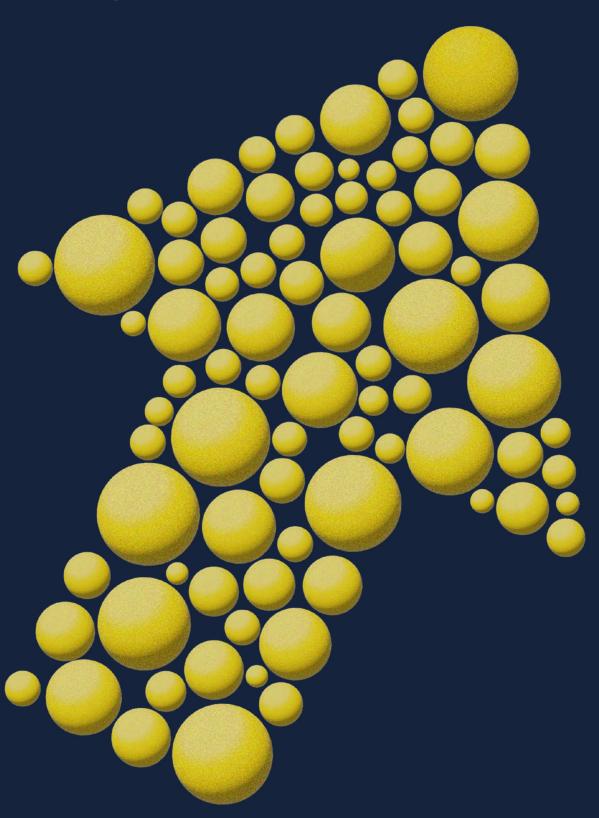
### Report and Financial Statements



Year Ended 31 March 2022



### **Contents**

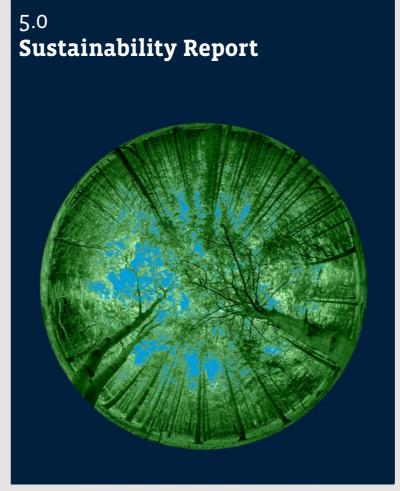
### 1.0 **Strategic Report**

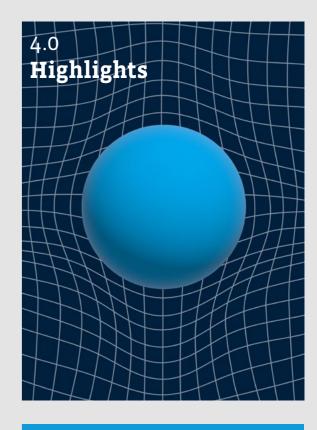
- 1.1 Purpose
- 1.2 Our Board
- 1.3 Introduction from the Chair
- 1.4 Chief Executive's Overview













- 7.0 Governance Statement
- Directors' Report
- **Independent Auditor Report**
- 10.0 Statement of Comprehensive
- 11.0 Statement of Financial Position
- 12.0 Statement of Cash Flows
- 13.0 Statement of Changes in Equity
- 14.0 Notes to the Financial Statements



2 | CONTENTS CONTENTS | 3

# Nuclear Science to Benefit Society

### **Country of Incorporation and Legal Form**

National Nuclear Laboratory Limited is a Private Limited Company incorporated and domiciled in the United Kingdom.

#### **Directors**

lan Funnell Chair

Paul Howarth FREng Chief Executive Officer

Clare Barlow Chief HR Officer

David Beacham Chief Customer Officer
Matthew Miller Chief Financial Officer

Fiona Rayment OBE, FREng Chief Science and Technology Officer

lain ClarksonNon-Executive DirectorEdward EmersonNon-Executive DirectorClaire FlintNon-Executive DirectorStephen Garwood FREngNon-Executive Director

### **Secretary**

David Dukes

### **Registered Office And Principal Place Of Business**

Chadwick House, Warrington Road, Birchwood Park, Warrington, WA3 6AE

3857752 Registered in England and Wales

### **Independent Auditors**

PricewaterhouseCoopers LLP, 1 Hardman Square, Manchester M3 3EB United Kingdom

4 | REPORT AND FINANCIAL STATEMENTS

### 1.0 Strategic Report

### 1.1 **Purpose**

National Nuclear Laboratory Limited's (NNL)'s financial statements include a strategic report that sets out the business's purpose and objectives as well as highlighting key aspects of our progress and performance during the 2022 financial year.

The directors have prepared this report to meet the requirements of Section 414 of the Companies Act 2006. NNL's independent auditors are required by law to report on whether the information given in this strategic report has been prepared in accordance with applicable legal requirements and is consistent with the financial statements. The auditors' report is included later in this document.

## Our Board



lan Funnell Chair

From 26 January 2022

Ian Funnell was appointed to the role of Chair of NNL on 26 January 2022 for an initial term of three years. He is currently Chief Executive Officer for Hitachi Energy UK Limited, for the UK and Ireland businesses. He spent nearly two decades at ABB in a number of different roles, including five years as Chief Executive Officer of ABB UK Limited.

In addition to his role at Hitachi Energy UK Limited, Ian is also a mentor for the global high potential female talent programme and an Ambassador for the Women's Leadership Association. An indication of his demonstrably strong commitment to sponsoring diversity and inclusion.

He has extensive experience in a non-executive capacity, and is currently Chair, Energy Futures Lab, Imperial College; Deputy Chair, CBI North West Region; Commissioner, coronavirus (COVID-19) Recovery Commission; and a Board Member, Energy Revolution Advisory Group, Innovate UK.

He is a Chartered Engineer, a Fellow of the Institution of Engineering and Technology and a Fellow of the Institute of Directors.



Sir Andrew Mathews **Chair** 

Until 25 January 2022

Sir Andrew Mathews was appointed as the Chair of NNL in January 2016, having served as a Non-Executive Director on the Board for 18 months prior to that time. He was reappointed for a further three-year term at the end of 2018 and stepped down as Chair on 25 January 2022.

He is a Non-Executive Director of both Devonport Royal Dockyard Limited and of EDF Energy's NNB GenCo. He retired from the Royal Navy in 2014 as Chief of Materiel Fleet, responsible for the support and acquisition programme for all ships and submarines and for the operation of the Navy's three naval bases.

Sir Andrew was appointed Companion of the Order of the Bath in 2008 and knighted in 2013. He is also a fellow of the Royal Academy of Engineering.



### Paul Howarth Chief Executive Officer

Paul has extensive experience in the nuclear industry covering operations, commercial and research portfolios in the UK and also overseas. He has worked with a broad range of stakeholders across government, industry and academia and more recently

has worked in the research, technology, and innovation sector beyond nuclear.

Paul began his career working on the European Fusion programme where he completed his PhD in nuclear physics after a first degree in Physics and Astrophysics at the University of Birmingham. He subsequently worked in Japan on technology transfer in the semiconductor industry and on the Japanese nuclear programme. He went on to work for BNFL at numerous locations in the UK and in roles covering technology commercialisation, plant support and policy development, culminating in support to the UK Government on the case for new nuclear build in 2007. Paul also co-founded the Dalton Nuclear Institute and worked for the US

organisation Battelle alongside US National Laboratories on M&O contract development. In 2009, he was part of the Management & Operations team that was awarded the contract to run NNL.

Currently Paul is Chair of BHR Group and, until February 2022, he served for five years as Chair of the Association of Innovation, Research and Technology Organisations (AIRTO). He holds a professorial position at the University of Manchester in nuclear technology and was elected to become a Fellow of the Royal Academy of Engineering in 2014. He is also a fellow of the Institute of Physics and the Nuclear Institute, holds an MBA and is an alumnus of Harvard Business School.



Matt Miller

Chief Financial Officer

Matt joined NNL in June 2018 and was appointed as Chief Financial Officer in April 2019. Prior to joining, Matt spent 16 years with BAE Systems where he undertook a number of roles across the business both in the UK and internationally. During this time, he built up a broad understanding of working across multiple sectors and customers, recognising the need to adapt to requirements to deliver value to all stakeholders. Through these roles he developed a strong understanding of the financial aspects of running major programmes as well as the governance and controls for divisional and external reporting

needs. His latter roles included Finance Director of the UK Land business and Dreadnought Submarine programme.

Matt is a Fellow with the Chartered Institute of Management Accountants (CIMA) and is a member of their UK Regional Advisory Panel as well as being Vice Chair and a Trustee of the CIMA Benevolent Fund.

Outside NNL, Matt is married with two children and he is a Level 2 qualified coach for the Rugby Football League and Vice Chairman of Chorley Panthers ARLFC.



Clare Barlow
Chief HR Officer

Clare joined us as Chief HR Officer and NNL Board member in June 2018. An experienced CHRO, Clare has worked across multiple sectors and in various global locations. She has held a number of senior HR and operational roles in BAE Systems, Royal Mail and British Airways. She is passionate about people and about contributing to organisational strategy and her areas of expertise include organisational development, change management and employee engagement. Clare has created a completing vision for our people strategy to help NNL achieve its purpose.

In addition to her NNL role, Clare is a Trustee of Age UK Lancashire and a qualified Executive Coach.



David Beacham

Chief Customer Officer

David was appointed as NNL's first ever Chief Customer Officer (CCO) in November 2016, and as such he is responsible for the full end-to-end delivery of NNL's operations whilst ensuring that delivering value to our customers is at the heart of the organisation.

David is both a Chartered Engineer and a Fellow of the Institution of Civil Engineers, and he has a proven track record of improving team performance and delivering challenging projects for customers. His nuclear experience includes working on major projects at Hinkley Point C, Sizewell C, Wylfa, Sellafield, Drigg, Devonport and Barrow. He also has extensive international experience ranging from Cuba to India and Taiwan to Romania.



Fiona Rayment
Chief Science and
Technology Officer

Fiona was appointed Chief
Science and Technology Officer
and NNL Board Member in July
2020 and has over 25 years of
nuclear industry experience. In
her previous role leading the
Nuclear Innovation and Research
Office, she led on the provision of
strategic nuclear advice into the
Department of Business, Energy
and Industrial Strategy.

Fiona provides independent advice to government and industry bodies both nationally and internationally on nuclear related matters including OECD NEA, Generation IV International Forum, CEA and ONR. She is a Chartered Chemist and Engineer and a Fellow of the Royal Academy of Engineering, the Nuclear Institute, and the Royal Society of Chemistry. Fiona is also a non-executive board member of the UK Space Agency. She was awarded an OBE in 2017 and the French Légion d'Honneur in 2020.

8 | STRATEGIC REPORT OUR BOARD | 9



lain Clarkson

Non-Executive Director

Iain joined the NNL Board in October 2019 having previously served as Chief Financial Officer of WYG plc, an international consulting, engineering, and project management business. Prior to that role. Iain was Finance Director for Amec Foster Wheeler's Clean Energy business, and before that he held various Finance Director positions in Westinghouse Electric Company, a global nuclear technology provider, including two periods spent working in the United States. In April 2020, Iain was also appointed as the Chief Financial Officer of Calder Group Holdings Limited a pan

European metals and precision engineering business.

Iain started his career with Coopers & Lybrand where he qualified as an ACA before moving into Corporate Finance to work on Mergers & Acquisitions. He moved across into industry in 1996 and now has over 20 years' financial leadership experience in international consulting and engineering businesses and has a particular specialism in the international energy sector. In addition to his non-executive director role, Iain chairs the NNI. Board's Audit Risk and Assurance Committee.



Edward Emerson

Non-Executive Director

Edward joined the NNL Board in October 2021, as the shareholder's non-executive representative.

He joined UK Government
Investments (UKGI) in 2015 and
has worked on both corporate
finance and corporate governance
projects. Prior to joining UKGI,
Edward worked as a lawyer.
He trained with the Scottish
government before moving into
private practice first in Scotland
and then the City, specializing in
project and asset finance. Edward
combined work and study to
complete a Masters in Global
Energy and Climate Policy, and

further augmented his sectoral experience with secondments to Network Rail, ING, and UK Export Finance.

Edward has also completed a two-year secondment with the Cabinet Office, where he first led on business, energy and environmental policy coordination in the Economic and Domestic Affairs Secretariat, working closely with HM Treasury and No.10. Edward then led a team preparing for the UK's exit from the EU, before being asked to help establish and lead a team within the COVID-19 Taskforce.



Claire Flint
Non-Executive Director

Claire was appointed to the NNL Board in April 2017 for an initial term of two and a half years and was re-appointed for a further three years in 2019. In her executive career, Claire was most recently Group Human Resources and Brand Director and Management Board member for Oxford Instruments plc, the leading FTSE listed, international, high technology business.

In addition to her non-executive role as Senior Independent Director and Chair of NNL's Remuneration Committee, Claire is a NED and Chair of the Remuneration Committee at AWE and NED and Chair of the Remuneration and Appointments Committee at Oxford University Hospitals NHS Foundation Trust. Claire has a BA in history from London University and a post graduate diploma in labour studies.



Stephen Garwood

Non-Executive Director

Steve joined the NNL Board in May 2020, having been Professor of Structural Integrity at Imperial College London and served as a non-executive director of the Transport Systems Catapult. Prior to those roles, Steve was Director, Research & Innovation – Nuclear, at Rolls-Royce plc, retiring in 2013. Over the previous 15 years, he held various Engineering and Technology Director roles for Rolls-Royce plc, including Head of the Technical Authority for the Nuclear Submarine plant.

After a PhD in Applied Mechanics, Steve started his career with The Welding Institute in 1976, rising to Head of Engineering, before joining Rolls-Royce and Associates in 1996. He was elected a Fellow of the Royal Academy of Engineering in 2002.

In addition to his non-executive director role, Steve chairs both NNL's Technical Advisory Board and the Environment, Health, Safety & Security Committee. He continues to serve as an Independent on a number of Nuclear Advisory Boards and is an honorary Professor at Imperial College London.



Anna Payton

Non-Executive Director

Anna was appointed to NNL's Board, as the shareholder's non-executive representative, in 2018, and stepped down in October 2021 when Edward Emerson took over this role.

Anna was an Executive Director and Head of Governance in UK Government Investments (UKGI). During her time at UKGI, Anna worked with the former Department for Energy and Climate Change on delivery structures for renewable energy incentives, advised the Department for Transport on alternative rail network delivery, and led UKGI's housing work with the Ministry for Housing, Communities and Local Government. Alongside her work with NNL, as Head of Governance Anna led UKGI's corporate governance strategy and capability programme. Anna left UKGI in June 2022 to take up the role of Director of Governance and CoSec at ICE Clear Europe.

Anna began her career as a project finance lawyer at Allen & Overy, specializing in PFI and energy infrastructure transactions. Her professional experience following this included commercial and financial project finance roles in the energy sector, both as a fund manager for an energy and infrastructure fund in Zurich, and prior to that as a commercial manager in the corporate venturing arm of the Carbon Trust.



