llika plc Annual Report an

nd Accounts 2016



accelerated materials innovation

# Pioneering materials innovation and solid-state battery technology

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Annual Report and Accounts 2016

# **Ilika plc** pioneers material innovation and solid-state battery technology

### THE COMPANY

Ilika plc (LON: IKA) is a pioneer in materials innovation, including in automotive, aeronautical and electronic components sectors. Global brands such as Rolls-Royce and Toyota have long-term collaborations with Ilika's development teams. By applying that heritage of patented materials invention, Ilika has developed groundbreaking solid-state battery technology to meet the demands of the Internet of Things ('IoT').

# MATERIALS

llika's high throughput technology enables functional materials to be made, characterised and tested up to 100 times faster than traditional techniques. Its robust datasets fully define the performance of families of materials. This enhances intellectual property value, optimises product performance and reduces time to market, thereby minimising costs and maximising the return on your R&D investment.

# STEREAX™ BATTERY TECHNOLOGY

Miniaturised batteries are a critical enabler to current and emergent technologies including wearables, medical devices and the IoT. Ilika has been working with solid-state battery technology since 2008 and offers its Stereax<sup>™</sup> battery technology to companies who need energy efficient batteries. These are energy dense batteries in the smallest possible footprint, with distinct benefits over lithium-ion batteries.



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# HIGHLIGHTS 2016

### **Financial highlights**

- Revenues £0.6 million (2015: £1.1 million)
- Loss for the year £3.5 million (2015: £2.7 million)
- Loss per share 5.2p (2015: 4.1p)
  Cash, cash equivalents and bank deposits of £3.0 million (2015: £6.0 million)

### **Operational highlights**

- Launch of Stereax<sup>™</sup> M250 solid-state battery
- Definition of roadmap covering future development pathways for Stereax<sup>™</sup>
- · Continuous improvement in yield and productivity of battery pilot line
- Grant of patents protecting Stereax<sup>™</sup> technology
- Defence of patent position for fuel cell catalysts
- Award of grant for smart materials for electronic data storage
- Continuation of success in securing grants for aerospace alloys
- Appointment of Mike Inglis, former Chief Commercial Officer of ARM Holdings, as Non-Executive Chairman

Since my appointment as Non-Executive Chairman at the Annual General Meeting last September, I have been very encouraged to see the technical progress and increased commercial focus at Ilika. The definition of a clear solid-state battery roadmap and the launch of the Stereax<sup>™</sup> M250 have been important milestones on the road to commercial success. Underpinning this product development has been a continued deployment of Ilika's high throughput platform on a focused portfolio of materials development opportunities. I am looking forward to further progress in the year to come.

> Mike Inglis, Chairman Commenting on the results

# BATTERY TECHNOLOGY

### AT A GLANCE

We have developed a type of lithium-ion battery, which, instead of using the usual liquid or polymer electrolyte, uses a ceramic ion conductor. This is particularly important because battery technology is a key challenge in the electronics space, with the IoT being a key driver of growth in the market and battery technology development.

IoT devices offer a different set of battery challenges compared to other electronic devices. They have similar pressures, such as cost and availability, but they also have some specific requirements:

- Small size in both footprint and thickness
- Ability to be trickle charged
- Charged only when an energy harvester can get energy
- Longer life span to match sensors and microcontroller units ('MCUs')
- Support wider temperature ranges

# Performance Concept Capacity Beagle Miniaturisation Stereax™ M250 Concept April 2016 Future

### SOLID-STATE BATTERY ROADMAP

### BUSINESS MODEL FOR STEREAX™ COMMERCIALISATION



### **APPLICATIONS**

### STEREAX<sup>™</sup> MINIATURISATION BATTERY APPLICATIONS

### **Medical wearables and devices**

- Millimetre scale batteries for miniature devices
- Bio-compatible and moisture resistant materials
- Non-flammable



### STEREAX<sup>™</sup> CAPACITY BATTERY APPLICATIONS

### **Smart buildings and infrastructure**

- 5,000 cycles enabling 'leave for life'
- Thin profile
- Capacity to operate sensors perpetually with daily Photovoltaic ('PV') recharge



### STEREAX<sup>™</sup> PERFORMANCE BATTERY APPLICATIONS

### Transport

- Increasing use of sensors in cars as trend towards autonomous vehicles
- Batteries reduce cabling which is now third heaviest component averaging 100kg
- Elevated temperatures around engine and brakes require robust batteries



# STEREAX<sup>™</sup>M250

Ilika demonstrates the ability of its Stereax™ M250 solid-state battery to power a real device within the IoT. This device is a perpetual beacon for smart homes, in other words, an autonomous sensing device of minimal size which, fixed on a wall, measures temperature data at regular intervals and transmits the data using Bluetooth low energy to an app.

General One of the key challenges for IoT devices is enabling long-life, energy-efficient power sources. The combination of energy harvesting and battery technology has been urgently needed to enable small, energyefficient solutions that can easily be installed across a wide range of locations with minimum maintenance.

> Franco Gonzalez, industry analyst **IDTechEx**

> > No free

lithium

### STEREAX™ M250 BENEFITS IOT WHY USE SOLID-STATE BATTERIES OVER OTHER SOLID-STATE BATTERIES up to leakage current improvement in energy density ensors are currently per footprint connected to the Internet 80 60 Increased 40 temperature range to **Challenges for IoT** longer lifespan 20 energy source (Stereax™ lasts up 0 to 10 years) Cost (30°c higher than existing No cabling Availability • Trickle charging • Maintenance free

of the volume for

the same power

ILIKA TRANSFORMS BATTERY TECHNOLOGY FOR IOT

Ecological implications

footprint)

• Limited energy resources

Small size (thickness and

### **General description**

The Stereax<sup>™</sup> M250 is the first of a family of solid-state, rechargeable, thin film batteries developed by Ilika. It contains no liquid or polymer components and is the only solidstate battery available without free lithium, either in the charged or discharged state, making it moisture resistant and appropriate for medical applications. Its low self-discharge allows it to be trickle charged by an energy harvesting source such as vibration or a PV panel. Its high peak

### Features

- Thin form factor
- All solid-state construction
- Fast charge
- High current pulses
- High energy density per footprint
- Thousands of cycles
- Low self-discharge
- High operating temperatures
- No free lithium: moisture resistant
- Eco-friendly

current enables the transmission of data using protocols such as Bluetooth low energy. The combination of energy harvester, transmitter, sensor and the M250 is ideal for integration into small, 'fit and forget' autonomous sensor devices with multiple applications including smart homes, vehicles and medical devices. The M250 is provided on a rigid substrate (650 µm) whilst thinner substrates may also be used.

### Applications

- Autonomous sensor devices
- Smart homes (HVAC, security, light)
- Automotive (infotainment, sensors)
- Logistics (asset tracking)
- Medical devices (biometric monitoring)
- Wearables

### Stereax™ M250



- Anode current collector
- 🔿 Anode
- Electrolyte
- Cathode
- Cathode current collector
- Substrate

### PERPETUAL BEACON FOR SMART HOMES POWERED BY STEREAX™M250

### **General description**

The perpetual beacon harvests solar energy and is self-sufficient for power. It measures temperature data at regular intervals and transmits the data using Bluetooth low energy to an app. The app displays temperature information as well as the battery's state of charge and indicates if heating needs to be started or stopped. This device replicates sensors for smart homes. where the data could be sent to a hub for automated control. The beacon's self-sufficiency, together with its thin form factor. means that it can be deployed unobtrusively and forgotten in a smart building or smart home.

http://www.ilika.com/battery-technology/ perpetual-beacon-dehttps://youtu.be/ 6-gKIR13GUwmonstrator



The perpetual beacon can be placed and forgotten on the wall of a smart home.

# SOLID-STATE BATTERIES

### Q. What benefits do solid-state batteries have over existing lithium-ion batteries?

A. The major benefits of solid-state batteries derive from the solid electrolyte. Conventional lithiumion batteries use an organic solvent which is flammable and has a relatively short useful life.

Performance benefits include:

- Faster charging (6x faster)
- Increased energy density (2x energy for the same volume)
- Increased cycle life (up to 10 years, compared to 2)
- Low leakage currents (nanoamps)
- Non flammability

# Q. Is the battery voltage similar to current lithium-ion batteries?

A. The output voltage for the Stereax™ M250 is 3.5V.

# Q. How thin can a solid-state battery be?

A. The Stereax<sup>™</sup> M250 battery is less than 750 µm thick. We use a standard 650 µm silicon substrate but tests are ongoing to use other substrates such as 200 µm glass so overall battery thickness could be less than 350 µm.

# Q. Does Ilika have patents protecting this new technology?

A. Ilika currently has 5 patents which cover 3 main areas: the composition of the materials in the battery; the process to make the battery; and the cell architecture of the battery.

# Q. What materials are used in the batteries?

A. The Stereax<sup>™</sup> M250 batteries use similar cathodes to current lithium batteries but we use different materials for the electrolyte and anode. The anode in the Stereax<sup>™</sup> M250 is silicon.

# Q. What applications could the batteries be used in?

A. The size and performance of the Stereax™ M250 solid-state batterv make it ideal for applications in autonomous sensor devices in the IoT. Its low self-discharge allows it to be trickle charged by an energy harvesting source such as vibration or a PV panel. Its high peak current enables the transmission of data using protocols such as Bluetooth low energy. The combination of energy harvester, transmitter, sensor and the M250 is ideal for integration into small, 'fit and forget' autonomous sensor devices with multiple applications including, smart homes (HVAC, light, security), automotive (infotainment, sensors), logistics (asset tracking) and medical devices (biometric monitoring).

# Q. Can the battery power real devices?

A. Ilika has demonstrated the ability of its Stereax<sup>™</sup> M250 solid-state battery to power a perpetual beacon which replicates sensors deployed in smart homes for managing heating and cooling systems.

# Q. What is the operating temperature range of the batteries?

A. The Stereax<sup>™</sup> M250 can work between -20°C and 100°C

### Q. Are solid-state batteries limited to the same cylindrical (prismatic) format as conventional batteries such as AA or AAA format?

A. Solid-state batteries are flat and our Stereax™ M250 batteries have a square footprint. The footprint can be adapted to suit the end device requirements.

# Q. What is the scalability of the technology?

A. Ilika's batteries can be scaled to larger footprints using production processes used to produce bulk glass and photo-voltaic sheets. This creates the potential for large area batteries.

