (57m), Nigeria (11m), Zimbabwe (9.3m), USA (9m) & China (8.2m).

**Arsenic Test Market in Bangladesh:** The Bangladesh government is planning a four-year \$200m arsenic mitigation programme for 2019-22, with ~\$65m likely to be allocated for arsenic testing and database analytics. Of 10m active tube wells in Bangladesh (each with an operational life of 8 years) approximately 40% are in areas where arsenic levels are above 10 parts-per-billion (ppb), the WHO limit. Every year > 500k new wells are dug in these areas. To test all existing wells in high risk areas would require 2m tests p.a. for a two year campaign. A rolling cycle of testing every six months to two years plus a rolling offer of new well testing would require 1-4 million tests every year. We conservatively estimate market demand at 3 million tests per year for the first five years of operation. At an estimated cost of £1 each this generates total projected revenues of £15m over 5 years. AquAffirm's executive team has held in-depth conversations with UNICEF on addressing the arsenic problem in other 'at-risk' regions in developing countries for which there is an estimated demand for up to 4.5m test strips.

**Arsenic Test Market in USA:** In the USA the 16m private wells, fracking and land contaminated by the dumping of hazardous waste indicate a potential market of 2.5m tests per year which at a sales price of \$10 per test would generate projected sales of \$25m per year. We will address the B2B market in the US (comprising a large number of 'small' customers) through distributors, with attendant higher support and distribution costs.

**Follow-up Products:** AquAffirm's second product, AquAffirm-F™, will measure fluoride in drinking water. The technology will be developed to detect other toxins, including cadmium, lead, mercury, manganese and, potentially, an unlimited number of other contaminants including oestrogens and algal toxins. The global water analysis instrumentation market is estimated to be worth \$938m in 2018, growing at a CAGR of 5.1% (F&S, 2016), in which buyers are typically municipal water utilities, industries, and residential customers. The initial strategy is to attract endorsement and procurement from relevant NGOs and government departments for use within 'low-priced (developing) markets' where the need is greatest (Bangladesh; West Bengal, India), then introduce to more advanced countries which are less price-sensitive (USA, Australia), where IP is in place.

### **Three divisions**

Whilst the primary focus of this fund raising is to raise capital for the growth and development of the AquAffirm business summarised above, AquAffirm and its subsidiary BNC have three divisions overall: Environmental Sensors; Medical Diagnostics; and Carbon Nanotubes as follows:

#### **Division 1      Environmental Sensors - "AquAffirm"**

##### **AquAffirm**

Arsenic and fluoride - as above

##### **WReN Optimisation software**

Developing an enterprise software package (funded in part by a two-year Innovate UK grant in collaboration with several Brazilian companies) that will enable planning and design of water re-use (so-called "greywater") systems which are in use in many water-stressed areas around the world - big markets in US in places like Las Vegas and Arizona - this will be like a "Google Maps" package that optimises the design of real engineering systems based on engineering constraints (minimising CapEx and OpEx and providing designers with alternatives); engineering groups like Arup & BuroHappold have already expressed interest.

##### **Asparagine test**

Another Innovate UK-funded two-year project to develop a new rapid sensor for measuring asparagine (an amino acid) linked to a known carcinogen, acrylamide that is found in wheat and flour - new EU regulations stipulate the need to reduce asparagine in baked goods and our collaborator has good links with many of the UK's biggest baked goods organisations (Hovis, etc) - this is a very timely and would have a significant UK/EU market right off the bat.

#### **Division 2      Medical Diagnostics**

##### **Spinostics**

This is a unique technology for measuring (cancer and other) biomarkers in a drop of blood using a novel "EPR" device linked directly to a smartphone. AquAffirm are in early discussions with a Chinese investment group about setting up a JV in China to develop this but if the technology lives up to its promise, this is game-changing and has enormous number of medical (as well as scientific research market) applications (patent applied for).

##### **QELFA**

Another medical diagnostic project that merges the benefits of pregnancy tests (ease of use and rapid) with those of diabetes tests (quantitative and precise). AquAffirm has finished a two-year Innovate UK-funded project and has demonstrated most of the key aspect of the technology; initial application could be as a rapid home test of chronic kidney disease (CKD - huge market). (Patent GRANTED in EU).

Our short- to medium-term aim is to sell off/licence out patents in the Medical Diagnostics division rather than developing them in-house.

#### **Division 3      Carbon Nanotubes**

The Group has a family of five patents related to carbon nanotubes and graphene that have been granted in a number of jurisdictions including US & Europe; this enables numerous industrial applications including smart sensors (e.g. small, networked strain gauges for infrastructure - bridges, etc) and carbon sequestration. (Five sets of patents granted in various jurisdictions).

Our short- to medium-term aim is to sell off/licence out patents in the Carbon Nanotubes division rather than developing them in-house.

#### *Overall Business strategy of the Group*

Most of the capital raised by the fund raising will be employed on the growth and development of the businesses within the Environmental Sensors division – chiefly AquAffirm - which are near to market, leading to the appointment of a distributor in the US and the development of the Group's own sales team for Europe and the rest of the world to hit the 2019/20 AquAffirm sales targets.

Some capital will be employed on the development of the Medical Diagnostics division but with a short to medium term aim to sell off/licence out the Medical Diagnostics patents, because the time and cost of taking these to market may be challenging.

Some capital will be employed on the development of the Carbon Nanotubes but also with a short to medium term plan to do the same with the Carbon Nanotubes as per our recommendation for Medical Diagnostics.

Outside help may be needed to support the management team as regards out-licencing deals for Medical Diagnostics and Carbon Nanotubes Divisions.

### **Management Team & Directors**

#### ***Management***

***Dr David Sarphe (AquAffirm CEO, Co-founder & Director)*** Co-founder of PowderJect (one of the UK's most successful biotechnology /medical-technology companies); CEO of BNC; AquAffirm director.

***Dr Chris Johnson (AquAffirm Dir. of Technology Development)*** Formerly of Plasticell Ltd, leads a team of 5 FTEs working on the project;

***Katie Macdonald (AquAffirm CFO & Co-founder)*** Chartered Accountant, Chartered Secretary & senior finance professional with 26 years' experience, the latter 16 years as Finance Director & Company Secretary to biotech- and tech-based SMEs; AquAffirm company secretary.

#### ***Non-executive Directors***

***Prof Tony Cass FRSC (AquAffirm Co-founder & Non-Executive Director)*** One of original inventors of glucose test strips, now Prof of Chem Biology in the Dept of Chemistry at Imperial College & Fellow Royal Society of Chemistry & Society of Biology; co-founder & non-exec director of BNC.

***Prof Gabriel Aepli FRS (AquAffirm Co-founder & Non-Executive Director)*** Head of the Photon Science Division at the Paul Scherrer Institute (Switz), Prof of Physics at ETH & EPFL, and co-founder & non-exec director of BNC.

***Prof John Wood CBE, FEng (AquAffirm Co-founder & Non-Executive Director)*** Nominated chairman of the ATTRACT Project Advisory Board (EU), former Chief Executive of the Council for the Central Laboratory of the Research Councils (UK) and the former Secretary General of the Association of Commonwealth Universities (ACU).

### **Key Achievements**

- Bio Nano Holdings, an AquAffirm subsidiary, has generated almost £850k in innovation grants in three years to support initial development of the arsenic and fluoride products.
- Total research and innovation funding supporting development of the arsenic test exceeds £2.5m.
- Patents for arsenite sensor have been granted in the United States (2017), Europe & Australia (2018), and are pending in Canada.
- Directors are in advanced commercialisation discussions with key customers (UNICEF and WaterAid).
- Team has started to sell the base electrodes (without proprietary chemistry) for research use, generating modest but growing revenues (2018).

### Investment requirement

AquAffirm is currently seeking initial funding of £1m primarily for the following development activities:

- Successful completion of AquAffirm-As™ (arsenic) product development and field demonstration in Bangladesh & India.
- Scale-up of AquAffirm-As™ manufacturing process.
- Commercial launch of AquAffirm-As™ in Bangladesh and West Bengal, India.
- Development of market strategy for launch of AquAffirm-As™ in US/Canada.
- Laboratory proof-of-concept of AquAffirm-F™ for fluoride measurement.
- Initial development of other proprietary technologies.

**AquAffirm is EIS eligible for UK investors.**

### Exit Strategy

AquAffirm intends to become the leading developer of tests for water safety with an initial focus on biosensors for the measurement of toxins in drinking water

We anticipate a likely exit as a merger/acquisition in 3-5 years and have undertaken initial discussions with a German medical/food diagnostics company with a manufacturing group in India, which has expressed potential interest in AquAffirm once sales traction has been demonstrated; expected valuation in 3-5 years would likely exceed £100m, based on an NPV assessment of forecast revenues and comparison with recent comparable acquisitions (e.g. Danaher-Hach).

### A Brief History of AquAffirm

In October 2007 The Bio Nano Centre Limited ("BNC") was established as a private company limited by guarantee to implement a joint venture between Imperial College and UCL. Bio Nano Holdings Limited ("BNH") bought BNC in 2015 and, so that BNH would be eligible to receive EIS investment, in February 2019 BNC was re-registered as a company with a share capital, wholly owned by BNH. At the same time BNH changed its name to AquAffirm Limited. The AquAffirm - BNC group owns a substantial portfolio of granted patents in a range of technology areas including biosensors, microwaves/photronics & nano-materials.

### Corporate Structure



## AQUAFFIRM BUSINESS SCOPE AND OBJECTIVES: THE 2 YEAR PLAN

With IP based on a modification of the technology behind the everyday blood glucose self-test, AquAffirm identifies and develops proprietary molecules such as enzymes which can be produced and packaged onto specially-designed test strips. The enzyme on the strips react with toxins to create nano-scale currents proportional to the water contamination detected, which is measured digitally using a handheld web-connected meter. Its initial product is the AquAffirm-As™ for measuring arsenic at parts-per-billion (ppb) concentrations in drinking water. A follow-on product (AquAffirm-F™), a test strip-based system to measure fluoride in drinking water, is also under development.

*AquAffirm-As™*: the team has demonstrated laboratory operational proof-of-concept for its first product which will be launched in Bangladesh; the team is developing the strategy for product stabilisation and packaging at the moment. Field trials will be conducted as noted below.

*AquAffirm-F™*: the team has demonstrated initial laboratory proof-of-concept with data showing relevant detection limit and range. The team are currently determining matrix interference effects and developing product stabilisation and packaging.

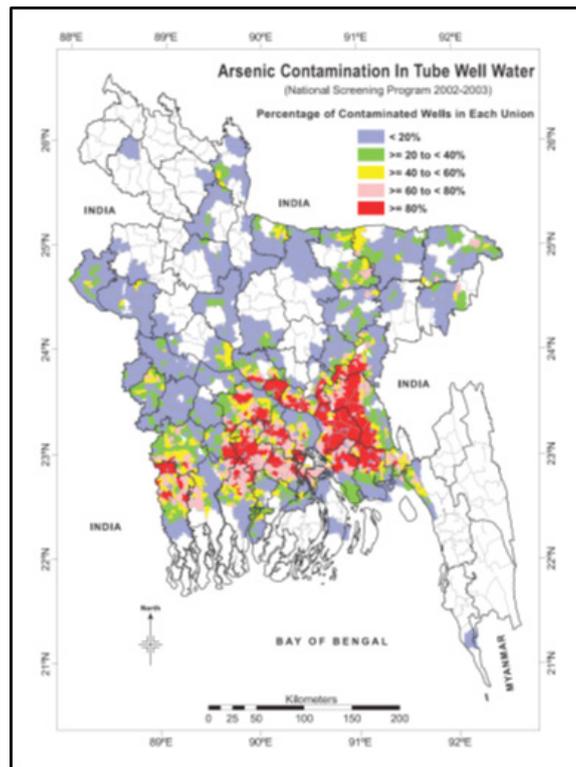
Field demonstration of the arsenic product will be conducted in Mexico and then Bangladesh, starting in March 2019. Experimental studies for development of the fluoride product will be conducted in Mexico in February 2019, with field demonstration later in 2019.

Manufacture of the thin-film gold electrodes, which form the base of our As test strips, is currently out-sourced to a medical device manufacturing company (FlexMedical) in Scotland. They use a scalable approach (laser-micromachining) to produce strips to a design that BNC owns. The current procedure (which produces 200 thin-strip gold electrodes on each A4 sheet) can be scaled up to produce 5,000 electrodes per week very quickly. Scaling up to manufacturing volume above this will require additional capital expenditure.

### **Arsenic Product Launch**

*Bangladesh*: The team is targeting initial product launch of AquAffirm-As™ in Bangladesh for Q1 2020. The team has already undertaken advanced discussions with the primary NGO that is responsible for addressing the arsenic issue in Bangladesh (UNICEF). Bangladesh's Department of Public Health Engineering (DPHE) and UNICEF are planning a \$200m launch of a four-year arsenic mitigation Offer with ~\$65m to be allocated for arsenic testing and database analytics over the lifetime of the Offer.

*Arsenic contamination of groundwater in Bangladesh*: The World Health Organisation (WHO) has called the arsenic contamination of drinking water in Bangladesh: "The largest mass poisoning of a population in history". The naturally-occurring arsenic affects 59 out of Bangladesh's 64 districts (DFID, 2000), and in some villages, 90 per cent of the tubewells are unsafe, with few alternatives to groundwater. Estimates of the number of people currently ingesting unsafe levels of arsenic in their drinking water in Bangladesh range from **40 to 50 million**. In 2000, the Water and Sanitation Program (WSP), a significant World Bank-sponsored initiative, emphasized the importance of testing and continuous monitoring, and a screening program over the following five years (partially sponsored by UNICEF) tested nearly 5 million wells in the most affected regions of Bangladesh using commercially-available field test kits.

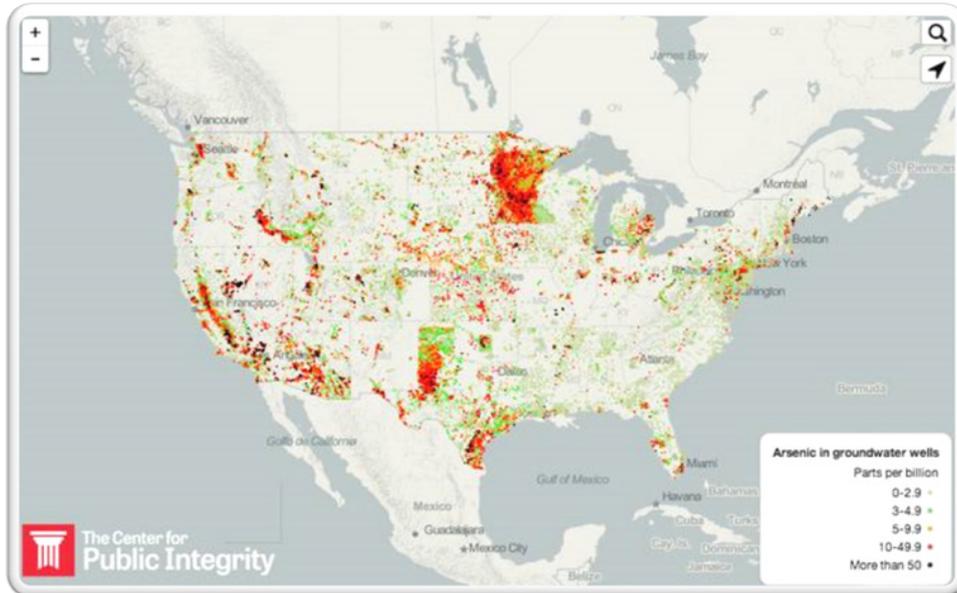


**Figure. Map showing arsenic contamination of tube wells in Bangladesh.**

*Estimate of market demand in Bangladesh:* Of the 10m active tube wells in Bangladesh (each with an operational life of 8 years) approximately 40% are in areas where arsenic levels are above 10ppb (the WHO international limit). Every year > 500k new wells are drilled in these areas. To test all existing wells in high risk areas would require 2m tests p.a. for two years. A rolling cycle of testing every six months to two years plus a rolling Offer of new well testing would require 1-4 million tests every year. We conservatively estimate market demand at 3m tests per year for the first five years of operation. At an estimated cost of £1 each this generates total projected revenues of £15m over 5 years. AquAffirm's executive team has held in-depth conversations with UNICEF on addressing the arsenic problem in other 'at-risk' regions in developing countries for which there is an estimated demand for up to 4.5m test strips.

### **US Market for AquAffirm**

It's not just in resource-limited developing countries where arsenic is a problem. Even a country like the US is affected in a significant way: estimates suggest up to 9 million people are affected in areas as widely-separated as west Texas, Minnesota, California and even Maine on the East Coast.



**Figure. Map showing red and black dots representing wells reading above the EPA limit.**

However, this problem is only going to increase, as fracking is known to exacerbate the situation, with 30% of the water wells near fracking sites being affected in one Texas study. Oil exploration companies and “frackers” will eventually be forced to test the “produced” water (a nasty organic waste product that is generally dumped after fracking) and the water in the local private wells on a regular basis, either through legislation or as a result of law suits. Having the ability to test immediately (whether by oil company or private citizen) will be of immense importance in the future (rather than waiting weeks for results of lab tests to be returned). This is especially true for testing *produced water* before it is dumped - indeed, massively important. Numerous scientific publications have already shown that arsenic is already leading to increases in cancers in the US, with US medical researchers recommending increased testing of water wells.

The AquAffirm price point for tests in USA (for forecast purposes) is \$10 per test, which is in line with other (far inferior) colourimetric tests for water pollutants in US. Additional analysis may suggest that our prices could be at a premium to the \$10/test but at an estimated 2.5m tests per year, this is a reasonable starting point for US-generated revenues.

The Financial Forecasts show annual revenues in excess of £2,500,000 from sales in the US within the third year following launch, rising substantially thereafter.

## TECHNOLOGY

### TECHNOLOGY - DIVISION 1 ENVIRONMENTAL SENSORS - INCLUDING "AQUAFFIRM"

#### AQUAFFIRM

##### ***AquAffirm-As™ - Rapid arsenic test strip-based sensor***

The Company's first product is the AquAffirm-As™ for rapid point-of-use measurement of arsenic in drinking water. This is scheduled for launch in Q1 2020, with key first markets in areas of greatest need, including Bangladesh and India.



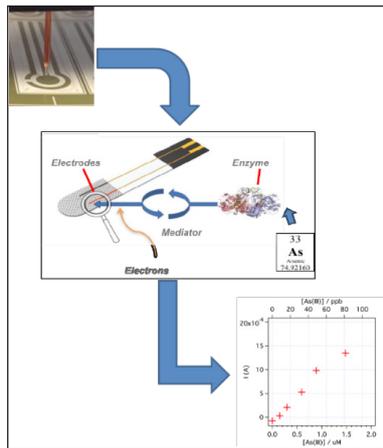
**Figure: Artist's rendering of AquAffirm-As™ electronic reader and test strips**

Utilizing a patented modification to the familiar everyday blood glucose self-test, we have developed an innovative platform which enables the commercialization of a simple, rapid, cheap, disposable test that can be tailored to specific toxic elements and compounds. Using a proprietary enzyme and advanced electrochemistry-based methods, our technology solution has already been demonstrated for detecting arsenic in proof-of-concept experiments in the laboratory. A similar rapid test strip-based platform can be re-engineered to detect fluoride, cadmium, lead, mercury, manganese and potentially an unlimited number of other contaminants including oestrogens and algal toxins.

Two key fundamental technologies are at work in the AquAffirm™ system: (1) use of state-of-the-art "bioprospecting" methods to systematically discover novel toxin-specific enzymes (or other molecules) which form the basis for the electrochemistry, and (2) the electrochemical system itself.

The key enzyme used by the AquAffirm-As™ was originally developed from a bacterium discovered in an Australian gold mine by a UCL professor (Prof Joanne Santini, who has agreed to join the AquAffirm Scientific Advisory Board); since then she has been instrumental in developing the expression system which enables the enzyme to be synthesised in a scalable manufacturing process.

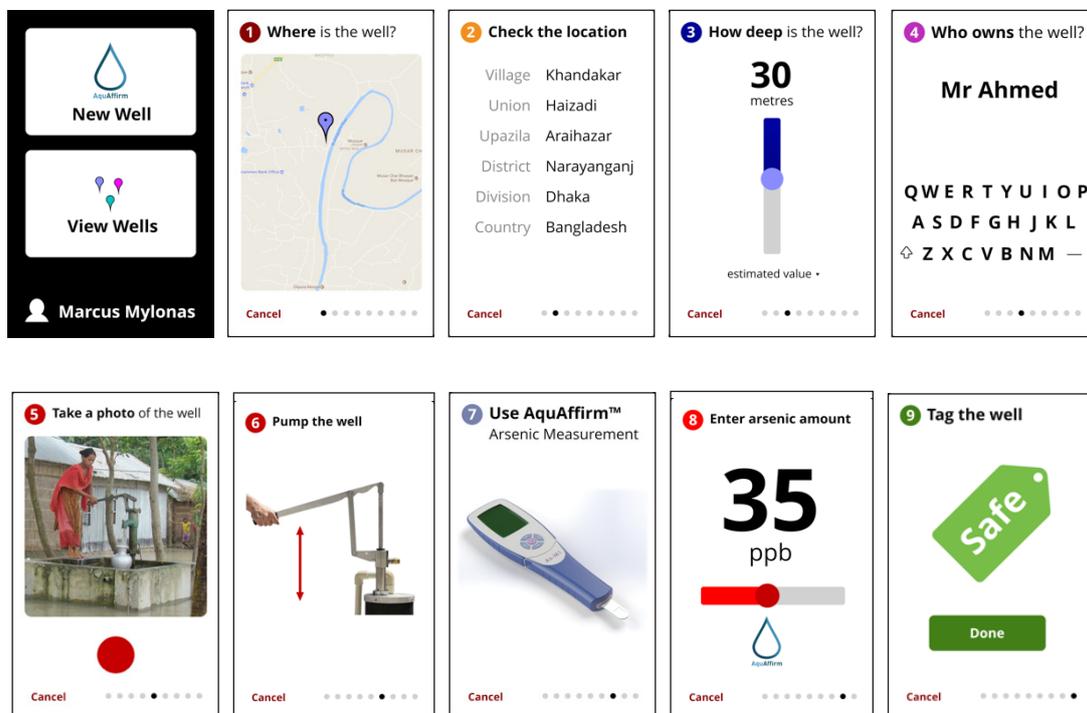
Redox enzyme electrochemical biosensors work through a specific reaction of the enzyme with the analyte to be measured, followed by the transfer of electrons from the enzyme via a mediator (or mediators) to the electrode surface, which creates a nano-scale current proportional to the concentration of the target analyte (arsenic in this case, see Figure below); this current is then measured through a specially-designed handheld meter.



**Figure: Overview of electrochemistry-based method for arsenic measurement.**

**Data acquisition and analysis software tools**

In parallel to developing the disposable test strip/reusable reader platform for tailored toxic elements and compounds a suite of data acquisition and analysis software tools will be created. A mobile application (initially for Android) will communicate with the AquAffirm™ reader via Bluetooth to automatically record the measurement data, thus reducing the human errors that occur when manually recording large datasets. The mobile app will also allow additional metadata to be recorded, including GPS location, location address, well owner name, well age, well depth and a photo of the location and well. A clear graphical interface will provide a step-by-step set of instructions that will lead the user through each test (see Figure below), to further reduce user errors. We have already received positive feedback on the initial app design from head of arsenic mitigation, UNICEF, Bangladesh.