1.3

# Introduction from the Chair

This is my first opportunity to write a review of the year in the annual report, having taken over the helm in January from Sir Andrew Mathews. It's a pleasure to report to you that - once again - NNL has had a very successful year this year. We once again ensured the continuing safety of all of our people, whilst also delivering record turnover and an overall financial performance in line with (or better than) the targets for the year - which were agreed in advance by the board and government. And of course, this was another year of uncertainty and changing levels of restriction due to the continuing impact of the COVID-19 pandemic, as well as a year when international events reinforced the importance of energy security, which was clearly recognised in Westminster and Whitehall.

Our continuing success as a business – whilst further strengthening our position as both an advisor to government and a delivery body for key national programmes – can only stand us in good stead for the future, however that future might turn out.

Our purpose 'Nuclear Science to Benefit Society' has remained at the focal point of how we think and operate as an organisation. Our four focus areas of Clean Energy, Health and Nuclear Medicine, Environmental
Restoration, and Security and NonProliferation, have all been under
the spotlight in different ways
during the year. Not least with
the important COP26 Conference
taking place in Glasgow, where a
number of NNL colleagues were
involved in helping to make the
case for nuclear energy's role in
the future energy mix, alongside
other low carbon options.

But as important as anything we may have done externally,

or through the internal transformation of some parts of the business, of the most important piece of reporting at the close of a tumultuous year is that we achieved all this with an exemplary safety and security record.

We are not in any way blind to the troubles and uncertainties which faced so many organisations during the year. We were fortunate that our own business remained fairly stable - and that our kev customers were in the same position. But we saw the substantial impact which COVID-19 had on other sectors of the economy – including many companies from across our supply chain – and we have remained in close discussion with our customers and suppliers to ensure there have been no major impacts on our delivery programme.

Our ability to withstand the challenges of the year was not just good fortune. Our success was built on prudent preparations to ensure the robustness of the business, made over previous years, and on the clear organisational leadership shown, not just by the board and executive teams, but by our leaders and managers across NNL. The continuing adaptability, dedication and resilience of our people have been vital through

the year and I am grateful to everyone who has played their part.

In particular, I need to record my gratitude to my predecessor – Sir Andrew Mathews – whose eight years on the board (with the latter six as chair) represented a time of massive positive change for NNL. His vision and leadership have transformed NNL into the company it is today, through some challenging times in the energy sector and indeed the wider economy. There is no greater tribute I can pay than to say that when the opportunity to be his successor arose, I jumped at the opportunity and was delighted to be appointed.

In one further change to the board during the past year, Ed Emerson has joined to replace Anna Payton as the government's shareholder representative. I look forward to working with Ed – and all the rest of the board – and, although our terms of office did not overlap, I know from discussions with others that Anna's insightful and important contribution over her three years on the Board have been tremendously valuable.

In terms of business performance, I'm pleased to report that - once again - the nuclear sector was less impacted than many others during this challenging and difficult year. But there was still a good deal of disruption, anxiety, and uncertainty, nonetheless. Challenges for us in NNL continued to include getting our people into facilities, supporting their health and wellbeing, and giving them a clear idea of what our future operational practices were going to be, to help them to plan their own domestic arrangements, as well as keeping our delivery to customers on track. We also recognised that our customers and suppliers all faced challenges of their own - often greater than ours for those companies whose work is not limited to nuclear. I'm pleased that NNL was able to remain flexible and responsive, against a backdrop of rapidly changing restrictions in society at large, and credit goes to all who played their part. To achieve another year of record turnover whilst also delivering substantial social value to the nation through our work, is an incredible achievement.

As I take up the reins of the NNL chair, I'm both excited at the opportunities ahead of us and delighted with what I've seen of the organisation, and the people who make it, so far.

This is an incredibly exciting time to be working in the nuclear sector and in some

"I'm pleased that NNL was able to remain flexible and responsive, against a backdrop of rapidly changing restrictions in society at large, and credit goes to all who played their part."

ways the role has allowed my engineering career to come full circle, having spent the majority of my working my life in the energy sector.

I was first inspired into the world of engineering as an eight-year-old schoolboy, on a visit to Dounreay in the far north of Scotland from my school, which was just north of Inverness. That memory – and the admiration I had for the magnificent engineering and technology I saw there – has stuck with me. To find out that nuclear is now front and centre of the energy transition just makes the opportunity to get involved better and better.

The energy sector as a whole is now undergoing the biggest transformation in its history. In response to the huge challenge of net zero, the UK government has, in recent months, put its shoulder behind the nuclear industry, giving everyone the confidence they need to succeed. To be part of NNL, a world renowned centre of excellence for nuclear, is incredibly exciting for me. As is the growing use of nuclear to benefit society in ways beyond energy – in sectors such as medical science and space. The sky is clearly no longer the limit!

I have enjoyed my first couple of months in the role and I'm very much look forward to meeting and working with more of my new colleagues throughout the NNL business, and from across our different groups of external stakeholders, in the months and years ahead.



# Chief Executive's Overview

Once again, it's been a very unusual year for the business and for everyone in it – and connected with it. Although this was the second full financial year of operating against the background of COVID-19, the parameters were different and continued to change and remain uncertain as we progressed through the year. The fact that NNL performed so well, as Ian already noted, is once again testament to a number of prudent measures introduced into NNL over several previous years, coupled with the nuclear industry's well-established culture of resilience and preparedness.

A particular highlight of the year for me has been the way we have all continued to look out for one another - recognising the challenges we've all faced. I've felt that this year has seen a clear embedding of both our Purpose - Nuclear Science to Benefit Society - and our NNL values, to help guide our decision making. For some this thinking has shaped major strategic decisions, yet for others it may simply have been the way they have checked up on colleagues who may be a little quieter than usual, offered to cover for someone with childcare

issues, or helped to organise the social check ins that keep team spirit up. I'm grateful to everyone who's helped us all to stay focused and productive.

Once again this year, our challenge was not the flow of work into the business but rather our ability to deliver facility-based work with restrictions in place. As always, we put our safety value to the fore to make our workplaces COVID-19 secure in a way which allowed us to find and address issues. We remembered our customer value and liaised regularly with our

customers to understand their concerns and priorities, as we flexed our delivery programmes. And we continued to remember our values of Integrity, Taking Responsibility, Enthusiasm and Collaboration as we took care over the safety, health and welfare of our colleagues. In doing so we have once again ended the year with our financial targets all hit and – most importantly – our workforce safe and well.

In our work this year, we've put an enhanced emphasis on two important aspects of our work – and you'll hear more about both of those as you read through this report.

The first is a greater focus on understanding and engaging effectively with our stakeholders – both internal and external.

We have broadly grouped our stakeholders into the following six - equally important - categories:

Government (governance and policy)

Customers and potential customers

Academia / research community

Employees (and trade union representatives)

Communities and wider society

Nuclear industry and the supply chain

You'll hear more about their different roles in helping to shape our business decision making, and the vital role they all play as this report progresses. They have always been important to us – but we've not articulated our stakeholder map in quite the same way before now.

The second aspect which we've brought into sharper focus is our work on Sustainability. This is now covered explicitly in a dedicated section in the report (section 5) and again is a thread running through a lot of our work.

As I've mentioned, it was a successful year in many ways, and some of our key highlights as a business included:

We once again hit all of our safety, security, environmental, quality and customer satisfaction targets

We continued to keep all of our critical national infrastructure running whilst ensuring the wellbeing of our colleagues and their families

We delivered a record revenue and exceeded even our stretch targets for the key financial measures of Earnings to Reinvest and cash

We were successful in securing government funding for a major programme of investment (known as CAMILA) in the critical national research and development (R&D) infrastructure we maintain. The successful delivery of that work alongside customer programmes – has led to around a further £80m being secured for a follow up programme

Once again, despite dealing with the uncertainties and challenges of the year, and delivering successfully to our customers, we did not overlook the importance of

"I'm pleased that both the industry and NNL are entering the year in a strong place - looking to continue our journey to harness all aspects of nuclear science to benefit society."

continuing with vital long-term improvement programmes within the business. With the support of government, we've made impressive progress on refurbishment of many parts of our critical infrastructure to ensure they are in the best state to deliver work for many years to come.

I cannot write the introduction to this year's annual report without recording my thanks and gratitude to Sir Andrew Mathews who stepped down in January at the end of his six-year statutory term as Chair, and eight years in total on the board. It's been my pleasure and privilege to work with him over the whole of that period. He has continually supported me, the rest of the board and executive team, and the whole of NNL on this journey – despite some unexpected turns along the way, especially over the last couple of years.

As we enter the 2022/23 financial year we have some cautious optimism that the worst of COVID-19 may be behind us, and that we can see a return to more familiar ways of working and meeting colleagues, customers government and other stakeholders in person again. We will continue to exercise caution, and we are strongly supporting a hybrid approach which you will hear more of later, but I'm pleased that both the industry and NNL are entering the year in a strong place – looking to continue our journey to harness all aspects of nuclear science to benefit communities and wider society.

# 1.5 Who We Are and What We Do









## Who We Are

NL aims to use nuclear science to benefit society – that is our fundamental purpose. We are the UK's principal nuclear fission research and development organisation, providing the technical knowledge and capability to ensure that the country's civil nuclear fission energy programmes are delivered safely and cost-effectively. We occupy a unique position in the nuclear innovation environment, spanning Technology Readiness Levels (TRLs) 3–6: we take science from inactive laboratory-scale demonstration to prototype deployment with real nuclear materials.

The company is overseen by a board of directors, the majority of whom are appointed by the UK government. It is owned by the Department for Business, Energy and Industrial Strategy (BEIS) via a holding company, NNL Holdings Limited. The framework within which NNL operates, including governance arrangements, is set out in a framework document which is publicly available on NNL's website.

NNL's purpose – nuclear science to benefit society – reflects our ongoing commitment to serving the greater good. Our mission is to support policy and provide long term sustainable value for the UK in our focus areas: Clean Energy, Environmental Restoration, Health and Nuclear Medicine, and Nuclear Security and Non-Proliferation.

In our role as the UK's national nuclear laboratory, we are the custodians of unique world-leading nuclear skills, critical infrastructure and equipment vital to the UK. With a broad span of knowledge and capability, we always act independently and authoritatively when advising government and stakeholders in the UK and worldwide. Many of our 1,200 employees are internationally recognised experts in their fields, and we work with universities to enable academic access to our services.

NNL hosts the Nuclear Innovation and Research Office (NIRO), a specialist unit funded by BEIS which is separated from our commercial operations by a series of ethical barriers. NIRO is staffed by experts from both NNL and the broader nuclear industry and provides technical advice and guidance to government.

### 1.5.2

### Purpose, Strategic Goals and Values

### Our Purpose is Nuclear Science to Benefit Society

NNL's strategy is articulated in its strategic ambitions, which are based around its four focus areas. These are to:

- Enable the UK's Advanced Modular Reactor (AMR) demonstration system by the early 2030's
- Resolve problematic nuclear waste challenges to save the UK £1bn a year
- Establish an indigenous UK radioisotope supply capability by 2028
- Be recognised as the UK's strategic technical authority for Nuclear Security and Non-Proliferation

These ambitions will be achieved through the successful delivery of work – both for our external customers and under our internal R&D programme – and through the development of our capabilities and stakeholder relationships. Objectives throughout the business are aligned accordingly and progress in their achievement is monitored.

Nuclear has a vital role to play in the lowcarbon energy mix but must demonstrate cost competitiveness in generation and must deal with UK's nuclear legacy in the most cost-effective way possible. As an independent, government-owned body, engaging strategically with industry through partnerships such as those we have with EDF and Sellafield Limited, we are uniquely placed to help identify and bring innovative technologies and practices into the nuclear sector. In doing this, we are working to retain the trust of industry, of the supply chain and of academia, to identify technology and foster innovation in the interests of the wider sector.

While our motivation is always to benefit society, we believe that our model helps us to deliver to time, cost and quality, and we continue to sustain and grow our business through strategic, long-term, mutually beneficial relationships wherever possible.

NNL's position as a national laboratory sitting at the heart of an extensive network and advising the government on nuclear technical issues, playing a leading role with the Nuclear Industry Council through our continued focus on innovation, and the linkage to a number of government roadmaps (including nuclear energy) - shows the role we already play in shaping the agenda in the UK. In addition, we continue to be at the forefront of shaping the global agenda, driving the change required to ensure our sector can continue to contribute its vital role to society. This includes building on our domestic Big Tech programme to deliver the Innovation for the Future of Nuclear Global Forum initiative alongside international partners, and - during this past year - by supporting nuclear industry engagement in the rescheduled COP26 held in Glasgow in November 2021. We continue to maintain and develop our strong trackrecord of international collaboration. As well as working with the wider UK supply chain to support the Japanese clean-up effort at Fukushima, we are now, along with other UK partners, working at other Japanese nuclear facilities.

NNL continues to foster unique capabilities by reinvesting our earnings in science, innovation, facilities and people. The UK continues to invest in the world-class national infrastructure of which we are the custodian, and those facilities, combined with our technical expertise and decades of experience as a nuclear operator, support every aspect of the UK's nuclear fission industry, helping us to be the trusted national nuclear fission laboratory, to sustain and grow our business, and to shape the agenda in the UK and beyond.

In order to ensure that we invest wisely, our Technical Advisory Board (which includes representation from our customers and stakeholders across the nuclear sector) provides independent oversight of our self-funded programme of research and innovation.

Our values are the essence of what makes us NNL and define how we go about every aspect of our work. Represented by the acronym SCI-TEC, they are:

**Safety** - In everything we do

**Customer** – Delivering value, sharing success

**Integrity** – Doing the right things right

**Taking responsibility** – Solving the problem, owning the solution

**Enthusiasm** – Enjoying what we do, inspiring others

**Collaboration** – Being inclusive, unleashing potential

The values are underpinned by a set of behaviours and both were developed by NNL people themselves. Both our values and our behaviours have been widely communicated across the business and are regularly used to structure internal conversations. Collectively they help to define the culture of our organisation by reminding our colleagues of what's important to us, the standards we maintain and the expectations we have of one another.

### 1.5.3

### **Our Business Model**

Our business model is unique for a national laboratory, in that we stand on own two feet financially.

NNL is purpose led: we are here to use nuclear science to benefit society, and we work in the national interest, in the interest of the UK nuclear supply chain, and ultimately towards a safe, affordable, low-carbon world. Our business is underpinned by a £1.5bn estate of critical UK infrastructure, which continues to receive public investment.

But we operate under a unique model for a national laboratory – one which we believe drives our efficiency and agility. Delivering to time, cost and quality for our customers generates earnings which we reinvest to enhance capability and innovation for the sector. Our own expenditure on R&D is heavily geared, and we believe our value to our customers (including to the UK taxpayer) is significant.

We believe that it is the combination of several different factors which makes NNL unique around the world:

Being a National Laboratory that underpins the civil nuclear fission energy programme, the nuclear clean up and decommissioning programme and the naval nuclear propulsion programme

Investing in our capabilities and in leadingedge innovation

Our world-leading portfolio of nuclear research infrastructure

NNL is custodian of a unique suite of critical national laboratory infrastructure on behalf of the government.