# **Q.** How does Ilika's solid-state battery differ from other solid-state batteries?

A. The main difference is the combination of materials. Other solid-state batteries use 'free lithium' which is highly reactive with moisture and air, and hence require stringent encapsulation. In the Stereax™ M250, the lithium is not free during storage or cycling; it is 'alloyed' in the cathode or anode and this reduces the encapsulation requirements. The combination of material and synthesis method enable a 40 percent energy improvement per footprint and an increased operating temperature range.

# DEVELOPMENT PROJECTS

### SUPERALLOYS WITH ROLLS-ROYCE



Gas turbine engine development for the aerospace industry continues to strive for improved fuel efficiency, reduced emissions and a reduction in noise at take off. This development effort demands materials, which can tolerate increasingly high operating temperatures while retaining their mechanical strength. Nickel-based superalloys are widely used in gas turbines and much effort has previously gone into understanding the relationship between composition, microstructure and properties. However, the scope for further developing nickel-based

alloys is diminishing and therefore the rate of improvement of aero engine technology is decreasing. There is, therefore, an opportunity to investigate alternative lightweight alloy systems, which may also be able to operate under high temperatures, handle greater stresses and remain in service for longer. Ilika is working together with Dr. Howard Stone's group at Cambridge University, Diamond Light Source and Rolls-Royce in a programme supported by Innovate UK.

### SELF-HEALING ALLOYS WITH BAE SYSTEMS AND GKN



llika is working along with BAE Systems, GKN, Reliance Precision engineering and the University of Sheffield in a project supported by the Aerospace Technology Institute and Innovate UK to develop a new generation of self-healing alloys suitable for additive manufacturing ('AM') processes. The aim is to develop a metallic manufacturing process that takes advantage of the flexibility of AM and the precision of subtractive manufacturing. This will pave the way for the manufacture of novel components with critical feature tolerances, meeting the challenges faced in the design of mechanisms for the aerospace industry with lower weight, structural integrity and functional performance.

### SMART MATERIALS WITH SEAGATE



This 'Nanomaterials for Smart Data Storage' project is to provide a demonstration of '2D materials' for Seagate's Heat-Assisted Magnetic Recording ('HAMR') Hard Disk Drive ('HDD') applications. 2D materials, sometimes referred to as single layer materials, are crystalline materials consisting of a single layer of atoms. In this project, materials with superior nanophotonic (the interaction of nanometer-scale objects with light) properties are being developed to achieve improved hard drive performance and reliability. These materials must operate at temperatures of up to 300°C for thousands of hours,

requiring extremely robust nanomaterials that have specific photonic properties allowing light energy to be conducted. HAMR is the next generation of HDD technology under development at Seagate. When buying a laptop, consumers have to make the decision between getting either a Solid-State Drive ('SSD') or HDD as the storage component. Even though the price of SSDs have been falling, HDDs remain significantly cheaper per unit of memory. Ilika is working together with Seagate and the University of Southampton in a programme supported by Innovate UK.

# STRATEGIC REPORT

The Directors present their Strategic Report for the year ended 30 April 2016.

### OUR STRATEGY

### Innovation

Develop collaboratively with large multinational companies through jointly funded programmes

### **Materials**

Functional materials made, characterised and tested much faster than traditional techniques

>

### Solid-state batteries

Energy dense batteries in the smallest possible footprint address the key challenge for IoT

### **Principal activities**

Ilika plc is the holding company for Ilika Technologies Limited, a pioneer in materials innovation and solidstate battery technology. Ilika has a unique, patent protected, high throughput technology platform which accelerates the discovery of new and patentable materials for identified end uses in the automotive, aeronautical and electronics sectors. Ilika has developed ground-breaking solidstate battery technology to meet the demands of the IoT.

### **Business strategy**

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The Company's strategy is to use its processes to discover and commercialise novel materials for integration into products with high value end-markets. In order to ensure a high probability of commercial success, the Company prefers to develop these materials in collaboration with large multinational companies, which have the expertise to bring new products to market to address unmet needs in their sectors. The Company aims to create intellectual property ('IP') such that it will benefit from commercialisation rewards associated with the ultimate generally adopted technology. The Company's objective is to have its materials integrated into marketleading products sold by leading commercialisation partners around the world. The Company generally

expects these end-products to fit into or create end-markets worth in excess of \$1 billion per year, in which the Directors believe a number of the Company's commercialisation partners are positioned to have a leading share.

The Company is pursuing its objectives through the following strategies:

- Developing leading-edge high throughput development processes
- Partnering with companies committed to developing and globally commercialising jointly developed products
- Using high throughput processes to invent patentable functional materials
- Development of valuable products through the application of functional materials

### **Operating review**

### Solid-state batteries

Ilika has been working with solidstate battery technology since 2008 and has developed a type of lithium-ion battery, which, instead of using liquid or polymer electrolyte, uses a ceramic ion conductor, making it particularly suitable for micro-battery applications. Battery technology is a key challenge in the electronics sector, with the IoT being a key driver of growth and battery technology development.

IoT devices offer a different set of battery challenges compared to other electronic devices. They have similar pressures, such as cost and availability, but they also have some specific requirements:

- Small size in both footprint and thickness
- Ability to be trickle charged
- Charged only when an energy
   harvester can get energy
- Longer life span to match those of sensors and MCUs
- Support wider temperature ranges

Ilika's solid-state batteries have several benefits over currently available lithium-ion batteries:

- 6x faster to charge
- Energy dense in a small footprint
- 10x lower leakage currents
- Non-flammable
- Can be integrated into integrated circuit ('IC') components to reduce end device size

### **Battery product launch**

In April 2016, Ilika launched its Stereax<sup>™</sup> M250 solid-state battery IP at the IDTechEx exhibition in Berlin. The battery is a miniaturised solidstate battery for IoT devices and is designed to address the key challenge of always-on, self-charging and efficient energy. Ilika Stereax™ batteries use patented materials and processes enabling superior energy density per battery footprint, up to 40 percent improvement on current solid-state solutions, and increased temperature range support to over 100°C, 30°C higher than existing solid-state products. Ilika's batteries do not contain any free lithium which makes them more moisture resistant.

Ilika demonstrated the ability of its Stereax™ M250 battery to power a real IoT device. This device is a perpetual beacon for smart homes. It is an autonomous sensing device of minimal size which, fixed on a wall, measures temperature data at regular intervals and transmits the data using Bluetooth low energy to an app. The app displays temperature information as well as the battery's state of charge. This device, which is so small it can easily be forgotten, replicates sensors for smart homes, where the data could also be sent to a hub for automated heating or air-conditioning control.

### **Battery roadmap**

The Ilika Stereax<sup>™</sup> roadmap focuses on 3 main battery requirements: miniaturisation; capacity in a small footprint; and increased performance. The miniaturisation roadmap looks at increasingly smaller footprints at smaller currents (µAh), making them ideal for small sensor driven devices. The capacity roadmap increases the amount of energy for a given active footprint by utilising Ilika's patented stacking feature, which allows multiple cells to be stacked on top of one another. The performance roadmap focuses on higher energy density solutions that have additional requirements such as extended temperature range support.

### **Pilot line operation**

Since announcing the commencement of pilot production in March 2015, Ilika has continued to operate the pilot line to produce batteries for demonstration purposes. The technical team has optimised the operational parameters to maximise the throughput yield and performance of the batteries, allowing Ilika to release batches of batteries and performance data for evaluation by commercial partners. In addition, discussions have progressed with potential partners capable of manufacturing full production lines at industrial scale. These discussions have enabled the calculation of early cost estimates for the production of batteries at realistic production volumes.



Introducing: Stereax<sup>™</sup>

# STRATEGIC REPORT CONTINUED

### **Patent position**

In September 2015, Ilika announced it had received a Notice of Grant in China for its patent application supporting solid-state batteries jointly filed with Toyota Motor Company in July 2011. This Notice of Grant in China followed the successful British grant in April 2014 and the Notice of Grant in Europe in July 2015. This joint filing resulted from collaborative work undertaken with Toyota, which commenced in 2008. This patent family is one of the two earliest filings of a growing portfolio of IP exemplifying Ilika's unique approach to solid-state battery production using evaporation sources. The more recent applications in the portfolio contain both jointly-owned and solely owned IP.

### **Materials portfolio activities**

Although solid-state battery development accounted for about 75 percent of activity in the year, the Company was also active in the development of aerospace alloys and materials for electronics applications.

### **Aerospace alloys**

In September 2015, Ilika announced that it had been awarded the lead role in a £2.15 million, 3-year Innovate UK grant funded project with BAE Systems, GKN, Reliance Precision Engineering and the University of Sheffield. The project aims to develop a new generation of self-healing alloys suitable for AM processes and to develop a metallic manufacturing process that takes advantage of the flexibility of AM and the precision of subtractive manufacturing. This will enable the manufacture of novel components with critical feature tolerances, meeting the challenges faced in the design of mechanisms for the aerospace industry with lower weight, greater structural integrity and enhanced functional performance.

In addition, Ilika continued in its role leading a £1.33 million 3-year Innovate UK funded project with Rolls-Royce, Diamond Light Source and the University of Cambridge to develop new superalloy compositions for gas turbine engines with better thermal efficiency than current alloys. The alloys are designed to increase gas turbine performance, reducing  $CO_2$ emissions and noise levels at take-off.

### **Electronic materials**

In February 2016, Ilika announced that it is taking part in a 2-year project with Seagate and the University of Southampton ('UoS'), which has been awarded a £374,000 grant by Innovate UK. £194,000 of the grant will be used to fund project activities at Ilika.

Seagate are the market leaders in magnetic recording used in HDD technology, most commonly used in laptops. UoS has developed world class expertise in the area of nanophotonics, the interaction of nanometer-scale objects with light.

The objective of this project is to provide a demonstration of '2D materials' for HDD applications. 2D materials, sometimes referred to as single layer materials, are crystalline materials consisting of a single layer of atoms. In this project, materials with superior nanophotonic properties are being developed to achieve improved hard drive performance and reliability. These materials must operate at temperatures of up to 300°C for thousands of hours, requiring extremely robust nanomaterials that have specific photonic properties allowing light energy to be conducted.