**Figure. Screen designs of the mobile app, that will lead the user through the process of performing a measurement as well as automatically recording the test data.**

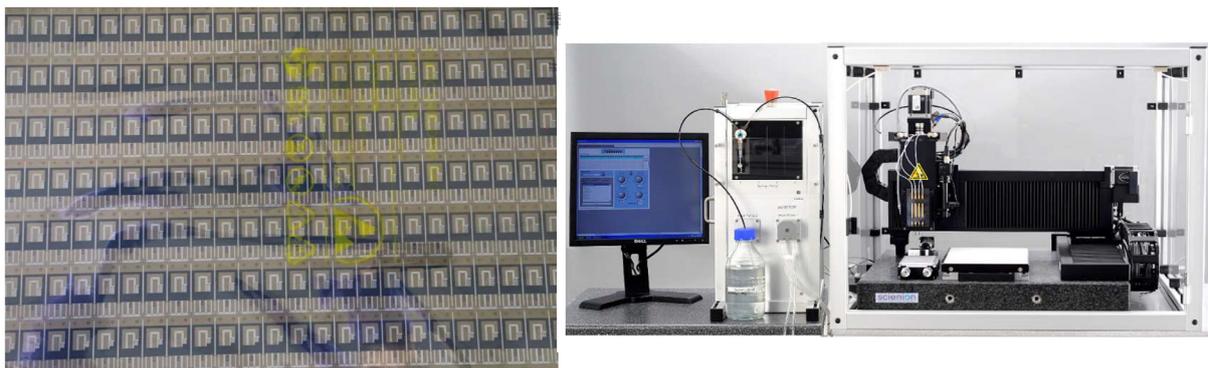
Accompanying desktop software will also be produced for powerful 'big-data' analytics and for managing the multiple users who are often involved in a single mitigation program. Finally, a cloud-based database will be developed. Issues concerning the integration and compatibility with existing national datasets will be considered. Initial designs have been completed and the concepts have received positive feedback from the head of WASH at UNICEF Bangladesh. The software will be opened to third party tests, and will be available as a stand-alone product, offered in combination with a consulting service in managing large WASH testing programs. This will open up markets that we do not yet have tests in, including the bacterial testing market.

A typical arsenic mitigation project spends 34% of the total budget on testing and creating/managing a database. We aim to capture a large proportion of this value with the AquAffirm tests and software tools.

#### ***Current small volume manufacturing capability***

Production of AquAffirm™ disposable test-strips requires the manufacture of high quality electrodes made from a nanolayer of gold sputtered onto a plastic substrate. We have established an arrangement with Eastman Chemicals to supply the same type of gold sputtered thin-film used by LifeScan (Inverness) in their top-of-the-range Verio glucose test strips.

The gold-coated plastic roll is patterned into a low-cost electrode structure using a highly-scalable laser ablation and screen-printing process. FlexMedical Solutions Ltd, a UK subcontractor, currently manufactures the test strip electrodes under contract with the tight reproducibility/low variability required. To complete the test strips, reagents are dispensed onto the electrode and a capillary-fill sample chamber constructed using tape technology. The Company uses an in-house deposition instrument (Scienion™) capable of batch processing thousands of tests per day.



***Figure A sheet of AquAffirm™ base electrodes and in-house liquid deposition instrument for batch processing.***

#### ***AquAffirm-F™ - Rapid fluoride test strip-based sensor***

While the global prevalence of dental and skeletal fluorosis is not entirely clear, it is estimated that excessive fluoride concentration in drinking water has caused tens of millions of dental and skeletal fluorosis cases world-wide over recent years, according to the WHO. In India an estimated 60 million people have been poisoned by well water contaminated by excessive fluoride, which is dissolved from the granite rocks. The effects are particularly evident in the bone deformities of children. Similar or larger problems are anticipated in other countries including China, Uzbekistan, Ethiopia, Mexico and other parts of Latin America.

The AquAffirm-F™ test for rapid measurement of fluoride levels in drinking water is being developed to address this global need. With a test strip-based approach similar to the AquAffirm-As™ the test will enable rapid point-of-use measurement of fluoride. It is being developed as part of an Innovate UK/ Newton Fund-sponsored project in collaboration with researchers from Mexico.

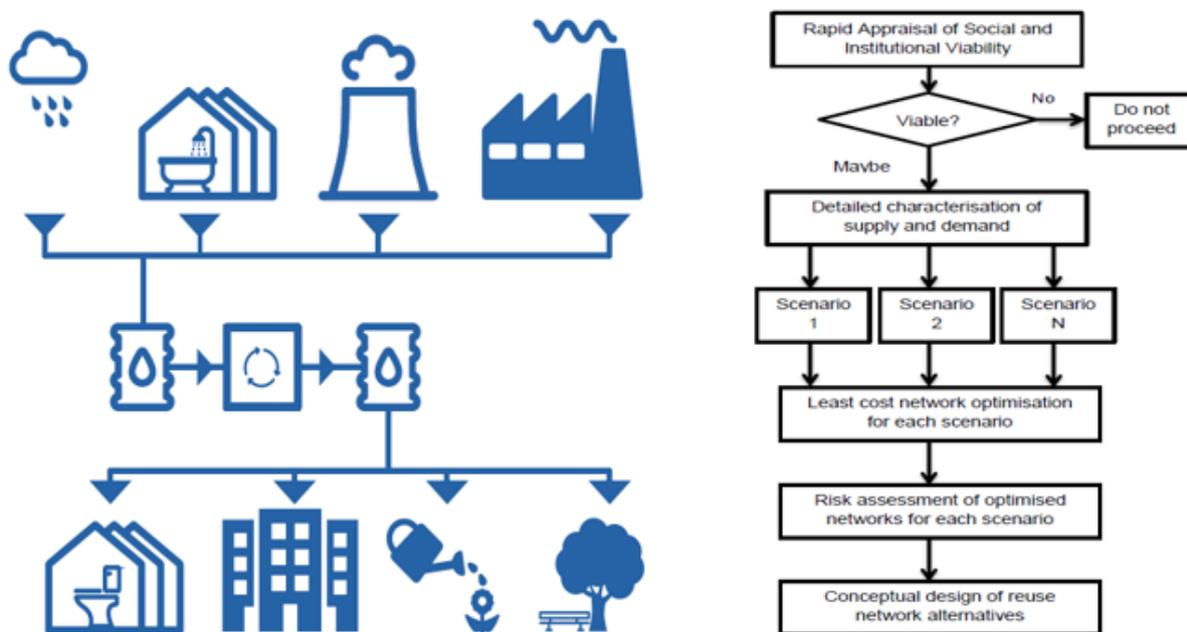
#### ***WRen™ - Water Reuse Network (WRen)™ optimisation software***

One of the major crises of the 21st century is the scarcity of freshwater in many parts of the world with water recycling and reuse being considered as a key element of water management globally. The

smart reuse of “greywater” from showers, wash basins and laundry for non-potable uses has been shown to reduce water consumption by 40%. Research has shown that the ability to achieve capital (CAPEX) and operating (OPEX) cost reductions is the greatest pull factor for companies looking to invest in water reuse network infrastructures. However, decision makers in both private and public sectors require innovative tools/methodologies to assess the cost-benefit and socio-institutional impact of undertaking major infrastructure projects and ways to deliver these projects at optimum capital (CAPEX) and operating (OPEX) cost levels.

To facilitate the significant investments needed to design, build and operate a water reuse network, AquAffirm and its collaborators are developing a novel decision support software/methodology to assess the cost-benefit and socio-institutional impact of undertaking major infrastructure projects and ways to deliver these projects at optimum capital (CAPEX) and operating (OPEX) cost levels. This project will develop an advanced least-cost optimization software for water reuse networks (WReN™).

The technology will provide a sustainable solution to the socio-institutional and cost related problems of facility management and maintenance. The WReN software will reduce the planning time and cost (CAPEX & OPEX) of greywater networks while ensuring energy efficiency by maximizing gravity flows. In addition, it will enable efficient and fair water metering and costing and the reduction of water wastage and losses. Accounting for future network expansions and project risks, this software will be the first of its kind in Europe.



**Figure. Schematic of WReN™ system and software design.**

**ASNInstaTest™: Rapid on-site test for asparagine in wheat flour**

Wheat accounts for 24.7% of total crop production in Europe. Although it is considered a healthy food, formation of the food contaminant, acrylamide, is produced in baked, fried and roasted wheat products at temperatures above 160°C. Acrylamide is a neurotoxin and probable carcinogen in humans. The main precursor for its formation is the free amino acid asparagine (ASN). Free ASN naturally accumulates in wheat grain and there is a significant difference in ASN accumulation between high ASN varieties and low ASN varieties. The reduction of ASN accumulation via a detailed understanding of ASN metabolism will improve the long-term impact on improving safe food and the welfare of the wider public. In addition, new EU regulations stipulate the need to reduce acrylamide levels in food, and monitoring asparagine levels in flour and baked goods is one key way to do this.

AquAffirm is developing the innovative ASNInstaTest™ as a new tool for addressing the issue of rising asparagine levels in wheat flour. Through the rapid (5 minute) measurement of gas-phase ammonia, a product of asparagine-asparaginase reaction, the team will develop technology that will enable rapid “at-the-gate” measurement of asparagine level, which is becoming an essential parameter within the baked-goods industry. This development project is being funded through an Innovate UK-supported

18-month project in association with partner SME, Curtis Analytics Ltd. Curtis has good links with many of the UK's biggest baked goods organisations and we are confident of strong commercial demand once the test has been finalised.

The development of an "ASNInstaTest" will significantly add to the global effort to reduce acrylamide formation in wheat products. Acrylamide content is a difficult problem facing the food industry globally, and our product will enable much faster measurement of relevant ASN levels, which will translate into strategies that will further reduce asparagine accumulation in wheat grain. Additionally, the "ASNInsta Test" could also be used as a follow-on test for potato crops, where the acrylamide problem is significantly more complex.

Development of this ASNInstaTest is directly aligned with key UK Agricultural and Food Security strategic priorities, and reduction of acrylamide-forming potential in wheat is also aligned to the strategic UK national priority to optimise health and reduce disease risks and, additionally, is aligned with the goal of reducing risks to human health from contamination of food by harmful substances at any stage of the food chain.

## TECHNOLOGY - DIVISION 2 MEDICAL DIAGNOSTICS

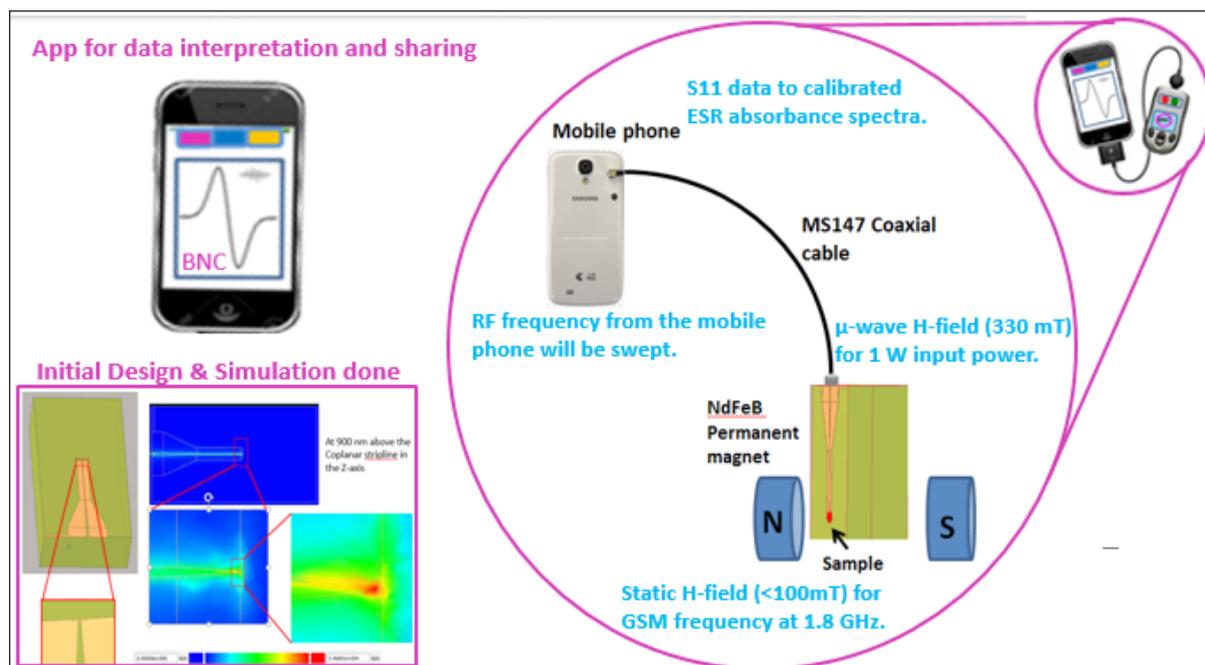
### SPINOSTICS™ - Rapid point-of-care medical diagnostics platform

AquAffirm and its collaborators are developing a novel smartphone-driven micro electron spin resonance (micro-ESR) platform which will enable a radical new approach to medical diagnostics and disease monitoring. Through development of a new device that places the power of ESR (also known as electron paramagnetic resonance or EPR) spectroscopy in the palm of the hand and with the parallel development of novel "spinostics" spin-labels, AquAffirm and its partners will establish an entirely new platform for measuring a range of clinically-relevant parameters, including biomarkers in the blood related to heart disease, cancer, bloodborne free radicals associated with psychological stress, and others.

The new device will be handheld and portable, delivering rapid results from capillary (finger-prick) blood samples. Driven by microwaves from a conventional smartphone, the novel device will radically transform medical diagnostics. The technology uniquely combines the high sensitivity and spectral clarity (fingerprint) of a miniaturized ESR spectrometer with the ubiquity and connectivity of smart mobile phones, thereby creating a powerful, quantitative and versatile system. AquAffirm has conducted rigorous numerical simulations of our micro-ESR design, which shows improved sensitivity over the current state-of-the-art ESR devices.

Once successfully developed, this technology, for which two patents are filed, will offer a useful alternative to optical and electrochemical paradigms in biomarker detection and measurement, creating new commercial opportunities in broad areas of application throughout clinical and research medicine.

Because of the timescales and substantial costs involved, the technology will be out-licensed to take it through pre-commercialisation and regulation.



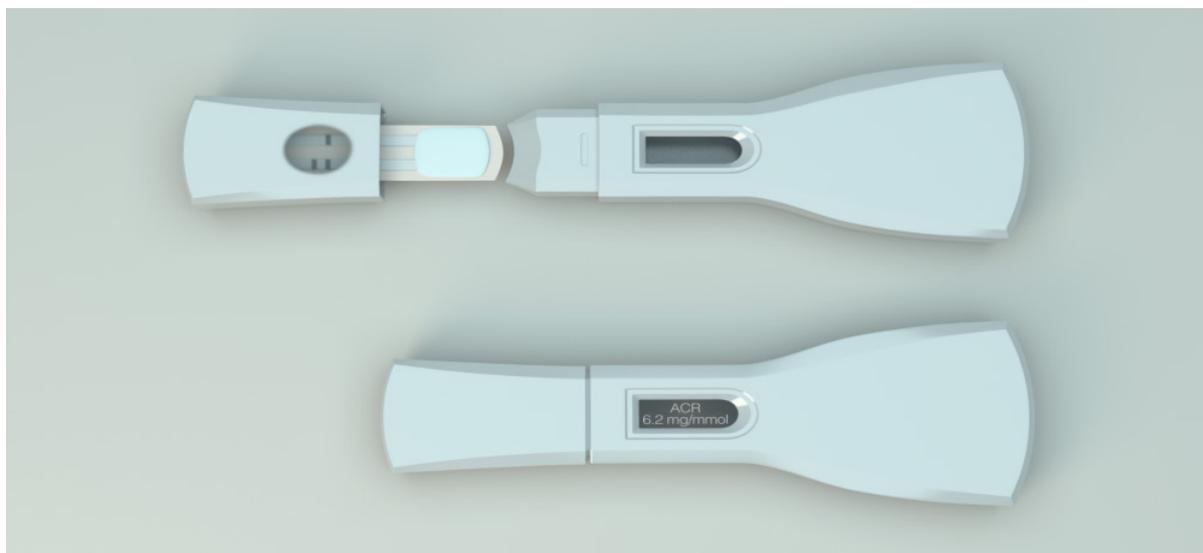
**Figure. High-level design of the Spinostics™ technology**

### **QELFA™ - Quantitative electrochemical lateral flow assay**

AquAffirm has developed the proprietary quantitative electrochemical lateral flow assay (QELFA™) which essentially combines the ease-of-use of lateral flow assays like pregnancy tests with the quantitative (digital) output and precision of blood glucose tests that diabetics regularly use.

QELFA innovatively replaces the gold nanoparticles or coloured latex beads, traditionally used in qualitative lateral flow assays (LFAs), with pH-sensitive polymer nanocapsules that are loaded with a redox probe. In the QELFA device an enzyme triggers the release of the probe by creating a local increase in pH at the test line. Subsequently, the free redox probe is quantitatively measured amperometrically using electrodes integrated with the LF membrane. A sandwich format for albumin detection and a novel competitive format for creatinine detection will be used. The first medical application for which the technology is being developed is for point-of-care (POC) measurement of key proteins

According to a report published in 2012 by *NHS Kidney Care*, kidney disease costs the NHS over £1.4 billion per annum, more than breast, lung, colon and skin cancers combined. A year later, the Kidney Health Report highlighted that every day 19 people in the UK are diagnosed with kidney failure. Behind these 19 people, many more will have a lesser degree of kidney dysfunction, called Chronic Kidney Disease (CKD) that will place them at increased risk of cardiovascular disease and acute kidney injury. The NHS estimates that about 1 million cases remain undiagnosed and thus untreated. These patients need to know they are at risk and take action so that this risk can be reduced. Current POC methods are semi-quantitative, and clinicians still rely on laboratory testing for assessment and monitoring of kidney disease. There is currently no device that can be used by clinicians for near-patient quantitative monitoring of kidney disease. This project's novelty lie in modifying the technology contained in familiar pregnancy tests to deliver a quantitative test for kidney disease that can be used at near-patient settings. Moreover, the digital readout of the test enables the automatic and accurate collation of kidney function readings into a central database using mobile technology.



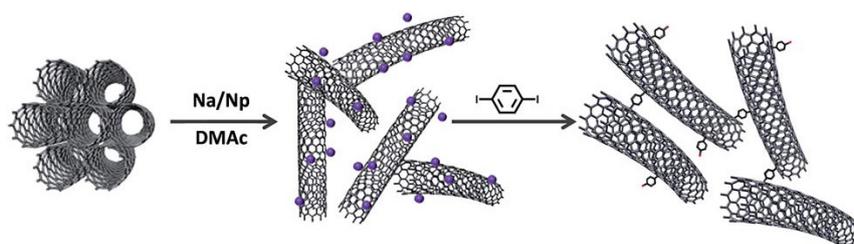
**Figure. Artist's rendering of the QELFA™ device.**

### TECHNOLOGY - DIVISION 3 CARBON NANOMATERIALS

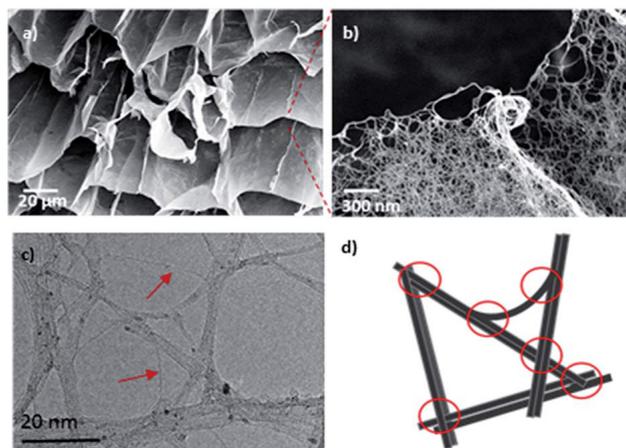
AquAffirm has developed new proprietary materials and innovative synthesis techniques for producing these new materials which are based on graphene and carbon nanotube aerogels. The highly innovative chemistry involved in the process allows a robust linkage between nanotubes into the aerogel providing materials with outstanding mechanical and electrical properties.

In particular, the chemistry used to crosslink the graphene and nanotubes within the aerogel is based on the reduction of the carbon nanotubes (introduction of a negative charge) to the corresponding so-called nanotubides (Figure X). The process allows the dissolution and functionalisation of the nanotubes with minimal damage to the carbon framework, thereby maintaining the intrinsic properties of carbon nanotubes. The advantage of direct chemical cross-linking is also an increased rigidity and stability of the aerogel. Furthermore, there is no need for tedious and harsh purification post-treatments of the aerogel because no polymers or additives are used; by bringing the carbon nanotubes into intimate contact potentially with a conjugated linker, as shown in Figure Y, they form a conductive or responsive network.

AquAffirm owns granted patents for the technique in a number of territories.

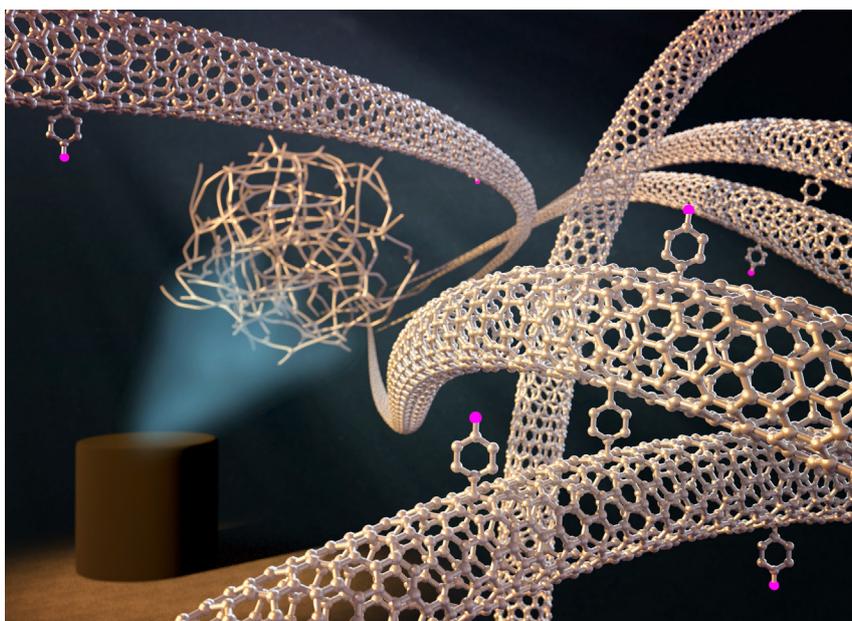


**Figure X. Chemistry used for the synthesis of the aerogels.**



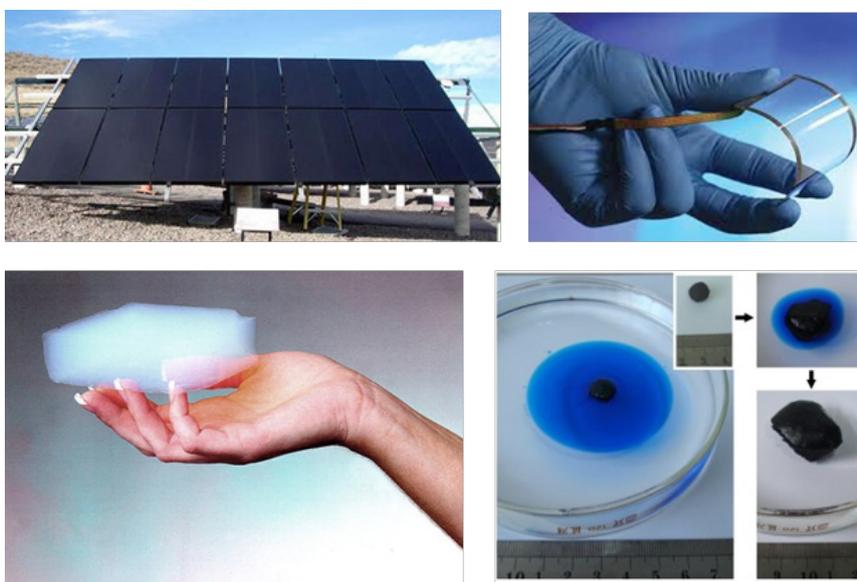
**Figure Y. Electron Microscopy images of the aerogels and a schematic representation of the arrangement of nanotubes in the aerogel.**

Preliminary results show that the aerogels synthesised following our methodology have high electrical conductivity ( $9.4 \text{ S m}^{-1}$ ), enhanced surface area ( $766 \text{ m}^2 \text{ g}^{-1}$ ) and significant accessible porosity. The same has been applied to graphene and graphene aerogels. The work has been recently published in *J. Mater. Chem. A.* and featured on the cover of the Journal as shown in Figure Z (DOI: 10.1039/c5ta10311h).