During the financial year BEIS undertook a review of NNLs Operational Model, which noted that NNL supports government's objectives across a broad spectrum of areas including management of the UK's nuclear legacy, support to existing civil and defence programmes and advancing the development of new nuclear technologies. However, the UK nuclear landscape is currently developing significantly and at pace. The review (which remains subject to final sign-off by BEIS) found that the model remains fit for purpose but will remain under review as HMG policy develops.

### 1.5.4

### **Our Stakeholders**

NNL engages extensively with a wide range of stakeholders including:

Energy Ministers, MPs, Lords and Government officials in numerous departments

Customers and potential future customers

NNL's employees

Regulators (for example, ONR, EA)

National research bodies (for example, UKRI)

Major international nuclear players and supply chain companies, including SMEs

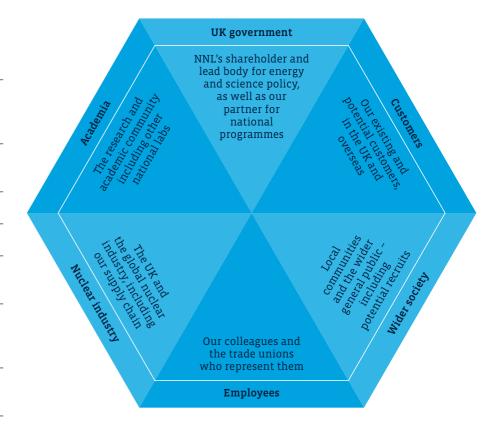
International partners and their respective governments

Key institutions and associations (including OECD, IAEA, NIA, CBI, AIRTO, Learned Societies)

Academic institutions in the UK and overseas

Regional bodies (for example, LEPs, county councils, borough councils)

Within our work to consider our stakeholder and how we can best meet their needs, we have considered them under six broad headings, as shown in the following model.



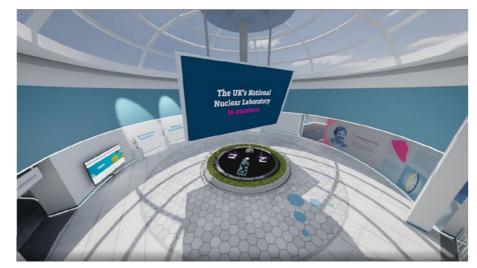
Across the business, we engage with our stakeholders in a variety of ways, and across many levels of the organisation.

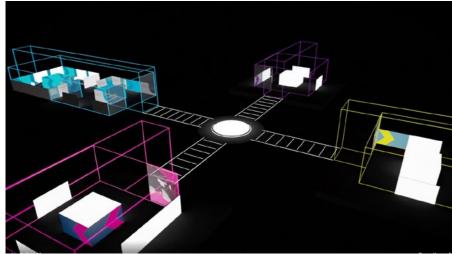
Our senior level engagement with government provides insight into the policy landscape external to the business at national and regional level, and this intelligence is fed back into the business to support operational activity and wider strategic thinking. Likewise, NNL's views and priorities can be fed back through these interactions to inform and influence the actions and positions government's own decision-making bodies.

NNL hosts the Nuclear Research and Innovation Office (NIRO), a specialist unit, pursuant to a contract funded by BEIS, and it provides technical advice and guidance to government. NIRO is separated from the rest of the NNL business by a series of ethical barriers to ensure both client confidentiality of policy matters and that NNL does not benefit commercially.

Engagement with our own colleagues is high on our priority list, and this is undertaken in a variety of ways, through many channels – including regular leadership briefings which are cascaded down to everyone, and via all employee roadshow events. Prior to COVID-19, NNL executive and board colleagues visited each of the company's major locations at least once per year and, whilst there, took the opportunity

### 1.5.4 Our Stakeholders





to meet teams and individual who are resident on each site to discuss their work and listen to their views and feedback. While COVID-19 prevented such visits through 2021–22, these visits will resume as soon as practicable on a more frequent basis, taking the opportunity to engage with groups of NNL people on specific topics.

NNL's Trade Union Forum continues to function effectively. The Forum is chaired by a Board Director and formally represents the views of most employees. It leads negotiations on formal people matters and is routinely engaged on matters such as business strategy, people strategy, and other significant developments.

Engagement with academia takes place across the organisation and this year NNL hosted a Global Lab Summit, bringing together nuclear and non-nuclear laboratories from a range of countries to explore major challenges and share good practice on ways of working and collaborating.

NNL is actively involved across the nuclear sector with bodies such as the UK Nuclear Industry Association, the World Nuclear Association, the IAEA and OECD-Nuclear Energy Agency.

In terms of our involvement and engagement with wider society, we attempt to be a responsible and open member of the communities where our colleagues live and work, and to NNL's Virtual Experience to allow anyone to see what it's like inside some of our lab facilities from their own computer screen.

be as transparent as we can be about the work which we do and the ways we do it. We participate in meetings of the West Cumbria Site Stakeholder Group, and we engage with other communities in different ways – such as through careers fairs, school visits and so on. This year we have also pioneered the development of the NNL Virtual Experience to allow anyone to see what it's like inside some of our lab facilities from their own computer screen.

In the past we have also usually had direct engagement with a wide range of stakeholders through events such as our own SCITEC Conference, held every year to showcase elements of the work NNL is doing and to promote NNL's role as a convenor of the key stakeholders who impact our sector in respect of technology, innovation and policymaking. These events bring together senior stakeholders from government, academia, customers, suppliers and our own colleagues and facilitate both formal and informal interactions and generate important insights regarding the views of our stakeholders that feed back into decision making. SCITEC events have been postponed as a result of COVID-19, but the event is expected to return in 2022-23, when it will take the form of a Global Forum on Innovation.

It is worth listing out our major customers to help put our activities into context and understand the value we bring to them and – through their work – to wider society.

### 1.5.5

### **Our Customers**

We provide strategic advice, technical services and expert support to customers across most of the nuclear fuel cycle – from fuel and reactor analysis through post-irradiation examination of fuel and reactor materials, to waste management, clean up and decommissioning support. We continue to broaden out our customer base and growing the number of key customers, who include:



Nuclear Decommissioning Authority (NDA)

The wider NDA estate (including Sellafield Limited) represents NNL's largest customer. We have a long-established and important relationship with the NDA and its site license companies. In addition to the work for Sellafield, described below, NNL provides a range of services across the estate with a particular emphasis on the disposition of fuels and special nuclear materials. Growth in work on the storage and management of special nuclear materials (including plutonium) across the NDA estate has been a notable feature of our portfolio of activity during recent years and has strengthened the NDA's position as our major customer.



Sellafield Limited (SL) – part of the NDA estate – accounts for over one third of our total turnover delivered under a long-term collaborative Technical Services Agreement (TSA). This is one of NNL's most significant ever commercial agreements – representing a 17-year commitment, with a potential lifetime value in excess of £500m.

The TSA allows us to engage and to deliver value at a strategic level and is consistent with our role as the UK's trusted national laboratory. It also creates a single point of entry for the wider supply chain for technical work at the Sellafield site. Work to embed the TSA ethos and approach across the portfolio of Sellafield technical work continues to progress. We see this as a potential model for our relationships with other commercial customers, particularly those in the public sector where we are working collaboratively in support of national programmes. We have jointly evaluated the way we support SL and recognised that we have collectively delivered around £7 billion of value through our joint efforts over the past 6-7 years.

### 1.5.5 Our Customers



EDF operates all of the UK's operating civil nuclear reactor fleet, comprising six Advanced Gas-Cooled Reactors (with an additional AGR – Dungeness B – now in the decommissioning phase) plus one Pressurised Water Reactor (Sizewell B). Our work for EDF includes post-irradiation examination (PIE) of fuel, components and graphite supporting continued operation, enhancing reactor performance, and – where appropriate – supporting the case for potential lifetime extension. NNL's main contract for support to EDF was further extended by almost 5 years in the previous FY with a value of around £90m.

That contract – the Lifetime Enterprise Agreement (LEA), signed with EDF Energy several years ago, aims to provide a throughlife science and technology partnership through a lifetime contract. The key focus areas under the LEA are waste management, structural integrity, fuel performance and chemistry. The LEA will continue to focus on the ongoing support to the AGR fleet as stations move towards their end of generation dates.



### Rolls Royce / Ministry of Defence

In the same way that we provide materials examination services to operating civil reactors, helping to keep the UK's nuclear energy generation fleet running, we provide a similar service to the Ministry of Defence in respect of the nuclear reactors which power the UK's submarine fleet. This contract is managed via Rolls Royce and again, we have established a more collaborative and strategic way of working.

We have a long-term partnership agreement with Rolls Royce that facilitates delivery of the first phase of a programme which, in total, is expected to be well over a decade in duration and generating a revenue stream for NNL which will approach that we receive from our biggest customer.



NNL has previously delivered a number of significant contracts let by the Department of Business, Energy and Industrial Strategy (BEIS) under the nuclear strand of their £505m Energy Innovation Programme (EIP), and during this year NNL secured a £10m extension to the £46m already allocated to the Advanced Fuel Cycle Programme (AFCP) theme, under the second phase of the EIP, alongside involvement in other EIP workstreams. This work has continued to allow NNL to work with the supply chain and academia, in the UK and beyond, to engage and deliver at a strategic level, creating a single point of entry for the wider supply chain, and marking a significant step in fulfilling NNL's strategic objectives, in particular in delivering our role as the UK's trusted national laboratory.

#### Others

NNL undertakes work for other businesses in the UK nuclear sector, including Dounreay, Westinghouse and Urenco. These are valued relationships which we are keen to build on, including establishing a presence close to customers to support delivery and build the relationships. Globally we have customers in the USA, Japan and continental Europe, and we work with overseas governments and utilities as well as other national laboratories.

### L.5.6

### **Capabilities**

### World Class Nuclear Knowledge and Experience

NNL is the custodian of much of the UK's expertise and experience in nuclear fission technology. We have a great many of the UK's Subject Matter Experts – the national and international leaders in their specialist fields – many of whom have decades of experience. Collectively, their subject areas cover much of the nuclear fuel cycle, including nuclear waste management. In many cases their experience comes from time spent on operational nuclear plants, often coupled with working in – or with – academia. NNL also has a growing capability in advanced reactor technology.

Our technical expertise is matched by our operational pedigree, and by our capabilities across all of our professional services and supporting functions. For one of our expert scientists to simply put his or her hands into a glovebox in an active lab facility requires the combined efforts of a vast range of dedicated professionals in every discipline from safety case preparation to procurement.

Technical excellence and operational excellence work most effectively together, as two sides of the same coin – and the fact that NNL possesses a huge breadth and depth in each gives the organisation an indivisibility which makes us unique.

### Science and Technology (S&T)

Science, technology and innovation are collectively the heartbeat of what we do at NNL, bringing together critical infrastructure, equipment and expertise to underpin safety cases, minimise risk and underpin decision making. At NNL we re-invest our earnings to further our understanding of nuclear science. Our S&T agenda focuses on core science, disruptive innovation and nationally important strategic research that enable

national nuclear outcomes. Our approach is to do this collaboratively, enabling and leading partnerships nationally and internationally making best use of expertise, infrastructure and investment.

#### **Critical Nuclear R&D Infrastructure**

NNL is the custodian on behalf of the UK for a suite of critical nuclear research infrastructure which collectively is unique in the world – ranging from lab-based to production scale and a full range of activity levels. These facilities are capable of carrying out work across the nuclear fuel cycle and using many different materials. These are used to deliver a diverse portfolio of work from large scale, inactive demonstrations and technique development through to very small-scale measurement of highly active nuclear fuel. Working with universities and research institutions, we are increasing access to these unique assets.

The flagship NNL facility is our Central Laboratory at the Sellafield site, which is unique in the UK in having both non-active and active laboratories and a rig hall. Other facilities include:

The Windscale Laboratory (active handling and inspection)

The Preston Laboratory (uranium research and advanced fuel development)

The Workington Laboratory (non-radioactive test rig services)

We also have office-based facilities at Warrington, Stonehouse and Culham.

### 1.6.1

### **Business Performance Summary**

As noted earlier, this was again an excellent year for NNL. We achieved record revenue, and significantly exceeded our financial targets for the performance of the business. All this in a year when our ways of working were once again constrained by COVID-19 and needed to regularly adapt to the changes in guidance across all of our society. We continued to keep our people and their families safe and secure, whilst maintaining the new ways of working we had introduced for many of our people, including an element of remote working for the vast majority of our staff.

Despite our own success, we recognise that the year has again presented much greater challenges elsewhere in the sector – most notably further down the supply chain – and we will continue to assess the situation for our own suppliers to ensure we try to anticipate any issues.

Our business continues to evolve in readiness for further change. As our purpose – Nuclear Science to Benefit Society – becomes firmly embedded in our organization we strive to think and operate as a national asset.

Cash reserves at the start of 2022/23 remain strong. We anticipate that the impact of COVID-19 on our business will gradually reduce, and we do not expect it to present a significant cash challenge. But the implications of the evolving situation for cash will continue to be closely monitored and a dialogue maintained with the government shareholder to ensure the business has access to the cash it requires.

All of our key targets on safety, security, quality and environmental performance were achieved.

### 1.6.2

## **Key Performance Indicators**

The table includes the metrics used by management to monitor business performance. Revenue figures represent core business activities and differ to those disclosed in the Statutory Financial Statements which include income which is presented as a cost reduction in management reporting.

	2020/21 Results	2021/22 Target	2021/22 Results
Environment & Energy	0	Category 1-4 Events: 0	0
Health & Safety	0	Significant Events: <3 Actions Missed: 0	0 0
Security	0	Significant Events: <2 Actions Missed: 0	0 0
Quality	0	Category 4 Issues: <3	0
Culture & Assurance	0	Actions outstanding: <9 (per period)	3
Revenue	£128.3m	£130.1m	£129.9m
Earnings to Reinvest	£13.3m	£3.1m	£11.4m
Cash			
Forecast Low	£26.9m	> £8.0m	£26.5m
Year End	£40.2m	£30.6m	£42.1m
Efficiency: Utilisation	1369	Average Hours: 1326hrs	1307
Facilities Cost Base	£30.0m	Facilities Budget: £32.2m	£28.1m
Functional Cost Base	£19.3m	Functional Budget: £22.9m	£23.1m
Customer Satisfaction	Green	Green	Green
Publications	76	75	76

As the UK's National Laboratory, NNL operates to generate earnings to invest in the technical knowledge and capability which ensures that the country's civil nuclear fission energy programmes are delivered safely and cost-effectively. The level of earnings available to reinvest is therefore an important Alternative Performance Measure (APM). Earnings to Reinvest (ETR) is reconciled to profit from operations as follows:

Earnings to Reinvest	2022 £'000	2021 £'000
Investment in science & technology included in administrative expenses Items considered by the directors to be non-trading, included in administrative expenses	11,434 (5,803)	13,273 (4,243)
Difference between Pension contributions paid, and IAS 19 P&L charge included in administrative expenses	(2,915) 287	(3,803) 439
Difference in accounting treatment between statutory accounts and management accounts	208	369
Profit from operations	3,211	6,035

### Financial Review

We once again achieved a record revenue this year of £129.9m, an increase from the 2021 figure of £128.3m, which was itself a record. Our profit (earnings to reinvest) figure of £11.4m was broadly comparable to the previous year's result of £13.4m.