### **Patent position**

In January 2014, 3 international patent applications from the portfolio were filed under the Patent Co-operation Treaty based upon earlier British priority applications. These were published in July 2015 and are progressing through the international patent examination process.

In August 2015, Ilika announced that the European Patent Office ('EPO') had upheld Ilika's opposition to a fuel cell catalyst patent from Brookhaven Science Associates ('BSA'). Certain claims of a granted European patent from BSA might have impacted upon Ilika's freedom to operate its own granted European patent. BSA manages Brookhaven National Laboratory ('BNL') on behalf of the United States Department of Energy ('US DOE'). BNL is a US national laboratory, primarily funded by the Office of Science of the US DOE. Ilika had filed an Opposition against the BSA patent in February 2013 and oral proceedings took place before the Opposition Division in March 2015 at the EPO in the Netherlands. As a result of these proceedings, the BSA European patent was revoked. The EPO issued a notice in August 2015 that the opposition proceedings were now terminated with revocation of the patent as the time limit had expired for filing an appeal against the decision to revoke the patent.

### Key performance indicators ('KPIs')

The Board considers that the most important KPIs are technical and operational and relate to the sales pipeline and engagement of commercialisation partners resulting from the progress of the technical development programmes outlined above.

The most important financial KPIs are the cash position and the operating loss of the Group, which remain under constant focus and which are considered in the financial review.

# FINANCIAL REVIEW

The Financial Review should be read in conjunction with the consolidated financial statements of the Company and Ilika Technologies Limited (together the 'Group') and the notes thereto on pages 28 to 29. The consolidated financial statements are presented under International Financial Reporting Standards as adopted by the European Union. The financial statements of the Company continue to be prepared in accordance with International Financial Reporting Standards as adopted by the EU and are set out on page 43.

# Statement of comprehensive income Revenue

Revenue, all from continuing activities, for the year ended 30 April 2016 was £0.6 million (2015: £1.1 million). This includes £450,000 of grant income recognised from Innovate UK (2015: £384,000), the majority of which relates to work together with the University of Cambridge, Diamond Light Source and Rolls-Royce to develop new superalloy compositions for gas turbine engines.

The Company has committed an increased proportion of its operational resource to the internally funded battery development programme in the year and as a consequence, has generated lower revenue from customers than in the prior year.

# Administrative expenses and losses for the period

Total administrative costs for the year were slightly increased at £3.8 million in 2016 relative to £3.6 million in 2015. This increase is attributable to the increased spend on R&D in the year, particularly associated with the solid-state battery development programme.

Combined cost of sales and administrative expenses were £4.1 million in the year which is consistent with the £4.1 million for 2015.

New options were granted in the year giving rise to a share-based payment charge of £0.4 million relative to £nil in 2015.

Loss on continuing activities before tax increased to £3.9 million in 2016 from £3.0 million in 2015. £0.5 million of this increase is associated with the reduction in revenues and £0.4 million is associated with the accounting adjustment share-based payment charge.

# Statement of financial position and cash flows

At 30 April 2016, net assets amounted to £3.4 million (2015: £6.5 million), including net funds of £3.0 million (2015: £6.0 million).

The principal elements of the £3.1 million decrease over the year ended 30 April 2016 in net funds were:

- Cash used in operations of £3.3 million (2015: £2.5 million)
- Purchase of plant, property and equipment of £0.1 million (2015: £0.3 million)
- R&D tax credits received of £0.3 million (2015: £0.3 million)

### Treasury policy and financial risk management Credit risk

The Group follows a risk-averse policy of treasury management. Sterling deposits are held with one or more approved UK based financial institutions. The Group's primary treasury objective is to minimise exposure to potential capital losses whilst at the same time securing prevailing market rates.

### Interest rate risk

The Group's cash held in current bank accounts is subject to the risk of fluctuating base rates. An element of the Group's financial assets is placed on fixed-term interest deposits.

### **Currency risk**

During the year under review, the Group was exposed to Euro, Japanese Yen and US Dollar currency movement as it engages business development staff in each of those territories. Additionally, a small element of expense and capital spend is denominated in these currencies. The Group has arranged for some of its programmes, with customers based in these territories, to be denominated in these currencies to hedge against this exposure.



# PRINCIPAL RISKS AND UNCERTAINTIES

COMMERCIAL RISK	The Company is subject to competition from competitors who may develop more advanced and less expensive alternative technology platforms, both for existing materials and for those materials currently under development. The Company is largely dependent on its partners to commercialise the end-products containing the Company's materials. The Company seeks to reduce this risk by continually assessing competitive technologies and competitors. The Company seeks to commercialise materials through multiple channels to reduce overreliance on individual partners and, in agreements with partners, it ensures that there are commercialisation milestones which must be met for the partner to retain the rights to commercialise the materials.
FINANCIAL RISK	The Company is reliant on a small number of significant customers and partners. Termination of these agreements could have a material adverse effect on the Group's results or operations or financial condition. The Company expects to incur further operating losses as progress on development programmes continue. There can be no assurance that the Company will ever achieve significant revenues or profitability. The Company seeks to reduce this risk by broadening the number of customers and partners and thereby reduce reliance on individual significant companies.
INTELLECTUAL PROPERTY RISK	The Group faces the risk that IP rights necessary to exploit R&D efforts may not be adequately secured or defended. The Group's IP may also become obsolete before the products and services can be fully commercialised. The Company seeks to reduce this risk by employing in-house staff with extensive global experience of patenting and licensing using commercially available patent searching and landscaping software. External patent agents and attorneys are used to advise on the drafting and filing of patent applications.
DEPENDENCE ON SENIOR MANAGEMENT AND KEY STAFF	Certain members of staff are considered vital to the successful development of the business. Failure to continue to attract and retain such highly skilled individuals could adversely affect operational results. The Group seeks to reduce this risk by offering appropriate incentives to staff through competitive salary packages and participation in long-term share option schemes.

By order of the Board

**Mike Inglis** Chairman 7 July 2016 Graeme Purdy

Chief Executive Officer

# BOARD OF DIRECTORS



**Mike Inglis** Chairman (independent)

Mike Inglis was appointed a Non-Executive Director of Ilika in July 2015 and Chairman in September 2015. He is currently a Non-Executive Director of Advanced Micro Devices Inc and as of 1 September 2015 of BT plc. Mike is also a member of the BT Technology Committee.

Formerly, Mike was a Director and member of the Executive of ARM Holdings for over a decade serving as Chief Commercial Officer until the end of March 2013, having previously been EVP & GM Processor Division and EVP Sales and Marketing. Before ioining ARM, he worked in management consultancy with AT Kearney and held a number of senior operational and marketing positions at Motorola. Mike has previously worked in semi-conductor sales, marketing, engineering and consultancy with Texas Instruments, Fairchild and BIS Macintosh and gained his initial industrial experience with GEC Telecommunications. He is a Chartered Engineer and a Chartered Marketer.



**Graeme Purdy** Chief Executive Officer

Graeme was appointed to head-up Ilika from the beginning of May 2004, just before completion of the company's seed round of funding. He led the company through two successful rounds of venture funding before floating the company on AIM in 2010.

Prior to joining Ilika, Graeme was Chief Operating Officer of a high-technology company in the Netherlands and before that worked internationally in a variety of technical and commercial roles for Shell. Graeme holds a Master's degree in Chemical Engineering from Cambridge and an MBA from INSEAD business school in France. Graeme is a Chartered Engineer and a Sainsbury Management Fellow.



**Prof. Brian Hayden** Chief Scientific Officer

Brian is a founder of Ilika and holds the executive role of Chief Scientific Officer. He is also professor of Physical Chemistry at the University of Southampton, a Fellow of the Royal Society of Chemistry, Fellow of the Institute of Physics, and a member of the International Editorial Board of Surface Science.

Brian is a pioneer of surface science with a strong track record in running successful industrial collaborations and has published in excess of 100 papers in the fields of surface science, surface electrochemistry and fundamental aspects of heterogeneous catalysis and electro-catalysis.

He is also the author of over 12 active patents including new catalysts and materials for low temperature fuel cells and solid-state Li-ion batteries.



**Stephen Boydell** Finance Director

Having qualified with Deloittes in 1996, Stephen held a number of acquisition, treasury and group reporting roles at both Hays plc, a diversified commercial, logistics and personnel group, and then AGI Media, a global creative packaging group. He then become Finance Director of Healthy Direct, a successful Guernsey-based group of companies, producing and supplying vitamins and supplements to the UK market. He was instrumental in the restructuring of that group and its subsequent trade sale to a competitor. He joined Ilika in 2009 as Finance Director and Company Secretary.

Stephen studied Economics at Nottingham University and is a Fellow of the Institute of Chartered Accountants.



**Clare Spottiswoode CBE** Non-Executive Director

She is perhaps best known

General of Ofgas between

oversaw the transformation

monopoly, which controlled

1993 and 1998 where she

of the gas industry from a

chain, into a deregulated, competitive industry.

Clare was a commissioner

Commission on Banking

Chaired by John Vickers,

and currently chairs Gas

Strategies Group Limited

and Flowgroup plc. She is

also a non-executive director

of G4S plc and EnQuest plc.

Awarded a CBE for services

to industry in 1999, she holds

degrees from Cambridge

and Yale Universities and

from Brunel.

has an honorary doctorate

the whole gas supply

on the Independent

for her role as Director

software company.



Prof. Sir William Wakeham Non-Executive Director



of the University of Southampton in September 2009. He studied Physics at Exeter University at both undergraduate and doctoral level.

He is a Fellow, Senior Vice-President and International Secretary of the Royal Academy of Engineering, a Fellow of the Institution of Chemical Engineers, the Institution of Engineering and Technology, the Institute of Physics and the Portuguese Academy of Engineering. He is a Visiting Professor at Imperial College London, Exeter and Lisbon, Chair of Exeter Science Park Limited and Trustee of Royal Anniversary Trust.

He was knighted in 2009 for services to Chemical Engineering and Higher Education.



**Prof. Keith Jackson** Non-Executive Director

Keith has had a wide ranging and successful career in companies varying from start-ups to multinationals. He founded and grew an automotive control systems company whose engine control systems are used on millions of vehicles around the world. Following the sale of the company to a major car company he joined Rolls-Royce plc where he worked as Chief Technology Officer in the electrical power and control systems group.