**Figure Z. Cover of Journal of Materials Chemistry (DOI: 10.1039/c5ta10311h) showcasing the work developed at Bio Nano Consulting in collaboration with Imperial College London.**

There are a number of applications envisaged for the aerogels synthesised using our methodology, including: catalyst supports, non-reflective panels, transparent conductive carbon nanotube films, materials for space applications, electrochemical devices, absorbents for solvents, oil or petrol, filters for liquids, gas absorbents and a water purification medium (Figure A). However, the outstanding electrical properties and the low volumetric density of these aerogels lead to their use as supercapacitors as the most significant potential application.



DOI: 10.1002/adma.200902986

**Figure A. Examples of carbon nanotube aerogels applications.**

## PATENTS

Patent families owned by the Group are shown below:

Patent Name	Description	Patent Codes	Jurisdiction	Status	Total Paid (£)
<b>AquAffirm - Arsenic</b>					
Modified arsenite oxidase and a biosensor for detecting arsenite	The present invention provides an arsenite oxidase enzyme modified to prevent translocation by modification of a translocation signal sequence. A microorganism modified to express the heterologous arsenite oxidase enzyme is also provided by the invention, together with a device for detecting the presence of arsenite in a sample	CA2852619A1 AU2012324576 GB201118026D0  EP2768951A1 US9777306B2 WO2013057515A1	Canada Australia United Kingdom  Europe United States World	Application Granted Granted  Granted Granted Application	74474.41
Dual Mediator Biosensor	The present invention provides a device for detecting the presence of an analyte in a sample, said device comprising (i) at least one electrode, (ii) a oxidase enzyme, and (iii) first and second redox mediators.	GB201517275D0  US20180282777A1 EP3356809A1 201817014718 WO2017055873A1	United Kingdom  United States Europe India World	Granted  Application Application Application Application	20205.39
<b>Medical Diagnostics</b>					
Apparatus and method for the lateral flow of affinity assays ("QELFA")	Apparatus for the quantitative analysis of an analyte in a sample, comprising: (i) a solid phase; and (ii) a detector, wherein the surface of the solid phase comprises: (a) a first position for application of the sample; and (b) a second position distant from the first position, wherein a first molecule binds to the analyte and is capable of releasing a detectable species is deposited in either the first position or has been added to the sample before application to the solid phase, and wherein a second molecule that binds to the analyte is immobilized in the second position, and wherein an enzyme is immobilized, collocated with the molecule immobilized in the second position, and wherein the detector is located very next to the immobilized in the second position molecule, wherein a substrate for the enzyme is either normally present in the sample, or has been added to the sample before application to the solid phase or has been deposited in the first position on the solid phase prior to application, and wherein the interaction between the enzyme and the substrate results in the release of a detectable species of the first molecule.	GB201112395D0  US20140248642A1  EP2734842B1  WO2013011323A3  JP6053781B2  DK2734842T3  ES2567803T3	United Kingdom  United States  Europe  World  Japan  Denmark  Spain	Granted  Application  Granted  Application  Granted Granted Granted	82924.47

Analytical method on the basis of electron spin resonance (ESR) and probe molecule ("Spinostics")	The present application relates to an electron spin resonance (ESR) analytical method comprising: providing a probe molecule capable of binding selectively to a target, wherein a paramagnetic moiety is bound to the probe molecule via two thioether linkages, and an electron spin resonance signal of the probe molecule bound to the target is different from an electron spin resonance signal of the probe molecule that is not bound to the target, contacting the probe molecule with a first sample, which may or may not comprise the target, to form a mixed sample and obtaining an electron spin resonance signal of the mixed sample. Probe molecules, molecules for producing the probe molecules, and an apparatus is also described.	GB201211159D0 EP2864767A1 WO2013190329A1	United Kingdom Europe World	Granted Application Application	2081.40
<b>Carbon nano-materials</b>					
Cross-linked carbon nanotube networks	The present invention relates to a method for the production of cross-linked carbon nanotube networks which are selected from aerogels and xerogels with improved performance and characteristics thereof. The invention is also concerned with carbon nanotube networks which are selected from aerogels and xerogels produced by such processes and uses thereof.	GB201100712D0 US9308479B2 EP2665552B1 WO2012098345A3 CN103459011B DK2665552T3 ES2606142T3	United Kingdom United States Europe World China Denmark Spain	Granted Granted Granted Application Granted Granted Granted	113665.03
Heatable carbon nanotube aerogels, xerogels and gels	The present invention relates to a method of heating carbon nanotube which are selected from aerogels, xerogels and gels using an electrical current. The invention is also concerned with the use of such heatable carbon nanotube networks which are selected from aerogels, xerogels and gels in a wide range of applications including filtration, sorption, gas storage and catalyst support. The invention is further concerned with devices comprising such heatable carbon nanotube networks which are selected from aerogels, xerogels and gels.	GB201122198D0 WO2013093520A3	United Kingdom World	Granted Application	14834.40
Carbon nanotube aerogels and xerogels for CO <sub>2</sub> capture	The present invention relates to carbon nanotube networks which are selected from aerogels and xerogels comprising layered double hydroxides (LDHs). The invention is also concerned with the method of preparing such carbon nanotube networks which are selected from aerogels and xerogels and use of such carbon nanotube networks which are selected from aerogels and xerogels for sorption and gas storage.	GB2516565B WO2013093519A3	United Kingdom World	Granted Application	22637.20

Graphene and graphene oxide aerogels/xerogels for co2 capture	The present invention relates to graphene materials, particularly to aerogels and xerogels which comprise graphene or graphene oxide, and also contain layered double hydroxides (LDHs). The invention is also concerned with the method of preparing such graphene or graphene oxide aerogels and xerogels and use of such materials for sorption and gas storage.	GB201417256A  WO2013132259A1	United Kingdom  World	Granted  Application	15347.80
Cross-linked graphene networks	The present invention relates to a method for the production of cross-linked graphene and graphene oxide networks, which are selected from aerogels and xerogels with improved performance and characteristics thereof. The invention is also concerned with graphene and graphene oxide networks, which are selected from aerogels and xerogels produced by such processes and uses	GB201204170D0 US9950931B2 EP2822893B1 CN104640809B WO2013132260A9 DK2822893T3 ES2657460T3 WO2013190329A1	United Kingdom United States Europe China World Denmark Spain World	Granted Granted Granted Granted Application Granted Granted Application	66410.23

## FINANCIAL INFORMATION

### Historical Financial Information

#### AquAffirm Limited (formerly BNH)

The Profit and Loss Account of AquAffirm Limited (formerly BNH) for the year ended 28 February 2018 was as follows:

#### AQUAFFIRM LIMITED (FORMERLY BNH)

#### Profit and Loss Account for the year ended 28 February 2018

	<b>2018</b>	<b>2017</b>
	<b>£</b>	<b>£</b>
Administrative expenses	(3,062)	(2,791)
<b>Operating loss</b>	(3,062)	(2,791)
<b>Loss before taxation</b>	(3,062)	(2,791)
Tax on loss		
<b>Loss for the financial year</b>	(3,062)	(2,791)

The Balance Sheet of AquAffirm limited (formerly BNH) for the year ended 28 February 2018 was as follows:

#### AQUAFFIRM LIMITED (FORMERLY BNH)

**Registered number:** 09188375

#### Balance Sheet as at 28 February 2018

	Notes	2018	2017
		£	£
<b>Fixed assets</b>			
Intangible assets	3	7,822	3,590
<b>Current assets</b>			
Debtors	4	1,198	
Cash at bank and in hand		1,168	510
		2,366	510
<b>Creditors: amounts falling due within one year</b>	5	(34,333)	(25,182)
<b>Net current liabilities</b>		(31,967)	(24,672)
<b>Net liabilities</b>		(24,145)	(21,082)
<b>Capital and reserves</b>			
Called up share capital		20	20
Profit and loss account		(24,165)	(21,102)
<b>Shareholders' funds</b>		(24,145)	(21,082)

**BNC (the wholly owned subsidiary of AquAffirm)**

The Profit and Loss Account of BNC for the year ended 28 February 2018 was as follows:

**THE BIO NANO CENTRE UNLIMITED****Profit and Loss Account****for the year ended 28 February 2018**

	Notes	2018 £	2017 £
<b>Turnover</b>		974,607	906,304
Cost of sales		(649,484)	(690,740)
<b>Gross profit</b>		325,123	215,564
Administrative expenses		(337,007)	(351,058)
Other operating income			18,149
<b>Operating loss</b>		(11,884)	(117,345)
Interest receivable			4
<b>Loss on ordinary activities before taxation</b>		(11,884)	(117,341)
Tax on loss on ordinary activities	4		
<b>Loss for the financial year</b>		(11,884)	(117,341)

The Balance Sheet of BNC for the year ended 28 February 2018 was as follows:

**THE BIO NANO CENTRE UNLIMITED**

**Balance Sheet**

**as at 28 February 2018**

	Notes	2018		2017	
		£	£	£	£
<b>Fixed assets</b>					
Intangible assets	5		129,931		105,245
Tangible assets	6		10,497		10,102
			<u>140,428</u>		<u>115,347</u>
<b>Current assets</b>					
Debtors	7	277,629		262,036	
Investments held as current assets		18		18	
Cash at bank and in hand		312,361		209,805	
		<u>590,008</u>		<u>471,859</u>	
<b>Creditors: amounts falling due within one year</b>	8	<u>(563,659)</u>		(408,545)	
<b>Net current liabilities</b>			<u>26,349</u>		<u>63,314</u>
<b>Net assets</b>			<u>166,777</u>		<u>178,661</u>
<b>Capital and reserves</b>					
Profit and loss account			<u>166,777</u>		<u>178,661</u>
			<u>166,777</u>		<u>178,661</u>

**STATEMENT OF CHANGES IN EQUITY**  
**for the year ended 28 February 2018**

	<b>Profit and loss account</b>	<b>Total</b>
	<b>£</b>	<b>£</b>
<b>At 1 March 2016</b>	296,002	296,002
Profit for the financial year	(117,341)	(117,341)
<b>At 28 February 2018</b>	178,661	178,661
<b>At 1 March 2017</b>	178,661	178,661
Profit for the financial year	(11,884)	(11,884)
<b>At 28 February 2018</b>	166,777	166,777

## **NOTES TO THE ACCOUNTS**

### **for the year ended 28 February 2018**

#### **1 Accounting policies**

##### *Basis of preparation*

The accounts have been prepared under the historical cost convention and in accordance with FRS 102, The Financial Reporting Standard applicable in the UK and Republic of Ireland.

Each company has taken advantage of the following disclosure exemptions under FRS102:

- (a) The requirements of Section 4 Statement of Financial Position paragraph 4.12(a)(iv)
- (b) The requirements of Section 7 Statement of Cash Flows
- (c) The requirements of Section 33 Related Party Disclosures paragraph 33.7.

##### *Going concern*

As highlighted in the Director's report, the directors have a reasonable expectation that each company will have adequate resources to continue in operational existence for the foreseeable future. Accordingly, we continue to adopt the going concern basis in preparing the accounts.

##### *Turnover*

Turnover represents grants receivable, project management income and consultancy fees receivable, exclusive of VAT.

##### *Grants*

Grants obtained are treated as deferred income and credited to the profit and loss account as the related expenditure is incurred.

##### *Research and development*

Expenditure on research and development is written off in the year in which it is incurred.

##### *Intellectual property*

The costs associated with the application for patents and trademarks are capitalised and amortised on a straight line basis at 20% per annum, this being the directors' prudent estimate of the economic life of the intellectual property acquired. Patent renewal costs are written off as incurred.

##### *Tangible fixed assets*

Tangible fixed assets are measured at cost less accumulative depreciation. Depreciation is provided on all tangible fixed assets, at rates calculated to write off the cost of each asset evenly over its expected useful life, as follows:

Computer Equipment	25% reducing balance
Research Equipment	25% reducing balance

##### *Taxation*

A current tax liability is recognised for the tax payable on the taxable profit of the current and past periods. A current tax asset is recognised in respect of a tax loss that can be carried back to recover tax paid in a previous period. Deferred tax is recognised in respect of all timing differences between the recognition of income and expenses in the financial statements and their inclusion in tax assessments. Unrelieved tax losses and other deferred tax assets are recognised only to the extent that it is probable that they will be recovered against the reversal of deferred tax liabilities or other future taxable profits. Deferred tax is measured using the tax rates and laws that have been enacted or substantively enacted by the reporting date and that are expected to apply to the reversal of the timing difference. Current and deferred tax assets and liabilities are not discounted.

## **Accounting policies (continued)**

### *Foreign currency translation*

Assets and liabilities in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are translated into sterling at the rate of exchange ruling at the date of the transaction. Exchange differences are taken into account in arriving at the operating result.

### *Pensions*

Each company operates a defined contribution pension scheme. Contributions are charged to the profit and loss account as they become payable in accordance with the rules of the scheme.

## **2. Audit information**

These accounts have been audited by Sygma. Their audit report is unqualified and is signed on their behalf by Alex Chandler, Senior Statutory Auditor.

No Accounts have been prepared since 28 February 2018.

The Directors  
The Bio Nano Centre Limited & Bio Nano Holdings Limited  
69 Onslow Road  
Richmond  
TW10 6QA

Our ref: THE 017  
Date: 5 February 2019

### Independent Auditors' Report

Dear Sirs,

#### Opinion

We have audited the financial statements of The Bio Nano Centre Limited and Bio Nano Holdings Limited for the year ended 28 February 2018 which comprise the Income Statement, Balance Sheet and Notes to the Financial Statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the company's affairs as at 28 February 2018;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

#### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We are independent of the company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the directors' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.



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Company number: 10821194

Syigma Accountants Limited is a company registered in England and Wales

Registered office: 1 Sopwith Crescent, Wickford, Essex, SS11 8YL

Company number: 10821194

ICAEW member company

**Other information**

The directors are responsible for the other information. The other information comprises the information in the Report of the Directors, but does not include the financial statements and our Report of the Auditors thereon.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

**Opinion on other matters prescribed by the Companies Act 2006**

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Report of the Directors for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Report of the Directors has been prepared in accordance with applicable legal requirements.

**Matters on which we are required to report by exception**

In the light of the knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified material misstatements in the Report of the Directors.

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit; or
- the directors were not entitled to prepare the financial statements in accordance with the small companies regime and take advantage of the small companies' exemption from the requirement to prepare a Strategic Report or in preparing the Report of the Directors.

**Responsibilities of directors**

As explained more fully in the Statement of Directors' Responsibilities set out in the financial statements, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

**Auditors' responsibilities for the audit of the financial statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a Report of the Auditors that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at [www.frc.org.uk/auditorsresponsibilities](http://www.frc.org.uk/auditorsresponsibilities). This description forms part of our Report of the Auditors.

**Use of our report**

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in a Report of the Auditors and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Yours faithfully,



Alex Chandler ACA  
Sygma  
Chartered Accountants

## CONSOLIDATED FINANCIAL FORECASTS

The consolidated financial forecasts presented here are based on initial launch of the lead product in Q1 2020 and include the Directors' reasonable assumptions concerning likely take-up of the product.

<b>P&amp;L AquAffirm Ltd</b>	<b>YE Feb 2017</b>	<b>YE Feb 2018</b>	<b>YE Feb 2019</b>	<b>YE Feb 2020</b>	<b>YE Feb 2021</b>	<b>YE Feb 2022</b>	<b>YE Feb 2023</b>
	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	Total	Total	Total
	<b>Actual £</b>	<b>Actual £</b>	<b>FC £</b>	<b>FC £</b>	<b>FC £</b>	<b>FC £</b>	<b>FC £</b>
Project management	648,616	561,744	193,757	116,893	17,011		
Grant income	232,368	352,727	425,653	291,339	46,767		
Other Income, Strip and Device sales	25,320	60,136	67,223	82,000	4,059,000	12,610,000	20,190,000
<b>Total Revenue</b>	<b>906,304</b>	<b>974,607</b>	<b>686,633</b>	<b>490,232</b>	<b>4,122,778</b>	<b>12,610,000</b>	<b>20,190,000</b>
<u>PROJECT &amp; OTHER DIRECT COSTS</u>							
Direct COGS incl S & M/Royalties			-	51,660	2,588,670	7,444,300	11,719,700
Project Costs	292,171	279,341	145,378	42,139	-		
R & D Staff Salaries	511,783	503,922	547,591	613,976	790,071	813,773	838,186
Technical Consultancy	30,746	24,854	8,609	169,050	68,617	80,000	100,000
Patent Renewal Costs	17,567	16,521	48,872	47,311	34,886	40,000	50,000
<b>Total R&amp;D Costs</b>	<b>852,267</b>	<b>824,638</b>	<b>750,451</b>	<b>924,136</b>	<b>3,482,243</b>	<b>8,378,073</b>	<b>12,707,886</b>
<b>Total Operating Expenses</b>	<b>190,741</b>	<b>161,853</b>	<b>175,906</b>	<b>272,011</b>	<b>323,967</b>	<b>358,480</b>	<b>374,968</b>
OPERATING PROFIT/(LOSS) FOR PERIOD	(136,704)	(11,884)	(239,724)	(705,914)	316,568	3,873,447	7,107,145
Profit/(Loss) on Disposals	1,210		-	-	-	-	-
Interest Receivable	4		-	-	-	-	-
R&D Expenditure Credit/ Corporation tax	18,149		8,700	-	-	(774,689)	(1,421,429)
<b>NET PROFIT/(LOSS) FOR PERIOD</b>	<b>(117,341)</b>	<b>(11,884)</b>	<b>(231,024)</b>	<b>(705,914)</b>	<b>316,568</b>	<b>3,098,757</b>	<b>5,685,716</b>

<b>Balance Sheet AquAffirm Ltd</b>	<b>YE Feb 2017</b>	<b>YE Feb 2018</b>	<b>YE Feb 2019</b>	<b>YE Feb 2020</b>	<b>YE Feb 2021</b>	<b>YE Feb 2022</b>	<b>YE Feb 2023</b>
	<b>Actual</b>	<b>Actual</b>	<b>FC</b>	<b>FC</b>	<b>FC</b>	<b>FC</b>	<b>FC</b>
<u>FIXED ASSETS</u>							
Research Equipment	61,222	61,222	61,222	61,222	61,222	61,222	61,222
Office Equipment	15,110	18,235	18,235	18,235	18,235	18,235	18,235
Patent Costs & Know-How	209,316	267,718	307,723	307,723	307,723	307,723	307,723
Accumulated Depreciation	(170,302)	(206,748)	(254,707)	(303,007)	(356,137)	(386,137)	(387,151)
<b>Total Fixed Assets</b>	<b>115,346</b>	<b>140,427</b>	<b>132,473</b>	<b>84,173</b>	<b>31,043</b>	<b>1,043</b>	<b>29</b>
<u>CURRENT ASSETS</u>							
Trade Debtors	20,740	111,584	2,323	66,000	616,800	1,261,000	2,019,000
Sundry Debtors & Prepayments	213,998	137,211	183,466	72,221	51,389	51,389	51,389
VAT		(22,850)	38,130	16,517	(100,144)	(280,733)	(341,021)
Bio Nano Holdings Ltd	24,782	26,318	27,560	27,560	27,560	27,560	27,560
Bank Accounts	212,339	314,895	99,559	475,217	769,365	4,949,780	11,017,084
<b>Total Current Assets</b>	<b>471,859</b>	<b>567,158</b>	<b>351,038</b>	<b>657,515</b>	<b>1,364,971</b>	<b>6,008,996</b>	<b>12,774,012</b>
<u>CURRENT LIABILITIES</u>							
Trade Creditors	123,428	99,706	45,532	94,271	416,028	1,204,372	1,635,918
Director's loans		148,500	45,000	45,000	45,000	45,000	45,000
Sundry Creditors & Accruals	44,646	37,643	42,313	42,313	42,313	42,313	42,313
Taxation creditors	19,000	34,419	-	-	-	774,689	1,421,429
Deferred Income	221,470	220,540	81,413	31,765	47,766	0	0
<b>Total Current Liabilities</b>	<b>408,544</b>	<b>540,808</b>	<b>214,258</b>	<b>213,349</b>	<b>551,107</b>	<b>2,066,375</b>	<b>3,144,660</b>
Net Current Assets/ (Liabilities)	63,315	26,350	136,780	444,166	813,864	3,942,621	9,629,351
<b>TOTAL NET ASSETS</b>	<b>178,661</b>	<b>166,777</b>	<b>269,253</b>	<b>528,339</b>	<b>844,907</b>	<b>3,943,664</b>	<b>9,629,380</b>
Retained Earnings	296,002	178,661	500,277	1,234,253	528,339	844,907	3,943,664
Profit & Loss Account	(117,341)	(11,884)	(231,024)	(705,914)	316,568	3,098,757	5,685,716
<b>TOTAL RESERVES</b>	<b>£ 178,661</b>	<b>£ 166,777</b>	<b>£ 269,253</b>	<b>£ 528,339</b>	<b>£ 844,907</b>	<b>£3,943,664</b>	<b>£9,629,380</b>

## Assumptions underlying the Financial Forecasts

### THE ATTENTION OF POTENTIAL INVESTORS IS DRAWN TO THE KEY RISK FACTORS SUMMARISED ON PAGES 38 TO 49

<b>Revenue</b>	No future revenue / grant income has been included in the forecast other than current contracts.  A total of £1,254k potential contracts in the pipeline as at 31 Jan 2019 (not included in the revenue forecast) that could be resourced with employees included in the forecast
<b>COGS</b>	COGS production is assumed at 50% of gross sales. This is a worst-case scenario and COGS could be reduced by the purchase of the CapEx to produce the strips at £150k and then hiring 2 x production operatives at approx. £40k p
<b>Annual inflation</b>	3% p.a. pay rises from 1 Jan 2019 10 % p.a. increase from 1 March each year for admin overheads, other overheads adjusted individually as required Travel, Directors fees and pensions included in Stats in 2017 & 2018 have been included in CNT and other project costs
<b>P&amp;L Patent renewals</b>	Historical patent renewals have not been split between business division, all P & L are included in CNT & Other projects
<b>Corporation Tax</b>	For purposes of this model assume losses until 2022 and CT liability start in 2022.
<b>Cash Flow</b>	Sales strips and devices - 30 days from invoice Purchases - 30 days Grants quarterly in arrears

The model includes net investment in March 2019 of £965k.

The model has converted a Directors Loan from David Sarphie as at 31/12/2018 of £333,500 into equity in February 2019. Approximately £70k of further loan from David Sarphie from Jan- March 2019 is shown as short-term loan.

BNH has no transactions other than annual maintenance, so no consolidation of this entity for simplicity.

Accounts for BNH the current holding company are not included as the company does not trade and has minimal overheads.

Shareholder funds of (£24k) as at 28/2/2018 and £(21k) 28/02/2017. A similar movement in 2019 is expected.

## AQUAFFIRM MARKETS

### *Arsenic*

Its first product, *AquAffirm-As™*, has been demonstrated in laboratory proof-of-concept experiments and will be tested in Bangladesh drinking water wells in Q2 2019 to demonstrate its ability to accurately measure concentrations of arsenic contamination at parts-per billion (ppb) levels. Countries where more than 5 million of the population are exposed to potential arsenic poisoning include India (78.7m) Bangladesh (57m); Nigeria (11m); Zimbabwe (9.3m); USA (9m) China (8.2m).