Investment in key infrastructure continued during the year resulting in property plant and equipment balances of £95.0m (2021 – £81.8m) at the year-end. An actuarial gain arising in the company's Defined Benefit schemes in the year resulted in an asset of £2.6m (2021 Liability (£0.1m)) being recognised. Following an extension of a rent agreement in relation to one of the company's laboratories the right of use asset and associated lease liability were remeasured in accordance with IFRS 16, this led to right of use assets valued at £12.6m (2021 – £9.9m), and lease liabilities valued at £12.4m (2021 – £9.9m)

At the statement of financial position date, the company had total assets of £204.3m (2021 – £179.1m) and total liabilities of £116.2m (2021 – £101.5m). Further details are set out in the Financial Statements on pages 88 to 117.

Revenue

£129.9m

Profit (earnings to reinvest)

£11.4m

•

Property plant and equipment balances

£95.0m

An actuarial gain arising in the company's Defined Benefit schemes in the year resulted in an asset of

£2.6n

Right of use assets valued at

£12.6m

.

Lease liabilities valued at

£12.4m

**A** 

Total assets

£204.3m

Total liabilities

£116.2m

1.8

### Future Outlook

The nuclear industry – both in the UK and beyond – continues to change, and NNL is adapting and changing with it.

We know that the overall level of funding available in the UK's cleanup and decommissioning market remains on a downward trajectory over the coming years, paralleling the anticipated reduction of work from EDF as the AGR stations reach their eventual closure dates, more of which were confirmed during the year. Our strategic collaborations with our biggest customers are based on understanding of their circumstances and position NNL to remain close to our customers, working together as we provide innovation, expertise and reliable capability across the sector. Despite the downward trend in the overall level of funding available, our customer relationships mean that new opportunities are expected to continue to emerge into the future to address the complex technical challenges presented by this market. Decommissioning funding will slowly decline but the market presents a lot of bespoke challenges that require technology solutions, which NNL is well placed to deliver or support. There is also growth associated with management of nuclear materials and provision of radiochemical analysis services - and as a result our position across the NDA estate (including SL) is steady. On the reactor front, the AGRs will be closing - but the ambition to have

an AMR demonstrator in operation by the mid-2030's set out in the government's ten point plan is a real opportunity for NNL. Lastly, MoD Futures presents a significant opportunity and there are further opportunities presented by greater future alignment between civil and defence programmes. Overall, NNL's UK market outlook is steady with significant potential opportunities.

Looking more broadly, and still notwithstanding the challenges of travel restrictions imposed due to the COVID-19 pandemic, the nuclear sector is becoming more globally connected. As it does so, we in the UK have an opportunity to re-establish ourselves at its heart. NNL continues to work closely with government to help achieve this, and with our unique national infrastructure, coupled with our breadth and depth of experience – encompassing new starters, mid-career professionals and globally recognised Subject Matter Experts - we will continue to consolidate and grow our presence on the international stage as we move forward.

Looking to the future, we will continue to grow a broad base of long-term programmes for government and major customers. We also strive to be more intimately engaged with our key

customers, to better understand and anticipate their needs, so that we can add more value to their work. Our purpose – increasingly a focus of our organization – emphasises the value we bring to society as a whole, through the missions of our key customers and the support we help to deliver to the UK economy and beyond.

As custodians of over £1.5 billion worth of unique and critical nuclear research infrastructure. supporting national missions, we will strive to ensure that they continue to receive the investment they need to remain operational and efficient. Alongside our facilities, we will ensure that we invest in our people and our future capabilities. We will work to transfer knowledge from this generation to the next – ensuring we can turn today's apprentices and graduates into the subject matter experts of tomorrow.

Science and innovation remain at the beating heart of our business, and we seek to establish a greater focus on the wider innovation landscape, enabling us to bring in appropriate developments from elsewhere into the sector, recognising the constraints and challenges of our industry. The effective exploitation of innovation will be crucial to the successful development of some of tomorrow's nuclear concepts - including novel fuel designs, space applications, disruptive decontamination techniques, and advanced reactor systems

#### 1.8 Future Outlook

that support new applications of nuclear energy, and the move the nation towards a sustainable hydrogen economy, powered by nuclear fission.

As we evolve to address the future. we are focusing on our purpose -Nuclear Science to Benefit Society - seeking to maximise the value we can add for customers and to society as a whole, through harnessing our expertise, experience, infrastructure and innovation. We will be guided by our enduring values and the associated behaviours, making sure that nothing compromises safety in any circumstances. We will continue to forge our role in driving innovation in the sector - nationally and globally, while operating more effectively across the organisation – better aligned to our purpose and strategic goals. In particular we will seek greater engagement with technology providers and developers, leveraging our capabilities and the critical national infrastructure under our stewardship to facilitate innovation that will benefit the sector.

The COVID-19 pandemic continues to have an impact on many aspects of life and business, both in the UK and globally (albeit – in the UK at least – to a lesser extent than at many times during the previous two years). NNL continues to put the safety of our people, their families and wider society first, whilst ensuring that vital work can continue to be delivered to customers.

At the time of preparation of this report, the future implications of



the COVID-19 pandemic remain unclear, although we anticipate that our activities in at least the early part of 2022/23 will continue to be impacted to some extent, with the rollout of our new hybrid ways of working for staff who are office-based. During 2021, COVID-19 was considered to represent a special Board risk and was managed via a business continuity approach with close engagement with stakeholders including NNL people, customers, BEIS and host Site License Companies/local communities. Following a review in December 2021, the board have agreed that any residual risk is more appropriately managed as part of business continuity.

As the 2021-22 financial year drew to a close, international events put the importance of energy security firmly in the spotlight, once again, and it was encouraging to see that this was recognised by government and opposition parties, alike.

As we look to the longer-term, our priorities for our business - in addition to our over-riding priority of safety - remain:

Delivering value to customers and society as a whole

Better tools to do the job with a high performing information technology platform

Development of people, values and behaviours

Becoming a better place to work – with lean and efficient processes

Safe, secure data and information

Investment in our infrastructure and facilities

These steps will all benefit our business as a whole, the people working within it, our customers and – ultimately – the wider UK nuclear industry and society.

1.9

# Risks and Uncertainties

NNL's directors remain confident about the future of the business. Nevertheless, risks and uncertainties do exist which could adversely impact future financial performance. Following a year which has once again seen significant resilience of the business to disruption, it is hoped that the impact of COVID-19 will lessen in the coming year. Nevertheless, we are confident that a resurgence of the virus

would not impact unduly on the NNL business, given the success of the measures taken over the past two years, and the relatively small impact on overall business performance.

Our approach to risk and opportunity has continued to evolve throughout 2021/22 as the new risk management approaches introduced in 2020/21 have become embedded within the business.

At board level, risk is managed through the Audit, Risk and Assurance Committee, which considers all matters of risk and opportunity across the business. The Environment, Health, Safety and Security Committee provides in-depth reviews across the Health and Safety of our business activities.

The principal areas of risk have further developed through 2021/22 and are set out in section 7.

1.10

### **Going Concern**

The company's business activities, together with factors likely to affect its future development, performance and position have all been considered. As part of assessing the company's ability to continue as a going concern particular focus has once again been given to assessing the impact of COVID-19. Management have again performed stress testing scenarios on the Company's balance sheet to assess the potential downturn the continued impact of the pandemic could have on its business.

Consultations regarding the impact of the pandemic have continued throughout the year with our critical customers and

suppliers and these helped to inform the sensitivities applied in the scenarios considered. In each scenario enough liquidity was demonstrated.

Based on the detailed cashflow forecasts prepared by management, which included any reasonably possible change in key assumptions on which the cashflow forecasts themselves were based, and assessing various scenarios relating to COVID-19 the directors continue to believe that there is a reasonable expectation that the company has adequate resources to continue to adopt the going concern basis in preparing these financial statements.

### **Approval**

This strategic report was approved by order of the board.

Shletse

**David Dukes** Secretary July 2022



suite of critical national infrastructure across several sites (including our own and those run by others). We handle a wide variety of highly challenging materials, many of which are highly radioactive, as well as working with heavy engineering machinery in our rig halls. The nature of the research we undertake often means we are undertaking unique processes for the first time.

This year we have experienced a significant increase in output and a record number of new recruits. All of this creates an environment where our focus on remaining safe and secure must be paramount at all times. We therefore continue to ensure Safety is incorporated into everything we do – and to sustain this ethos as a core value of our business and all our personnel.

We once again achieved an industry-leading performance, with no reportable events around either nuclear safety (related to the INES scale) nor to any aspect of our EHSS&Q activity. Continuous improvement is a key driver with notable improvement initiatives in leadership and supervision and workplace engagement realised this year. Relationships and interfaces with our regulators continue to remain strong and positive, with the annual intervention program completed without any significant findings.

Our continued response and arrangements implemented for COVID-19 ensured continuing operations and very low infection rates. Our focused exit planning and hybrid working strategy provided the foundations for a safe return back to our workplaces as well as providing a more efficient and effective working environment for the future.

We continue to review and de-risk our facility operations as we enhance and improve their infrastructure and capability in line with future national challenges.

We were proud to be awarded our 18th consecutive RoSPA Health and Safety award during the year. However, ensuring we remain vigilant and continue to learn lessons from events and nearmisses – both within NNL and across the industry – remains a priority. The health and wellbeing of all our personnel has been a focus of a variety of initiatives and campaigns during the year with excellent participation and interaction.

Combined with Safety, Security (including the increasingly important area of cyber-security) remains a key area of focus, with Security and Resilience processes becoming much stronger and more robust as we continue to build and sustain our Security Culture. Our Information Security certification (ISO 27001) surveillance assessment was successful after a comprehensive LRQA audit.

We maintained a strong performance in the area of Environmental management and control, with robust compliance with all Environmental Permits and Authorisations across all our facilities. This was supported by improvements in our processes to track energy usage and Streamlined Energy Carbon Reporting.

The surveillance audits of our Occupational H&S certification (ISO 45001), Environmental Management certification (ISO 14001), Energy Management certification (ISO 50001) and Quality Management certification (ISO 9001) were successfully undertaken, and all resulted in zero non-conformance.

We continued to identify, and progress, suitable disposal routes for difficult waste streams, with some long-standing legacy wastes disposed of this year.

The 'Achieving EHSS&Q Excellence' vision and long-term strategic plan to sustain a strong Nuclear Safety, Security and Conformance Culture, underpinning operational delivery excellence, continued to progress with the cultural maturity model road map indicating we continue to move towards a 'proactive' culture. The EHS Climate survey carried out supports this step change.

### 3.0 **COVID-19**



3.1

# Business Response to COVID-19

From the start of the COVID-19 pandemic there has been an ongoing level of activity to protect our people and wider stakeholders. This has continued throughout the 2021-22 financial year and the steps taken at the start have ensured the business has remained in good health. We have been able to deliver the vast majority of work to our customers, as planned, and have seen very reassuring business performance during both last year and this year. We have retained a prudent approach to operations within our laboratory facilities and to the return of our office-based

colleagues to the workplace. Simultaneously, we have begun a programme of redesigning office locations to be ready for our new hybrid working model, which will roll out early in financial year 2022-23. As noted earlier, as the 2021–22 financial year drew to a close, the COVID-19 pandemic continues to have an impact on many aspects of life and business, both in the UK and globally (albeit - in the UK at least - to a lesser extent than at many times during the previous two years). NNL continues to put the safety of our people, their families and wider society first, whilst ensuring that

vital work can continue to be delivered to customers. At the time of preparation of this report, the future implications of the COVID-19 pandemic remain unclear, although we anticipate that our activities in at least the early part of 2021/22 will continue to be impacted to some extent, with the rollout of our new hybrid ways of working for staff who are office-based. During 2021, COVID-19 was considered to represent a special board risk and was managed via a business continuity approach with close engagement with stakeholders including NNL people, customers, BEIS and host Site Licence Companies/local communities. Following a review of the board risks in December 2021, the board agreed that any residual risk would be more appropriately managed as part of business continuity.

3.2

### Impact of COVID-19: EHSS&Q, Customer Deliveries, Health and Wellbeing

Throughout the pandemic, we have brought our colleagues back into the workplace carefully and steadily to make sure everything was working as planned. For those colleagues who were working at home – indeed for all of our colleagues – we put their welfare at the top of our priority list and adapted quickly to ensure they had all the support we could give them – both practical and pastoral.

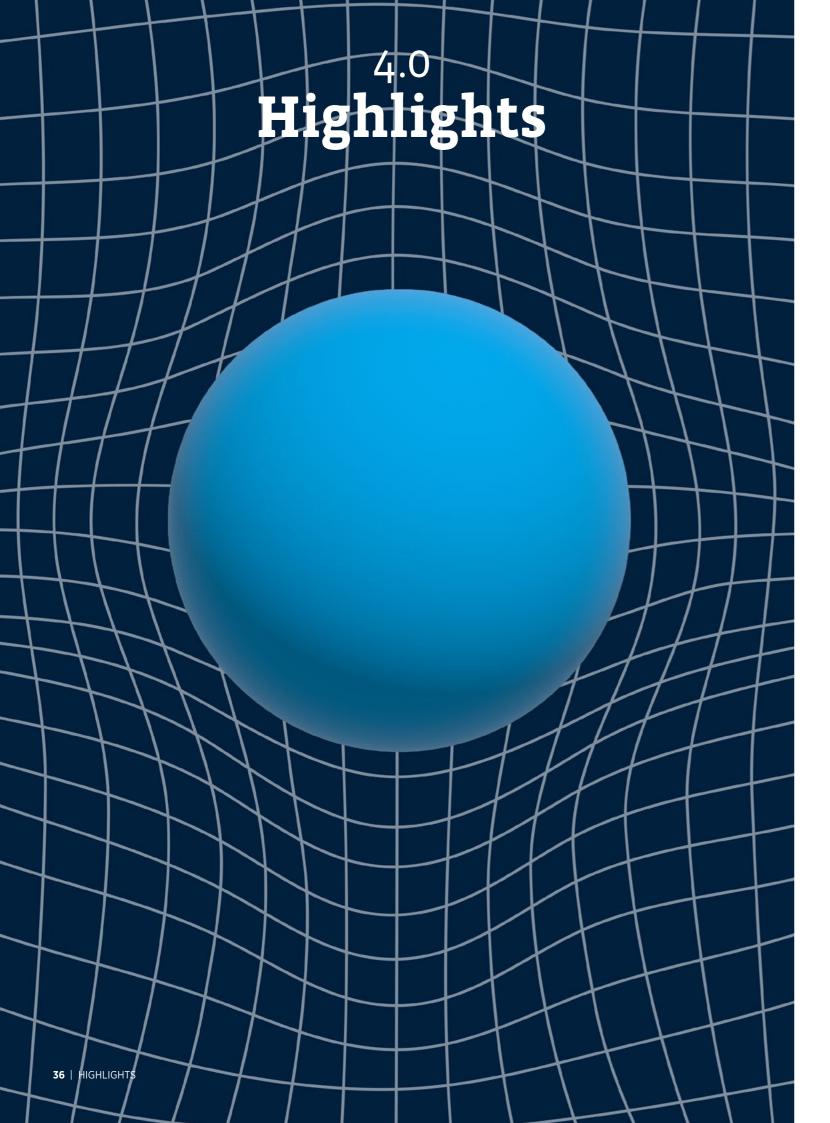
As the COVID-19 pandemic has continued, we have continued to work closely with our trade union colleagues to prioritise employee safety and placed an emphasis on mental and physical health and wellbeing. We have monitored employee sentiment and areas of concern through two COVID surveys and have continued to provide employee resources, emotional intelligence and personal resilience training, line manager support materials, raising awareness of our Employee Assistance programme (Lifeworks).