Keith is Chief Technology Officer at Meggitt PLC, a global aerospace and energy components and systems company where he is responsible for the technology strategy and research and technology. He is also actively involved on talent development at Meggitt through its Fellowship and graduate programmes.

Keith is a Fellow of the Society of Automotive Engineers, a Rolls-Royce Engineering Fellow and a visiting Professor at Sheffield University. He is a graduate from University College London.

# DIRECTORS' REPORT

The Directors present their report and the audited financial statements for Ilika plc ('Ilika') and its subsidiary ('the Group') for the year ended 30 April 2016.

Details of Directors' remuneration and share options are given in the Directors' Remuneration Report.

### Directors

The Directors who served on the Board of Ilika during the year and to the date of this report were as follows:

### **Executive**

Mr. S. Boydell (FD and Company Secretary) Prof. B. E. Hayden (CSO) Mr. G. Purdy (CEO)

### **Non-Executive**

Mr. J. B. Boyer (Chairman) (retired 30 September 2015) Mr. M. Inglis (appointed 10 July 2015, appointed Chairman 30 September 2015) Ms. C. Spottiswoode CBE Prof. Sir W Wakeham Prof. K. Jackson

### **Research and development costs**

In accordance with the policy outlined in note 1 of the consolidated financial statements, the Group incurred R&D expenditure of £2,057,966 in the year (2015:  $\pm$ 1,740,173). Commentary on the major activities is given in the Strategic Report.

### **Financial instruments**

The use of financial instruments and financial risk management policies is covered in the Strategic Report and also in note 13 of the consolidated financial statements.

### Dividends

The Directors do not recommend the payment of a dividend.

### **Political donations**

The Group made no political donations during the year (2015: £nil).

### **Directors' interests in Ordinary Shares**

The Directors, who held office at 30 April 2016, had the following interests in the Ordinary Shares of the Company:

	Number of shares		
	1 May 2015	30 April 2016	
G. Purdy C. Spottiswoode S. Boydell M. Inglis W. Wakeham B. Hayden <sup>1</sup>	589,427 45,454 9,090 - - -	589,427 45,454 9,090 65,000 - -	
K. Jackson	-	-	

1 B. Hayden had an interest in Preference Shares of the Company amounting to 426,300 at 1 May 2015 and at 30 April 2016.

Between 30 April 2016 and the date of this report, there has been no change in the interests of Directors in shares as disclosed in this report.

### Substantial shareholdings

As at 28 June 2016, the Company had been notified of the following holdings of more than 3 percent or more of the issued share capital of the Company.

Shareholder	Number of Ordinary Shares	Percent shareholding
Charles Stanley Group plc Henderson Global	9,863,826 9,500,000	15.0 14.4
IP Group plc	6,358,779	9.7
Ruffer LLP	6,105,454	9.3
Baillie Gifford & Co.	4,956,616	7.5
Richard Griffiths	2,574,836	3.9
Southampton Asset		
Management	2,349,900	3.6
Herald Investment		
Management	2,215,000	3.4
Hargreave Hale	2,063,045	3.1

### Post balance sheet events

There are no significant post balance sheet events from 30 April 2016 to the signing of this report.

### Auditors

All the current Directors have taken all the steps that they ought to have taken to make themselves aware of any information needed by the Company's Auditors for the purposes of their audit and to establish that the Auditors are aware of that information. The Directors are not aware of any relevant audit information of which the Auditors are unaware.

A resolution to reappoint BDO LLP will be proposed at the next Annual General Meeting.

By order of the Board

### Steve Boydell

Company Secretary

# DIRECTORS' REMUNERATION REPORT

This report is non-mandatory for AIM-quoted companies and has been produced on a voluntary basis. It includes and complies with the disclosure obligations of the AIM Rules.

### **Remuneration Committee**

The Company's remuneration policy is the responsibility of the Remuneration Committee ('the Committee'), which was established in May 2004. The terms of reference of the Committee are outlined in the Corporate Governance Statement on page 21. The members of the Committee are Mike Inglis (Chairman), Clare Spottiswoode, Prof. Keith Jackson and Prof. Sir William Wakeham.

The Chief Executive Officer and certain executives may be invited to attend meetings of the Committee to assist it with its deliberations, but no executive is present when his or her own remuneration is discussed.

### Remuneration policy (i) Executive remuneration

The Committee has a duty to establish a remuneration policy which will enable it to attract and retain individuals of the highest calibre to run the Group. Its policy is to ensure that the executive remuneration packages of Executive Directors and the fee of the Chairman are appropriate given performance, scale of responsibility, experience, and consideration of the remuneration packages for similar executive positions in companies it considers to be comparable. Packages are structured to motivate executives to achieve the highest level of performance in line with the best interests of shareholders. A significant element of the total remuneration package, in the form of bonus and share options, is performance driven. Executive remuneration currently comprises a base salary, an annual performance-related bonus, a longterm incentive plan, a pension contribution to the Executive Director's individual money purchase scheme (at between 8 percent and 10 percent of base salary) and critical illness cover. Salaries and benefits were last reviewed in January 2016 with increases taking effect from 1 January 2016, taking into account Group and individual performance, external benchmark information and internal relativities. The Company operates a discretionary bonus scheme for Executive Directors for delivery of exceptional performance against a series of financial, commercial and technology objectives. The maximum bonus payable for the year to 30 April 2016 was restricted to 50 percent of CEO base salary, 30 percent of CSO base salary and 20 percent of CFO base salary.

### (ii) Chairman and non-executive Director remuneration

The Chairman, Mike Inglis receives a fixed fee of £65,000 per annum. Clare Spottiswoode, Prof. Sir William Wakeham and Prof. Keith Jackson received a fixed fee of £32,500 per annum. The fixed fee covers preparation for and attendance at meetings of the full Board and Committees thereof. The Chairman and the Executive Directors are responsible for setting the level of non-executive remuneration. The Non-Executive Directors are also reimbursed for all reasonable expenses incurred in attending meetings.

All remuneration policies will be reviewed regularly to maintain adherence with best market practice as appropriate.

# DIRECTORS' REMUNERATION REPORT CONTINUED

### **Directors' remuneration**

The aggregate remuneration received by Directors who served during the years ended 30 April 2016 and 2015 was as follows:

	Basic salary £	Benefits in kind £	Bonus £	Total short- term benefits £	Pension £	Total £
Year to 30 April 2016						
G. Purdy	190,000	671	30,000	220,671	30,000	250,671
S. Boydell	120,260	423	10,181	130,864	17,181	148,045
B. Hayden <sup>1</sup>	64,000	-	16,095	80,095	-	80,095
M. Inglis	54,167	-	-	54,167	-	54,167
J. Boyer	25,500	-	-	25,500	-	25,500
K. Jackson	32,500	-	-	32,500	-	32,500
W. Wakeham	32,500	-	-	32,500	-	32,500
C. Spottiswoode	32,500	-	-	32,500	-	32,500
	551,427	1,094	56,276	608,797	47,181	655,978
Year to 30 April 2015					~~~~~	
G. Purdy	1/6,66/	543	24,000	201,210	29,833	231,043
S. Boydell	115,000	356	12,000	127,356	17,450	144,806
B. Hayden'	60,270	-	12,000	72,270	-	72,270
J. Boyer	61,200	-	-	61,200	-	61,200
K. Jackson	16,035	-	-	16,035	-	16,035
W. Wakeham	31,641	-	-	31,641	-	31,641
C. Spottiswoode	31,641	-	-	31,641	-	31,641
	492,454	899	48,000	541,353	47,283	588,636

1 B. Hayden is employed by the University of Southampton. The amounts disclosed in the table above relate to payments made directly to B. Hayden. The University of Southampton recharged employment costs of £63,171 to the Company in the year in respect of B. Hayden. (2015: £55,873).

Share-based payment charge attributable to Directors in the year was £267,301 (2015: £7,080).

Benefits in kind include critical illness cover.

### Share options

The share options of the Directors are set out below:

	2015 Number	Lapsed	Granted	2016 Number	Exercise price	Expiry date
Unapproved						
G. Purdy	136,200	-	-	136,200	80p	July 2017
G. Purdy	1,050,000	-	-	1,050,000	51p	May 2020
G. Purdy	-	-	872,727	872,727	1p	September 2025
J. Boyer	1,050,000	(1,050,000)	-	-	51p	May 2020
B. Hayden	59,300	-	-	59,300	80p	July 2017
B. Hayden	525,000	-	-	525,000	51p	May 2020
B. Hayden	177,900	-	-	177,900	81.5p	February 2025
B. Hayden	-	-	527,272	527,272	1p	September 2025
S. Boydell	117,600	-	-	117,600	51p	May 2020
S. Boydell	-	-	274,909	274,909	1p	September 2025
W. Wakeham	65,100	-	-	65,100	51p	May 2020
C. Spottiswoode	50,100	-	-	50,100	51p	May 2020
M. Inglis	-	-	120,000	120,000	68.75p	September 2025
K. Jackson	-		40,000	40,000	68.75p	September 2025
Approved						
G Purdy	26 500	_	_	26.500	80n	May 2017
G. Purdy	245.300	_	_	245.300	81.5p	February 2025
S. Boydell	90.000	-	_	90.000	q0q 0.8	December 2019
S. Boydell	154,600	-	-	154,600	81.5p	February 2025

Graeme Purdy exercised no options in the year (2015: 139,500).

### **Mike Inglis**

Chairman of the Remuneration Committee

### STATEMENT OF DIRECTORS' RESPONSIBILITIES IN RESPECT OF THE ANNUAL REPORT AND THE FINANCIAL STATEMENTS

The Directors are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors have elected to prepare the Group and Company financial statements in accordance with International Financial Reporting Standards ('IFRSs') as adopted by the European Union. Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company for that period. The Directors are also required to prepare financial statements in accordance with the rules of the London Stock Exchange for companies trading securities on the Alternative Investment Market ('AIM').

In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether they have been prepared in accordance with IFRSs as adopted by the European Union, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the requirements of the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

### Website publication

The Directors are responsible for ensuring the annual report and the financial statements are made available on a website. Financial statements are published on the Group's website in accordance with legislation in the United Kingdom governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the Group's website is the responsibility of the Directors. The Directors' responsibility also extends to the ongoing integrity of the financial statements contained therein.