*marketsandmarkets.com* has estimated the market for arsenic testing in drinking water to total \$500m (private communication). The market is split based on the relative size, competitiveness and sophistication of the economy. Buyers in developing countries are typically government departments such as the Department of Public Health Engineering (DPHE) in Bangladesh, district governments or NGOs such as UNICEF or WaterAid placing orders worth several million pounds on an annual basis. Key buyers in this market as noted above currently source their supplies of competing water analysis instrumentation from Hach EZ Arsenic™, Merck MQuant™, Palintest DigiPAsS™/Arsenator™ but this equipment is slow, difficult to use, results in the toxic by-product arsine gas, and does not accurately determine the concentrations of inorganic toxins in water. Crucially, the lack of connectivity of competing instruments slows the management process. The main organisations and distributors tasked with managing the issue (such as the NGOs like UNICEF and departments like DPHE) are likely to be keen to switch their sources of supply to AquAffirm due to its perceived benefits, including web-enabled connectivity, speed, ease-of-use, and lack of toxic reagents or by-products.

Buyers in more advanced high-income countries (such as the USA) typically tend to be municipal water boards, environmental test firms, and more recently consumers, especially those with private water wells.

### *Fluoride*

Its second product, *AquAffirm-F™*, will measure fluoride in drinking water. Countries of key concern for fluoride poisoning, which leads to bone deformities, include India, China, Uzbekistan, Ethiopia, Mexico and other parts of Latin America.

### *General*

The technology can be developed to also detect cadmium, lead, mercury manganese and, potentially, an unlimited number of other contaminants including oestrogens and algal toxins.

More generally, the market for global water testing and analysis instruments is projected to grow at a CAGR of 5.2% to reach a value of \$3.5 billion by 2019 (*marketsandmarkets.com*).

## **ARSENIC TEST MARKET**

**Arsenic Test Market in USA:** In the USA the 16m private wells, fracking and land contaminated by the dumping of hazardous waste indicate a potential market of 2.5m tests per year which at a sales price of \$10 per test would generate projected sales of \$25m per year.

## **ARSENIC TEST MARKET IN BANGLADESH**

**Arsenic Test Market in Bangladesh:** The Bangladesh government is planning a four-year \$200m arsenic mitigation Offer for 2019-22, with ~\$65m allocated for arsenic testing and database analytics. Of 10m active tube wells in Bangladesh (each with an operational life of 8 years) approximately 40% are in areas where arsenic levels are above 10ppb. Every year > 500k new wells are dug in these areas. To test all existing wells in high risk areas would require 2m tests p.a. for two years. A rolling cycle of testing every six months to two years plus a rolling Offer of new well testing would require 1-4 million tests every year. We conservatively estimate market demand at 3 million tests per year for the first five years of operation. At an estimated cost of £1 each this generates total projected revenues of £15m over 5 years. AquAffirm's executive team has held in-depth conversations with UNICEF on addressing the arsenic problem in other 'at-risk' regions in developing countries for which there is an estimated demand for up to 4.5m test strips.

## MANAGEMENT TEAM AND DIRECTORS

### *Management*

**Dr David Sarphe (AquAffirm CEO & Co-founder)** Co-founder of PowderJect (one of the UK's most successful biotechnology / medical-technology companies); CEO of BNC. AquAffirm director.

**Dr Chris Johnson (AquAffirm Dir. of Technology Development)** Formerly of Plasticell Ltd, leads a team of 5 FTEs working on the project

**Katie Macdonald (AquAffirm CFO & Co-founder)** Chartered Accountant, Chartered Secretary & senior finance professional with 26 years' experience, the latter 16 years as Finance Director & Company Secretary to biotech- and tech-based SMEs. AquAffirm company secretary.

### *Non-executive directors*

#### **Prof Tony Cass FRSC (AquAffirm Co-founder & Director) - Non-Executive**

One of original inventors of glucose test strips, now Prof of Chem Biology in the Dept of Chemistry at Imperial College & Fellow Royal Society of Chemistry & Society of Biology; co-founder & non-exec director of BNC.

#### **Prof Gabriel Aepli FRS (AquAffirm Co-founder & Director) - Non-Executive**

Head of the Photon Science Division at the Paul Scherrer Institute (Switz), Prof of Physics at ETH & EPFL, and co-founder & non-exec director of BNC.

#### **Prof John Wood CBE, FREng - Non-Executive**

John Wood is the nominated chairman of the ATTRACT Project Advisory Board, a new, open, pan-EU initiative of leading European Research Institutions including CERN. He is a former Chief Executive of the Council for the Central Laboratory of the Research Councils and is also the former Secretary General of the Association of Commonwealth Universities.

## **RISK FACTORS**

1. An investment in the Ordinary Shares involves a high degree of risk. In particular, the Company's performance may be affected by changes in market and/or economic conditions and in political, judicial and administrative factors and in legal, accounting, regulatory and tax requirements in the United Kingdom and elsewhere. These risks could be substantial and are inherent in the Company's business. Accordingly, prospective investors should carefully consider the specific risks set out below in addition to all of the other information set out in this document before investing in the Ordinary Shares. The investment offered in this document may not be suitable for all of its recipients. Potential investors are accordingly advised to consult a professional adviser authorised under FSMA, who specialises in advising on the acquisition of shares and other securities, before making any investment decision. A prospective investor should consider carefully whether an investment in the Company is suitable in light of their personal circumstances and the financial resources available to them.
2. In addition to the usual risks associated with an investment in a company, the Directors believe that the factors and risks described below are the most significant for potential investors in relation to an investment in the Company and should be carefully considered, together with all the information contained in this document, prior to making any investment decision in respect of the Ordinary Shares. However, the risks listed do not necessarily comprise all of those to which the Company is or may be exposed or all of those associated with an investment in the Company and are not set out in any particular order of priority. Additional risks and uncertainties not currently known to the Company and the Directors, or that the Company and the Directors currently consider to be immaterial, may also have an adverse effect on the Company and the information set out below does not purport to be an exhaustive summary of the risks affecting the Company. In particular, the Company's performance may be affected by changes in market and/or economic conditions and in legal, regulatory and/or tax requirements.
3. If any of the following risks, together with possible additional risks and uncertainties of which the Company and the Directors are currently unaware or which the Company and the Directors consider not to be material in relation to the Company's business, were to materialise, the Company's business, financial condition, capital resources, results and/or future operations could be materially and adversely affected. In such circumstances, the value of the Ordinary Shares could decline and an investor may lose part or all of his or her investment in the Company. There can be no certainty that the Company will be able to implement successfully the strategy set out in this document. Any investment in the Company is therefore suitable only for financially sophisticated investors who are capable of evaluating the risks and merits of such an investment and who have sufficient resources to bear any loss that might result from such an investment. The Company's performance may be affected by changes in legal, regulatory and/or tax requirements in any of the jurisdictions in which it operates or intends to operate as well as overall global financial conditions.
4. Investors should also take their own tax advice as to the consequences of owning shares in the Company as well as receiving returns from it. No warranty, express or implied, is given to investors as to the tax consequences of their acquiring, owning or disposing of any shares in the Company and none of the Company, the Directors, SPNV or Amberside will be responsible for any tax consequences for any such investors.

### **RISKS RELATING TO THE BUSINESS AND OPERATIONS OF THE COMPANY**

5. The Company is dependent on a supply-chain providing advanced materials of high specification and which currently involves particular dependence on a UK-based manufacturer.  
  
All of the above could materially adversely affect the Company's ability to achieve commercial operations and profitability.  
  
The Company intends to negotiate an agreement with this manufacturer to ensure consistency of future supply and to identify secondary suppliers.
6. Positive results from laboratory testing of the sensors may not necessarily be predictive of later results that the Company may be able to achieve in real use. It may be necessary for the Company to make new discoveries in order to successfully develop and commercialise its IP.

Much of the Company's future revenues depends on its ability to continue to discover new toxin-specific moieties (such as enzymes) and to use these to develop new sensors. Although the Company has experienced some success to date in developing toxin-specific sensors, there is no guarantee that it will be able to continue to make new discoveries. All discovery programmes and new product development have an inherent level of risk. The access that the Company currently has or may in the future have to relevant expertise may not be sufficient to enable it to discover further insights, either at all or of a nature that can be developed for commercial purposes. In addition, new discoveries may take longer to make than planned, impacting potential future revenue, may require more resources than planned which will increase development costs and may pose technical and technological challenges that the Company cannot solve.

7. The Company is dependent on the expertise and continued service of employees, consultants and advisers with the necessary scientific and technical skills that the Company requires.

The Directors believe that the future success of the Company will depend in part upon its ability to compete in the highly competitive field of environmental sensors, which overlaps considerably with equally competitive industries such as technology, biotechnology and environmental sensors. The Company is therefore dependent on the expertise and continued service of certain key executives and highly qualified scientific and technical personnel. Among others, our biosensor experts have also been, and remain, essential to the development of the Company's technical capabilities. Competition for these types of highly skilled employees, consultants and advisers is often intense due to the limited number of qualified professionals. The departure of any of the Company's relatively small number of executive officers or other key employees, consultants and advisers could have a negative impact on its operations. In the event that future departures of employees, consultants and advisers with these key skills occur, the Company's ability to execute its business strategy successfully or to continue to develop its business operations could be adversely affected.

8. The Company's ability to successfully commercialise its discoveries and grow its operations effectively is dependent on its current executive team, as well as its ability to attract, retain and motivate suitable management, technical, marketing and sales personnel.

The Company is highly dependent on its current executive team, in particular, Dr David Sarphe, who the Directors consider has been, and remains, integral to the success of the Company. The performance of the Company depends, to a significant extent, upon the abilities and continued efforts of its existing executives. The loss of services of any of the Company's executive team and its inability to find suitable replacements could harm the Company's business, financial condition, prospects and ability to achieve commercial success and profitability.

In addition, the Company's ability to successfully develop and commercialise new IP from its discoveries depends upon its ability to attract and recruit, retain and incentivise highly skilled employees across all areas of the business, and particularly with applicable management, technical, marketing and sales expertise. Many of these skills are in demand in a number of competing industries, and other companies that also seek such qualified personnel have greater financial and other resources, different risk profiles and a longer operating history than that of the Company. If this competition is very intense, the Company might not be able to attract or retain key personnel on terms that are economically acceptable.

The Company has attempted to align its interests with those of valuable employees by implementing share option schemes which it considers appropriate to incentivise and reward the efforts of those individuals, and to protect itself from the risk of key personnel departures by entering into contracts with them which contain limited non-competition provisions.

However, these measures do not guarantee that key personnel will stay employed with the Company or will remain effectively incentivised. The value to employees of share options that vest over time is significantly affected by movements in the Company's share price that are beyond its control and may at any time be insufficient to counteract more lucrative offers from other companies.

The inability of the Company to attract and retain key personnel could delay or prevent the implementation of its strategy, which could adversely affect the Company's business, financial condition, results or future operations.

9. Part of the Company's future success may depend on regulatory approval of certain proprietary medical technologies and market acceptance of products developed as a result of those technologies. Those technologies and products may fail to achieve a broad degree of adoption and/or changes in practice necessary to achieve commercial success.

If the Company is unable to convince opinion leaders and health professionals of the benefits of its technologies and the products developed as a result of those technologies, there could be weak penetration of the market, which might have a materially adverse effect on the Company, its business, financial situation, growth and prospects. In addition, the slow adoption of new methods and technologies could result in timeframes being longer than anticipated by the Company.

While the current focus of the Company is on commercialization of environmental sensors for which regulatory approval is not currently necessary, the Directors believe that certain of the Company's medical technologies could enable development of medical products for a viable commercial market. However, there can be no assurance that these will prove to be an attractive addition or alternative to existing products, or that there will be sufficient recognition by clinicians of the Company's technologies or products to bring about the necessary change in clinical practices that would create a market for those products or that these will achieve the necessary regulatory approvals. The development of a market for products based on the Company's licensed IP is affected by many factors, some of which are beyond the Company's control, including: (i) the emergence of newer, more competitive products; (ii) the cost of the products based on the Company's licensed IP (as well as competitors' products); (iii) regulatory requirements; (iv) customer perceptions of the efficacy and reliability of those products; and (v) customer reluctance to buy a new product. If a market fails to develop or develops more slowly than anticipated, the Company may be unable to achieve commercial operations or profitability.

10. The Company may require additional financing in the medium to long term and may be unable to raise sufficient capital, which could lead it to delay, reduce or abandon business initiatives and the potential commercialisation of IP rights.

The Company expects to incur significant expenses in connection with its ongoing technology and product development activities and the development and commercialisation of technologies arising from those activities. The Company does not expect to earn significant revenue unless it can commercialise new products or technologies, and it is not able to give a firm indication of the timeframe in which this may occur. The Company's financing requirements depend on numerous factors, including the rate of market acceptance of its discoveries and products developed as a result of those discoveries, and its ability to attract customers. Some factors are outside of the Company's control. The Company may be unable to obtain adequate financing on acceptable terms, if at all, which could cause the Company to delay, reduce or abandon research and development. Offers or hinder commercialisation of some or all of its IP rights.

The Company may, in the medium term, need to raise additional capital, whether from equity or debt sources, to finance working capital requirements or to finance its growth through future stages of development. Any additional share issue may have a dilutive effect on Shareholders, particularly if they are unable or choose not to subscribe by taking advantage of rights of pre-emption that may be available. Debt funding may require assets of the Company to be secured in favour of the lender, which security may be exercised if the Company were to be unable to comply with the terms of the relevant debt facility agreement. Further, there can be no guarantee or assurance that additional funding will be forthcoming when required, nor as to the terms and price on which such funds would be available. Any of the foregoing could have a materially adverse effect on the Company's business, financial condition or operating results.

11. The Company operates in a potentially competitive environment and may face competition from others with considerably greater financial, technical and marketing resources.

The environmental sensors market is potentially highly competitive and rapidly changing. Competitors may have access to considerably greater financial, technical and marketing resources. The availability and price of the Company's competitors' technologies and products could limit the demand, and the price the Company is able to charge, for its products and technologies. New competing products may enter the market and make the Company's technologies and the products developed from those technologies obsolete. Alternatively, a competitor's products may be more effective, cheaper or more effectively marketed than the products developed by the

Company. A substantial increase in competition for any one of these reasons could require the Company to increase its marketing or capital expenditure or alter its business model to remain competitive, either of which may have an adverse impact on the Company's competitiveness and, in turn, could have a materially adverse effect on the Company's profitability and/or financial condition.

12. If the Company is unable to establish sales, marketing and distribution capabilities or enter into relationships for sales, marketing and distribution capabilities, the Company may be unable to realise value for its products and other IP.

Given the Company's stage of product development, it does not have any significant internal sales, marketing or distribution infrastructure or capabilities. For the Company to realise value on its IP rights, technologies and products, it must develop or acquire a sales and marketing organisation, outsource these functions to third parties or out-license to a partner with sales and marketing capabilities.

The Company may establish its own sales and marketing capabilities to promote its technologies and products and any discoveries it makes in the European Union, the United States and other markets. Even if the Company establishes sales and marketing capabilities, it may fail to license its technologies, products and other IP effectively given its limited experience in this area. In addition, recruiting and training a sales force is expensive and time consuming and could lead to delays. In the event of such a delay, the Company may have prematurely or unnecessarily incurred commercialisation expenses, and the Company's investment in its technologies, products and other IP may be lost if it cannot retain or reposition its sales and marketing personnel until they are needed.

13. Factors that may inhibit the Company's efforts to commercialise its technologies, products and other IP on its own include:

- the Company's inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- unforeseen costs and expenses associated with creating an independent sales and marketing organisation; and
- costs of marketing and promotion above those anticipated by the Company.

If the Company enters into arrangements with third parties to perform sales and marketing services, the Company's revenues or the profitability of these revenues for the Company could be lower than if the Company were to conduct its own marketing and sales activities. In addition, the Company may not be successful in entering into third party arrangements or may be unable to do so on favourable terms. Acceptable third parties may fail to devote the necessary resources and attention to the Company.

If the Company does not establish sales and marketing capabilities successfully, either on its own or with third parties, it may not become commercially successful or profitable.

14. The Company may be exposed to potential product liability and other legal risks related to its operations, which are not adequately covered by insurance.

The Company's business will expose it to potential product liability and other legal risks related to its operations. Criminal and/or civil proceedings might be filed against the Company by other companies or any other third party. These actions could include claims resulting from acts by its partners, licensees and subcontractors, over which the Company has little or no control. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the products, negligence, strict liability and a breach of warranties. If the Company cannot successfully defend itself against product liability claims, it may incur substantial liabilities or be required to limit certain commercial activities. Even successful defence could require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in: decreased demand for its products and those developed from its discoveries due to negative public perception; injury to the Company's reputation or brands; withdrawal of clinical study participants or difficulties in recruiting new study participants (for medical products); initiation of investigations by regulators; costs to defend or settle the related litigation; a diversion of management's time and its resources; substantial monetary awards to patients or third parties (such as study participants); product

recalls, or withdrawals; labelling, and marketing or promotional restrictions; loss of revenues from product sales; and/or the inability to commercialise any products, if approved. There can be no assurance that product liability or other claims would not materially and adversely affect the business.

While the Company maintains commercial insurance at a level it believes is appropriate against certain risks commonly insured in the industry, there is no guarantee that it will be able to obtain the desired level of cover on acceptable terms in the future. Furthermore, the nature of these risks is such that liabilities could exceed policy limits or that certain risks could be excluded from the Company's insurance coverage. There are also risks against which the Company cannot insure or against which it may elect not to insure. The potential costs that could be associated with any liabilities not covered by insurance or in excess of insurance coverage may cause substantial delays and require significant capital outlays, adversely affecting the Company's earnings and competitive position in the future and, potentially, its financial position. The Company's operations could suffer losses which may not be fully compensated by insurance. In addition, certain types of risk may be, or may become, either uninsurable or not economically insurable, or may not be currently or in the future covered by the Company's insurance policies. Any of the foregoing could have a materially adverse effect on the Company's business, financial condition or operating results.

15. The Company may face reputational risk arising from a number of factors, including failure to deal appropriately with legal and regulatory requirements, ethical practices, fraud, privacy, record-keeping and other trading practices, as well as market risks inherent in the Company's business.

The Company's reputation is central to its future success in terms of the products it provides, the relationships it currently has and intends to develop in the future with academic institutions, the collaborations it intends to create with other companies, the way in which it conducts its business and the financial results which it achieves. Issues that may give rise to reputational risk include, but are not limited to, failure (or allegations or perceptions of failure) to deal appropriately with legal and regulatory requirements, ethical practices, money laundering, fraud prevention, privacy, record-keeping, sales and trading practices and the credit, liquidity and market risks inherent in the Company's business.

If the Company fails, or appears or is alleged to fail, to deal with various issues that may give rise to reputational risk or if it fails to retain relationships with academic institutions for any other reason, this could lead to adverse publicity, press attention and governmental (including Parliamentary) and regulatory scrutiny, which could materially harm its business prospects. Also, failure to meet the expectations of the press and the general public, as well as its customers, suppliers, employees, shareholders and other business partners may have a materially adverse effect on the Company's reputation and future revenue.

16. Litigation and other adversarial action in the ordinary course of business could have a materially adverse effect on the Company.

Although the Company is not currently subject to any material litigation, it may be subject to such litigation in the future. In addition, the Company may be subject to other disputes, claims and complaints, including adversarial actions, by customers, employees, suppliers, insurers and others in the ordinary course of business. Significant claims or a substantial number of small claims may be expensive to defend, may divert the time and focus of management away from the Company's operations and may result in the Company having to pay monetary damages, any of which could have a materially adverse effect on the Company's results of operations and financial condition. In addition, adverse legal publicity or substantial litigation against the Company could negatively impact its reputation, even if the Company is not found liable, which could also adversely impact the Company's business, prospects, results of operations and financial condition.

17. The Company is in an early stage of its development with a limited operating history and track record of revenue generation, which makes it difficult to assess the Company's commercial viability.

The Company has not generated any material revenues from out-licensing, selling or otherwise commercialising or realising value on its technologies, IP and products. The Company expects

to continue to make substantial investments to develop further its business and it therefore expects to continue to make losses for some time. Even if the Company achieves profitability in the future, the Company may not be able to sustain profitability in subsequent periods. The Company's prior losses, combined with expected future losses, may adversely affect the market price of its Ordinary Shares and its ability to raise capital and continue operations. Given its limited operating history, the Company may encounter unforeseen expenses, difficulties, complications or delays.

As the Company operates in a difficult competitive market, there is a risk that if commercialisation opportunities are achieved at a slower rate than the Directors expect, or not at all, the Company will continue to incur losses, which, when combined with prior losses, may adversely affect the valuation of its Ordinary Shares, its ability to raise capital and continue its business operations.

In addition, the Company expects to experience growth in the number of its employees and the scope of its operations in connection with the continued development and commercialisation of its business. This potential growth will place a significant strain on its management, operations and financial resources, and the Company may have difficulty managing this future potential growth.

18. The Company may be dependent on a limited number of suppliers for certain services.

The Company purchases materials and services from a number of suppliers. The Company has historically enjoyed good relations with its suppliers; however, any material increase in the purchase price of equipment and/or services or a material change in the terms of supply of such material and/or services could have a materially adverse effect on the business.

#### **RISKS RELATING TO THE COMPANY'S IP RIGHTS**

19. The Company relies on patents and proprietary knowledge to protect its proprietary IP rights, and is reliant on the commercialisation of the IP arising in respect of its discoveries. There can be no assurance that the Company will be able to obtain appropriate future IP protections, or that competitors will not seek to apply for, or have pre-existing, rights that interfere with the Company's ability to commercialise the IP arising from its technologies.

The Company relies on a combination of patents, copyright and proprietary knowledge, as well as confidentiality procedures and contractual and other restrictions to establish and protect its proprietary IP rights. For discoveries arising from its development activities, the Company may seek new patent protections for new technologies and/or other products or processes it develops. A patent directed to such subject matter provides only purpose-limited protection and, at least in Europe, the patent application as filed must contain sufficient enabling disclosure. There can be no assurance that a patent which is directed to such subject matter and which relies on data generated by the Company's activities would meet this requirement.

While the Company seeks patent protection where appropriate for its discoveries and developmental technologies which underly its products, there can be no assurance that existing patents, or patents which may be issued, will provide the Company with sufficient protection in the case of an infringement of its technology. Where the Company's products and technologies are not protected by patents and only benefit from unregistered IP rights (such as copyright or know-how), there will be limited protection against competitors independently developing, or having independently developed, technology comparable or superior to that employed by the Company. There can also be no assurance regarding the degree and range of protection any of the Company's patents or other IP rights will afford against competitors and competing technologies, that any existing patents or patents which may be issued or other IP rights that may be granted or claimed will provide any competitive advantage to the Company or that they will not be successfully challenged, invalidated, found unenforceable or circumvented in the future. In addition, there can be no assurance that competitors will not seek to apply for and obtain patents or claim the protection of other IP rights that will prevent, limit or interfere with the Company's ability to make, use and sell its products or license its technologies and IP rights arising from its discoveries either in the United Kingdom or in international markets. The Company cannot predict whether it will need to initiate litigation or administrative proceedings, or whether such litigation or proceedings will be initiated by third parties against the Company, which may be costly and time consuming, regardless of whether the Company wins or loses, and whether parties claim that the Company's technology and know-how infringes upon their rights.

The complexity and uncertainty of patent laws has also increased in recent years, especially in the European Union. Changes in patent law or patent jurisprudence could limit the Company's ability to obtain new patents in the future that may be important for its business and/or may facilitate yet further the ability for patent protection to be challenged across the European Union simultaneously which, if successful, could result in patent protection being lost in most jurisdictions of the European Union at the same time.

The Company has entered into consultancy agreements with certain third parties. Although the Company has and will continue to take reasonable steps to ensure that any IP created or designed in the course of the delivery of the consultancy services will belong exclusively to the Company, there can be no assurance that third parties will not seek to claim rights over IP developed by the Company with the assistance of a third party and/or that disputes will not arise as to the proprietary rights to IP that has been developed by the Company with the assistance of third parties.