We are now shaping our final arrangements for the introduction

of a 'hybrid' working scheme that will maximise the benefits of home and office-based working for both the business and the individual. This includes redesigned office spaces reflecting modern ways of working and inspiring creation and innovation by putting an emphasis on collaboration and teamwork.

Our hybrid working scheme will continue to encourage flexible working wherever practical, to give our people the opportunity to better balance their work and personal/family commitments. NNL supports part-time working, with over one tenth of our workforce on part-time hours of some form.

It has been pleasing to see that the feedback from our regular employee surveys showed our efforts were appreciated and the measures we took had been effective.



### 4.1

### **Customer Highlights**

Whilst this has been a good year overall for NNL, we recognised that once again, the challenges of COVID-19 placed significant constraints on many of our customers. Some needed to defer or re-configure many of their own programmes of work, with a consequential impact on NNL. It was therefore all the more pleasing that we were, once again, able to deliver a record quantity of work successfully this year. NNL carries out a wide variety of activities for customers so it is always difficult to select specific highlights from a full year's worth of work. But a few examples worthy of note include:

#### 4.1.1 Sellafield Limited

Building on the bespoke Remotely Operated Vehicle work in the Vitrified Product Store (VPS), following the deployment mentioned in last year's report, the results of the inspection have been combined with modelling work undertaken by NNL and other engineering inputs, working in collaboration with SL, resulting in a formal decision to defer any VPS2 new build for around 50 years. This decision results in a cost saving to SL - and thus the UK taxpayer - of over £1bn.

Building on previous successes NNL has embedded key technical staff within SL's Strategy and Technical Teams with the Spent Fuel Management Value Stream and are defining technical requirements and work scope to support strategic decision

making regarding management and treatment of SIXEP wastes and also problematic solids and slurries from the Low Active Effluent Management Group (LAEMG). This work will enable SL and NNL to collaboratively develop key capabilities to support the site over the next 10-15 years.

Utilising their key skills in robotics operation and deployment, NNL are working in collaboration with SL to develop an automated system to undertake routine operations within Special Nuclear Materials stores on the Sellafield site, with the key objective of removing the human operator from the hazardous environment. This work is being delivered at NNL's Hot Robotics facility at its Workington Laboratory.

NNL has agreed new contracts worth £64M with Sellafield Limited to cover the continued operation until 2029 of a facility for opening, characterising and repacking cans of plutonium materials. This work provides technical underpinning to the continued safe storage of the UK's plutonium and its future treatment through a treatment plant currently being built at



### 4.1 Customer Highlights

Sellafield. The length of the new contract allows forward planning of recruitment to ensure a continued pipeline of skills and provides funding for maintaining and refreshing the key assets within this facility, which will come to the end of their operational life during the period covered by the contract.

Significant progress has been made in several areas on the Hot Isostatic Pressing (HIP) project, part of the plutonium disposition programme, that will subject the plutonium oxide powders and precursors to high temperature and pressure to immobilise the plutonium.

Most notably, NNL achieved a key milestone with the first can-incan HIP canister being completely fabricated at NNL Workington using only equipment identified for the HIP process. This marks the first time we have been able to weld and fully seal HIP canisters on-site and successfully demonstrates the canister fabrication process from start to finish

All of the glovebox internal equipment, for the preparation and mixing of the powders, the filling and welding of the HIP cans and for the coring and cutting of samples for analysis following the HIP process, has now been designed and successfully tested at NNL Workington

The Active Furnace Isolation Chamber (AFIC), the containment vessel for the HIP cans within the HIP furnace, has successfully passed a series of drop tests at NNL's sub-contractor works in Australia. The AFIC is crucial to ensure containment outside of the gloveboxes for transfer of HIP cans to and from the furnace

### 4.1.2 The Wider NDA Estate

Following previous successful work demonstrating the capability to thermally treat active waste within our Central Lab using the "Geomelt" technology, NDA, in collaboration with SL, have initiated a major piece of work with the objective of building three active thermal demonstrator plants to treat a variety of hazardous and challenging radioactive wastes, including plutonium-

contaminated materials. NNL are the key technical partner and have led the work on defining the R&D requirements to support the programme.

NNL completed a project on behalf of Dounreay Site Restoration Limited to safely process unirradiated uranium carbide fuel. The project involved development of bespoke tooling to allow removal of pellets from inside fuel pins, the pellets were then size reduced to increase

the surface area before being subjected to heat treatment to convert the material to a passively safe oxide suitable for long-term storage. The material has been consolidated with other stocks of NDA uranium at Capenhurst pending a final decision on reuse or disposal. Removal of this material from the Dounreay supported DSRL's programme to reduce hazards on the site and provided an opportunity for re-use of the material.

Extension to AFCP

PhD / Postdoctoral students supported



### Support to Government

#### 4.2.1 **NIRO**

The National Nuclear Laboratory (NNL) is the government's centre of expertise for nuclear fission. Part of its remit involves providing technical nuclear advice to policy teams. This is delivered though the Nuclear Innovation and Research Office (NIRO): a division of NNL operated on an independent, arms-length basis and staffed by experts from across the nuclear industry.

NIRO is designed to provide BEIS with immediate access to strategic and technical advice and guidance. NIRO members work closely with teams in SICE and Nuclear Directorate and, when not prevented by COVID-19 restrictions, have in the past spent time working from BEIS offices.

Throughout the year NIRO has supported BEIS on a variety of areas including:

Worked with more than 90 **UK** organisations

Supported over 90 PhD and postdoctoral students

Nuclear Innovation programme

Innovation and Research Advisory

Advanced Nuclear Technologies

including Small Modular Reactors

and Advanced Modular Reactors

including advice on COP 26 and

IAEA and a number of bilateral

Support to activities relating to

International Engagement

Public Dialogue, integrated

approaches with NEA and

Delivery of Large Nuclear

the Nuclear Sector Deal

R&D collaborations

Secretariat for the Nuclear

Board (NIRAB)

Delivered work in more than 20 UK facilities and delivered 10 new **UK** capabilities

Generated over 100 publications, presentations and peer reviewed journal papers

Supported significant TRL increase across advanced fuels and fuel cycle

Leveraged over £130 million in international programmes

Underpinned work with more than 25 organisations across 11 countries

Delivered significant influence in multi-lateral programmes with IAEA, OECD-NEA, GIF and EU Horizon projects

### 4.2.2 Advanced Fuel Cycle **Programme**

Following on from the success of the £46m Advanced Fuel Cycle Programme, in 2020-21, we were delighted to secure a £10m extension to the programme this year.

The programme is themed around four strategic objectives of Capability, Capacity, Cost Reduction and Collaboration.

which together support the manufacture, deployment and accessibility of clean energy and sustainability technologies in the UK.

Impact is focused around 8 key areas across science and society - including Innovation, People, Infrastructure, and Supply Chain - taking an integrated approach that targets the various ways in which nuclear innovation will support the UK's future.

Overall, the £56m AFCP programme has:

International programmes

Organisations Countries

**38** | HIGHLIGHTS SUPPORT TO GOVERNMENT | 39

### 4.3

### Enhancing Our Critical National Infrastructure

COVID-19-secure arrangements remained in place across
Central Laboratory, Windscale,
Workington and Preston in response to the pandemic,
enabling critical operations and customer delivery to continue uninterrupted.

Across the NNL estate we have continued to improve and enhance our critical national infrastructure and office spaces. Most notably, we have successfully delivered major progress under the BEIS-funded CAMILA programme, and secured £79m of future funding for "CAMILA 2" from government, which will be spent on transforming asset management.

At our Preston Laboratory funding under the CAMILA programme has been used to improve the working environment by addressing the condition and performance of some of the facility's older assets. Additional CAMILA funding has helped to underpin our future activities by replacing or refurbishing equipment and introducing new capability.

At our Central Laboratory substantial improvement has been

made to improve the condition of the building's roof, as well as improvements to the welfare facilities in the building and reconfiguring of spaces to be more suitable for future working patterns in both labs and office areas. Work is also in progress to upgrade the radiometrics capability in the building.



At our Windscale Laboratory
CAMILA funding has been
deployed to upgrade many aspects
of the fabric of this older building,
and to restore many aspects of the
building's services and welfare
infrastructure to the levels

expected of a modern workplace.

In our office locations we begun the process of transforming office spaces into locations suitable for hybrid working, which we see as the way forward for NNL, starting with our largest office location – Chadwick House in Warrington – which has undergone a major reconfiguration and refurbishment.

A key part of our role as national laboratory is to allow others to access our critical national infrastructure where appropriate and we continue to strive to open our facilities, particularly for academic access. That activity needed to be curtailed during the year due to COVID-19 restrictions. However, we were once again able to provide physical access to existing embedded academics, plus an element of remote access for new academic researchers allowing them to specify work to be carried out by NNL staff. We remain committed to returning to normal levels of access as soon as possible once circumstances allow, as we recognize that this collaborative approach enhances the capabilities of our people and the wider nuclear industry.

### 4.4

## Science, Technology and Innovation

The UK environment is changing with respect to the role that nuclear will play. Decarbonising the energy sector by 2050, creating sustainable environmental solutions and enabling production of medical isotopes for health will all be key for a sustainable future. In line with NNL's purpose and strategy a new Science & Technology (S&T) agenda was launched last year. S&T is the heartbeat of NNL and will enable successful delivery of NNL's purpose - Nuclear Science to Benefit Society.

The S&T agenda builds on the successes achieved to date, focusing on national requirements and enabled through collaborative partnerships with academia, industry, government and international organisations.

It is made up of three key pillars:

Core science (focused on themes that develop core skills, utilise critical national infrastructure and drive university collaborations)

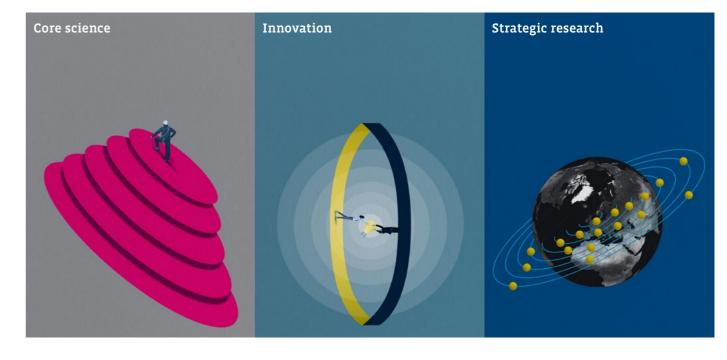
Innovation (disruptive innovation created from innovative ideas, customer led challenges and industry wide partnerships)

**Strategic research** (programmes underpinning the future national agenda that leverages R&D programme investment)

This is all underpinned through collaboration that will accelerate R&D solutions and enable access to critical R&D capability through the sharing of resources (people, knowledge and infrastructure).

Through this agenda, our experts provide thought leadership through active engagement on national and international committees, meetings and advisory panels. As part of this agenda, we are expanding our fellowships within NNL to broaden the areas that the fellowships cover and also to introduce an early careers associate fellowship programme.

NNL S&T investment will continue to focus on the creation and delivery of key scientific outcomes that will benefit both NNL and the whole nuclear industry.



40 | HIGHLIGHTS SCIENCE, TECHNOLOGY AND INNOVATION | 41

### 4.4 Science, Technology and Innovation

### Some highlights from this past year include:

Our NNL S&T Agenda was fully incorporated into a £30M multiyear programme to 2026

A record 76 peer reviewed journal publications were published this year and during the year we reached a cumulative total of over 10,000 citations for NNL journal publications

Self-funded R&D has leveraged a total revenue of £27.6m this FY

Three new core science themes were established – in Health and Nuclear Medicine, Irradiated Fuel Characterisation and Nuclear Hydrogen

We hosted a roundtable event on nuclear derived hydrogen, bringing together cross-sector experts to deliver recommendations into government as part of the Nuclear Sector Deal

We hosted the world's first Global National Laboratories Energy Summit - in the year of the UK presidency of COP26 – starting a collaboration in Integrated Energy Systems with international national laboratories across the energy sector

We saw well-deserved recognition for some of our experts: NNL Fellow Nassia Tzelepi was awarded the Institute of Physics (IoP) Dennis Gabor Medal and Prize and the ASTM International Award of Excellence in recognition of her dedicated efforts, technical contribution and leadership as Chair of Subcommittee on Manufactured Carbon and Graphite Products. Also, NNL Fellow Dave Goddard was appointed as visiting Professor in Nuclear Fuels at Bangor University

Disruptive open innovation: we have successfully launched and delivered challenges across our four focus areas connecting with more than a hundred organisations and initiating innovative work programmes on areas including alternative materials for encapsulation, manipulation of americium in a glovebox for space applications, flexible films for

nuclear physics and medicine experiments, technology to scale thermochemical production of hydrogen and shape sorting of coated particle fuel for high temperature reactors

We published some groundbreaking full energy system modelling with Energy Systems Catapult and detailed future fuel cycle R&D roadmaps as part of our Strategic Research area under the joint BEIS and NNL led Advanced Fuel Cycle Programme (AFCP)

Our S&T Agenda is supporting over 100 PhDs across our world leading UK universities

£30m

multi-year programme
to 2026

100
PhDs supported by S&T Agenda

£276m

Revenue leveraged by self-funded R&D

Peer-reviewed journals

# Taking our Business Forward

Our programmes of business enhancement over recent years have paid dividends during the year. As we responded to the COVID-19 challenge, our organisational design ensured clear lines of accountability and our SmartSource IT platform continued to be transformational in facilitating the business to continue to function with the vast majority of colleagues working from home. The most recent phase of the project, 'Sustainability of NNL' ensured that efficiencies, savings and growth were embedded into the business, ensuring a sustainable business model going forward. Vital examples include the move to secure cloud-based computing, which was pioneering in our sector, and which remained a cornerstone of our ability to work remotely this year.

Empowering people from *all levels* in the organisation to own their challenges and develop and implement appropriate solutions.