### Going concern

The Directors have prepared and reviewed financial forecasts. After due consideration of these forecasts and current cash resources, the Directors consider that the Company and the Group have adequate financial resources to continue in operational existence for the foreseeable future (being a period of at least 12 months from the date of this report), and for this reason the financial statements have been prepared on a going concern basis.

By order of the Board

### **Graeme Purdy**

Chief Executive Officer 7 July 2016

# CORPORATE GOVERNANCE STATEMENT

The Board is accountable to the Company's shareholders for good corporate governance and it is the objective of the Board to attain a high standard of corporate governance. As an AIM listed company full compliance with the provisions of the UK Corporate Governance Code ('the Code') is not a formal obligation. The Company has not sought to comply with the full provisions of the Code, however it has sought to adopt the provisions that are appropriate to its size and organisation, and establish frameworks for the achievement of this objective. This statement sets out the corporate governance procedures that are in place.

### **Board of Directors**

The Board of Directors ('the Board') consists of a Non-Executive Chairman, 3 Executive Directors and 3 Non-Executive Directors.

The responsibilities of the Non-Executive Chairman and the Chief Executive Officer are clearly divided. The Chairman is responsible for overseeing the formulation of the overall strategy of the Company, the running of the Board, ensuring that no individual or group dominates the Board's decision making and ensuring that the Non-Executive Directors are properly briefed on matters. Prior to each Board meeting, Directors are sent an agenda and Board papers for each agenda item to be discussed. Additional information is provided when requested by the Board or individual Directors.

The Chief Executive Officer has the responsibility for implementing the strategy of the Board and managing the day-to-day business activities of the Group through his chairmanship of the Executive Committee.

The Non-Executive Directors bring relevant experience from different backgrounds and receive a fixed fee for their services and reimbursement of reasonable expenses incurred in attending meetings.

The Board retains full and effective control of the Group. This includes responsibility for determining the Group's strategy, and for approving budgets and business plans to fulfil this strategy. The full Board ordinarily meets bimonthly.

The Company Secretary is responsible to the Board for ensuring that Board procedures are followed and that the applicable rules and regulations are complied with. All Directors have access to the advice and services of the Company Secretary, and independent professional advice, if required, at the Company's expense. Removal of the Company Secretary would be a matter for the Board.

### **Performance evaluation**

The Board has a process for evaluation of its own performance which is carried out annually.

### **Board Committees**

As appropriate, the Board has delegated certain responsibilities to Board Committees as follows:

### (i) Audit Committee

The Audit Committee currently comprises Clare Spottiswoode CBE (Chairman), Prof. Sir William Wakeham, Prof. Keith Jackson and Mike Inglis.

The Committee monitors the integrity of the Group's financial statements and the effectiveness of the audit process. The Committee reviews accounting policies and material accounting judgements. The Committee also reviews, and reports on, reports from the Group's auditors relating to the Group's accounting controls. It makes recommendations to the Board on the appointment of auditors and the audit fee. It has unrestricted access to the Group's auditors. The Committee keeps under review the nature and extent of non-audit services provided by the external auditors in order to ensure that objectivity and independence are maintained.

### (ii) Remuneration Committee

The Remuneration Committee comprises Mike Inglis (Chairman), Clare Spottiswoode CBE, Prof. Keith Jackson and Prof. Sir William Wakeham.

The Committee is responsible for making recommendations to the Board on remuneration policy for Executive Directors and the terms of their service contracts, with the aim of ensuring that their remuneration, including any share options and other awards, is based on their own performance and that of the Group generally.

### (iii) Nomination Committee

The Nomination Committee comprises Mike Inglis (Chairman), Prof. Sir William Wakeham, Prof. Keith Jackson and Clare Spottiswoode CBE.

It is responsible for providing a formal, rigorous and transparent procedure for the appointment of new Directors to the Board and reviewing the performance of the Board each year.

# CORPORATE GOVERNANCE STATEMENT CONTINUED

### Attendance at Board meetings and Committees

The Directors attended the following Board and Committees meetings during the year:

Attendance	Board	Audit	Nomination	Remuneration
S. Boydell	6/6	-	-	-
J. Boyer	3/3	1/1	1/1	1/1
B. Hayden	6/6	-	-	-
M. Inglis	5/5	2/2	-	1/1
G. Purdy	6/6	-	-	-
C. Spottiswoode	6/6	2/2	1/1	2/2
W. Wakeham	6/6	2/2	1/1	2/2
K. Jackson	6/6	2/2	1/1	2/2

### **Risk management and internal control**

The Board is responsible for the systems of internal control and for reviewing their effectiveness. The internal controls are designed to manage rather than eliminate risk and provide reasonable but not absolute assurance against material misstatement or loss. The Audit Committee reviews the effectiveness of these systems primarily by discussion with the external auditor and by considering the risks potentially affecting the Group.

The Group does not consider it necessary to have an internal audit function due to the small size of the administration function. Instead there is a detailed Director review and authorisation of transactions. The annual audit by the Group auditor, which tests a sample of transactions, did not highlight any significant system improvements in order to reduce risk.

The Group maintains appropriate insurance cover in respect of actions taken against the Executive Directors because of their roles, as well as against material loss or claims of the Group. The insured values and type of cover are comprehensively reviewed on a periodic basis.

By order of the Board

**Mike Inglis** 

Chairman 7 July 2016

### INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF ILIKA PLC

We have audited the financial statements of Ilika plc for the year ended 30 April 2016 which comprise the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated cash flow statement, the consolidated statement of changes in equity, the Parent Company balance sheet, the Parent Company cash flow statement, the Parent Company statement of changes in equity and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and International Financial Reporting Standards ('IFRSs') as adopted by the European Union and, as regards the Parent Company financial statements, as applied in accordance with the provisions of the Companies Act 2006.

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 an auditor's report 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.

### **Respective responsibilities of Directors and auditors**

As explained more fully in the statement of Directors' responsibilities, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Financial Reporting Council's ('FRC's') Ethical Standards for Auditors.

### Scope of the audit of the financial statements

A description of the scope of an audit of financial statements is provided on the FRC's website at www.frc.org.uk/auditscopeukprivate.

### **Opinion on financial statements**

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and the Parent Company's affairs as at 30 April 2016 and of the Group's loss for the year then ended;
- the Group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- the Parent Company financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union and as applied in accordance with the provisions of the Companies Act 2006; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

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

In our opinion the information given in the Strategic Report and Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

# Matters on which we are required to report by exception

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 by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the Parent Company 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.

### Malcolm Thixton (senior statutory auditor)

For and on behalf of BDO LLP, statutory auditor Southampton United Kingdom 7 July 2016

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

		Year ended	d 30 April
	Notes	2016 £	2015 £
Revenue	2	605,924	1,093,978
Cost of sales		(336,281)	(591,044)
Gross profit		269,643	502,934
Administrative expenses		(3,776,950)	(3,555,188)
Share-based payment charge		(352,291)	(33,648)
Operating loss	3	(3,859,958)	(3,085,903)
Income from short-term deposits		30,734	50,557
Loss before tax	5	(3,828,864)	(3,035,346)
Taxation		357,896	333,647
Loss for period/total comprehensive income attributable to owners of parent		(3,470,968)	(2,701,699)
Loss per share from continuing operations Basic Diluted	6	(5.23)p (5.23)p	(4.10)p (4.10)p

### CONSOLIDATED BALANCE SHEET Company number 7187804

		As at 3	i0 April
	Notes	2016 £	2015 £
ASSETS			
Non-current assets			
Intangible assets	7	15,595	30,119
Property, plant and equipment	8	399,324	560,698
Total non-current assets		414,919	590,817
Current assets			
Trade and other receivables	9	517,695	496,985
Current tax receivable	5	375,000	304,122
Other financial assets - bank deposits		-	528,349
Cash and cash equivalents	10	2,997,412	5,479,035
Total current assets		3,890,107	6,808,491
Total assets		4,305,026	7,399,308
Issued capital and reserves attributable to owners of parent			
Issued share capital	14	663 911	663 748
Share premium	14	17 470 417	17 465 442
Capital restructuring reserve		6.486.077	6.486.077
Retained earnings		(21,213,507)	(18,094,830)
Total equity		3,406,898	6,520,437
Current liabilities			
Trade and other pavables	11	748.128	728.871
Provisions	12	150,000	150,000
Total liabilities		898,128	878,871
Total equity and liabilities		4,305,026	7,399,308

The notes on pages 28 to 39 form part of these financial statements.

These financial statements were approved and authorised for issue by the Board of Directors on 7 July 2016.

**Mike Inglis** Chairman

# CONSOLIDATED CASH FLOW STATEMENT

	Year ended 30 April	
	2016 £	2015 £
Cash flows from operating activities		
Loss before taxation on continuing operations Adjustments for:	(3,828,864)	(3,035,346)
Amortisation	14,524	12,736
Depreciation	257,274	324,556
Equity-settled share-based payments	352,291	33,648
Loss on disposal of plant, property and equipment	1,049	-
Financial income	(30,734)	(50,557)
Operating cash flow before changes in working capital, interest and taxes	(3 234 460)	(2 714 963)
(Increase)/decrease in trade and other receivables	(26,432)	79 918
Increase in trade and other payables	19,257	118,124
Cash utilised by operations	(3,241,635)	(2,516,921)
Tax received	287,018	277,716
Net cash flow from operating activities	(2,954,617)	(2,239,205)
Cash flows from investing activities		
Interest received	36,456	45,958
Sale of property, plant and equipment	-	1,640
Purchase of property, plant and equipment	(96,949)	(279,267)
Purchase of intangible assets	-	(42,062)
Decrease in other financial assets	528,349	1,248,418
Net cash from investing activities	467,856	974,687
Cash flows from financing activities		
Proceeds from issuance of Ordinary Share capital	5,138	1,413,586
Net cash from financing activities	5,138	1,413,586
Net increase in cash and cash equivalents	(2 481 623)	149 068
Cash and cash equivalents at the start of the period	5,479,035	5,329,967
Cash and cash equivalents at the end of the period	2,997,412	5,479,035

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

As at 30 April 2016	663,911	17,470,418	6,486,077	(21,213,508)	3,406,898
Loss and total comprehensive income	-	-	-	(3,470,968)	(3,470,968)
Issue of shares	163	4,975	-	-	5,138
Share-based payment	-	-	-	352,291	352,291
As at 30 April 2015	663,748	17,465,442	6,486,077	(18,094,830)	6,520,437
Loss and total comprehensive income	-	-	-	(2,701,699)	(2,701,699)
Issue of shares	31,088	1,382,498	-	-	1,413,586
Share-based payment	-	-	-	33,648	33,648
As at 30 April 2014	632,660	16,082,944	6,486,077	(15,426,779)	7,774,902
	Share capital £	Share premium account £	Capital restructuring reserve £	Retained earnings £	Total attributable to equity holders of parent £

### Share capital

The share capital represents the nominal value of the equity shares in issue.