Failure to secure and maintain trade mark registrations for the Company's product names could adversely affect its business. During trade mark registration proceedings, the Company may receive rejections of its applications by the applicable trade mark registry. Although the Company is given an opportunity to respond to those rejections, it may be unable to overcome such rejections. In addition, in many jurisdictions, third parties are given an opportunity to oppose pending trade mark applications or challenge granted registrations (including, for example, for non-use of a mark), which could result in the total or partial rejection, cancellation or revocation of the trade mark applications and/or registrations. Opposition or cancellation proceedings may be filed against the Company's trade marks, and its trade marks may not survive such proceedings. Furthermore, in many countries, owning and maintaining a trade mark registration may not provide adequate defence against a subsequent infringement claim asserted by the owner of an earlier trade mark. If the use of the Company's trademarks is challenged, this may mean that the Company has to rebrand its products, which may be expensive and may limit, delay or interfere with the Company's ability to make, use and sell its products in the future.

20. In order to maintain a competitive position, the Company will need to maintain, defend and enforce its IP rights against third parties. The Company may incur significant costs as a result of IP disputes.

If the Company is unable to obtain, maintain, defend or enforce the IP rights covering its products technologies, as well as the IP arising from its discoveries, third parties may be able to make, dispose (or offer to dispose) of, use, import or keep products that would otherwise infringe the Company's IP rights and may affect its ability to compete in the market. The Company cannot guarantee the degree of future protection that it will have in respect of the products and technologies, as well as the IP arising from its discoveries. Patent protection is deemed by the Company to be of importance to its competitive position and a failure to obtain or retain adequate protection could have a materially adverse effect on the Company's business, prospects, financial condition and results of operations.

Competitors may infringe the Company's patents and other IP rights. To counter infringement or unauthorised use, the Company may be required to file infringement claims, which can be expensive and time consuming. In addition, in an infringement proceeding, a court may decide that a patent or other IP rights of the Company is invalid, unenforceable, and/or has not been infringed. An adverse result in any litigation or defence proceedings could put one or more of the Company's IP rights at risk of being invalidated or interpreted narrowly and could put any outstanding patent applications at risk of not issuing, as well as giving rise to an obligation on the Company to pay the third party's costs and damages. This could have a materially adverse effect on the Company's business, prospects, financial condition and results of operations.

In addition, the laws of some of the countries in which the Company's products are or may be sold may not protect the Company's products and IP to the same extent as other countries such as the United States or in the European Union, if at all. The Company may also be unable to protect its rights in trade secrets, trademarks, know-how and unpatented proprietary technology in certain countries.

21. The Company's products and technologies, as well as its IP arising from its discoveries, could infringe patents and other IP rights of third parties.

The Company's products and technologies, as well as its IP arising from its discoveries, may infringe or be alleged to infringe existing patents or patents that may be granted in the future, or other third-party IP rights. As some patent applications in the European Union and the United States may be maintained in secrecy until the patents are issued, patent applications in the European, the United States and many foreign jurisdictions are typically not published until 18 months after filing, and publications in the scientific literature often lag behind actual discoveries, the Company cannot be certain that others have not filed patents that may cover its know-how, products or technologies or the use or results of its know-how, products or technologies. In addition, the Company employs individuals who were previously employed at other companies. The Company may be subject to claims that it or its employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of its employees' former employers or other third parties. As a result, the Company may become party to, or threatened with, future adversarial proceedings or litigation regarding patents with respect to its know-how, products and technologies.

If the Company is sued for infringement of a third party's IP rights, the Company would need to demonstrate that its know-how, products and technologies either do not infringe the IP rights of the relevant third party or that such IP rights are invalid, and the Company may not be able to do this. If the Company is found to infringe a third party's IP rights, the Company could be required to obtain a licence from such third party to continue developing and marketing its know-how, products and technologies or the Company may elect to enter into such a licence in order to settle litigation or in order to resolve disputes prior to litigation. However, the Company may not be able to obtain any required licence on commercially reasonable terms or at all. Even if the Company is able to obtain a licence, it could be non-exclusive, thereby giving its competitors access to the same technologies licensed to the Company and could require the Company to make substantial royalty payments. The Company could also be forced, including by court order, to cease commercialising the infringing technology or product. If the Company is found to infringe a third party's IP rights, the Company may also have to pay damages and/or redesign any infringing products or technologies and redesigning any infringing products or technologies may be impossible or require substantial time and monetary expenditure. A finding of infringement could prevent the Company from commercialising its know-how, products or technologies or force the Company to cease some of its business operations, which could materially harm its business. Further, if an infringement suit were brought against the Company, it could be forced to stop or delay research, development, manufacturing or sales activities of the Company that are the subject of the suit. Claims that the Company has misappropriated the confidential information or trade secrets of third parties could have a similarly negative impact on its business.

Any such claims, with or without merit, could be time consuming and expensive to defend or settle and could divert management resources and attention, which could materially adversely affect the Company's business, results of operations or financial condition. There may also be related costs implications and/or potential monetary damages to be paid and/or implications for the Company. Some of its competitors may be able to sustain the costs of complex patent or other IP litigation more effectively than the Company can because they have substantially greater resources.

The Directors are not aware of any infringement by the Company of the IP rights of any third parties. However, it is not possible to be aware of all third-party IP rights from limited freedom to operate searches that have been conducted on behalf of the Company. Third parties may assert claims that the Company and/or its know-how, products or technologies infringe IP rights or misuse confidential information belonging to them.

22. If the Company is not adequately able to protect the trade secrets, confidential information and proprietary know-how on which it relies, the value of its technology and discoveries could be significantly diminished.

The Company relies on trade secrets, confidential information and proprietary know-how, which it seeks to protect, in part, through confidentiality and proprietary information agreements. The Company has a policy of requiring advisers, contractors and third-party partners to enter into confidentiality agreements and its employees to enter into invention, non-disclosure and non-compete agreements. The Company may not be able to protect its trade secrets, confidential information and proprietary know-how adequately. There can be no assurance that such

confidentiality or proprietary information agreements will not be breached, that the Company would have adequate remedies for any breach (in the event of any unauthorised use or disclosure of information, for example), or that the Company's trade secrets will not otherwise become known to or be independently developed by competitors. If any of the Company's trade secrets were to be independently developed by a competitor, the Company would have no right to prevent them, or those to whom they disclose such trade secrets, from using that technology or information to compete with the Company. If any of the Company's trade secrets were to be unlawfully disclosed to, or independently developed by, a competitor or other third party, relief may not be obtained and the Company's competitive position would be harmed. It may be possible for competitors or customers to copy one or more aspects of the products marketed by the Company or obtain information that the Company regards as proprietary. Governmental agencies or other national (or state) regulatory bodies may require the disclosure of such information in order for the Company to have the right to market a product. An agency or regulator may also disclose such information on its own initiative, or pursuant to a request under the Freedom of Information Act 2000 (or analogous legislation), if it should decide that such information is not confidential commercially-sensitive information.

No assurance can be given that the Company has entered into appropriate agreements with all parties that have had access to its trade secrets, confidential information and proprietary know-how. Furthermore, the Company cannot provide assurance that any of its employees, consultants, contract personnel or third-party partners, either accidentally or through wilful misconduct, will not cause serious damage to its Offers and/or its strategy, by, for example, disclosing trade secrets, proprietary know-how or confidential information to its competitors. It is also possible that trade secrets, proprietary know-how or confidential information could be obtained by third parties as a result of breaches of its physical or electronic security systems. Any disclosure of confidential data into the public domain or to third parties could allow the Company's competitors to learn confidential information and use it in competition against the Company. Any action to enforce the Company's rights against any misappropriation or unauthorised use and/or disclosure of trade secrets, proprietary know-how or confidential information is likely to be time consuming and expensive, and may ultimately be unsuccessful, or may result in a remedy that is not commercially valuable.

#### **RISKS RELATING TO THE REGULATORY AND TAX REGIMES IN WHICH THE COMPANY OPERATES**

23. The Company may experience cyber-attacks and face other risks relating to data security.

The Company relies on information technology systems in part to conduct its operations. Because of this, the Company and its software are at risk from cyber-attacks. Cyber-attacks can result from deliberate attacks or unintentional events and may include (but are not limited to) third parties gaining unauthorised access to the Company's software for the purpose of misappropriating financial assets, IP or sensitive information, corrupting data, or causing operational disruption. If the Company suffers from a cyber-attack, whether by a third party or insider, it may incur significant costs (including liability for stolen assets or information) and repairing any damage caused to the Company's network infrastructure and systems. The Company may also suffer reputational damage and loss of investor confidence. If the Company suffers a cyber-attack, this could expose the Company to potential financial and reputational harm.

24. Adverse decisions of a regulator, including tax authorities, or changes in tax treaties, laws, rules or interpretations could reduce or eliminate research and development tax relief that the Company may be eligible for in the United Kingdom.

The Company may be eligible for tax relief for qualifying research and development expenditure in the United Kingdom. It is anticipated that the Company and BNC will, where available, claim such relief, but this will be subject to tax planning as the business develops. However, the tax laws and regulations in the United Kingdom (including treaties, legislation, regulations and case law), or the interpretation, application or enforcement of such laws by courts, tribunals or tax authorities, may be subject to change (in each case possibly with retroactive effect). As a result, the Company may not, or may not in the future, be eligible for research and development tax relief in the United Kingdom, which could have a negative effect on the Company's profit after tax and cash flow.

The United Kingdom has a patent box regime which applies for corporation tax purposes in relation to certain income derived from patents granted by the UK Intellectual Property Office,

the European Patent Office or certain specified EEA countries. By electing to enter into the patent box regime, a qualifying company would benefit from a lower effective corporation tax rate on relevant profits derived from qualifying patents. Companies are unlikely to elect into the patent box regime until they are profitable. The Company may, if available and if considered appropriate, elect into the patent box regime. However, the applicable tax laws in the United Kingdom (including treaties, legislation, regulations and case law), or the interpretation, application or enforcement of such laws by courts, tribunals or tax authorities, may be subject to change (in each case possibly with retroactive effect). As a result, even if the Company were currently to qualify for the patent box regime, it may cease to qualify in the future, which could have a negative effect on the Company's profit and cash flow.

Any change in the Company's tax status, or in applicable tax laws (including treaties, legislation, regulations and case law), or the interpretation, application or enforcement of such laws by courts, tribunals or tax authorities, in each case in any jurisdiction in which the Company operates, could affect the Company's financial condition and results and its ability (if any) to provide returns to Shareholders.

25. The Company's risk management procedures may fail to identify or anticipate future risks.

Although the Directors believe that the Company's risk management procedures are adequate, the methods used to manage risk may not identify or anticipate current or future risks or the extent of future exposures, which could be significantly greater than historical measures indicate. Risk management methods depend on the evaluation of information regarding markets or other matters that is publicly available or otherwise accessible to the Company. Failure (or the perception that the Company has failed) to develop, implement and monitor the Company's risk management policies and procedures and, when necessary, pre-emptively upgrade them could give rise to reputational and trading issues which could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

26. The Company is reliant on successfully obtaining and maintaining regulatory approval for certain products in multiple jurisdictions. Regulations are different in various jurisdictions, and there can be no guarantee that if a product is approved in one jurisdiction that it will be approved in another. Changes in regulation may require the Company to re-apply for approval or prevent the further use of those products.

The Company may be required to obtain regulatory approvals or clearances or otherwise comply with medical devices legislation prior to marketing and selling certain of its products. For instance, in the EEA, any of the Company's future medical diagnostics products will have to undergo a conformity assessment procedure to demonstrate compliance with the applicable essential requirements set forth in the EU Medical Device Directive, before the product may be CE marked and placed on the market. While the EU Medical Device Directive allows the Company to self-declare conformity, the new EU Medical Device Regulation, which takes effect in May 2020, has introduced substantial changes to the requirements for medical device manufacturers in the EU market, including with respect to classification, clinical development, labelling, traceability, technical documentation and quality management systems. This may result in the Company's products necessitating certification by a notified body, which may take considerable time and require additional testing to be performed. Any delay or regulatory restriction may adversely affect the Company's ability to market its products which may have an adverse effect on the Company's business, operations and financial condition.

In the United States, before a new medical device, or a new use of, or significant modification to, an existing device can be marketed, it must first receive either premarket clearance under section 510(k) of the FDCA, grant of a *de novo* classification request, or premarket approval from the FDA, unless an exemption applies. Any FDA clearances or approvals required in the future could subject the Company to delays before commencing marketing and sales, or the FDA could limit or deny a clearance or approval sought by the Company.

Even if a regulatory agency or notified body approves a product, the approval may limit the indicated uses for a product, may otherwise limit the Company's ability to promote, sell and distribute a product or may require post-marketing studies or impose other post-marketing obligations. There is no assurance that the Company will be able to obtain the necessary regulatory clearances or approvals for any product on a timely basis or at all. Further, the regulatory agencies in other countries may change their clearance and approval policies, adopt

additional regulations or revise existing regulations, or take other actions which may prevent or delay approval or clearance of the Company's products under development.

In addition, the Company is required to continue to comply with applicable regulatory requirements once it has obtained clearance for a product. The Company cannot guarantee that it will successfully maintain the clearances it has received or may receive in the future. In addition, the Company's existing clearances can be revoked if any issues arise that question the safety or effectiveness of the Company's products. The loss of previously received clearances or approvals, or the failure to comply with existing or future regulatory requirements could also have a materially adverse effect on the Company's business.

Certain modifications to the Company's medical devices, including certain product enhancements, may require re-assessment by a notified body, a new 510(k) clearance or approval of a PMA supplement. If regulators and notified bodies do not permit such modifications, the Company may be required to cease marketing or distribution of its products or to recall the modified product until it obtains approval, and it may be subject to significant regulatory fines or penalties.

In the United Kingdom, even if the Company's products do not constitute medical devices which require authorisation as outlined above, these products will still be required to comply with various general consumer product laws, ISO standards and other standards. If any of the products fail to comply with these standards this could result in product liability litigation (see Risk Factors above), the product ceasing to be available and/or other regulatory sanctions may have a materially adverse effect on the Company's business, results of operations and financial condition.

Further, the Company is subject to governmental oversight and associated civil and criminal enforcement relating to failure to comply with medical device regulations and rules governing their advertising, promotion and marketing, and such enforcement is evolving and intensifying, particularly in the United States. Other parties, including private plaintiffs, also commonly bring suit against medical device companies, alleging off-label marketing and other violations.

#### **OTHER RISKS APPLICABLE TO THE COMPANY**

27. Global market risks and economic conditions could adversely affect the Company's business and operations.

The Company may be affected by general market trends which are unrelated to the performance of the Company itself. The Company's success depends on market acceptance of the Company's discoveries and products, and there can be no guarantee that this acceptance will continue to be forthcoming. Market opportunities targeted by the Company may change and this could lead to an adverse effect upon its revenue and earnings.

Any economic downturn either globally or locally in any area in which the Company operates may have an adverse effect on the demand for the Company's discoveries or products.

28. The United Kingdom's exit from the European Union could have a material adverse effect on the Company's business, results of operations and financial condition.

The United Kingdom voted to leave the European Union in a referendum held on 23 June 2016 and the Company faces risks associated with the political and economic instability associated with this, as well as uncertainty relating to the regulatory environment in which it will operate following the United Kingdom's exit from the European Union. For example, as a significant proportion of the legal and regulatory regime applicable to the Company is derived from EU directives and regulations, the United Kingdom's exit from the European Union may materially change the legal and regulatory framework applicable to the Company's business and operations and result in further political, regulatory and economic uncertainty which may adversely affect the market in which the Company operates. For example, the Company may need to comply with new regulatory requirements in the United Kingdom and may need to put in place additional regulatory infrastructure inside the EEA, such as designation of an authorised representative within that territory. In addition, it could result in restrictions on the movement of capital and people, which may impact the Company's ability to recruit and retain personnel with the necessary scientific, medical and technical skills it requires. The general speculation and concern surrounding how and when the United Kingdom will leave the European Union has also caused uncertainty in the market which may damage customers' and investors' confidence. Any of these

risks could have a materially adverse effect on the Company's business, results of operations and financial condition.

29. Force majeure events may adversely affect the Company's operations in the future.

The Company's operations now or in the future may be adversely affected by risks outside the control of the Company, including labour unrest, civil disorder, war, subversive activities or sabotage, fires, floods, explosions or other catastrophes. The Company's operation may also be adversely affected by radical changes in health or other policies of the UK government.

#### **RISKS RELATING TO THE ORDINARY SHARES**

30. The Ordinary Shares will not be traded on AIM or any other market, meaning that investors may not be able to sell their Ordinary Shares at the price at which they bought those Ordinary Shares.

The Ordinary Shares will not be traded on any regulated market.

An investment in the Ordinary Shares is only suitable for investors capable of evaluating the risks (including the risk of capital loss) and merits of such investment and who have sufficient resources to sustain a total loss of their investment. An investment in the Ordinary Shares should be seen as long-term in nature and complementary to investments in a range of other financial assets as part of a diversified investment portfolio. Accordingly, typical investors in the Company are expected to be institutional investors, private client fund managers and private client brokers, as well as private individuals who have received advice from their professional advisers regarding investment in the Ordinary Shares and/or who have sufficient experience to enable them to evaluate the risks and merits of such investment themselves.

31. The Company does not anticipate paying dividends in the foreseeable future and, accordingly, Shareholders must not rely on dividend payments for any return on investment.

Under English law, a company can only pay cash dividends to the extent that it has distributable reserves and cash available for this purpose. The Company may not pay dividends if the Directors believe this would cause the Company to be inadequately capitalised or if, for any other reason, the Directors conclude it would not be in the best interests of the Company. The Company's direct and indirect subsidiaries may be precluded from paying dividends by various factors, such as their own financial condition, restrictions in existing or future financing documents to which they are party or applicable law.

Upon the Company and its subsidiaries generating revenues and profits, the Company's current policy is to retain future distributable profits and only recommend dividends when appropriate and practicable. There can be no assurance as to the level of future dividends (if any) that may be paid by the Company or, in light of the accrued losses of the Company, of the ability to pay dividends. Any determination to pay dividends in the future will be a decision for the Board (and will be subject to applicable laws and generally accepted accounting principles from time to time, and other factors the Board deems relevant). Any return to Shareholders will therefore be limited to any capital appreciation of their investment for the foreseeable future.

Once the Company does pay dividends, any change in the tax treatment of dividends or interest received by the Company from its subsidiaries may reduce the level of yield received by Shareholders.

## TAXATION

*The following statements are intended to apply only as a general guide to certain UK tax considerations in relation to the Ordinary Shares. They are based on current UK tax law and what is understood to be the current published practice of HM Revenue and Customs (“HMRC”) (which may not be binding on HMRC), both of which are subject to change at any time, possibly with retrospective effect.*

They relate only to certain limited aspects of the UK taxation treatment of, and are intended to apply only to Shareholders who are resident, and, in the case of individuals, domiciled or deemed domiciled, solely in the United Kingdom for UK tax purposes (except where the position of non-UK resident or non-UK domiciled Shareholders is referred to expressly) and do not apply to Shareholders to whom split-year treatment applies. They apply only to Shareholders who hold the Ordinary Shares as investments (other than under an individual savings account or a self-invested personal pension) and who are the absolute beneficial owners of both the Ordinary Shares and any dividends paid on them. The statements may not apply to certain classes of shareholder such as (but not limited to) trustees, persons acquiring Ordinary Shares in connection with an office or employment, persons holding their shares through trust arrangements, dealers in securities, banks, insurance companies and collective investment schemes.

Prospective holders of Ordinary Shares who may be subject to tax in a jurisdiction other than the United Kingdom or who may be unsure as to their UK tax position should seek their own professional advice.

### 1. DIVIDENDS

#### ***Withholding tax***

The Company will not be required to deduct or withhold amounts on account of UK tax at source from dividend payments it makes, irrespective of the residence or particular circumstances of the Shareholder receiving such dividend payment.

#### **Individuals**

A nil rate of income tax will apply for the first £2,000 of dividend income received by individual Shareholders in a tax year (the “**Nil Rate Band**”).

The rate of tax applicable to dividend income in excess of the Nil Rate Band will depend on the wider tax position of the Shareholder. Broadly speaking, after taking into account the amount (if any) of a Shareholder’s personal allowance, and any other allowances, exemptions and reliefs, the Shareholder’s taxable income up to the basic rate limit will fall within the basic rate band; taxable income between the basic rate limit and the higher rate limit will fall within the higher rate band; and taxable income above the higher rate limit will fall within the additional rate band. For the tax year running 6 April 2018 to 5 April 2019 the basic rate limit is £34,500 and the higher rate limit is £150,000 (although, these limits can be increased in certain circumstances).

The rates of income tax on dividends received above the Nil Rate Band are (a) 7.5 per cent. for dividends in the basic rate band; (b) 32.5 per cent. for dividends in the higher rate band; and (c) 38.1 per cent. for dividends in the additional rate band.

In determining the tax band in which any dividend income over the Nil Rate Bands falls, dividend income is treated as the top slice of a Shareholder’s income and dividend income within the Nil Rate Band is still taken into account. Because dividend income (including income within the Nil Rate Band) is taken into account in assessing whether a Shareholder’s overall income is above the higher or additional rate limits, the receipt of such income may also affect the amount of personal allowances to which the Shareholder is entitled.

#### **Companies**

Shareholders within the charge to UK corporation tax that are “small companies” for the purposes of Chapter 2 of Part 9A of the Corporation Tax Act 2009 will not be subject to UK corporation tax on any dividend received from the Company provided certain conditions are met (including an anti-avoidance condition).

Shareholders within the charge to UK corporation tax that are not “small companies” for this purpose will not be subject to UK corporation tax on any dividend received from the Company so long as

the dividend falls within an exempt class and certain conditions are met. For example, (i) dividends paid on shares that are not redeemable and do not carry any present or future preferential rights to dividends or to the Company's assets on its winding up, and (ii) dividends paid to a person holding less than a 10 per cent. interest in the Company, should generally fall within an exempt class. However, the exemptions mentioned above are not comprehensive and are subject to anti-avoidance rules.

If the conditions for exemption are not met or cease to be satisfied, or such a Shareholder elects for an otherwise exempt dividend to be taxable, the Shareholder will be subject to UK corporation tax on dividends received from the Company, at the rate of corporation tax applicable to that Shareholder (the main rate of corporation tax is currently 19 per cent.).

## **2. CAPITAL GAINS**

A disposal or deemed disposal of Ordinary Shares by a Shareholder who is resident in the United Kingdom for tax purposes may, depending on the Shareholder's circumstances and subject to any available exemptions and reliefs, give rise to a chargeable gain or an allowable loss for the purposes of UK taxation of chargeable gains.

### **Individuals**

For individual Shareholders, the principal factors that will determine the UK capital gains tax position on a disposal or deemed disposal of Ordinary Shares are the extent to which the Shareholder realises any other capital gains in the UK tax year in which the disposal is made, the extent to which the Shareholder has incurred capital losses in that or earlier UK tax years, the income tax band into which the Shareholder falls, and the level of the annual allowance of tax-free gains in that UK tax year (the "**Annual Exemption**"). The Annual Exemption for the tax year running 6 April 2018 to 5 April 2019 is £11,700.

The applicable rate for an individual Shareholder who is subject to income tax at a rate or rates not exceeding the basic rate and makes a capital gain on the disposal (or deemed disposal) of Ordinary Shares which (after taking advantage of the Annual Exemption and deducting any available capital losses) is liable to UK capital gains tax is 10 per cent. Where an individual Shareholder is subject to income tax at either the higher or the additional rate, or to the extent that any gain on the disposal (or deemed disposal) takes the individual Shareholder's aggregate income and gains over the basic rate limit, the applicable rate will be 20 per cent.

A Shareholder who ceases to be resident in the UK for tax purposes and then reacquires UK tax residence before five complete tax years have elapsed and who disposes of Ordinary Shares during that period of non-residence may also be liable on their return to the UK to tax on any capital gain realised, subject to any available exemptions or reliefs.

HMRC have issued advance assurance that the Shares qualify for relief under the Enterprise Investment Scheme (EIS). Therefore, subject to the continuing compliance with the rules those shareholders who qualify for EIS relief will not pay capital gains tax on their shares on any subsequent disposal provided they have held them for at least three years.