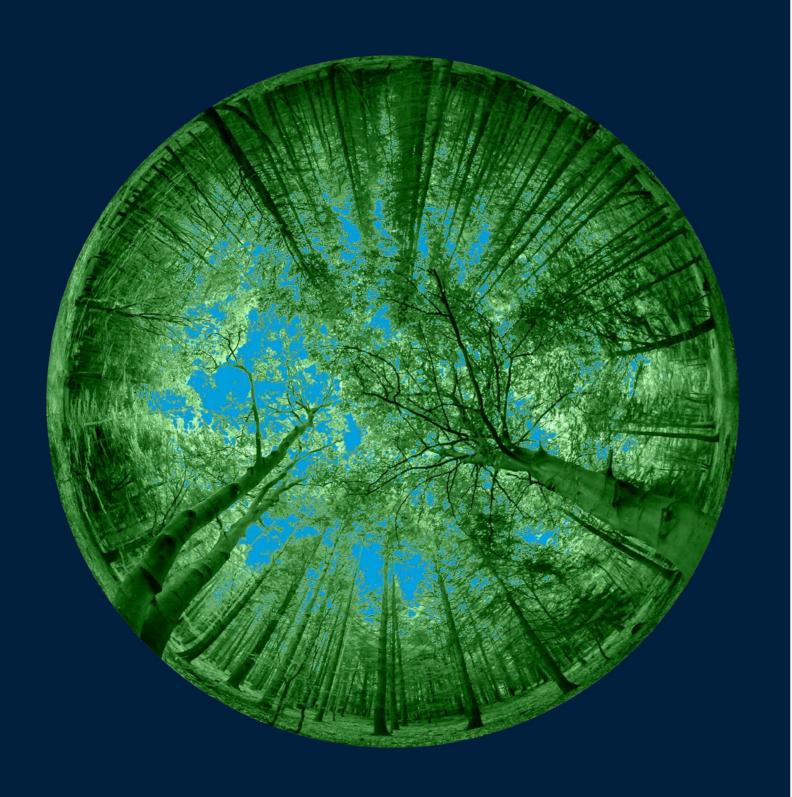
Our Delivering Excellence programme continued through the year and - once again - embodied a multitude of different projects from across the organisation and produced significant benefits for us. Some of these were financial - savings of many tens or hundreds of thousands of pounds in saved effort and reduced use of commodity items. More important though were the softer benefits – such as the personal development recognised by all of the individuals who took part in these projects, the upskilling

in teamwork and collaborative skills and the cultural change of empowering people from all levels in the organisation to own their challenges and develop and implement appropriate solutions.

As we move forward, we remain focused on becoming more purpose driven as an organisation and looking for ways to deliver benefit to wider society as well as serving our customers. Our business improvement activities put the organisation on a strong foundation to do that.

42 | HIGHLIGHTS TAKING OUR BUSINESS FORWARD | 43

### 5.0 Sustainability



stainability is a core focus for NNL. We are committed to do all we can to help minimise any negative impacts on the planet as we strive to develop the clean energy the world needs.

This year saw the sustainable business mandate move from a range of ad hoc and largely responsive activities, to being a named key strategic priority for the organisation.

The inclusion of 'purpose-driven and sustainably-led' in the strategic themes and business objectives powerfully signals to our internal and external stakeholders the concern, focus and commitment NNL has towards ensuring that we deliver to our stated purpose, to be of benefit to society, and ensures that we do so through **how** we do business, as well as via **what** we do.

Our sustainability ambitions as a business are as follows:

- 1. Environment: We will achieve \*net zero (scopes 1 & 2), reduce our environmental impact by half and double positive contributions to our natural systems, by 2030
- 2. Society: We will maximise our social impact, benefiting our people and our communities
- 3. Economic: We will optimise for practices that support long-term inclusive economic growth and financial stability to support our national missions, whilst balancing this with broader measures of value and performance

Among the steps we have already taken this year, in addition to the appointment of our first Head of Sustainability and ESG (Environment, Social and Governance), are:

We joined as signatories to the UN Global Compact

We invited all staff to join Giki Zero, to help understand their own carbon footprint and how this could be reduced

Whilst we recognise that offsetting prior CO2 emissions is not a long term sustainable approach, we feel it is a responsible step to take. Accordingly, we have purchased 'Gold Standard' carbon offsets to account for NNL's emissions covering two years prior to the current financial year

We are in the process of ordering an Electric Vehicle (EV) and will be putting in EV charging at our Workington facility as well as investigating additional EV infrastructure needs across our wider estate

44 | SUSTAINABILITY

### **5 Sustainability**

Looking to the longer-term, we have developed a series of 'Good Growth' sustainable business objectives as follows:

- 1. People: Embed and enable positive social impact and pro environmental decision making into our ways of working, clearly communicate our sustainability goals and support an inclusive programme of staff upskilling and engagement. Prioritise wellbeing and meaningful work for all and support employee-led action towards the UN SDGs
- 2. Society & Economy: Maximise the value we create for, and investments in our communities, supporting a sustainable, equitable and inclusive economy, designed for the long-term and protecting the interests and needs of future generations
- 3. Emissions: Meet our net zero 2030 target and move, over time, to a Net Positive contribution
- 4. Resources: Improve the efficiency of our material resource use and reduce waste across all categories
- 5. Procurement: Drive environmental and social benefit through our supply chain and support the growth of a circular economy, building trust and transparency through aligned objectives and collaboration
- 6. Beyond NNL: Support the global Sustainable Development Goals and the systems changes required to deliver enduring and inclusive economic benefit. Considering our whole value chain impacts and assess the areas for greatest potential collaboration



### 5.1

# Our Engagement with Local Communities

A significant part of our sustainability agenda involves engagement with the local communities where our sites are based, and where our colleagues and their families live. The opportunities for that engagement to take place on a face to face basis have largely been curtailed this year, by COVID-19, but we have continued to do as much as we can.

We ran a series of successfully employability workshops, which were delivered to the long term unemployed, and these saw a high percentage (75%) of those who attended going on to apply for roles in nuclear sector.

NNL has always maintained a programme of Corporate Social Responsibility (CSR) and outreach activity focused predominantly on supporting Science, Technology, Engineering and Maths (STEM) in and around the communities where our facilities are based and where our people live. Obviously, this has been especially challenging during the year due to the constraints of the COVID-19 pandemic, which have prevented such activities from taking place face-to-face. Nonetheless we

have continued to support such activity as far as was practicable whilst looking forward to the opportunity to resume face to face interactions.

#### Our activity this year included:

We continued to offer structured week-long work experience placements to young people. Instead of hosting them in our facilities we moved the activity online and refreshed the programme content accordingly. Feedback was extremely positive

We also hosted three students on the Dream Placement work experience scheme in February 2022 – which this year was run as a hybrid week – partially online and partially in our facilities

Fresh fruit, which would normally have been provided free of charge to our colleagues in our workplaces, has instead been donated to local food banks, since several of our workplaces have been largely empty throughout the year

During the year we also supported and encouraged a number of NNL employees to support STEM and outreach activity taking place remotely – such as careers fairs and virtual visits into schools, and we know that significant extra support was provided by our people in their own time.

NNL is also an active supporter of Women in Nuclear (WiN) UK. NNL were the Industrial Partner of WiN for 2020, which saw the two organisations work together to address the industry's gender balance and improve the representation of women in leadership. Of our employees, 29% are female, and many (both female and male) are members of WiN. Of our seven locations, four - including the two largest already hit or exceed the Nuclear Sector Deal target of 40% of staff being female. And four of NNL's ten board members are female matching the Sector Deal target.

Future strategy development work will focus on Sustainability as a core NNL strategy and NNL's work with local communities and CSR activities will be encompassed within it.

46 | SUSTAINABILITY

OUR ENGAGEMENT WITH LOCAL COMMUNITIES | 47

### **5 Sustainability**

5.2

### Environmental Performance (Streamlined Energy and Carbon Reporting)

Our Annual Energy Review included an intensity ratio calculation for the UK government's Streamlined Energy and Carbon Reporting (SECR). Our reviews indicated our facilities have a relatively consistent energy usage, and we have shown

a continuing reducing energy intensity ratio, although – as last year – COVID-19 restrictions have had an impact on some operations this year, notably business travel, so the extent to which this reduction will endure is difficult to quantify at present.

NNL Streamlined Energy Carbon Report (SECR)	2020-2021	2021-2022
Data  Energy consumption used to calculate emissions (IVMI)	Electricity: 9,386,637	Electricity: 9,406,851
Energy consumption used to calculate emissions (kWh)	Gas: 563,436	Gas: 530,321
	Steam: 8,173,746	Steam: 8,006,642
Scope 1 Emissions from activities for which the company own or control including combustion of fuel & operation of facilities (tCO $_2$ e)	Gas: 104	Gas: 108
Scope 2 Emissions from purchase of electricity, heat, steam and cooling purchased for own use (tCO <sub>2</sub> e)	Electricity: 2,188 Steam (CHP): 1,411	Electricity: 1,997 Steam (CHP): 1,366
Scope 3 Total emissions from business travel in rental cars or employee- owned vehicles	Kilometres =115,829 <b>Transport</b> = <b>20 tCO</b> <sub>2</sub> <b>e</b> (Employee travel restrictions due to COVID-19)	Kilometres = 536,123 <b>Transport = 88 tCO<sub>2</sub>e</b> (Authorised travel)
Total gross Scope 1 & Scope 2 emissions / tCO <sub>2</sub> e =	3,702 tCO₂e	3,471 tCO <sub>2</sub> e
Intensity ratio: tCO <sub>2</sub> e (gross Scope 1 + 2) / £1,000,000 revenue	3,702 tCO₂e/£132M Intensity Ratio 28.0	3,471 tCO <sub>2</sub> e/£128M Intensity Ratio 27.1

a) Total gross emissions are noted in 'tonnes of carbon dioxide equivalent' (tCO,e).

**6.2%** reduction in tCO<sub>2</sub>e

3,471 tCO<sub>2</sub>e in 2021-2022

3,702 tCO<sub>2</sub>e in 2020-2021

NNL is accredited to ISO 50001:2018 Energy Management and is committed to improving energy performance and mitigate excessive energy use as a result of business activities, by applying effective energy management, through controlled processes and effective risk management, with continual energy efficiency improvement activities.

Methodology: NNL boundaries are defined as three active facilities, one non-active facility and four offices – approximately 75,000m² in total. The company has established and actively uses an energy baseline; using a systematic, data driven and fact-based process, focused on continually improving energy performance. NNL monitors and measures all energy consumption,

using meter readings for facilities and energy data supplied by landlords for offices in shared buildings. Estimates are used for one office extrapolated against historical data and checked against a metered office. NNL energy consumption is well understood – deviations from expected energy usage are understood and relatable to work patterns or outages.

Continuous Improvement: NNL's carbon footprint is relatively steady year-on-year, and our energy intensity ratio is steadily decreasing through various education measures, including eLearning, regular promotion of best practice on reducing environmental impact and energy management awareness. Physical improvement measures

include refurbishment of facilities, care and maintenance and equipment purchasing, considering both sustainability and energy efficiency. NNL established environmental & energy management improvement activities across fourteen departments, progress was measured and monitored, and formally reported as a Key Performance Indicator (KPI).

In summary, NNL's facility operations have continued through COVID-19 restrictions, and the data indicates a steady carbon footprint. NNL has maintained full accreditation to ISO 50001 and ISO 14001 demonstrating commitment to protecting the environment and energy management in our daily operations and services.

48 | SUSTAINABILITY

b) Government conversion factors for company reporting of greenhouse gas emissions have been used to derive tonnes of carbon dioxide per annum from each energy source.

### 6.0 Our People



his year saw a continuation of our response to the COVID-19 pandemic; maintaining our focus on ensuring our people were kept safe, supporting their needs, and maintaining the availability of our critical national infrastructure wherever possible. Our people have shown fantastic resilience and commitment during the pandemic; whether that be workers who attended site throughout the last two years, or those who continued to work from home; overcoming the different personal challenges that this brought for so many.

Despite the disruption of COVID-19 we have continued to deliver as many elements as possible of our People Strategy programme. We have focused on preparing for the return to the workplace and the implementation of hybrid working arrangements, to maximise the benefits of home and office-based working for both the business and the individual.

50 | OUR PEOPLE OUR PEOPLE

In this section we consider our activities during the year under the different headings of the **People Strategy** as follows.

### Define

of developing new talent and this year we were proud to double our annual intake of graduates and apprentices. In September, we welcomed a total of 54 new Apprentices, Graduates onto our redesigned Early Careers programmes, which will provide our new joiners with the best foundation for entry to the business and the wider nuclear sector. We also launched a new entry route for those Early Career people who have a PhD or equivalent qualification to join our new Postdoctural programme; a first of its kind for the nuclear sector. We expect to increase our Early Careers intake again this year as we maintain our commitment to offering opportunities to the next generation of talent.

NNL recognises the importance

Externally we continue to contribute to the nuclear skills landscape review by providing an overview of NNL's current capability and capacity across the entire nuclear fuel cycle. We also sit on the steering board of the Nuclear Skills Strategy Group, where we provide specific input on the higher level skills and

innovations required to deliver the sectors future aspirations. We also continue to contribute to the alpha capability and capacity review, which aims to understand the fragile skills picture in the UK with regard to handling and working with Special Nuclear Material. The BEIS funded Advanced Nuclear Skills and Innovation (ANSIC) project provided a backdrop this year to pilot a number of skills, training and education outreach activities which have been delivered to a wide number of stakeholders over the past year. This has included employability workshops, developing education content for schools, colleges and universities and in defining processes around international secondments.

Our workforce skills assessment exercise has reviewed our current technical skills and capability levels; and looked at our requirements for the next five years, as well as helping to inform discussion on the outlook for skills in the longer-term. Time and effort have been invested in our succession planning for scarce skill technical roles.

### Attract

This year we have again attended virtual Early Career showcase events and after running online selection processes for both graduates and apprentices we were proud to offer 19 graduates, 19 apprentices and 20 post-docs places in our business. We were also able to move all of our work experience placements online and participated in virtual education outreach events throughout the year.

As a result of changes made during this year, all of our Early Careers intake are now recruited on permanent contracts to ensure they have no worries or concerns about the certainty of employment on completion of their programme and we have increased our EC support team to provide additional wellbeing and pastoral care whilst our EC people are on programme with us.

We have also continued to run the 'Becoming Me' personal development course and a series of career podcasts to showcase career pathways within our organisation. And finally, we have embedded Early Careers coordinators through our Delivery Operations organisation to further assist in the integration of our Early Careers people as they enter into their business function.

We have invested significantly in rebranding our recruitment campaigns and expanding our use of recruitment platforms to help us attract the best talent to NNL. We have used our ED&I agenda to look at how we attract and retain talent in our organisation and have, wherever possible accommodated a number of reasonable adjustments and flexible working requests.

### Acquire

Our new NNL interview framework continues to ensure we recruit individuals who share our NNL values and behaviours and will embody the culture and mindset we wish to create in our organisation.