### Share premium account

When shares are issued, any premium paid above the nominal value is credited to the share premium reserve.

### **Capital restructuring reserve**

The capital restructuring reserve arises on the accounting for the share for share exchange. It represents the difference between the value of the issued equity instruments of Ilika Technologies Limited immediately before the share for share exchange and the equity instruments of Ilika plc along with the shares issued to effect the share for share exchange.

### **Retained earnings**

The retained earnings reserve records the accumulated profits and losses of the Group since inception of the business.

### **1 Accounting policies** Basis of preparation

These financial statements have been prepared in accordance with International Financial Reporting Standards ('IFRSs') adopted by the European Union. The principal accounting policies adopted in the preparation of the consolidated financial statements are set out below. The policies have been consistently applied to all of the years presented.

The individual financial statements of Ilika plc are shown on pages 40 to 43.

### **Basis of consolidation**

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company made up to the reporting date. Control is achieved where the Company has the power to govern the financial and operating policies of an investee entity so as to obtain benefits from its activities. All intra-Group transactions, balances, income and expenses are eliminated on consolidation.

### Going concern

The financial statements have been prepared on a going concern basis which assumes that the Company will have sufficient funds available to enable it to continue to trade for the foreseeable future. In making their assessment that this assumption is correct the Directors have undertaken an in depth review of the business, its current prospects, and cash resources as set out below.

The Directors have prepared and reviewed financial forecasts. The Group meets its day-to-day working capital requirements through existing cash resources which, at 30 April 2016, amounted to £2,997,383. After due consideration of these forecasts and current cash resources, the Directors consider that the Company and the Group have adequate financial resources to continue in operational existence for the foreseeable future (being a period of at least 12 months from the date of this report), and for this reason the financial statements have been prepared on a going concern basis.

The Directors have also considered the likely sales, contracts and announcements that the Company anticipate being able to make over the coming months, the current share price, levels of trading in the Company's shares and past history of raising funds with the Company's Brokers.

After taking account of all the above factors the Directors believe that as the market becomes more aware of the Company' prospects and the scale of the opportunities that the Company's technologies create the Company will continue to be able to raise any funds required to enable it to continue to trade and grow towards self-sufficiency.

### Changes in accounting policies

### (a) New standards, amendments to standards or interpretations adopted early

During the period ended 30 April 2016, there were no new or revised standards, amendments to standards or interpretations that have been adopted and affected the amounts reported in the financial statements.

### (b) New standards, amendments to standards or interpretations not yet applied

The following standards, interpretations and amendments, which have not been applied in these financial statements and have an effective date commencing after 1 May 2016, will or may have an effect on the Group's future financial statements:

International Accounting Standards (IAS/IFRS)		Effective date for periods commencing
IFRS 9	Financial Instruments	1 January 2018
IFRS 15	Revenue from Contracts with Customers	1 January 2018
IFRS 16	Leases	1 January 2019
IAS 7	Statement of Cash Flows (Amendments)	1 January 2017
IAS 12	Income Taxes (Amendments)	1 January 2017

No other new standards or amendments are expected to have an effect on the Group.

### Revenue

Revenue comprises the fair value for the sale of services, net of value added tax and is recognised as follows:

### Sales of services

Sales of R&D services are recognised in the accounting period in which the services are rendered, by reference to completion of the specific transaction assessed on the basis of the actual service provided as a proportion of the total services to be provided.

### Government grants

Grants that compensate the Group for expenses incurred are recognised in the income statement on a systematic basis in the same periods in which the expenses are recognised.

### **Financial income**

Financial income is recognised in the income statement as it accrues, using the effective interest method.

### Pension and other post retirement benefits

Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due.

### Share-based payment transactions

The Group issues equity-settled share-based payments to all employees. Equity-settled share-based payments are measured at fair value at the date of grant. The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's estimate of shares that will eventually vest and adjusted for the effect of non-market-based vesting conditions.

The fair value of market-based options granted by the Group is measured by use of the stochastic valuation model taking into account the following inputs: the exercise price of the option; the life of the option; the market price on the date of grant of the option; the expected volatility of the share price; the dividends expected on the shares; and the risk free interest rate for the life of the option.

The fair value of non-market-based options granted by the Group is measured by use of the Black-Scholes pricing model taking into account the following inputs: the exercise price of the option; the life of the option; the market price on the date of grant of the option; the expected volatility of the share price; the dividends expected on the shares; and the risk free interest rate for the life of the option. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions, and behavioural considerations.

### Research and development expenditure

Expenditure on the research phase is charged to the income statement in the period in which it is incurred. Development expenditure on new products is capitalised only once the criteria specified under IAS 38, Intangible Assets, have been met and it is probable that future economic benefit will flow to the Group. Prior to and during the year ended 30 April 2016, no development expenditure satisfied the necessary conditions of IAS 38.

### Taxation

Companies within the Group may be entitled to claim special tax allowances in relation to qualifying R&D expenditure (e.g. R&D tax credits). The Group accounts for such allowances as tax credits, which means that they are recognised when it is probable that the benefit will flow to the Group and that benefit can be reliably measured. R&D tax credits reduce current tax expense and, to the extent the amounts due in respect of them are not settled by the balance sheet date, reduce current tax payable. A deferred tax asset is recognised for unclaimed tax credits that are carried forward as deferred tax assets.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the reporting date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised.

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

### 1 Accounting policies continued

### **Foreign currency**

Transactions in foreign currencies are translated at the foreign exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated at the foreign exchange rate ruling at that date. Foreign exchange differences arising on translation are recognised in the profit and loss account.

### Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and impairment losses. Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

Depreciation is charged to the statement of comprehensive income on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment less their estimated residual value. The estimated useful lives are as follows:

Leasehold improvements	lease term
Plant, machinery and equipment	3-5 years
Fixtures and fittings	3–5 years

### Impairment

The carrying amounts of the Group's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated at the present value of the future expected cash flows associated with the impaired asset.

An impairment loss is recognised whenever the carrying amount of an asset exceeds its recoverable amount. Impairment losses are recognised in the profit and loss account.

### Intangible assets

### Computer software

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised to administrative expenses using the straight-line method over their estimated useful lives (1–3 years).

### Intellectual property

Acquired intellectual property is included at cost and is amortised to administrative expenses on a straight-line basis over its useful economic life of 15 years.

### **Financial instruments**

Financial assets and financial liabilities are recognised on the Group's balance sheet when the Group becomes a party to the contractual provisions of the instrument. The Group's financial assets are all classified as loans and receivables and carried at amortised cost. The Group's financial liabilities are all classified as 'other' liabilities which are carried at amortised cost. Cash and cash equivalents comprise cash balances and call deposits. Deposits of over 3 months' maturity, judged at inception, are classified as other financial assets.

### Key sources of estimation and uncertainty

The preparation of the Group's financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses at the date of the Group's financial statements. The Group's estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

### Revenue recognition

The Group's revenue substantially comprised revenues from the provision of R&D services. The contracts set out defined deliverables the achievement of which trigger milestone payments. Judgement is used to determine the stage of completion and the point at which revenue is recognised.

### Share-based payments

The critical accounting estimates, assumptions and judgements underpinning the valuation of the option awards are disclosed in note 18.

### Taxation

The current tax receivable is the expected tax receivable on the R&D qualifying expenditure for the period using the tax rates and laws that have been enacted or substantively enacted at the balance sheet date, and any adjustments to tax payable in respect of previous years. The ultimate receivable may vary from the amounts provided and is dependent upon negotiations with the relevant tax authorities.

### **2** Segment reporting

The Group operates in one area of activity, namely the production, design and development of high throughput methods of material synthesis, characterisation and screening. The Group has materials development programmes addressing a wide range of applications including the solid-state battery, aerospace alloys and electronic materials.

For management purposes, the Group is analysed by the geographical location of its customer base and Business Development Directors have been appointed to cover the Group's 3 territories of focus, Asia, North America and Europe. . . . . .

	rear ended	Year ended 30 April	
Revenue	2016 £	2015 £	
Analysis by geographical market: By destination			
Asia	74,162	125,875	
Europe	23,355	441,219	
North America	7,702	142,351	
UK grants	500,705	384,533	
	605,924	1,093,978	

A number of customers individually account for more than 10 percent of the total turnover of the Group. The revenues from these companies are indicated below:

	Year ende	Year ended 30 April	
Revenue	2016 £	2015 £	
Customer 1 Customer 2	500,705 74,150	384,533 247.200	
Customer 3	-	189,052	
Customers less than 10 percent	31,069	273,193	
	605,924	1,093,978	

### **3 Operating loss**

3 Operating loss	Year ended 30 April	
This is arrived at after charging:	2016 £	2015 £
R&D expenditure in the year Depreciation Amortisation of intangible assets Auditor's remuneration	2,057,966 257,274 14,524	1,740,173 324,556 12,736
Fees payable to the Group's auditor for the audit of the Group's accounts Fees payable to the Group's auditor for other services:	19,700	19,700
<ul> <li>The Audit of the Group's subsidiaries</li> <li>All other services</li> </ul>	6,800 21,518	6,800
Operating lease rentals Share-based payment Foreign exchange differences	204,578 352,291 3,616	202,964 33,648 5,123

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

### **4 Employees**

The average number of employees during the year, including Executive Directors, was: Vear ended 30 April

	real chaca so April	
	2016 Number	2015 Number
Administration Materials synthesis	8 27	8 23
	35	31

Staff costs for all employees, including Executive Directors, consist of:

Staff costs for all employees, including Executive Directors, consist of:	Year endec	30 April
	2016 £	2015 £
Wages and salaries Social security costs Share-based payment expense	1,813,849 183,594 337,291	1,641,465 153,801 18,648
Pension costs	119,664	98,206
	2,454,438	1,912,120

The total remuneration of the Directors of the Group was as follows:

The total remuneration of the Directors of the Group was as follows.	Year ended 30 April	
	2016 £	2015 £
Wages and salaries Pension costs	607,703 47,181	541,353 47,283
Directors' emoluments Social security costs Share-based payment expense	654,884 77,420 267,301	588,636 60,858 7,080
Key management personnel	999,605	656,574

The Directors represent key management personnel and further details are given in the Directors' Remuneration Report on pages 17 to 19.