### **Companies**

A disposal or deemed disposal of Ordinary Shares by a Shareholder within the charge to UK corporation tax may give rise to a chargeable gain or allowable loss for the purposes of UK corporation tax, depending on the circumstances and subject to any available exemptions or reliefs. Corporation tax is charged on chargeable gains at the rate applicable to that company.

## **3. INHERITANCE TAX**

The Ordinary Shares will be assets situated in the UK for the purposes of UK inheritance tax.

Accordingly, regardless of whether a Shareholder is resident, domiciled or deemed domiciled in the UK for tax purposes, (i) the deemed transfer of Ordinary Shares on the death of the Shareholder under the UK inheritance tax rules or (ii) a lifetime disposition (which may include a gift, transfer at less than full market value, settlement or deemed transfer) of the Ordinary Shares, may give rise to a liability to UK inheritance tax. The applicable rate of inheritance tax depends on the circumstances of the Shareholder and of the disposition and can be up to 40 per cent.

Various exemptions and reliefs may be available depending on the circumstances of the Shareholder and of the disposition. In particular, no inheritance tax liability should generally arise for a Shareholder who is not domiciled or deemed domiciled in the UK unless the cumulative aggregate value of their UK assets has exceeded the inheritance tax nil rate band (currently £325,000).

A non-UK domiciled Shareholder who is unsure as to whether a disposition may be within the scope of UK inheritance tax or where there is potential for a double charge to UK inheritance tax and an equivalent tax in another country is recommended to seek professional advice.

#### **4. STAMP DUTY AND STAMP DUTY RESERVE TAX**

The allocation and issue of the Shares will not give rise to a liability to stamp duty or stamp duty reserve tax.

## ADDITIONAL INFORMATION

### ADDITIONAL INFORMATION

#### 1. Responsibility Statement

The Directors, whose names and functions are set out on page 37 of this document, and the Company accept responsibility, both individually and collectively, for all the information contained in this document. To the best of the knowledge and belief of the Directors and the Company (each of whom has 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.

#### 2. THE COMPANY

- 2.1 The Company is domiciled in the United Kingdom and was incorporated and registered as a private company limited by shares on 28 August 2014 in England and Wales under the Act with registration number 9188375. It was incorporated with the name Bio Nano Holdings Limited.
- 2.2 The Company is a private limited company and accordingly the liability of its members is limited to the amount paid up or to be paid on their shares. The principal legislation under which the Company operates and which the Shares will be issued is the Companies Act 2006 ("the Act") and regulations made thereunder.
- 2.3 The Company's principal activity is that of a holding company. It is the ultimate parent company of the Group comprising the Company and its subsidiary undertaking.
- 2.4 As at the date of this document, the Company has one wholly owned subsidiary, The Bio Nano Centre Unlimited.
- 2.5 The registered office and corporate headquarters of the Company is 69 Onslow Road, Richmond, UK TW 10 6QA, and its telephone number is: +44 0207 544 8420.
- 2.6 The Company's website address is [www.AquAffirm.com](http://www.AquAffirm.com).

#### 3. SHARE CAPITAL OF THE COMPANY

- 3.1 As at 11 February 2019 (being the latest practicable date prior to the date of this document) the issued share capital, share capital under option and shares now offered in the Company is as follows:

Shareholder	Issued Shares	%	Shares under option	Offer Shares	Fully diluted	%
Dr David Sarphie	3,017,614	39.72			3,017,603	30.13
Anthony Cass	1,920,000	25.27			1,920,000	19.17
Gabriel Aeppli	2,016,000	26.54			2,016,000	20.13
Lord Alec Broers	320,000	4.21			320,000	3.20
Katie MacDonald	160,000	2.11			160,000	1.6
John Wood	160,000	2.11			160,000	1.6
AQBio Limited	3,200	0.04			3,200	0.03
Nanda Rahman			28,800		28,800	0.29
Abiola Oladipo			19,200		19,200	0.19
Nick Chadwick			6,400		6,400	0.06
Chris Johnson			12,800		12,800	0.13
Partners in RW Blears LLP			340,976		340,976	3.41
<b>Offer Shares</b>				<b>2,003,200</b>	<b>2,003,200</b>	<b>20.02</b>
Total	7,596,803	100			10,008,179	100

- 3.2 The Company was incorporated with an issued share capital of 2,000 ordinary shares of £0.01 each. On 7 February 2019 the Company issued one ordinary share of £0.01 to AQBio Limited in connection with the reorganisation referred to in paragraph 4 below. On 11 February 2019 the Company issued 343 ordinary shares of £0.01 each to David Sarphie as part of a debt to equity conversion which capitalised £333,500 owed to David Sarphie. Dr Sarphie has been funding cashflow shortfalls for some time and following this debt to equity conversion the Company will remain indebted to David Sarphie in the sum of £45,000 which will be repaid as a short term loan but not before January 2022.
- 3.3 By way of a written resolution of the Shareholders dated 11 February 2019, the Company passed resolutions to:
- 3.3.1 sub-divide its ordinary share capital on a basis of a number of new shares for every existing share in the ratio of 3,200:1 so that following this sub-division the nominal value of an ordinary share became £0.0000031250.
- 3.3.2 adopt new articles of association of the Company in substitution for and to the exclusion of the existing articles of association of the Company;
- 3.3.3 generally and unconditionally authorise the Directors, in accordance with section 551 of the Act, to allot Ordinary Shares or grant rights to subscribe for or convert any security into Ordinary Shares:
- (a) in connection with the Offer up to 4,000,000 Ordinary Shares, such authority to expire on 30 September 2020;
- (b) 340,976 Ordinary Shares to partners in RW Blears LLP (and such additional Ordinary Shares as may be calculated) pursuant to the terms of their engagement summarised in paragraph 12.1 below; such authority to expire on 30 September 2020
- 3.3.4 give the Directors the power to allot or grant options over equity securities (as defined in section 560 of the Act) pursuant to the authority conferred on them by the resolution summarised in 3.3.3 above under section 551 of the Act as if section 561 of the Act did not apply to such allotment, provided that this power shall expire on 30 September 2020; and
- 3.3.5 give the Directors the power (pursuant to section 569 of the Act to allot equity securities (as defined by section 560 of the Act) of the Company for cash pursuant to the authorities granted by the resolution summarised in section 3.3.3 above as if section 561 of the Act did not apply to any such allotment.
- 3.4 Save as disclosed in this Information Memorandum:
- 3.4.1 no share or loan capital of the Company is under option or is the subject of an agreement, conditional or unconditional, to be put under option;
- 3.4.2 no share or loan capital of the Company has been issued, or is now proposed to be issued (other than pursuant to the Offer or on the exercise of the options to be issued under the share option scheme) referred to in paragraph 11 below, fully or partly paid, either for cash or other consideration to any person; and
- 3.4.3 no person has any preferential subscription rights for any share capital of the Company;
- 3.5 No commissions, discounts, brokerages or other special terms have been granted by the Company in connection with the issue or sale of any share or loan capital of the Company save as disclosed in paragraph 12 below.
- 3.6 Neither the Company nor any other member of the Group holds any of the Ordinary Shares.
- 3.7 The Company has no convertible debt securities, exchangeable debt securities or debt securities with warrants in issue.
- 3.8 There are no acquisition rights or obligations over the authorised but unissued share capital of the Company and there is no undertaking to increase the share capital of the Company.
- 3.9 The Ordinary Shares have been created under the Act.

- 3.10 The Ordinary Shares are in registered form and may be held only in certificated form.
- 3.11 No shares of the Company are currently in issue with a fixed date on which entitlement to a dividend arises and there are no arrangements in force whereby future dividends are waived or agreed to be waived.
- 3.12 Save for the options referred to above, the Company does not have in issue any securities not representing share capital.
- 3.13 Other than pursuant to the Offer, the Ordinary Shares are not being marketed or being made available to the public in whole or in part.
- 3.14 The Ordinary Shares have not been admitted to dealing on any recognised investment exchange or other trading facility, nor has any application for such admission been made and it is not intended to make any arrangements for dealings in the Ordinary Shares on any such exchange.
- 3.15 The Company has the contractual capacity of a natural person and is empowered to borrow, guarantee and give security.

#### **4. REORGANISATION**

The following reorganisation was carried out in February 2019.

BNC was originally a private company limited by guarantee with no share capital. It was a spin out company from Imperial and UCL, in association with the National Physical Laboratory (NPL). The sole member of BNC is AquAffirm.

It isn't possible under the Companies Act 2006 for BNC to re-register as a private company limited by shares and so on 31 January 2019 BNC applied to be re-registered as an unlimited company with a share capital pursuant to section 102(3) Companies Act 2006 and, on re-registration, BNC created and issued a subscriber share to AQBio Limited.

AQBio Limited then transferred its shareholding in BNC to AquAffirm at a time when the only shares issued in AquAffirm were its subscriber shares. The consideration consisted wholly of the issue of a new share in AquAffirm to AQBio Limited.

AquAffirm is thus to be treated, in accordance with the advance assurance by granted by HMRC under the rules of the Enterprise Investment Scheme, for the purposes of sections 192 (1)(e) and 195 of the Income Tax Act 2007 ("ITA"), by virtue of section 195(7) ITA, as having created the valuable intellectual property created by BNC thus entitling the Group to receive royalties and licence fees in respect of that intellectual property as part of its qualifying trade. AQBio Limited is a dormant company controlled by the Directors which has never traded. It has served to facilitate the acquisition of BNC share capital by AquAffirm in a manner which was approved by HMRC for the purposes of section 195(7) ITA but now has no other relevance to AquAffirm save that it remains a minority shareholder in AquAffirm in consequence of the merger, holding 3,200 Ordinary Shares (following the sub-division referred to in paragraph 3.3.1 above) which, at maximum subscription will represent approximately 0.03% of the fully diluted issued share capital of the Company.

#### **5. ARTICLES OF ASSOCIATION**

The Articles include, *inter alia*, provisions to the following effect.

##### **5.1 Objects**

The objects of the Company, in accordance with section 31(1) of the Act, are unrestricted.

##### **5.2 Limited liability**

The liability of the members is limited to the amount, if any, unpaid on the shares in the Company respectively held by them.

##### **5.3 Rights attaching to Ordinary Shares**

###### **5.3.1 Voting rights of members**

Subject to the Articles and to any special rights or restrictions as to voting for the time being attached to any shares (as to which there are none at present) the provisions of the Act shall apply in relation to voting rights. On a show of hands, at a general meeting which is being held

as a physical meeting, every member or authorised corporate representative present has one vote and every proxy present has one vote except if the proxy has been duly appointed by more than one member and has been instructed by (or exercises his discretion given by) one or more of those members to vote for the resolution and has been instructed by (or exercises his discretion given by) one or more other of those members to vote against it, in which case a proxy has one vote for and one vote against the resolution. On a poll, every member present in person or by proxy has one vote for every share of which he is a holder. In the case of joint holders, the vote of the person whose name stands first in the register of members and who tenders a vote is accepted to the exclusion of any votes tendered by any other joint holders.

#### 5.3.2 *Dividends*

The profits of the Company, which the Company may so resolve to distribute, shall be distributed amongst the holders of Ordinary Shares in proportion to the number of Ordinary Shares held.

#### 5.3.3 *Return of capital*

On a return of assets on a liquidation or capital reduction or similar, the balance after payment of the Company's liabilities shall be shared amongst the holders of Ordinary Shares in proportion to the number of Ordinary Shares held.

### **5.4 Transfer of Ordinary Shares - pre-emption rights and tag and drag along rights**

5.4.1 Subject as mentioned below the Directors are required to register promptly any transfer of Shares made in accordance with the provisions of these Articles.

5.4.2 The Directors may refuse to register a transfer of a Share: which is not fully paid up (as to nominal value or premium) and a transfer of a share on which the Company has a lien; if it is in favour of more than four transferees; unless it is lodged at the office or such other place as the Directors may determine and is accompanied by the certificate for the Shares to which it relates and such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer; and unless it is in respect of one class of Share only.

5.5 In addition the Directors may refuse to register a transfer of a Share to a bankrupt, a minor or a person of unsound mind.

#### *Pre-emption rights*

5.6 The right to transfer Shares or any interest therein is subject to the following pre-emption rights. Before transferring or disposing of any Shares (or any interest in Shares) the proposing transferor shall serve a notice (Transfer Notice) on the Company specifying the number and class of shares in question and the proposed price for such shares, and the Transfer Notice shall constitute the Company his agent for the sale of those Shares at the prescribed price as defined in paragraph 5.8 below (Prescribed Price) to any Member or Members.

5.7 The Directors will endeavour to agree the Prescribed Price with the proposing transferor. If the Directors fail to agree the Prescribed Price with the proposing transferor within 14 days of receipt of the Transfer Notice by the Company the Directors shall request the auditors or if they are unable or decline to act, an independent firm of chartered accountants appointed by the Directors or, in the event of disagreement appointed on the application of the proposing transferor or by the Directors by the President of the Institute of Chartered Accountants in England & Wales to certify the Prescribed Price.

5.8 The auditors shall (acting as experts and not arbitrators) within 14 days of such a request certify to the Company the Prescribed Price, being the value of each share comprised in a Transfer Notice (Sale Share) calculated on the following basis: by determining the sum which a willing purchaser would offer to a willing vendor for all the issued Ordinary Shares; if the Company is then carrying on business as a going concern, on the assumption that it will continue to do so; that the Sale Shares are capable of being transferred without restriction; valuing the Sale Shares as a rateable proportion of the total value of all the issued Ordinary Shares without any premium or discount being attributable to the percentage of the issued Ordinary Shares which they represent; and reflecting any other factors which the auditors reasonably believe should be taken into account provided that such factors shall not override the above assumption and bases; and by dividing the resultant figure between the holders of Ordinary Shares in proportion to the number of Ordinary Shares held. The auditors' certificate as to the Prescribed Price shall be final and binding, save in the event of manifest error.

- 5.9 Within 21 days following receipt of the Transfer Notice or (where relevant) the date on which the Transfer Notice is deemed to have been given or where the Prescribed Price is certified by the auditors the date of certification of the Prescribed Price, the Company shall offer the Sale Shares to each Member (other than the proposing transferor and any certain excluded persons) for purchase at the Prescribed Price. All offers shall be made by notice in writing and state a time (being between 30 and 42 days inclusive following the date of such notice) within which the offer must be accepted or, in default, will be deemed to have been declined (Acceptance Period). A copy of such offer shall at the same time be sent by the Company to the proposing transferor.
- 5.9.1 The Sale Shares shall be offered on the following basis: any Member to whom the Sale Shares are offered may accept all or some only of the Sale Shares offered to him, and shall be invited to indicate whether, if he accepts all such Sale Shares, he wishes to purchase any Sale Shares which other Members decline to accept (Excess Shares) and, if so, the maximum number of Excess Shares which he wishes to purchase; any Excess Shares shall be allocated between the Members who have indicated that they wish to purchase Excess Shares pro rata to the proportion of the total number of Shares held by those Members but so that no Member shall be required or entitled to receive more than the maximum number indicated by him and, the purchasers shall be bound to purchase the Sale Shares properly allocated to them at the Prescribed Price.
- 5.9.2 Not later than 7 days following the expiration of the Acceptance Period the Company shall give written notice to the proposing transferor stating: if it is the case, that no Member has sought to purchase any of the Sale Shares; or, otherwise the number of Sale Shares which Members have sought to purchase, giving the name and address of each Purchaser and the number of Sale Shares to be purchased by him. If within the Acceptance Period, purchasers have been found for only some of the Sale Shares or if no purchaser has been found for any of the Sale Shares, the proposing transferor may within 7 days of service on him of notice to this effect revoke his Transfer Notice by written notice to the Company. If the Proposing Transferor is given notice (and subject to his not revoking his Transfer Notice) he shall be bound on payment of the Prescribed Price to transfer the Sale Shares in question to the respective purchasers.
- 5.10 If the Company fails before the end of the Acceptance Period to find a purchaser or purchasers for any of the Sale Shares, the proposing transferor may sell all or any of the Sale Shares to any third party/parties.
- 5.11 If before the end of the Acceptance Period the Company finds a purchaser or purchasers for some (but not all) of the Sale Shares and serves notice as mentioned in paragraph 5.9.2 the proposing transferor may sell all or any of the Sale Shares for which no Purchaser has been found to any third party/parties unless he revokes his Transfer Notice in which case he may sell all (but not some only) of the Sale Shares to any third party/parties.
- 5.11.2 The right of the proposing transferor to sell Sale Shares shall be subject to the following restrictions: Sale Shares may not be sold after the expiry of three months after the date on which notice is given by the Company under paragraph 5.9.2; Sale Shares must be sold on a bona fide sale at a price not less than the Prescribed Price and without any deduction, rebate or allowance whatsoever to the Purchaser; the drag along provisions referred to below (if applicable); and no Shares may be transferred, or disposed of by certain excluded persons unless the Directors resolve to approve such transfer or disposal.
- 5.12 The costs of the auditors shall be borne as the auditors shall deem fair and reasonable.

*Tag along rights*

- 5.12.1 No sale or transfer of the legal or beneficial interest in any Shares (the Relevant Transaction) may be made or validly registered if as a result of such sale or transfer an interest in more than 50% of the Ordinary Shares in issue for the time being (a Relevant Interest) is obtained by a person (or persons acting in concert) where such person(s) did not have a Relevant Interest immediately prior to the Relevant Transaction, unless the proposing transferor: shall have procured a written offer to have been made by the proposed transferee (or any person or persons acting in concert with it) ("the Proposing Transferee") to the holders of all the other issued Shares to acquire their entire holding of Shares (the "Eligible Shareholders"); and shall have served a notice on the Eligible Shareholders in respect of such proposed offer (the "Tag Notice").

- 5.12.2 The Tag Notice will specify: that Eligible Shareholders are entitled to transfer all of their shareholdings to the Proposing Transferee; the terms of sale to which the Eligible Shareholders are required to adhere and enclose copies of the tag along documents (if any) relating to the sale; the identity of the proposed purchaser; the specified price as defined in paragraph 5.12.4 below (Specified Price) and/or type of consideration being offered (including non-cash consideration) for each class of Shares held by the Eligible Shareholders; and the proposed place, date and time of completion.
- 5.12.3 The offer shall be on terms that: it will be open for acceptance in England and Wales for a period of at least 28 days following the making of the offer; each Member to whom it is made shall be entitled to receive for each of the Shares held by him a sum per Share equal to the Specified Price (or otherwise on the same terms for non-cash consideration where relevant); the purchase of any Shares in respect of which such offer is accepted shall be completed at the same time as the Relevant Transaction; and otherwise on the same terms for all members (and for this purpose any offer which provides for any warranties or indemnities (other than warranties as to title and capacity) or restrictive covenants from some, but not all, Members shall be deemed to comply).
- 5.12.4 The expression "the Specified Price" means: a price per Share which shall be determined by valuing the entire issued share capital of the Company ("the Sale Value") by reference to the aggregate of: the amount offered or paid or payable by the proposed transferee or transferees or his or their nominees respectively for each of the Shares comprised in the Relevant Interest to the holder or holders thereof or, if higher, the highest amount paid or payable for an Ordinary Share in any related or previous transaction within the 12 months preceding the offer by the same purchaser or any person acting in concert with the proposing transferee; and an amount equal to the relevant proportion of any other consideration (in cash or otherwise) received or receivable by the holder or holders of the Shares comprised in the Relevant Interest which, having regard to the substance of the transaction as a whole, can reasonably be regarded as an addition to the price paid or payable for the Relevant Interest (and, for the avoidance of doubt and without prejudice to the generality of the foregoing, any additional consideration which is linked to future profits, turnover or some other measure of the future performance of the Company shall be regarded as consideration which is an addition to the price paid or payable for the Relevant Interest).
- 5.13 Any disagreement as to the calculation of the Specified Price which each Member is entitled to receive in respect of each Share held by him for the purposes of this Article shall be referred to the auditors or if a Member objects or they are unable to act or decline to act, an independent firm of chartered accountants appointed by the Directors, or in the event of disagreement, appointed on the application of the Proposing Transferor or the Directors by the President of the Institute of Chartered Accountants in England and Wales and the provisions relating to the auditors shall apply to such independent firm of chartered accountants (acting as experts and not arbitrators) whose decision shall be final and binding (in the absence of manifest error) and the costs of the auditors shall be borne by the Company.
- 5.14 If at any time one or more Members holding between them more than 50% of the Company's voting rights for the time being in issue (the "Vendors") propose to sell the legal or beneficial interest in their entire holdings of Shares to a person with whom none of them is Connected or one or more such persons acting in concert (the "Offeror") then the Vendors shall have the right to require the holders of all other issued Shares in the Company (the "Called Shareholders") to sell and transfer their entire holdings of Shares (for the same consideration as the Vendors whether this be cash or non-cash consideration) to the Offeror (or as the Offeror shall direct) (the "Drag Along Right") at a price (the "Drag Along Price") to be determined on the basis set out in paragraph 5.12.4.

#### *Directors*

- 5.15 The directors (other than alternate directors) shall not, unless otherwise determined by an ordinary resolution of the Company, be less than two nor more than 8 in number. A director need not be a member of the Company. The Directors shall not be required to retire by rotation.
- 5.16 The Company may by ordinary resolution appoint any person who is willing to act to be a director, either to fill a vacancy or as an additional director. The Directors may appoint a person who is willing to act to be a Director, either to fill a vacancy or as an additional Director,

provided that the appointment does not cause the number of Directors to exceed any number fixed by or in accordance with these Articles as the maximum number of directors. One or more Members holding between them more than 20% of the Company's voting rights for the time being in issue shall have the right to appoint one person as a Director of the Company and to remove from office any person so appointed and (subject to such removal) to appoint another person in his place.

General meetings

- 5.17 An annual general meeting shall be held in accordance with the applicable statutory provisions at such place as may be determined by the Board. Other general meetings shall be held whenever the Board thinks fit or on the requisition of shareholders in accordance with the Act.
- 5.18 Subject to the applicable statutory provisions, an annual general meeting shall be called by at least 21 clear days' notice and all other general meetings shall be called by not less than 14 clear days' notice or by not less than such minimum notice period as is permitted by the applicable statutory provisions.

## **6. INTERESTS OF THE DIRECTORS**

- 6.1 The table in paragraph 3.1 above sets out the interests of the Directors and their families (including any interest known to that Director which could with reasonable diligence be ascertained by him or her) in the issued share capital of the Company immediately prior to the Offer and, assuming that the Offer is fully subscribed, immediately following the Offer.
- 6.2 There are no outstanding loans granted or guarantees provided by the Company to, or for the benefit of, any of the Directors.
- 6.3 At the date of this document BNC owes approximately £45,000 to David Sarphie as a result of his funding the monthly cash burn in the business at the rate of approximately £25,000 per month.
- 6.4 Save as otherwise disclosed in this document, no Director has any interest, whether direct or indirect, in any transaction which is or was unusual in its nature or conditions or significant to the business of the Company taken as a whole and which was effected by the Company since its incorporation and which remains in any respect outstanding or under-performed.
- 6.5 None of the Directors or any person connected with a Director (within the meaning of section 252 to 255 of the Act) is interested in any related financial product referenced to the Ordinary Shares (being a financial product whose value is, in whole or in part, determined directly or indirectly by reference to the price of the Ordinary Shares, including a contract for difference or a fixed odds bet).

## **7. DIRECTORS' SERVICE AGREEMENTS AND LETTERS OF APPOINTMENT**

- 7.1 The Directors have been appointed to the offices and roles set out against their respective names below. The service agreements and letters of appointment summarised below are each between the respective Director and the Company.
- 7.2 Executive Directors
- 7.2.1 David Sarphie (*Chief Executive Officer*) entered into a service agreement with the Company dated 29 January 2008. His appointment is terminable on nine months' notice by either party and the agreement contains provisions for early termination, without notice, in certain circumstances, including if the director is prevented or prohibited by law from being a director or is in serious (after written warning) repeated breach of any of his obligations to the Company or of any legal duty owed to it. David Sarphie's salary is £80,000 per annum. The agreement also provides for David Sarphie to join, subject to eligibility, such registered group personal pension scheme as has been set up by the Company, as well as the repayment of all reasonable expenses properly and reasonably incurred in the performance of the executive's duties. In addition, the agreement contains post- termination restrictive covenants and confidentiality obligations.