Despite the ongoing challenges presented by COVID-19 we have welcomed over 220 new employees to NNL. We have invested in continuing improvements to our onboarding processes to enhance the experience of our new joiners and have continued to run our online induction programmes which continue to receive very positive feedback from new colleagues.

### Deploy

During the year we have further developed our succession planning processes to strengthen our resilience in the skills and knowledge required for our organisation's safe, effective and efficient delivery of our 10-year plan.

Succession plans are in place for all our senior leaderships roles and the succession planning process has been extended to cover all of our business functions; identifying our critical roles and helping ensure a pipeline of talent for these roles is in place in the short, medium and longer-term future.

We continue to collaborate with other organisations across the UK nuclear sector-to offer secondment opportunities including inter-project exchanges such as through the Alpha Resilience Capability project as well as to BEIS and NIRO, as well

as colleagues on secondments to the British Embassy in Tokyo and to AIRTO (the Association of Innovation, Research and Technology Organisations). Similarly we have supported the NDA rotational graduate programme, welcoming a number of placements to the business in the last year as well as appointments from academia.

During the year we have been proud to share some of the individual success stories of our amazing colleagues. We were delighted once again that three of our colleagues were selected as finalists at the prestigious Nuclear Skills Awards, held in March 2022. Kerry Jackson won the overall Apprentice of the Year Award; James Dewar won the Graduate of the Year Award and Emin Vernon was shortlisted as a finalist in the Innovation in People and Skills Development / ED&I category.

Our colleague Nassia Tzelepi won both the 2021 Institute of Physics (IoP) Dennis Gabor Medal, and the ASTM International Award of Excellence in recognition of her dedicated efforts, technical contribution and leadership as chair of one of the society's subcommittees.

Rodosthenis Charalampous won the European award for innovation for his CINDe project, Gemma Lewthwaite and Jemma Atkinson were on the YGN winning team for the Dounraey decommissioning challenge, Aydin Can won first prize for the best Graduate Student Poster competition and Josh Turner won the ANS Award for Best Poster Presentation/Paper at the Waste Management Symposia 2022.

In addition to all of the above, NNL is also proud to have a number of employees who hold visiting professorships at various UK universities.

### **Engage**

As we continue on our journey to develop a 'purpose-led' and sustainable NNL it remains vital that we stay connected and aligned with our employee's values, principles and needs, so that we can understand and enhance 'what it means' and 'what it feels like' to work at NNL.

We are currently piloting our new engagement tool to be launched in 2022. This will enable us to better reach out to employees on any issue, and the insights provided by advanced data gathering and analysis capabilities will help inform our approach and decision making on people related issues.

NNL has a fundamental commitment to open communications and two-way engagement with all our employees. We continue to engage and involve employees in the design and development of solutions relating to our People projects and activities, and we regularly share business updates; whilst these have been online throughout the last 12 months we look forward to meeting in person as we implement hybrid working during 2022.

Our monthly Trade Union Forum is an established part of our HR calendar that allows us keep trade union colleagues closely involved in what is happening in the business, so that together we can continue to make NNL a great place to work.

52 | OUR PEOPLE | PEO

### 6.0 Our People

#### Science & Technology

Following the launch of our NNL ED&I Strategy and awarding of the National Equality Standard (NES) accreditation of our programme in 2020–21 we have continued to make progress on the delivery of our Equality, Diversity and Inclusion agenda.

Our ED&I representatives continues to provide input into all our people working groups, and our ED&I team has continued to bring the company together for some competitive but lighthearted fun on the final Friday of every month. We remain proud supporters of Women in Nuclear and the NSSG ED&I initiatives.

This year we have appointed an ED&I Manager to oversee the delivery of our 5-year ED&I plan and to coordinate the recommendations from the NES accreditation process. We have begun a campaign to collect ED&I data across the company to enable anonymised analysis, with the aim of understanding of how we fair from a diversity point of view.

To date approximately 25% of employees have chosen to share their data with us. We have also been pivotal in establishing a Racial Equality in Nuclear (REiN) initiative, specifically focussed on supporting ethnic diversity across the nuclear sector.

Our 2021 Gender Pay Review report has been produced and demonstrated good progress on some key input measures. As we continue to strive towards the Nuclear Sector Deal target of 40% of employees being women, the number of NNL employees identifying as women is currently 29%, against a current industry average of 20% (22% in the civil nuclear sector). Encouragingly, women accounted for 37% of our new starters in 2021, which is the highest level ever recorded for NNL. Our percentage of women in lower graded roles has increased to 40%, reflecting an increase in women joining through Early Career programmes. We still have a lower percentage of women in senior technical and laboratory roles which are still predominately being performed

by men and hence are looking at ways to address this imbalance through our career pathways and talent management programmes.

Number of NNL employees identifying as women is currently 29%, against a current industry average of 20%

Our mean gender pay gap has actually increased slightly in the last 12 months to 11.2% (mean), however the median has decreased to 14.4%, as a result of some senior female leavers. This compares favourable to the national average pay gap of 15.5% and is lower than known pay gaps for many other organisations within the UK nuclear industry.

### **Health and Wellbeing**

In 2020-21 we appointed our first NNL Health & Wellbeing Manager to raise awareness and promote the importance of positive physical and mental health and wellbeing.

This year, we have been further building on that foundation and have identified a team of wellness champions from across the business. We have also continued to support our employees by providing a range of resources, including access to a free 24-hour employee assistance programme – Lifeworks – where employees and their families can access confidential support on a range of topics, from coping with

difficult personal situations to managing finances. As in previous years, we continue to offer autumn flu jabs to all employees.

We have offered new e-learning modules on mental health awareness, changing behaviours, personal agility and resilience. We have agreed and shared a wellbeing calendar with a wellbeing focus highlighted each month and have promoted a 'watercooler sessions' initiative where for an hour a month people from across the business can drop in for an informal chat. At the end of the year we identified a supplier for a new employee benefits programme that will be launched to our employees in the first quarter of 2022–23.

### Develop

This year we launched our new NNL Leadership Framework. Our Framework sets out the standard for good leadership at all levels of our organisation; and we see creating a community of supported and inspiring leaders as a key part of developing a culture where all our people feel valued and can flourish.

The Framework is underpinned by our values and behaviours and aims to ensure consistency across all levels of leadership, whilst supporting employees in their roles as Nuclear Professionals. At the heart of our Framework, is Leadership Integrity, which is expected at all levels of our organisation.

The Leadership Framework will be a key enabler as we launch our 'New Clear Leaders' leadership programme in April 2022. This will be part of the significant investment in developing our people leaders and colleagues who 'lead through influence' and supporting them to be 'the best they can be'.

We have continued to develop our annual Performance Development Review process to directly incorporate our NNL values and behaviours and so that the new Framework can be meaningfully used as a component of the review process.

During 2021 we continued to offer Development Centres at Early Careers, Middle Manager and Senior Leader levels to help employees understand their key strengths and areas for development, providing each attendee with a personal development plan and a mentor to support their ongoing progress.

As in previous years, we have also continued to offer a programme of self-nominated Behavioural Skills modules, which were focused this year on personal resilience and emotional intelligence.

This year we launched our NNL Science and Engineering Career

Pathways. Career Pathways help people understand how their own role fits into the wider NNL organisation, and provide insights and information that will help individuals develop their careers and work towards the roles that they aspire to; whether this is through gaining greater depth in a specific professional discipline or adding breadth of knowledge and skill by moving into different careers in different areas of the business.

Our new Careers Lab offers employees a fantastic range of resources to support their career development planning; from identifying their next training courses through to planning longer term career steps.

In total during the year we have delivered 7651 e-learning courses to support induction, compliance, access to NNL's facilities/systems and health and wellbeing activities, however we look forward to recommencing face to face classroom training in 2022–23.

#### Separate

Our leavers process continues to ensure a consistent leaving process and provides us with an opportunity to thank leavers for their contribution to our organisation. The leavers interview provides us with a rich source of information and feedback from which we have been able to identify key themes and consider changes that will improve the employee experience for others.

#### Measure

In collaboration with our trade union colleagues we have completed the review of our family focused people policies and processes to ensure they reflect the modern work experience, which we will be rolling out in April 2022. This activity will continue next year to similarly modernise the remainder of our policies and processes.

This year we have developed and introduced monthly HR scorecard metrics to optimise our analysis, reporting and presentation of data and information to inform decision-making.

We have introduced self-service across the business and continued to implement continuous improvements to automate people processes and will provide better and more accurate employee data.

54 | OUR PEOPLE | 55

For the Year Ended 31 March 2022

NNL is a private company limited by shares, and as a consequence of its ownership by BEIS is classified by ONS as a Public Corporation. NNL is not required to comply with the provisions of either the Corporate Governance in Central Government Departments: Code of Good Practice or the UK Corporate Governance Code 2018 but aims to take appropriate account of the principles and provisions of both codes, to the extent that they apply. Similarly, under the terms of the Framework Document, NNL is required to comply with the provisions of Managing Public Money to the extent that they apply.

The following Governance Statement provides an insight into the corporate governance framework of NNL during 2021/22.

#### **Governance Framework**

The board has responsibility for establishing and taking forward the strategic aims and objectives of NNL whilst maintaining a sound system of internal control that safeguards NNL's assets. The board supports high standards of governance and, in so far as is practicable given the business's size and status, has, together with UKGI, continued to develop the governance of the business in accordance with the Corporate Governance in Central Government Departments: Code of Good Practice, the UK Corporate Governance Code 2018 and Managing Public Money (MPM).

The NNL Framework Document was entered into in August 2019. During the financial year BEIS undertook a review of NNLs Operational Model. The review (which remains subject to final sign-off by BEIS) found that the model remains fit for purpose but will remain under review as HMG Policy develops. The Government Functional Standards were introduced during 2021 and work is currently underway to align NNL functional processes and procedures to the Government Functional Standards.

#### **Board and its Committees**

During the financial year ended 2021/22, the board of directors has comprised a Non-Executive Chair, four further Non-Executive Directors and five Executive Directors (the Chief Executive Officer, Chief Financial Officer, Chief Customer Officer, Chief HR Officer and Chief Science and Technology Officer).

The board met eight times in 2021-22, including board workshops in September and December. Attendance by members at the board and committee meetings are set out in the table below.

Name	Position	Board+	ARAC++	Remuneration Committee	Nomination Committee	EHSSC	ТАВ
Sir Andrew Mathews*	Chair	7/7	-	4/4	3		-
Ian Funnell****	Chair	1/1	-	2/2	-	1/1	-
Paul Howarth	Chief Executive Officer	7/8	-	-	-	-	-
Clare Barlow	Chief HR Officer	8	-	-	-	-	-
David Beacham	Chief Customer Officer	8	-	-	-	-	-
Iain Clarkson	Non-Executive Director	8	4	6	3	2	-
Ed Emerson***	Non-Executive Director	4/4	2/2	4/4	2/2	2	-
Claire Flint	Non-Executive Director	7/8	-	6	3	-	-
Steve Garwood	Non-Executive Director	8	4	6	3	2	4
Matthew Miller	Chief Financial Officer	8	-	-	-	-	-
Fiona Rayment	Chief Science and Technology Officer	8	-	-	-	-	4
Anna Payton**	Non-Executive Director	3/3	2/2	2/2	1/1	-	-
Number of meetings		8	4	6		3	2 4

- Including Board workshops in September and December 2021.
- Note that Matt Miller attends ARAC meetings for finance-related discussions
- \* Resigned on 25 January 2022
- \*\* Resigned on 19 October 2021
- \*\*\* Appointed on 19 October 2021
- \*\*\*\* Appointed on 26 January 2022

Andrew Mathews, Iain Clarkson, Claire Flint, Steve Garwood and Ian Funnell were all considered independent on their appointment to the board.

#### The Role of the Board

The NNL board is responsible for setting the strategic direction of NNL. The board provides effective and proactive leadership of NNL within a framework of prudent and effective controls and risk management processes. The board sets NNL's values and behaviours and ensures that its obligations to its shareholders and others are understood and met.

NNL board's role is to support and constructively challenge the NNL executive and to apply scrutiny both in the development of NNL's business strategies, plans, business cases and targets and in the assessment of its performance delivering the approved strategic and business plans.

The Framework Document details the responsibilities and accountabilities of both the Chair and the Chief Executive Officer.

Key focus areas for the board regarding governance this year have included:

The appointment of a new Chair

The appointment of a new Shareholder Representative Director

Development of our strategic plan and business plan

Development of our sustainability ambitions

Refreshing the governance of the TAB

Enhancing our approach to stakeholder management

Continuing to strengthen our risk management framework

The board delegates the dayto-day management of NNL to an Executive Leadership Team, comprising five board members: The Chief Executive Officer, Chief Financial Officer, Chief Customer Officer, Chief HR Officer and Chief Science and Technology Officer and other senior executives.

All board and board committee meetings held during the year have been quorate. All decisions made by the board and its committees have been recorded appropriately. The board reviews the effectiveness and the terms of reference of each of its committees in line with best practice.

The unitary nature of the board means that non-executive members and executive members share the same responsibility to challenge board decisions and development of NNL's strategy and operations. The non-executive board members bring a wealth of experience and complement the executive representation on the board in the provision of challenge, scrutiny and support on operational and strategic matters.

All board members have full and timely access to relevant information to enable them to discharge their responsibilities. All directors have access to independent professional advice, at NNL's expense, if required.

The board met eight times this year and due to the impact of the pandemic five of these meetings were held using secure, online systems and technology.

### Board Performance and Effectiveness Review

An independent external review of the NNL board was conducted in early 2021 with the final report being issued in February 2021. Socia Limited was appointed to carry out the independent external review following a competitive tender process.

The external review confirmed that in recent years the board has made significant improvements to its governance arrangements. The improved governance processes have been complemented by an updated Framework Document agreed with BEIS. The review also reported that changes to executive and non-executive board membership has strengthened the capability of the board.

The external report made a number of recommendations to assist the board in continuing to develop its way of working and its leadership of the NNL organisation. The recommendations focussed on:
(i) Board Strategic Focus; (ii) Board Operation and Succession; (iii) Board Information and Focus. An action plan to respond to these recommendations was agreed and has been implemented throughout 2021/22.

(i) Board Strategic Focus:

During the year we have published the NNL Strategy, provided greater definition of our Strategic Priorities and established a framework for governance of our strategic areas of focus.

- (ii) Board Operation & Succession:
  We have worked closely with
  our Nomination Committee
  to develop a comprehensive
  succession plan for the
  executive and senior
  management teams.
- (iii) Board Information &
  Focus: We have increased
  clarity regarding board and
  leadership objectives. We have
  also developed a stakeholder
  map and incorporated
  stakeholder engagement as a
  standing item at each of our
  board meetings.

The board will continue to reflect on its effectiveness and will carry out a further internal review and assessment of effectiveness during 22/23.

#### **Board Committees**

The board has three committees; Audit, Risk & Assurance Committee (ARAC); Remuneration Committee (RemCo); and Nominations Committee (NomCo). The board also has two advisory committees: Environment, Health, Safety and Security Committee (EHSSC) and the Technology Advisory Board (TAB).