### **5** Taxation

### (a) Tax on loss from ordinary activities

There is no taxation charge due to the losses incurred by the Group during the year. The taxation credit represents R&D tax credit claims as follows: Year ended 30 April

	rear end	rear ended SU April	
	2016 £	2015 £	
Current tax on loss for the year Adjustments to prior period	329,473 28,423	304,122 29,525	
	357,896	333,647	

### (b) Factors affecting current tax charge

The tax assessed on the loss on ordinary activities for the period is different to the standard rate of corporation tax in the UK of 20 percent (2015: 21 percent). The differences are reconciled below:

	2016 £	2015 £
Loss on ordinary activities before tax	(3,828,864)	(3,035,346)
Loss on ordinary activities before tax multiplied by the standard rate of corporation tax in the UK of 20 percent (2015: 21 percent) Effects of	(765,773)	(637,423)
Expenses not deductible for corporation tax R&D relief	71,179 (329,473)	8,022 (304,122)
Under provision in previous years	694,594 (28,423)	629,401 (29,525)
Total tax credit for the year	(357,896)	(333,647)

### Unrecognised deferred taxation

There are tax losses available for carry forward against future trading profits of approximately £17,009,000 (2015: £15,290,000). A deferred tax asset in respect of these losses of approximately £3,062,000 (2015: £3,058,000) has not been recognised in the accounts, as the full utilisation of these losses in the foreseeable future is uncertain.

### 6 Loss per share

Earnings per Ordinary Share have been calculated using the weighted average number of shares in issue during the relevant financial periods. The weighted average number of equity shares in issue and the earnings, being loss after tax, are as follows:

	Year ended 30 April	
	2016 Number	2015 Number
Weighted average number of Equity Shares	66,378,114	65,895,078
	£	£
Earnings, being loss after tax	(3,470,968)	(2,701,699)
	р	р
Loss per share	(5.23)	(4.10)

The loss attributable to Ordinary Shareholders and weighted average number of Ordinary Shares for the purpose of calculating the diluted earnings per Ordinary Share are identical to those used for basic earnings per share. This is because the exercise of share options would have the effect of reducing the loss per Ordinary Share and is therefore not dilutive. At 30 April 2016, there were 6,988,112 options outstanding (2015: 5,414,848) as detailed in notes 14 and 18.

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

### 7 Intangible assets

	Software licences £	Intellectual property £	Total £
<b>Cost</b> <b>As at 30 April 2014</b> Additions Disposals	27,918 42,062 (15,615)	75,000 - -	102,918 42,062 (15,615)
As at 30 April 2015 Disposals	54,365 ( <b>8,072</b> )	75,000	129,365 <b>(8,072)</b>
As at 30 April 2016	46,293	75,000	121,293
Amortisation As at 30 April 2014 Provided for the year Disposals	27,125 12,736 (15,615)	75,000 - -	102,125 12,736 (15,615)
<b>As at 30 April 2015</b> Provided for the year Disposals	24,246 <b>14,524</b> (8,072)	75,000 - -	99,246 <b>14,524</b> (8,072)
As at 30 April 2016	30,697	75,000	105,698
Net book value As at 30 April 2014	793	_	793
As at 30 April 2015	30,119	-	30,119
As at 30 April 2016	15,595	-	15,595

The amortisation charge of £14,524 (2015: £12,736) is included within administrative expenses.

### 8 Property, plant and equipment

	Leasehold improvements £	Plant, machinery and equipment £	Fixtures and fittings £	Total £
Cost As at 30 April 2014 Additions Disposals	561,750 5,750 -	4,180,326 271,439 (25,688)	169,712 2,078 -	4,911,788 279,267 (25,688)
As at 30 April 2015 Additions Disposals	567,500 - -	4,426,077 <b>96,949</b> -	171,790 - (4,265)	5,165,367 <b>96,949</b> (4,265)
As at 30 April 2016	567,500	4,523,026	167,525	5,258,051
Depreciation As at 30 April 2014 Provided for the year Disposals	501,038 66,462 -	3,654,222 250,981 (24,048)	148,901 7,113 -	4,304,161 324,556 (24,048)
As at 30 April 2015 Provided for the year Disposals	567,500 - -	3,881,155 <b>250,492</b> -	156,014 <b>6,782</b> (3,216)	4,604,669 <b>257,274</b> (3,216)
As at 30 April 2016	567,500	4,131,647	159,580	4,858,727
Net book value As at 30 April 2014	60,712	526,104	20,811	607,627
As at 30 April 2015	-	544,922	15,776	560,698
As at 30 April 2016	-	391,379	7,945	399,324

There are no commitments for capital expenditure contracted but not provided for (2015: £nil)

### 9 Trade and other receivables

9 Trade and other receivables	As at 3	As at 30 April	
	2016 £	2015 £	
Trade receivables Prepayments Other receivables Accrued income	27,976 215,933 156,863 116,923	5,108 215,921 168,361 107,595	
	517.695	496,985	

The ageing of trade receivables is as follows:

The ageing of trade receivables is as follows.	As at 30	As at 30 April	
	2016 £	2015 £	
0-29 days 30-59 days 60-89 days	4,621 23,355 -	1,322 3,595 191	
90+ days	-	-	
	27,976	5,108	

### **10 Cash and cash equivalents**

to Cash and cash equivalents	As at 3	As at 30 April	
	2016 £	2015 £	
Current bank accounts Short-term deposits with less than 3 months' maturity	127,018 2,872,394	220,843 5,258,192	
	2,997,412	5,479,035	

### **11 Trade and other payables**

If frade and other payables		As at 30 April	
	2016 £	2015 £	
Trade payables	197,117	219,567	
Other payables	14,654	15,845	
Other taxes and social security costs	44,976	40,079	
Accruals	491,381	453,380	
	748,128	728,871	

The ageing of financial liabilities is as follows:

The ageing of finalicial liabilities is as follows.	As at 30	) April
	2016 £	2015 £
0-29 days 30-59 days 60-89 days 90+ days	390,618 61,039 21,495 230,000	384,869 45,613 20,000 238,310
	703,125	688,792

### **12 Provisions**

	Leasehold dilapidations £
As at 1 May 2015 and at 30 April 2016	150,000

All provisions are due within 1 year.

Leasehold dilapidations relate to the estimated cost of returning a leasehold property to its original state at the end of the lease in accordance with the lease terms.

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

### **13 Financial instruments**

The risks associated with financial instruments are set out below.

### Foreign currency risk

The Group buys goods and services in currencies other than Sterling. The Group's non-Sterling liabilities and cash flows can be affected by movements in exchange rates. These transactions are not significant and therefore no forward exchange contracts have been entered into.

### Credit risk

The Group's credit risk is attributable to its trade receivables and banking deposits. The Group places its deposits with reputable financial institutions to minimise credit risk. The maximum exposure to credit risk for each period is the amount disclosed above as total loans and receivables. For the periods above there were no trade receivables which were past due or impaired. Risk is further mitigated through the use of credit limits, but also through the nature of the customers, who, for the most part, are large multinationals.

### Liquidity risk

The Group's policy is to maintain adequate cash resources to meet liabilities as they fall due. All Group payable balances fall due for payment within 1 year. Cash balances are placed on deposit for varying periods with reputable banking institutions to ensure there is limited risk of capital loss. The Group does not maintain an overdraft facility.

### Interest rate risk

The main risk arising from the Group's financial instruments is interest rate risk. The Group placed deposits surplus to short-term working capital requirements with a variety of reputable UK-based banks. These balances are placed at floating rates of interest and deposits have maturities of 1–12 months. The Group's cash and short-term deposits are set out in note 11. Floating-rate financial assets comprise cash on deposit and cash at bank. Short-term deposits are placed with banks for periods of up to 12 months and are categorised as floating-rate financial assets. Contracts in place at 30 April 2016 had a weighted average period to maturity of 30 days (2015: 32 days) and a weighted average annualised rate of interest of 0.7 percent. (2015: 0.8 percent).

### Interest rate risk sensitivity analysis

It is estimated that a change in base rate to zero would have increased the Group's loss before taxation for the year to 30 April 2016 by approximately £31,000 (2015: £51,000).

It is estimated that an increase in base rate by 1 percent would decrease the Group's loss before taxation for the year to 30 April 2016 by approximately £42,000 (2015: £62,000).

There is no difference between the book and fair value of financial assets and liabilities.

### **Capital management**

The primary aim of the Group's capital management is to safeguard the Group's ability to continue as a going concern, to support its businesses and maximise shareholder value. The Group monitors its capital structure and makes adjustments as and when it is deemed necessary and appropriate to do so using such methods as the issuing of new shares. At present all funding is raised by equity. See note 1 for the fundraising that occurred during the year.

### **14 Share capital**

	As at 30 April	
	2016 £	2015 £
Authorised 65,802,710 Ordinary Shares of £0.01 each (2015: 65,736,416) 1,781,400 Convertible Preference Shares of £0.01 each	658,027 17,814	657,364 17,814
Allotted, called up and fully paid 65,802,710 Ordinary Shares of £0.01 each (2015: 65,736,416) 588,400 Convertible Preference Shares of £0.01 each (2015: 638,400)	658,027 5,884	657,364 6,384
	663,911	663,748

### Share rights

The Ordinary Share and Preference Shares rank pari passu in all respects other than:

- The profits which the Group may determine to distribute in respect of any financial period shall be distributed only among the holders of the Ordinary Shares. The Preference Shares shall not entitle the holders of them to any share in such distributions.
- On a return of capital or assets on a liquidation, reduction of capital or otherwise the surplus assets of the Group remaining after payment of its obligations shall be applied:
  - first, in paying to the holders of the Preference Shares the amount paid thereon, being the amount equal to the par value of the Preference Shares excluding any premium; and
- secondly, the balance of such surplus assets shall belong to, and be distributed amongst, the holders of the Ordinary Shares.