### **7.3 Non-Executive Directors**

- 7.3.1 Prof Gabriel Aeppli entered into a letter of appointment with BNC dated 3 October 2007. The appointment and terms of the letter of appointment will expire if regular attendance at board meetings does not occur. The terms of the appointment letter entitle Prof Aeppli to a director's fee of £1,000 per board meeting attended. Prof Aeppli is also entitled to the reimbursement of reasonable travelling and other expenses incurred in performing his duties. There are no benefits payable on the termination of the appointment.
- 7.3.2 Prof Anthony (Tony) Cass entered into a letter of appointment with BNC dated 3 October 2007. The appointment and terms of the letter of appointment will expire if regular attendance at board meetings does not occur. The terms of the appointment letter entitle Prof Cass to a director's fee of £1,000 per board meeting attended. Prof Cass is also entitled to the reimbursement of reasonable travelling and other expenses incurred in performing his duties. There are no benefits payable on the termination of the appointment.
- 7.3.3 Prof John Wood entered into a letter of appointment with the Company dated 28 October 2008. The appointment and terms of the letter of appointment will expire if regular attendance at board meetings does not occur. The terms of the appointment letter entitle Prof Wood to a director's fee of £1,000 per board meeting attended. Prof Wood is also entitled to the reimbursement of reasonable travelling and other expenses incurred in performing his duties. There are no benefits payable on the termination of the appointment.
- 7.4 The aggregate remuneration and benefits in kind paid by the Company to the Directors in respect of the financial period ended 28 February 2018 was £79,712. It is estimated that under the arrangements currently in force as at the date of this document, the aggregate remuneration payable and benefits in kind to be granted to the Directors by the Company for the financial period ending 28 February 2019 will be no less than £79,712.

### **8. ADDITIONAL INFORMATION ON THE DIRECTORS**

- 8.1 Other than in respect of the Company and its wholly-owned subsidiaries, the names of all companies and partnerships of which the Directors have been a director or partner at any time in the five years preceding the date of this document (and indicating whether they are current or former) are set out below:
- 8.1.1 Dr David Sarphe, Director, Oxford MediStress Ltd, Oxford, UK (current); Vineyard Wine and Travel Company (Residential property freeholder), Richmond, UK (current)
- 8.1.2 Prof Gabriel Aeppli, Member of Board of Directors, Paul Scherrer Institute, Villigen Switzerland (current)
- 8.1.3 Prof Tony Cass - none
- 8.1.4 Prof John Wood - M4 Technologies (current), Christians in Science Trust (current), Research Data Alliance (director until 2017), Careers Research and Advisory Centre (director until 2018), ACU Trading - resigned April 2017, Daphne Jackson Trust - resigned April 2016, INASP - resigned November 2015, Cokethorpe Educational Trust - resigned March 2015
- 8.2 None of the Directors has:
- 8.2.1 any unspent convictions in relation to indictable offences;
- 8.2.2 been or is the subject of any bankruptcy order made against him or her or been the subject of any form of individual voluntary arrangements;
- 8.2.3 been a director of a company which has been placed in receivership, compulsory liquidation, creditors voluntary liquidation, administration, been subject to a company voluntary arrangement or any composition or arrangement with its creditors generally or any class of its creditors while he or she was a director of that company or within the 12 months after he or she ceased to be a director;
- 8.2.4 been a partner in any partnership which has been placed in compulsory liquidation or administration or been the subject of a partnership voluntary arrangement or where the assets of any such partnership have been subject of a receivership while he was

a partner in that partnership or within the 12 months after he or she ceased to be a partner in that partnership;

- 8.2.5 been the owner of any asset or been a partner in any partnership which owned any asset which while he or she owned that asset, or while he or she was a partner or within the 12 months after he or she ceased to be a partner in the partnership which owned the asset, which has at any time been the subject of a receivership;
- 8.2.6 been the subject of any public criticism and/or investigation by any statutory or regulatory authority (including recognised professional body); or
- 8.2.7 ever been or is disqualified by a court from acting as a director of any company or from acting in the management or conduct of the affairs of any company.
- 8.3 Save as disclosed in this document, none of the Directors has or have had any interest in transactions which are or were unusual in their nature or conditions or which are or were significant to the business of the Company and which were effected by any member of the Company in the current or immediately preceding financial year or which were effected during an earlier financial year and which remain in any respect outstanding or unperformed.
- 8.4 No loans made or guarantees granted or provided by any member of the Company to or for the benefit of any Director are outstanding and there are no loans or guarantees provided by any of the Directors for the Company or its wholly-owned subsidiaries.

## 9. EMPLOYEES

As at 31 January 2019 BNC had 8 employees, the breakdown of which are set out as follows:

<i>Staff by activity</i>	<i>Staff Number</i>
Research and development	6
Sales and marketing	0.5
General and administration	1.5

## 10. REMUNERATION POLICY

- 10.1 The Company's remuneration policy is designed to provide a framework to: attract, motivate and retain executives and senior management to deliver the Company's strategic, business development and growth goals; incentivise strong financial performance and reward the delivery of the Company's business plan; align the interests of executives and senior management with the interest of shareholders; and adhere to principles of good corporate governance.
- 10.2 The Board is committed to achieving high standards of corporate governance, integrity and business ethics, and the Remuneration Committee has approved the following remuneration policy for its Directors.

### 10.2.1 *Salary*

Salaries are reviewed annually and are set at a level considered appropriate for the size and nature of the business, taking into account individual performance, and pay and conditions, of the wider workforce.

### 10.2.2 *Pension contribution*

Directors will be assessed for eligibility to participate in the Company's Group personal pension plan under the terms of auto enrolment.

### 10.2.3 *Benefits*

Directors will receive market competitive benefits, including (but not limited to) private medical insurance.

## 11. SHARE OPTION SCHEME

The Company has operated an HMRC-approved share option scheme since 2015 which falls within the scope of the Enterprise Management Incentive (EMI) scheme under Schedule 5 Income Tax (Earnings and Pensions) Act 2003; the Company is a Qualifying Company and all Option Holders are Eligible Employees. The options granted under the scheme are referred to in paragraph 3.1 above. The directors will seek the approval of shareholders before granting further shares under this scheme.

## **12. MATERIAL CONTRACTS**

- 12.1 Other than as set out below and other than contracts in the ordinary course of business, neither the Company nor any member of the Group, has entered into any contract in the two years immediately prior to the date of this document which is or may be material, or which contains any provision under which the Company or any member of the Group has any obligation or entitlement which is material to the Company as at the date of this document.
- 12.2 On 31st August 2018 RW Blears LLP solicitors agreed to provide legal services to the Company and to procure that SPNV Limited provide arranging services in relation to the Offer. It was agreed that these services would be provided on a wholly contingent basis in return for which, subject to the Company raising a minimum of £250,000, partners in the firm would have the right to subscribe at their nominal value for a number of Ordinary Shares which, valued at the Offer Price and together with a cash fee of £20,000 would, in aggregate, equal three times the firm's normal time costs. VAT is chargeable in addition. As at the date of this document the accrued rights to subscribe are set out in paragraph 3.1 above. A commission of 2% will also be paid in respect of Investors introduced by RW Blears LLP.
- 12.3 On 31 January 2019 Amberside Capital LLP agreed to act as a promoter in relation to the offer of Ordinary Shares to potential investors until 31 March 2020 in consideration for which the Company will a fee of 2% (plus VAT where applicable) of: all investment raised into the Company (or an affiliated company) over the 24 months following the date of this letter; and any follow-on investment into the Company (or an affiliated company) from investors introduced by Amberside for a further 12 months.

## **13. LITIGATION**

No member of the Company is or has been involved in any governmental, legal or arbitration proceedings which may have, or have had during the last 12 months preceding the date of this document, a significant effect on the Company's financial position or profitability and, so far as the Directors are aware, there are no such proceedings pending or threatened against the Company or its wholly-owned subsidiaries.

## **14. WORKING CAPITAL**

In the opinion of the Directors, having made due and careful enquiry, and taking into account the net proceeds of the Offer at full subscription, the working capital of the Company will be sufficient for its present requirements, that is, for at least the period of 12 months from the close of the Offer.

## **15. SIGNIFICANT CHANGE**

Save as disclosed in this document, there has been no significant change in the trading or financial position of AquAffirm and BNC since 28 February 2018, being the date to which the historical financial information set out on pages 24 to 32 was prepared.

## **16. GENERAL**

- 16.1 The gross proceeds of the Offer receivable by the Company are expected to be £1,000,000, with the total net proceeds of the Offer after settling fees and expenses expected to be approximately £950,000.
- 16.2 The Offer Shares are not being offered generally and no applications have or will be accepted other than under the terms of the Offer. The Offer is not being underwritten by any person.
- 16.3 Sygma, the reporting accountant and auditor to the Company, is a firm of chartered accountants regulated by the Institute of Chartered Accountants in England and Wales. Sygma has given and not withdrawn its written consent to the inclusion in this document of its report in relation to the Historical Financial Information included on pages 24 to 32.
- 16.4 Where information in this document has been sourced from a third party, this information has been accurately reproduced. So far as the Company and the 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.

- 16.5 It is expected that definitive share certificates will be despatched by hand or first-class post by within 14 days of allotment.
- 16.6 No person (excluding professional advisers otherwise disclosed in this document and trade suppliers) has received, directly or indirectly, from the Company within the twelve months preceding the opening of the Offer or entered into contractual agreements (not otherwise disclosed in this document) to receive, directly or indirectly, from the Company on or after Admission any of the following: (i) fees totalling £10,000 or more; (ii) its securities where these have a value of £10,000 or more calculated by reference to the Offer Price; or (iii) any other benefit with a value of £10,000 or more.
- 16.7 The accounting reference date of the Company is 28 February.

**17. AVAILABILITY OF THIS DOCUMENT**

The Offer for Subscription is available only to those to whom this Information Memorandum is this distributed or, where it can be properly regarded, in all the circumstances, as a private concern of the person receiving the offer and the Promoter, or a restricted number of intermediaries authorised by the Promoter to distribute this Information Memorandum on behalf of the Promoter to their clients.

## TERMS AND CONDITIONS OF THE OFFER FOR SUBSCRIPTION

The terms and conditions below apply to subscribers for Ordinary Shares under the Offer.

If you wish to invest under the Offer, either (i) you and your financial intermediary (whether advisory or 'execution only') should both complete the Intermediary Application Form, or (ii) if you wish to invest directly (without an intermediary) you will need to provide some information about your investment experience and financial circumstances by completing the Direct Investor Application Form. The Application Forms are on pages 70-85 of this Securities Note and are also available from Amberside Capital Limited, call: 01442 910 064. AquAffirm reserves the right not to accept any Application Form as it deems appropriate for any reason in its absolute discretion.

Acceptances of applications to subscribe Shares will be restricted to: (i) investors whose financial intermediary (whether advisory or 'execution only') is able, to provide the appropriateness assessment certificate within the Intermediary Application Form; and (ii) investors who invest directly (without an intermediary) where they are able to provide information about their investment experience and financial circumstances by completing the Direct Investor Application Form which is sufficient to enable SPNV to assess that an investment would be suitable for the investor. Accordingly, as any acceptance of an application is subject to a prior assessment of the investor, either by their financial intermediary or by SPNV, this Information Memorandum does not constitute a direct offer financial promotion (that is, an offer by AquAffirm which is capable of being accepted or an invitation to apply under the Offer which will be accepted by AquAffirm, in either case on an unconditional basis) under FCA rules.

### GENERAL

1. You as an investor are applying to subscribe for secured, transferable Ordinary Shares ("Ordinary Shares") issued by AquAffirm Limited. You are making your application ("Application"), based on the information set out in this Information Memorandum dated 11 February 2019 which sets out important information about investing in Ordinary Shares. Your Application is subject to the following terms and conditions. Capitalised terms that are not defined in these Terms and Conditions will have the meanings given to them in this Information Memorandum.
2. You will have completed all of the Company's registration requirements and all other requirements for making an Application on or before the close of the Offer, which will include:
  - any tests for appropriateness or assessing your investment knowledge and experience required by AquAffirm in connection with your application for Ordinary Shares; and/or
  - any other tests, certifications, or declarations as required by the Company, from time to time.
3. Payments are only to be made via direct bank transfer to the Receiving Agent in order to subscribe for any Ordinary Shares.
4. All Applications are made, and Ordinary Shares issued, strictly in accordance with this Information Memorandum, including these terms and conditions as well as the provisions of the Articles setting out the legal terms on which the Ordinary Shares will be issued. Each Ordinary Share is issued on condition that you (and any person claiming through or under you) are taken to have notice of the Articles and consent to be bound by the terms of the Articles (including all restrictions and limitations specified in and/or arising under or pursuant to the Articles). A summary of the key provisions of the Articles, can be found on pages 55 to 59. If the Articles is inconsistent with these terms and conditions then the Articles shall prevail. The Articles are governed by and shall be construed in accordance with English law.
5. Where applicable, the Receiving Agent undertakes on your behalf to hold money pending various anti-money laundering checks until it is remitted to the Issuer.
6. No less than the minimum amount of £1,000 worth of Ordinary Shares at the Offer Price will be issued and thereafter in multiples of £1,000. Until such time as applications are received for the minimum amount of £250,000 for Ordinary Shares, no Ordinary Shares will be issued and monies will be held in a non-interest-bearing client account until such time as the requisite applications are received and Investors will be noted of any such delays by other means of communication specified in your application. If the minimum subscription of £250,000 is not reached within six months, monies subscribed will be returned to Investors and the Offer will be closed.

7. Subject to the achievement of a minimum subscription of £250,000 for Ordinary Shares, AquAffirm will allot shares notwithstanding that less than the maximum amount £1,000,000 has been subscribed under the Offer.
8. The Directors reserve the right to increase the size of the Offer to more than £1,000,000 in their absolute discretion.
9. No costs or expenses of the Offer are charged directly to Investors. The Company has agreed to pay fees to RW Blears LLP and Amberside Capital LLP as set out on page 62 of this Information Memorandum .
10. In making your Application, you acknowledge and confirm:
  - (a) that you are not relying on any information given or any representations, warranties, agreements or undertakings (express or implied, written or oral) or statements made at any time by AquAffirm or its Directors or any other third party whether acting on their behalf or otherwise, in relation to the Issuer or any group entity other than as contained in this Information Memorandum (including these Terms and Conditions), the Articles, and that, accordingly, none of AquAffirm or its Directors, any group entity of either of them, any directors, officers, agents, employees or advisers of AquAffirm or its Directors or any such entity or any person acting on behalf of any of them shall have any responsibility for any such information, representations, warranties, agreements or undertakings (express or implied, written or oral);
  - (b) you are not relying on AquAffirm or its Directors, SPNV Limited or Amberside Capital Limited to advise you as to the merits of investing in the Ordinary Shares or to ensure that the Ordinary Shares are a suitable investment for you;
  - (c) you have considered and understood this Information Memorandum (including these Terms and Conditions), the summaries of the Articles, and including (but not limited to) the risk factors on pages 38 to 49 of this Information Memorandum . Without limiting the preceding sentence, you understand and accept that:
    - i. that you understand that the Ordinary Shares do not give you any right or option to convert them to shares or other securities;
    - ii. that there may be tax consequences for you in investing in Ordinary Shares. General information as to tax for UK individual investors as well as certain other types of investors is set out at page 50 to 52 of this Information Memorandum. You should consider your own personal tax position and take professional advice as appropriate;
  - (d) you are either an individual who is 18 years old or more at the date of making your Application and who is not resident in the USA ("US person") or you are the authorised representative(s) of a non-natural person, including a limited company, a limited liability partnership, trust or foundation that is not registered in the USA;
  - (e) your making of the Application, being issued with Ordinary Shares and/or receiving any payments under the Ordinary Shares, does not contravene any law or requirement of any official or government body based outside the UK to which you are subject. Without limiting any other terms and conditions, you acknowledge and confirm that you are not a US Person, are not receiving Ordinary Shares in the United States and are not acquiring Ordinary Shares for the account of a US Person;
  - (f) you are aware that it is open to you to seek advice from someone who specialises in advising on investments;
  - (g) charges may be payable by you to a Financial Advisor who has advised you in relation to your decision to subscribe for any Ordinary Shares. By making your Application you authorise the AquAffirm to pay such charges to the relevant Financial Advisor and to take account of such charges in determining the number of Ordinary Shares to be issued to you in accordance with the pricing formula in Box 4 of the Intermediary Application Form;
  - (h) you acknowledge that AquAffirm may, in its absolute discretion, reject in whole or in part or scale down your Application and may, if necessary, return monies to you by cheque to the postal address specified in your Application;

- (i) you are not engaged in money laundering. No money paid in subscription for Ordinary Shares shall represent the proceeds of any criminal activity;
- (j) unless you have disclosed to us that you are applying on another person's behalf (for example, as an intermediary who has disclosed its client's identity) you must make your Application on your own behalf and for no other person. You should note that under the Articles, Ordinary Shares may be held by a single holder or jointly with any other person; and
- (k) AquAffirm, its directors, employees, agents and advisers will rely upon the truth and accuracy of the confirmations, acknowledgements and representations contained in your Application.

### **MONEY LAUNDERING**

11. It is also a term of your Application that, to ensure compliance with the legislation relating to money laundering and financial crime, AquAffirm or its Directors may, in their absolute discretion, require information and/or evidence or further verification of your identity and AquAffirm may decide not to issue Ordinary Shares until it and/or its Directors are absolutely satisfied as to your identity. If within a reasonable time after a request for information or evidence as to your identity, satisfactory evidence has not been supplied, AquAffirm may, at its absolute discretion, terminate your Application in which event no Ordinary Shares will be issued to you.

### **THIRD PARTY RIGHTS**

12. AquAffirm, any member of the AquAffirm's group, any directors, officers, LLP members, agents, employees or advisers of AquAffirm or its Directors, or any such group entity or any person acting on behalf of any of them may rely upon a right under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of these terms and conditions that refers to an acknowledgement, confirmation, authority or right in their favour. No other person shall have a right under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of these terms and conditions. Notwithstanding any term of these terms and conditions, the consent of any person who is not a party is not required to rescind or vary these terms and conditions.

## DEFINITIONS

<b>Arsenic</b>	Chemical element with symbol As and atomic number 33 occurring naturally in many minerals and rock formations and found in groundwater in many locations around the world. Exposure to arsenic even in minute quantities is a hazard, as it builds up in tissue with repeated exposure. The US Environmental Protection Agency (EPA) states that all forms of arsenic are a serious risk to human health. The US Agency for Toxic Substances and Disease Registry ranked arsenic as number 1 in its 2001 Priority List of Hazardous Substances at Superfund sites. Arsenic is classified as a Group-A carcinogen. The World Health Organization (WHO) limit for arsenic contamination is 10 parts-per-billion (ppb). The national standard in Bangladesh is 50 ppb.
<b>Asparagine</b>	Amino acid (building block of protein) commonly found in many grains, including wheat flour, as well as potatoes, among other foods. When asparagine, together with certain sugars, is heated above specific temperatures, acrylamide (a known carcinogen) is formed (this is the same reaction that 'browns' food and produces the flavours/aromas associated with fried/baked/roasted foods.) Measurement of asparagine in flour prior to baking is particularly important.
<b>AquAffirm</b>	AquAffirm Limited incorporated in England and Wales as a private company limited by shares with registered number: 9188375, formerly named as Bio Nano Holdings Limited and, as the context requires, includes the Company's wholly owned subsidiary company, The Bio Nano Centre Unlimited
<b>Articles</b>	The articles of association of the Company currently in force as they may be amended from time to time with the requisite approval of Shareholders.
<b>Bio Nano Holdings or BNC</b>	AquAffirm Limited incorporated in England and Wales as a private company limited by shares with registered number: 9188375, formerly named as Bio Nano Holdings Limited
<b>Carbon nanotube</b>	Cylindrical carbon molecules with unusual mechanical, thermal and electrical properties, CNTs are valuable for nanotechnology, electronics, optics, and other fields of materials science and technology. With exceptional strength and stiffness properties, as well as extraordinary thermal conductivity, carbon nanotubes find applications as additives to various structural materials and in a growing number of other applications.
<b>Company</b>	AquAffirm Limited incorporated in England and Wales as a private company limited by shares with registered number: 9188375, formerly named as Bio Nano Holdings Limited.
<b>Directors</b>	The persons whose names are set out on page 37 of the Information Memorandum.
<b>Group</b>	AquAffirm and its wholly owned subsidiary BNC.
<b>Electrochemical</b>	The particular branch of chemistry dealing with the chemical changes produced by electricity and the production of electricity by chemical changes. Many biosensors and medical diagnostic devices are based on electrochemical reactions.

<b>Fluoride</b>	An inorganic ion of fluorine (estimated to be the 13 <sup>th</sup> most abundant element in the earth's crust) with chemical formula F <sup>-</sup> whose salts are typically white or colourless. Chronic exposure to excessive fluoride is characterized in children by discoloration and pitting of the teeth and in adults by pathological bone changes, leading, if unchecked, to brittle bones and impaired mobility.
<b>Lateral flow assay</b>	A simple paper-based medical diagnostic devices intended to detect the presence (or absence) of target analytes in liquid samples without the need for specialized and costly equipment. Often the test is designed for use as a home test to detect particular medical conditions (pregnancy tests are a good example).
<b>Offer</b>	The Offer for Subscription contained in this Information Memorandum as it may be amended from time to time with the approval of the Directors.
<b>Offer Price</b>	Fifty pence (£0.50) per Ordinary Share.
<b>Ordinary Shares or Shares</b>	Ordinary Shares with a nominal value of £0.0000031250 each in the capital of the Company having the rights and being subject to the restrictions set out in the Articles.
<b>Point-of-care test</b>	A medical test conducted at or near the point of care – that is, at the time and place of patient care. This contrasts with the historical pattern in which medical testing was wholly or mostly confined to the medical laboratory, which entailed sending off specimens away from the point of care and then waiting hours or days to learn the results. The speed of getting results can dramatically improve the way certain medical conditions are treated.
<b>Share Option Scheme</b>	Share Option Scheme summarised on page 61.
<b>The Bio Nano Centre Unlimited or BNC</b>	The Bio Nano Centre Unlimited incorporated in England and Wales and re-registered as a private unlimited company with a share capital with registered number 6389520.

11 February 2019

## CORPORATE DIRECTORY

Board	Dr David Sarphie Prof Tony Cass FRSC Prof Gabriel Aeppli FRS Prof John Wood CBE, FREng
Company Secretary	Katie Macdonald
Promoter	Amberside Capital Limited Amberside House, Wood Lane, Hemel Hempstead, Hertfordshire HP2 4TP
Receiving Agent	The City Partnership (UK) Limited 110 George Street Edinburgh EH2 4LH
Arranger	SPNV Limited 29 Lincoln's Inn Fields London WC2A 3EG
Solicitors and EIS Tax Advisers	RW Blears LLP 29 Lincoln's Inn Fields London WC2A 3EG

## APPLICATION FORMS

## INTERMEDIARY APPLICATION FORM

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### IMPORTANT NOTE

This Application Form incorporates by reference the Information Memorandum issued on 11 February 2019 by AquAffirm Limited, a private limited company registered in England and Wales with company number 9188375 whose registered office is at 69 Onslow Road, Richmond, UK TW 10 6QA ("AquAffirm") and approved by SPNV Limited, a private limited company registered in England and Wales with company number 07455644 whose registered office is at 29 Lincoln's Inn Fields, London WC2A 3EG ("SPNV") in connection with the AquAffirm Offer for Subscription of Ordinary Shares in the capital of AquAffirm ("the Shares") and all other documents published by AquAffirm which are expressed to be supplemental thereto (the "Information Memorandum"). Unless otherwise stated or as the context shall otherwise require, defined terms and expressions used in this Application Form have the meanings ascribed to them in this Information Memorandum.

### BEFORE YOU INVEST

Before completing this Application Form, you should carefully review and understand the Information Memorandum. Remember that an investment in the Shares may NOT be suitable for you, the information in the Information Memorandum does NOT constitute tax, legal or investment advice and you should seek your own independent advice.

### MINIMUM INVESTMENT

The minimum investment is £1,000 and thereafter in multiples of £1,000.

### INSTRUCTIONS FOR COMPLETING THIS APPLICATION FORM

Before completing this Application Form, please carefully review the Information Memorandum

Then follow the steps below.

Please complete Boxes 1 to 4 below in type or use block capitals (save for your signature) in black/blue permanent ink and sign any changes you make. Do not erase any text or use whiteout. Please arrange for a witness to counter sign the Application Form.

You then need to send to The City Partnership (UK) Limited, 110 George Street, Edinburgh EH2 4LH the following:

- this Application Form duly completed
- Your cheque or banker's draft made payable to 'City Partnership - AquAffirm' for the amount you wish to invest

Or, alternatively, this amount can be sent by electronic transfer using the details below:

Bank: Bank of Scotland  
Account Name: City Partnership - AquAffirm  
Account No: 1874 0063  
Sort Code: 80 22 60

If you need any assistance completing the Direct Investor Certificate or the Application Form or have any questions about the application process you should contact your Authorised Financial Intermediary in the first instance. Additionally, you can contact City Partnership (UK) Limited on 0131 243 7210.

AquAffirm may decide, in its absolute discretion, to accept or reject the Application Form or scale down the number of Ordinary Shares applied for and will notify you of its decision.

If you do not receive an acknowledgement of your application within 10 days of sending it to the address above, please contact City Partnership (UK) Limited on 0131 243 7210.

**BOX 1 PERSONAL DETAILS**

Title: Mr. / Ms. / Mrs. / Miss / Dry / Other	Forename(s):
Surname(s):	
Nationality:	National Insurance No.
Permanent Address:	
Postcode:	Email:

If length of occupation is not more than 3 years, then please provide your previous residential address:

Telephone (daytime):	Telephone (mobile):
Date of birth:	Town and country of birth:
Country of Residence (Inc. UK)	Tax reference number:
National Insurance Number	

Explanatory note: The UK government is required, in certain circumstances, to share tax information with the tax authorities in other countries. As a result, financial institutions are legally required to collect certain information about the tax residency of each investor that it deals with. These records will only be disclosed to the relevant tax authorities if, and when, this is required under applicable law.

Your tax residence generally is the country in which you live for more than half of the year. However, there are certain circumstances that would cause a person to become tax resident in a number of countries. The country/countries in which you pay income tax are likely to be your country/countries of tax residence.

If you are a US citizen, or hold a US passport or green card, you will also be considered tax resident in the US, even if you live outside the US.

If you have any concerns regarding your tax residency, please seek advice from a suitably qualified person.

**BOX 2 AUTHORISED FINANCIAL INTERMEDIARY REQUESTING THE APPLICATION FORM**

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Name of Authorised Firm

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FCA Registration Number

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Address of the Authorised Financial Intermediary to which the Application Form should be sent

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Email of the Authorised Financial Intermediary to which the Application Form should be sent

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**BOX 3 AUTHORISED FINANCIAL INTERMEDIARY CERTIFICATE**

We certify to AquAffirm as follows:

**ANTI-MONEY LAUNDERING DUE DILIGENCE**

We have applied customer due diligence measures on a risk-sensitive basis in respect of the Investor to the standard required by the Money Laundering Regulations 2007 within the guidance for the UK financial sector issued by the Joint Money Laundering Steering Group and we certify that: we have obtained information on the purpose and intended nature of the Investor’s proposed investment in AquAffirm Limited and we are satisfied that this investment is being made for bona fide legitimate purposes and not to conceal the proceeds of crime; and that we have identified and verified the identity of the Investor on the basis of documents, data and information obtained from a reliable and independent source.

**INVESTOR CATEGORISATION**

We certify to AquAffirm that the Investor is one of the following:

- Certified as a ‘high net worth investor’ in accordance with COBS 4.7.9R
- Certified as a ‘sophisticated investor’ in accordance with COBS 4.7.9R
- Self-certified as a ‘sophisticated investor’ in accordance with COBS 4.7.9R
- Certified as a ‘restricted investor’ in accordance with COBS 4.7.10R

**INVESTOR APPROPRIATENESS ASSESSMENT**

We have undertaken an adequate assessment of our client named above and of his/her expertise, experience and knowledge in the investment field relevant to the Shares such as to give reasonable assurance to AquAffirm in light of the nature of the transactions or services envisaged that the Investor is capable of making his or her own investment decisions and of understanding the risks involved in investment in the Shares and that such investment would be appropriate for the Investor.

FEES (please tick the appropriate box)

We are charging the fee referred to in Box 4 paragraph 2.

This fee is an Advisor charge to be facilitated as provided in Box 4 paragraph 3

OR

This fee is to be treated as commission as provided in Box 4 paragraph 4 on the basis therein stated

We consent to AquAffirm relying on this certificate.

Signature

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Date

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**BOX 4 APPLICATION TO INVEST IN THE ORDINARY SHARES OF AQUAFFIRM LIMITED**

1. I hereby apply to invest the following amount in Ordinary Shares at the Offer Price of fifty pence (£0.50) per share

Amount £	Amount pounds (words)

Insert amount, which must be in pounds sterling and not less than £1,000 and thereafter in multiples of £1,000

- Your cheque or banker's draft must be made payable to 'City Partnership - AquAffirm for the amount you wish to invest
- Or, alternatively, this amount can be sent by electronic transfer using the details below:
  - Bank: Bank of Scotland
  - Account Name: City Partnership - AquAffirm
  - Account No.: 1874 0063
  - Sort Code: 80 22 60

If you need any assistance completing the Application Form or have any questions about the application process you should contact your Authorised Financial Intermediary in the first instance. Additionally, you can contact City Partnership (UK) Limited on 0131 243 7210

2. I hereby instruct AquAffirm Limited to make the following payment to my authorised financial advisor ("the Payment") INCLUSIVE OF VAT:

(words)

£

(figures)

Or, if applicable,  
state NIL in this box

3. If this Payment is an Advisor Charge (as defined by FCA rules) in respect of a personal recommendation in respect of my application then I acknowledge that this Advisor Charge will be facilitated by the deduction of the amount of that Payment from my gross subscription (which will then be paid to my authorised financial advisor) and only the net amount (after that deduction) will be invested in Ordinary Shares at the Offer Price and (subject to my personal circumstances) I will obtain EIS relief in respect only of the net amount of my subscription.
4. Alternatively, if this Payment is to be treated as commission paid in respect of restricted advice (as defined by FCA rules) by my authorised financial advisor to me or is in respect of the execution-only processing of my application where my advisor confirms to AquAffirm that their duty to act honestly, fairly and professionally in my best interests is not impaired and that they provide an enhanced value service in accordance with COBS 2.3A.6 to 2.3A.9 then I request that the gross amount of my subscription be invested for Ordinary Shares so that (subject to my personal circumstances) I obtain EIS relief in respect of the whole of my subscription but on the basis the number of Ordinary Shares to be issued to me will be reduced in accordance with the following formula:

$$\text{Number of Ordinary Shares} = \frac{\text{Amount subscribed LESS the commission paid to my authorised financial intermediary}}{\text{Fifty pence £0.50 per Ordinary Share}}$$

## BOX 5 DECLARATION

1. I confirm that I am 18 years of age or older, and personally possess sufficient knowledge, experience and expertise in financial and business matters (including experience with investments of a similar nature to an investment in the Shares) to be capable of evaluating the merits and risks of an investment in the Shares. I acknowledge that neither AquAffirm nor SPNV is providing advice on this investment and confirm that I have taken such independent advice (including from an independent financial adviser) that I deem necessary or desirable.
2. I confirm that I have read and understood the Information Memorandum (and in particular the section headed Risk Factors). I confirm that, in making my application, I am relying solely on the information contained in the Information Memorandum and my own enquiries, and not on any other information or representation in relation to the Shares.
3. I agree and undertake, if my application is accepted, to observe, perform and be bound by the provisions of the Information Memorandum (and in particular the section headed Terms and Conditions of the Offer of the Shares) and the Articles of Association from time to time of AquAffirm.
4. I acknowledge that this Application Form is not transferable or assignable.
5. I confirm my agreement that this Application Form be governed by and construed in accordance with the laws of England and that the courts of England shall have exclusive jurisdiction to hear and determine any suit, action or proceedings and to settle any disputes which may arise out of or in connection with this Application Form and, for such purposes, I irrevocably submit to the jurisdiction of such courts. In addition, I irrevocably waive any objection which I might now or hereafter have to the courts of England being nominated as the forum to hear and determine any such suit, action or proceedings and to settle any such disputes, and agree not to claim that any such court is not a convenient or appropriate forum.
6. I agree that the foregoing representations, warranties, agreements and acknowledgments shall survive the date of issue of the Shares and this Application Form shall be binding upon and inure to the benefit of all parties and their successors and permitted assignees.
7. I agree that any term or provision of this Application Form which is invalid or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without rendering invalid or unenforceable the remaining terms or provisions of this Application Form or affecting the validity or enforceability of any of the terms or provisions of this Application Form in any other jurisdiction.
8. I confirm, in relation to my investment in the Shares, that I am applying on my own behalf;
9. I agree to the Payment referred to in Box 4 paragraph 1 and to the basis on which that Payment is to be treated as specified in Box 3 by my authorised financial intermediary.

This Application Form is executed and delivered as a deed on the date mentioned below:

Investor Signature:

Print name:

Witness Signature:

Print witness name and address:

Date:

By completing and signing this Application Form, I confirm that my identity may be verified by electronic means such as the use of data held by specialised data agencies.

Share prices, their values and income may go up and down and investors may lose some or all of their original investment. Past performance and return illustrations should not be relied on as an indicator of future performance.

## DIRECT INVESTOR APPLICATION FORM

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### IMPORTANT NOTE

This Application Form incorporates by reference this Information Memorandum issued on 11 February 2019 by AquAffirm Limited, a public limited company registered in England and Wales with company number 9188375 whose registered office is at 69 Onslow Road, Richmond, UK TW 10 6QA ("AquAffirm") and approved SPNV Limited, a private limited company registered in England and Wales with company number 07455644 whose registered office is at 29 Lincoln's Inn Fields, London WC2 3EG ("SPNV") in connection with the AquAffirm Offer for Subscription of Ordinary Shares in the capital of AquAffirm ("the Shares") and all other documents published by AquAffirm which are expressed to be supplemental thereto (the "Information Memorandum"). Unless otherwise stated or as the context shall otherwise require, defined terms and expressions used in this Application Form have the meanings ascribed to them in this Information Memorandum.

### BEFORE YOU INVEST

Before completing this Application Form, you should carefully review and understand the Information Memorandum. Remember that an investment in the Shares may NOT be suitable for you, the information in the Information Memorandum does NOT constitute tax, legal or investment advice and you should seek your own independent advice.

### MINIMUM INVESTMENT

The minimum investment is £1,000 and thereafter in multiples of £1,000

### INSTRUCTIONS FOR COMPLETING THIS APPLICATION FORM

Before completing this Application Form, please carefully review the Information Memorandum

Then follow the steps below.

Please complete Boxes 1 to 4 below in type or use block capitals (save for your signature) in black/blue permanent ink and sign any changes you make. Do not erase any text or use whiteout. Please arrange for a witness to counter sign the Application Form.

You then need to send to The City Partnership (UK) Limited, 110 George Street, Edinburgh EH2 4LH the following:

- this Application Form duly completed
- Your cheque or banker's draft made payable to 'City Partnership - AquAffirm' for the amount you wish to invest

Or, alternatively, this amount can be sent by electronic transfer using the details below:

Bank: Bank of Scotland  
Account Name: City Partnership - AquAffirm  
Account No: 1874 0063  
Sort Code: 80 22 60

If you need any assistance completing the Direct Investor Certificate or the Application Form or have any questions about the application process you should contact City Partnership (UK) Limited on 0131 243 7210.

AquAffirm may decide, in its absolute discretion, to accept or reject the Application Form or scale down the number of Ordinary shares applied for and will notify you of its decision. If SPNV decides on the basis of the information you provide in Box 2 that an investment in the Shares is not suitable for you then we would thank you for your interest, but we would then be obliged by FCA Rules to reject your Application to Invest.

If you do not receive an acknowledgement of your application within 10 days of sending it to the address above, please contact City Partnership (UK) Limited on 0131 243 7210.

**BOX 1 PERSONAL DETAILS**

Title: Mr. / Ms. / Mrs. / Miss / Dr / Other	Forename(s):
Surname(s):	
Nationality:	National Insurance No.
Permanent Address:	
Postcode:	Email:

If length of occupation is not more than 3 years then please provide your previous residential address:

Telephone (daytime):	Telephone (mobile):
Date of birth:	Town and country of birth:
Country of Residence (Inc. UK)	Tax reference number:
National Insurance Number	

Explanatory note: The UK government is required, in certain circumstances, to share tax information with the tax authorities in other countries. As a result, financial institutions are legally required to collect certain information about the tax residency of each investor that it deals with. These records will only be disclosed to the relevant tax authorities if, and when, this is required under applicable law.

Your tax residence generally is the country in which you live for more than half of the year. However, there are certain circumstances that would cause a person to become tax resident in a number of countries. The country/countries in which you pay income tax are likely to be your country/countries of tax residence.

If you are a US citizen, or hold a US passport or green card, you will also be considered tax resident in the US, even if you live outside the US.

If you have any concerns regarding your tax residency, please seek advice from a suitably qualified person.

**BOX 2 DIRECT INVESTOR CERTIFICATE**

I HEREBY CERTIFY TO AquAffirm and to SPNV THAT THE ANSWERS GIVEN BELOW ARE TRUE, COMPLETE AND ACCURATE

*Investor Assessment*

In order for you, the investor named in box 1 above ("the Investor"), to invest in the Shares, SPNV must obtain sufficient information from you to determine whether your investment in the Shares is suitable for you. This Direct Investor Certificate requests information to help SPNV undertake this assessment. Additional information may be required. AquAffirm and SPNV will keep all information provided by you confidential. Where, following the assessment, SPNV takes the view that an investment in the Shares will not be suitable for you, your application will be rejected and any funds transferred, or any cheques sent, to The City Partnership (UK) Limited in respect of your application will be returned.

*Personal Investment Objectives*

Please confirm your personal financial objectives in relation to an investment in the Shares. Please tick, if applicable: Capital Growth

Income

Balanced Income/Growth

*Risk Appetite*

Please confirm your risk appetite. Please tick, if applicable:

Low

Medium

High

*Investment Horizon*

Please confirm your investment time horizon. Please tick, if applicable: 6 to 12 months

12 to 24 months

Longer than 24 months

*Investor Objectives*

Please review the investment objectives of the Shares and the Risk Factors set out in this Information Memorandum (including the time for which an Investment may need to be held) and tick the box below to confirm that you are aware of and understand these objectives and risks; that they are consistent with your own personal financial objectives and preferences regarding risk taking; that you are able financially to bear the related investment risks consistent with these objectives; that you accept that the investments may expose you to a significant risk of losing all of the money or other property invested and that you are aware that it is open to you to seek advice from an authorised person who specialises in advising on non-readily realisable securities.

*Your Profession*

Please state your current profession, or, if you are retired, your previous profession:

*Your First Language*

Please state your first language below if it is not English:

*Investor Experience*

Your experience and understanding of various types of investments is a factor in determining the suitability of the Shares for you. Please put a number in each box in the paragraph 'Type of shares or Ordinary Shares' below to indicate the number of years of personal experience you have had with particular types of shares and Ordinary Shares.

*Type of shares or Ordinary Shares*

Large companies quoted on the main market of the London Stock Exchange

Years of Experience

Smaller companies quoted on the main market of the London Stock Exchange

Years of Experience

AIM-listed or unquoted companies

Years of Experience

Approximate number of previous share and Ordinary Shareholdings

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In what capacity have you had this experience? (please tick) Shareholder/bondholder

Director

Adviser/consultant/auditor

Other, please specify

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*Investor Experience (continued)*

On average, how much do you invest per year in shares or Ordinary Shares of smaller, unquoted or AIM listed companies (please tick)

Less than £10,000

£10,000-£25,000

£25,000-£100,000

More than £100,000

Please list any company directorships you hold/have held in the last five years Current:

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Last five years:

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Have you been in a network or syndicate of business angels for at least six months prior to today's date? YES / NO If applicable provide details:

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Please tick one of the following boxes to indicate your approximate annual net disposable income (after deduction of all regular financial commitments):

More than £100,000

£50,000-£100,000

£25,000-£50,000

£10,000-£25,000

£5,000-£10,000

Less than £5,000

Please tick one of the following boxes to indicate the value of your assets (excluding your principal private residence), net of any loans or other liabilities:

More than £1m	<input type="checkbox"/>
£500,000-£1m	<input type="checkbox"/>
£250,000-£500,000	<input type="checkbox"/>
£100,000 - £250,000	<input type="checkbox"/>
£50,000-£100,000	<input type="checkbox"/>
Less than £50,000	<input type="checkbox"/>

Regular source of income (e.g. employment, other investment income):

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Main sources of income (e.g. earnings/investment income/pension etc.):

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Liquidity - Are you aware of any significant capital commitments within the next 4 years which cannot be funded from your disposable income or liquid savings? YES / NO

If yes, please indicate how this capital sum will be funded:

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### Restricted Investor

Please tick the box below to confirm, if applicable, the Restricted Investor Statement below.

Restricted Investor Statement

I make this statement so that I can receive promotional communications relating to non-readily realisable securities as a restricted investor because;

in the past 12 months, I have not invested more than 10% of my net assets in non-readily realisable securities; and

I undertake that in the next 12 months I will not invest more than 10% of my net assets in non-readily realisable securities.

Net assets for these purposes do not include: the property which is my primary residence or any money raised through a loan on that property; any rights under a qualifying contract of insurance; any benefits (in the form of pensions or otherwise) which are payable on the termination of my service or on your death or retirement and to which I are (or my dependents are) or may be entitled; or any withdrawals from my pension savings (except where the withdrawals are used directly for income in retirement).

I accept that the investments to which the promotions relate may expose me to a significant risk of losing all of the money or other property invested. I am aware that it is open to me to seek advice from an authorised person who specializes in advising on non-readily realizable securities.

I confirm

## Net Worth Investor

Please tick the box below to confirm, if applicable the High Net Worth Investor Statement below.

### High Net Worth Investor Statement

I make this statement so that I can receive promotional communications which are exempt from the restriction on the promotion of non-mainstream pooled investments and non-readily realisable securities. The exemption relates to certified high net worth investors and I declare that I qualify as such because at least one of the following applies to me:

- (a) I had, throughout the financial year immediately preceding the date below, an annual income to the value of £100,000 or more. Annual income for these purposes does not include money withdrawn from my pension savings (except where withdrawals are used directly for income in retirement).
- (b) I held throughout the financial year immediately preceding the date below, net assets to the value of £250,000 or more. Net assets for these purposes do not include:
  - (1) the property which is my primary residence or any money raised through a loan secured on that property; or
  - (2) any rights of mine under a qualifying contract of insurance; or
  - (3) any benefits (in the form of pensions or otherwise) which are payable on the termination of my service or on my death or retirement and to which I am (or my dependents), or may be entitled; or
  - (4) any withdrawals from my pension savings (except where the withdrawals are used directly for income in retirement).

I accept that the investments to which the promotions relate may expose me to a significant risk of losing all of the money or other property invested. I am aware that it is open to me to seek advice from an authorised person who specializes in advising on non-readily realizable securities.

I confirm

## Money Laundering Regulations 2007

AquAffirm is required under the Money Laundering Regulations 2007 to verify the identity of all Investors in the Shares and it therefore requires copies of a) an identity document and b) a proof of address document from you:

- Proof of identity - please enclose a dated and certified\* copy of one of the following documents and put a tick in the relevant box: Current passport or national identity card
- Full driving licence (both parts if a new-style licence)
- Proof of address - please enclose a dated and certified\* copy of one of the following documents and put a tick in the relevant box: Recent bank statement (less than 3 months old)
- Utility bill (less than 3 months old)
- Credit reference agency report
- Full driving licence (both parts if a new-style licence)

\*The identity documents can be certified by a solicitor, chartered accountant or, director, officer or manager of a regulated financial services business. Please provide the certifier's name, job title, address and phone number, as well as confirmation of the relevant person's qualification (i.e. SRA, ACCA or FCA number).

Sample certification wording:

I have seen the original document and I certify that this is a complete and accurate copy of the original.

**BOX 3 APPLICATION TO INVEST IN THE ORDINARY SHARES OF AQUAFFIRM LIMITED**

I hereby apply to invest the following amount in Ordinary Shares at the Offer Price of fifty pence (£0.50) per share

Amount £	Amount pounds (words)

Insert amount, which must be in pounds sterling and not less than £1,000 and thereafter in multiples of £1,000

Your cheque or banker’s draft must be made payable to ‘City Partnership - AquAffirm for the amount you wish to invest

Or, alternatively, this amount can be sent by electronic transfer using the details below:

- Bank: Bank of Scotland
- Account Name: City Partnership -AquAffirm
- Account No.: 1874 0063
- Sort Code: 80 22 60

If you need any assistance completing the Application Form or have any questions about the application process you should contact your Authorised Financial Intermediary in the first instance. Additionally, you can contact City Partnership (UK) Limited on 0131 243 7210.

## BOX 4 DECLARATION

1. I confirm that I am 18 years of age or older, and personally possess sufficient knowledge, experience and expertise in financial and business matters (including experience with investments of a similar nature to an investment in the Shares) to be capable of evaluating the merits and risks of an investment in the Shares. I acknowledge that neither AquAffirm nor Amberside is providing advice on this investment and confirm that I have taken such independent advice (including from an independent financial adviser) that I deem necessary or desirable.
2. I confirm that I have read and understood the Information Memorandum (and in particular the section headed Risk Factors). I confirm that, in making my application, I am relying solely on the information contained in the Information Memorandum and my own enquiries, and not on any other information or representation in relation to the Shares.
3. I agree and undertake, if my application is accepted, to observe, perform and be bound by the provisions of the Information Memorandum (and in particular the section headed Terms and Conditions of the Offer of the Shares) and the Articles of Association from time to time of AquAffirm.
4. I acknowledge that this Application Form is not transferable or assignable.
5. I confirm my agreement that this Application Form be governed by and construed in accordance with the laws of England and that the courts of England shall have exclusive jurisdiction to hear and determine any suit, action or proceedings and to settle any disputes which may arise out of or in connection with this Application Form and, for such purposes, I irrevocably submit to the jurisdiction of such courts. In addition, I irrevocably waive any objection which I might now or hereafter have to the courts of England being nominated as the forum to hear and determine any such suit, action or proceedings and to settle any such disputes, and agree not to claim that any such court is not a convenient or appropriate forum.
6. I agree that the foregoing representations, warranties, agreements and acknowledgments shall survive the date of issue of the Shares and this Application Form shall be binding upon and inure to the benefit of all parties and their successors and permitted assignees.
7. I agree that any term or provision of this Application Form which is invalid or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without rendering invalid or unenforceable the remaining terms or provisions of this Application Form or affecting the validity or enforceability of any of the terms or provisions of this Application Form in any other jurisdiction.
8. I confirm, in relation to my investment in the Shares, that I am applying on my own behalf;

This Application Form is executed and delivered as a deed on the date mentioned below:

Investor Signature:

Print name:

Witness Signature:

Print witness name and address:

Date:

By completing and signing this Application Form, I confirm that my identity may be verified by electronic means such as the use of data held by specialised data agencies.

Share prices, their values and income may go up and down and investors may lose some or all of their original investment. Past performance and return illustrations should not be relied on as an indicator of future performance.