The Preference Shareholders have the right, at any time, to convert the Preference Shares held to the same number of Ordinary Shares.

On 7 October 2015, 50,000 £0.01 Convertible Preference Shares were converted to £0.01 Ordinary Shares.

### Share options and warrants

Employee related share options are disclosed in note 18. In addition to these, there were 107,300 non-employee share options over Ordinary Shares of £0.01 at the year end.

16,294 share options were converted into 16,294 £0.01 Ordinary Shares in the year for a total consideration of £5,138.

### **15 Operating leases**

The Group and Company had no commitments under non-cancellable operating leases as at the current and preceding reporting date.

### **16 Pensions**

The Group operates a defined contribution Group personal pension scheme. The pension cost charge for the period represents contributions payable by the Group to the scheme and amounted to £119,664 (2015: £98,206).

### **17 Related party transactions**

The Directors consider that no one party controls the Group.

During the year ended 30 April 2016, the Company incurred costs of £238,286 (2015: £245,576) with the University of Southampton in connection with R&D activities. The University of Southampton is the controlling shareholder of Southampton Asset Management Limited, which has a 3.6 percent interest in the Company. At 30 April 2016, the amount unpaid in respect of these costs was £8,295 (2015: £2,765).

The Company incurred fees from the University of Southampton in respect of Prof. B. Hayden, a Director of the Company. These amounts are included in the costs shown above. Further details are given in the Directors' Remuneration Report on pages 17 to 19.

Details of key management personnel and their compensation are given in note 4 and in the Directors' Remuneration Report on pages 17 to 19.

### 18 Share-based payments expense and share options

### Share-based payment expense

The Group has incentivised and motivated staff through the grant of share options under the Enterprise Management Incentive ('EMI') scheme and through unapproved share options. The Group has recognised an expense to the consolidated statement of comprehensive income representing the fair value of outstanding equity-settled share-based payment awards to employees. The fair values were charged to the consolidated statement of total comprehensive income over the relevant vesting periods adjusted to reflect actual and expected vesting levels.

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

### 18 Share-based payments expense and share options continued

The Group has calculated the fair market value of options which had market-based performance conditions at the time of grant, using the stochastic valuation model. Options with no market-based performance conditions at the time of grant, have been valued using the Black-Scholes model.

At 30 April 2016, the following options, whose fair values have been fully charged to the consolidated statement of total comprehensive income, were outstanding:

Approved share options:

Date of grant	Number	Period	Exercise price
	of shares	of option	per share
14 May 2007	156,100	10 years	£0.80
15 January 2008	22,400	10 years	£1.00
2 February 2009	58,000	10 years	£0.80
1 December 2009	90,000	10 years	£0.80
14 May 2010	26,100	10 years	£0.51
1 February 2012	39,634	10 years	£0.53

### Unapproved share options:

Date of grant	Number	Period	Exercise price
	of shares	of option	per share
11 July 2007	195,500	10 years	£0.80
11 November 2008	40,000	10 years	£2.4283
14 May 2010	1,897,800	10 years	£0.51

Black-Scholes valuation	
-------------------------	--

Black-Scholes valuation	Weighted average exercise price		Number	
	2016 £	2015 £	2016	2015
Outstanding:				
At start of the period	0.8341	0.4121	2,188,148	1,693,523
Granted in the period	0.2567	0.8150	2,867,908	1,521,920
Exercised in the period	0.2732	0.1038	(13,394)	(423,250)
Lapsed in the period	0.8032	0.1508	(85,750)	(604,045)
At the end of the period	0.5021	0.8341	4,956,912	2,188,148

The exercise price of options outstanding at the end of the period ranged between £0.01 and £2.4283 and their weighted average contractual life was 8.8 years (2015: 7.85 years). These share options are exercisable and must be exercised within 10 years from the date of grant.

### **Stochastic valuation** Weighted average exercise price Number 2016 2015 2016 2015 Outstanding: At start of the period 0.51 0.51 2,989,300 3,057,300 Exercised in the period 0.51 0.51 (2,900) (68,000) Lapsed during the period 0.51 0.51 (1,062,500) At the end of the period 0.51 0.51 1,923,900 2,989,300

The exercise price of options outstanding at the end of the period was £0.51 (2015: £0.51) and their weighted average contractual life was 5 years (2015: 6 years).

### Ilika plc Executive Share Option Scheme 2010

At 30 April 2016, the following share options were outstanding in respect of the Ilika plc Executive Share Option Scheme 2010:

Date of grant	Number of shares	Period of option	Exercise price per share
14 May 2010	26,100	10 years	£0.51
1 February 2012	39,634	10 years	£0.53
26 February 2015	1,309,470	10 years	£0.815
22 March 2016	1,033,000	10 years	£0.59

Members of staff in the Group have options in respect of Ordinary Shares in Ilika plc, which are conditional upon the achievement of a series of financial and commercial milestones.

85,750 options lapsed in the year and 13,394 options were exercised.

### Ilika plc unapproved share options

At 30 April 2016, the following share options were outstanding in respect of Ilika plc unapproved share options:

Date of grant	Number of shares	Period of option	Exercise price per share
11 July 2007	195,500	10 years	£0.80
11 November 2008	40,000	10 years	£2.4283
14 May 2010	1,897,800	10 years	£0.51
26 February 2015	177,900	10 years	£0.815
30 September 2015	160,000	10 years	£0.688
30 September 2015	1,674,908	10 years	£0.01

1,062,500 options lapsed in the year and 2,900 options were exercised.

There are 2,525,534 options which were capable of being exercised as at 30 April 2016.

	2016 £	2015 £
Share-based payment expense		
Black-Scholes calculation	352,291	33,648
	352,291	33,648

# COMPANY BALANCE SHEET OF ILIKA PLC Company number 7187804

	Notes	2016 £	2015 £
ASSETS			
Non-current assets			
Investments in subsidiary undertaking	20	121,339	121,339
Amount due from subsidiary undertaking	23	18,234,670	18,189,471
		18,356,009	18,310,810
Current assets			
Trade and other receivables	21	2,518	6,218
Total assets		18,358,528	18,317,028
Equity			
Issued share capital		663.911	663,748
Share premium		17.449.628	17.444.653
Retained earnings		108,683	75,276
		18,222,222	18,183,677
LIABILITIES			
Current liabilities			
Trade and other payables		136,306	133,351
Total liabilities		136,306	133,351
Total equity and liabilities		18,358,528	18,317,028

The notes on page 43 form part of these financial statements.

These financial statements were approved and authorised for issue by the Board of Directors on 7 July 2016.

**Mike Inglis** 

Chairman

# COMPANY CASH FLOW STATEMENT

	Year ended 30 April	
	2016 £	2015 £
Cash flows from operating activities		
Loss before tax	(318,884)	(887)
Adjustments for:		
Equity-settled share-based payments	352,291	33,648
Operating cash flow before changes in working capital, interest and taxes	33,407	32,761
Increase in trade and other receivables	(41,500)	(1,463,348)
Increase in trade and other payables	2,955	17,001
Cash utilised by operations	(5,138)	(1,413,586)
Cash flows from financing activities		
Proceeds from issuance of Ordinary Share capital	5,138	1,413,586
Net cash from financing activities	5,138	1,413,586
No. Construction of the sector		
Net increase in cash and cash equivalents	-	-
Cash and cash equivalents at the start of the period	-	
Cash and cash equivalents at the end of the period	-	-

# COMPANY STATEMENT OF CHANGES IN EQUITY

As at 30 April 2016	663,911	17,449,628	108,683	18,222,222
Profit and total comprehensive income	-	-	(318,884)	(318,884)
Share-based payment	-	-	352,291	352,291
Issue of shares	163	4,975	-	5,138
As at 30 April 2015	663,748	17,444,653	75,276	18,183,677
Profit and total comprehensive income	-	-	(887)	(887)
Share-based payment	-	-	33,648	33,648
Issue of shares	31,088	1,382,498	-	1,413,586
As at 30 April 2014	632,660	16,062,155	42,515	16,737,330
	Share capital £	Share premium account £	Retained earnings £	Total attributable to equity holders £

### Share capital

The share capital represents the nominal value of the equity shares in issue.

### Share premium account

When shares are issued, any premium paid above the nominal value is credited to the share premium reserve.

### **Retained earnings**

The retained earnings reserve records the accumulated profits and losses of the Company since inception of the business.

# NOTES TO THE COMPANY FINANCIAL STATEMENTS

### **19 Accounting polices** Basis of preparation

These financial statements have been prepared in accordance with (IFRSs) adopted by the European Union.

### Taxation, share-based payments and financial instruments

For the relevant accounting policies please see note 1.

### Investments in subsidiary undertakings

Investments in subsidiary undertakings where the Company has control are stated at cost less any provision for impairment.

### Profit of the parent company for the year

No profit and loss account is presented for the Company as permitted by section 408 of the Companies Act 2006. The Company's loss for the year was £318,884 (2015: loss of £887).

### 20 Investment in subsidiary undertaking

Investments in Group undertakings are stated at cost.

Ilika plc has a wholly owned subsidiary, Ilika Technologies Limited. Ilika Technologies Limited (incorporated in the UK) made a loss for the year of £3,152,084 (2015: £2,700,812) and had net liabilities as at 30 April 2015 of £14,683,985 (2015: £11,541,901).

Shares in Group undertakings (at cost)	2016 £	2015 £
At 1 May 2015 and 30 April 2016	121,339	121,339

### 21 Trade and other receivables

	2016 £	2015 £
Prepayments	2,518	6,218

### 22 Prior year adjustment

The amount due from Ilika Technologies Limited was previously shown as a current asset, it has been reclassified to non-current assets to reflect the fact that it will be repaid from future revenues that are expected to occur beyond the next 12 months.

### 23 Amount due from subsidiary undertaking

	2016 £	2015 £
Ilika Technologies Limited	18,234,670	18,189,471

# CORPORATE DIRECTORY

<b>Company num</b>	ber
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**Directors** Executive

**Non-Executive** 

Secretary

**Registered office** 

Website

Social media

Advisers Independent auditors

Nominated adviser and broker

Registrars

**Public relations** 

7187804

Graeme Purdy Prof. Brian Hayden Steve Boydell

Mike Inglis (Chairman) Clare Spottiswoode CBE Prof. Sir William Wakeham Prof. Keith Jackson

Steve Boydell

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