Each committee is chaired by a non-executive board member.
Each committee reports directly to the board by way of an annual report and access to minutes.
Urgent matters are escalated by the Committee Chair to the board as appropriate.

### Audit, Risk & Assurance Committee (ARAC)

The ARAC is responsible for the assessment and management of risk in support of the NNL board and for the independent assessment of NNL's control environment. The role of the ARAC is to critically challenge and review the effectiveness of the controls to ensure they are adequate in meeting the requirements of compliance, operations, corporate governance and information management. The ARAC is also responsible for reviewing the financial audit of the business as undertaken by the auditors of NNL.

The ARAC comprises three Non-Executive Directors and is chaired by an independent Non-Executive Director, currently Iain Clarkson. The committee invites Executive Directors, the Head of Independent Assurance, and senior representatives of the external auditors to attend meetings as and when appropriate.

The committee met four times in 2021–22. The activities of the ARAC included reviewing and endorsing the annual statutory accounts for Board approval. The ARAC and auditors worked together to undertake an enhanced assessment of the going concern that concluded that the level of risk faced by NNL in the current environment was low, but that ongoing assessment should continue. The Audit Contract was subject to a tender during the year. However, due to market conditions we did not receive a strong response to the tender and a decision was made to extend the existing contract for a further oneyear period to allow us to retender the contract in 2022/23.

The ARAC reviewed the progress of overall business controls through the annual review of Independent Assurance (IA). Key themes were identified, all with underlying Return to Green activities. Planned activities and management sponsorship of the planned interventions for the following financial year were endorsed.

The ARAC reviewed and endorsed for board approval the risk appetite statements. The ARAC has increased scrutiny of the business approach to risk management, reviewing the development of a consistent tool and reporting methodology. The ARAC will continue to support NNL in the development of its risk and opportunity management processes.

#### **Remuneration Committee**

The Remuneration Committee is responsible for NNL's remuneration policy and determines the pay and remuneration levels for the NNL executive team and workforce, as well as providing guidance and oversight on the overall culture of the organisation. The committee's work is undertaken with reference to the NNL Framework Document, Civil Service Pay Guidance and the Corporate Governance Code 2018, where they apply.

The committee ensures decisions are made with wider consideration of the organisation culture, people development and performance and that they are underpinned by NNLs strategy and values. The committee has oversight of the people metrics in addition to any external benchmarking data.

The Remuneration Committee comprises five Non-Executive Directors and is chaired by an experienced HR professional Non-Executive Director,

currently Claire Flint. Executive Directors are invited to attend meetings as appropriate (other than when their own remuneration and/or terms and conditions of employment are under discussion).

The committee determines the appropriate performance conditions for NNL leadership personal bonus scheme awards. These are based on a balanced scorecard of metrics, achievement of key results that deliver NNL's strategy, and the way in which these results were accomplished. NNL staff are public servants and are subject to public sector pay and conditions as set out in the Framework Document. This stipulates that appointment of the CEO is subject to Ministerial approval and that NNL salaries will not exceed that of the CEO, thereby setting the strategic rationale for the NNL remuneration policy. A Trade Union Forum, chaired by a board director, formally represents the views of most employees and leads negotiation of wider pay policy.

The committee met six times in 2021–22 to consider executive performance and reward and provide oversight of wider remuneration matters. Against a backdrop of the COVID-19 pandemic the committee undertook a comprehensive review of the two-year pay deal in place during 2021. The decision to honour the pay deal was reached after consideration of a wide range of factors, including taking

account of the views of our key stakeholder groups, to ensure that the deal was appropriate and defensible in the current climate.

In recognition of the unprecedented challenges presented by the COVID-19 pandemic to company performance and the prevailing economic conditions, the committee held a special items meeting to discuss the design of bonus schemes for 2021–22. Factors internal and external to NNL were thoroughly considered and decisions were ultimately made in consultation with BEIS after careful consideration of wider government guidelines and the forecast cash position.

The committee has continued to ensure that NNL takes appropriate account of public sector pay and guidance. During the year it was noted that the exit payment cap was removed from public sector pay and guidance and the committee took steps to ensure that NNL remained aligned to this guidance.

The committee also considered industrial relations and employee engagement. Current engagement strategies in place across NNL were reviewed and progress monitored through engagement surveys. Adherence to IR35 legislation was monitored; pension scheme membership, liabilities, and future provisions reviewed; and key remuneration metrics considered.

#### **Nominations Committee**

The Nominations Committee is responsible for advising the NNL board on matters relating to NNL's leadership requirements and the board's succession planning requirements. The committee is responsible for recruiting the best qualified candidates for the NNL executive, including any Executive Directors; recommendations are made to the board for its approval and onward recommendation to the shareholder. The shareholder is responsible for appointing the Chair, Non-Executive Directors and for approving appointment of the Chief Executive Officer.

The Nominations Committee comprises five Non-Executive Directors and is chaired by the Chair of NNL. The committee invites Executive Directors to attend meetings as and when appropriate.

The committee met three times in 2021–21 and oversaw the

replacement of both the Chair of NNL and the Shareholder Representative Non-Executive Director. The executive search agency Gatenby Sanderson was procured by UKGI (who manage the shareholder function on behalf of BEIS) to assist in the recruitment campaign for the new Non-Executive Chair of NNL. The Chair is appointed by the government, through a process regulated by the Office of the Commissioner for Public Appointments (OCPA). The committee supported BEIS and UKGI in the Chair recruitment process which led to Andrew Mathews stepping down as Chair in January 2022 and the appointment of Ian Funnell as his successor. Ed Emerson replaced Anna Payton as Shareholder Representative Non-Executive Director in October 2021. The committee reviewed the board induction programme accordingly.

The committee also considered the approach to executive succession

planning, organisational culture and succession priorities. In particular, the committee undertook a comprehensive review of succession plans for NNL board and senior executive roles and approved the introduction of a skills matrix to capture current skills and capability mix. The committee also noted and monitored the launch of the pilot for the New Clear Leadership programme as part of a wider review of NNL's succession and talent strategy.

As explained, in section 6 Our People and Wider Society of this annual report NNL has established a five-year ED&I Strategy to allow it to achieve and sustain a truly inclusive culture to underpin NNL's Strategy. The Nomination Committee have taken full account of the ED&I Strategy in the development of its approach to nomination and succession planning.

### **Technical Advisory Board**

The Technical Advisory Board (TAB) is not a formal board subcommittee, but it was established to provide advice to the NNL Board and Executive Leadership Team on the impact of Science, Technology and Engineering in underpinning NNL's Strategy. The remit of the TAB is to ensure that funds invested in NNL's Research and Development programme are invested in the best topic areas and that NNL's quality of science and engineering is of an appropriate standard for a national laboratory.

The TAB is chaired by a Non-Executive Director and its membership includes the NNL Chief Science and Technology
Officer together with government
representation through Chief
Scientific Advisors (BEIS and MOD),
representatives from industry,
strategic partner universities,
national labs and independents.
The Committee invites both NonExecutive Directors and Executive
Directors to attend meetings as
and when appropriate.

A number of important changes have been made within the TAB over the past 12 months including a refresh of TAB membership, changes to the format of TAB meetings, improved communication and visibility and a revised Terms of Reference.

The TAB Stakeholder Feedback Report made a number of recommendations regarding the management, focus and governance of the TAB that were welcomed by the NNL Board. These were specifically aimed at encouraging greater engagement with stakeholders in a variety of areas including technical research and development, encouraging greater diversity, and improving the visibility and communication of the advice provided by the TAB through the business. Implementation is underway and will continue through 2022/23.

The TAB met four times this year and key items of discussion included the NNL Science & Technology Agenda and links to wider NNL Strategy (Clean Energy, Security & Non-Proliferation, Health & Nuclear Medicine and Environmental Restoration) and Innovation.

### Environment, Health, Safety & Security Committee

The Environment, Health, Safety & Security Committee (EHSSC) was established to maintain board oversight of environmental, health, safety and nuclear security matters. The committee assesses the operating environment, policies and procedures in respect of Environment, Health, Safety and Security activities and associated risks to provide the board with assurance that the business is undertaking all required actions to achieve its objectives in these areas.

The EHSSC comprises three Non-Executive Directors and is chaired by a Non-Executive Director. The Committee invites Executive Directors to attend meetings as and when appropriate. The EHSSC met twice in 2021–22 to agree the assurance programme, review the assurance dashboard, and consider annual reviews of assurance and data protection.

The role of the EHSSC is continuing to be developed and a new set of Terms of Reference was proposed and approved at the EHSSC meeting held on 22 March 2022. The scope of the EHSSC will be expanded as part of the EHSS&Q Excellence Vision to provide a broader remit for monitoring the performance of Environment, Health, Safety and Security activities. This will allow the NNL Board to focus on progress with the proposed safety culture journey. The EHSSC will continue to run alongside the ARAC with a common executive and non-executive membership to avoid duplication when reporting internal assurance activities relevant to both committees.

#### **Executive Leadership Team**

The Chief Executive Officer has primary responsibility for the day-to-day management of the business and discharges his responsibilities through an Executive Leadership Team (ELT), whose membership is made up of the Executive Directors leading the business. The ELT meets formally on a regular basis and not fewer than 12 times a year. The roles and responsibilities of the ELT include:

Monitoring the effectiveness of all environmental protection, health and safety, security (including cyber security) and quality aspects of NNL activities including the review and management of assessments of NNL management processes.

Monitoring assurance activities undertaken to ensure compliance with statutory and regulatory requirements.

Overseeing the Key Performance Indicators (KPIs) that monitor overall progress against targets and ensuring corrective actions are taken.

Monitoring delivery of objectives required to implement the Strategic / Business Plan

Ensuring that NNL operates in line with guidance from the NNL Board

Sharing feedback from stakeholders

Driving the strategic development of NNL through implementation of a Strategic Agenda

Providing governance approval for matters within the delegated authority of the CEO and initial approval for matters that require approval by the NNL board

Preparing a risk register and subsequent reviews and mitigating actions

To enable the ELT to focus on driving implementation of the new strategy, ELT is supported by a Business Performance Lead Team (BPLT) made up of business area leads and heads of functions.

### **Risk Management**

NNL's directors remain confident about the future of the business. Nevertheless, risks and uncertainties do exist which could adversely impact future financial performance. Our approach to risk and opportunity has continued to evolve throughout 2021/22 as the new risk management approaches introduced in 2020/21 have become embedded within the business.

The approach to risk management at board level has matured

through the development of the ARAC and Risk Management Committee. The Risk Management Committee reports to the ARAC on risk management and operations across the business and escalates risks outside of risk tolerance. The ARAC advises the board on the current risk exposure of NNL and future risk strategy and develops risk appetite statements for approval by the board.

The board continues to review and monitor NNL's emerging and principal risks with the risk register being reviewed twice through 2021–22, resulting in changes to the principal risks considered by the directors which are considered to be in the areas of:

Board risks are mapped against executive risks which are themselves linked to the risks emerging from, and being managed by, the business. Board reporting is structured against the Board risks which are captured in a Board Risk Register which is itself reviewed on a regular basis.

Board Risk	Summary Description	Summary Mitigation
Safety, Security, and Safeguards	Significant EHSS&Q incident occurs at NNL or major nuclear accident occurs worldwide which undermines confidence in nuclear	<ul> <li>Provide visible EHSS&amp;Q leadership</li> <li>Deliver EHSS&amp;Q strategy, culture &amp; performance</li> <li>Share &amp; learn from best practice (nuclear &amp; non-nuclear community)</li> </ul>
Machinery of Government/ Policy Changes	Change in governance or policy or loss of shareholder confidence	<ul> <li>Manage relationships and maintain a broad base of support</li> <li>Deliver business targets and strategic objectives and fulfil role as national lab</li> </ul>
Commercial Performance and Financial Sustainability	Failure to deliver business operational performance targets (Budget/10yr Plan)	• Deliver business targets and strategic objectives
Stakeholder Relationships	Overall relationship with key customers and stakeholders is not optimised	Effective relationships with customers and stakeholders at all levels
Sellafield & NDA Relationships	Relationship not optimised and/or an issue, incident or development impacts the other party	<ul> <li>Manage all facets of complex relationships at all levels</li> <li>Deliver commitments</li> </ul>
Strategic Implications	Failure to execute or deliver against the Business Strategy and business objectives	<ul> <li>Monitor evolving environment, engage with stakeholders &amp; adapt strategy accordingly</li> <li>Adapt business to effectively deliver</li> <li>Effective strategic governance</li> </ul>
People, Resourcing & Capability	Failure to put in place people, critical infrastructure, equipment & IT required in future, to develop or maintain key capabilities and strong industrial relations	<ul> <li>Deliver strategies</li> <li>Manage succession, remuneration and industrial relations</li> <li>Responsibly manage operation of large-scale, high hazard nuclear facilities</li> </ul>
Analytical Services	Uncertain project scope entailing significant facility changes, uncertain commercial and delivery model/implication	<ul> <li>Develop/define project scope and deliver agreed milestones</li> <li>Manage stakeholder relationships</li> </ul>

Both the board and executive carry out a rolling review of deep dives into individual risks; actions are placed and the risk register updated accordingly. Risk mitigation is a key consideration in the strategic planning process and informs annual objective setting; progress in the delivery

of business objectives is routinely monitored by the executive.

As the financial year drew to a close, international events raised the level of geo-political risk in Eastern Europe and began to impact on a number of aspects of society including key international supply chains, global collaborative fora and the prioritisation of resources and focus within government. NNL will continue to monitor the situation closely and assess any potential risks to business activity.

#### COVID-19

During 2021, COVID-19 was considered to represent a special board risk and was managed via a business continuity approach with close engagement with stakeholders including NNL people, customers, BEIS and host Site Licence Companies/local communities. The board reviewed the board risks in December 2021 and whilst acknowledging that COVID-19 continues to be prevalent within our communities we felt that the organisation had established a framework for managing the operational impacts of COVID-19 which had resulted in minimal impact on our operational goals. It was agreed that any residual risk would be more appropriately managed as part of business continuity.

#### **EU Exit**

In preparation for the UK exit from the EU, risks were assessed, mitigations established, and the impact on decision making tested through a business continuity exercise. Upon EU Exit NNL was well prepared and as result did not see any significant impact upon its operations and performance.

### Government Functional Standards

The government has published a series of Government Standards for use by functional teams across government. NNL has voluntarily agreed to adopt the standards and has carried out a gap analysis against the mandatory requirements. NNL has identified improvement actions which will be implemented during 2022/23 to ensure that NNL processes and procedures are aligned to the mandatory Government Functional Standards.

#### **Climate Change**

As explained elsewhere in this document, the development of our approach to sustainability has been a key activity this year. In particular we have introduced our Sustainability Ambitions which include an ambition to achieve net zero, reduce our environmental impact by half and double positive contributions to our natural systems, by 2030.

We recognise that climate change represents both an opportunity and a risk to NNL. Our Strategy demonstrates the opportunities arising for NNL as part of the climate change agenda. However, we also recognise that climate change will introduce risk to our business. During 2022/23 we will be developing our Good Growth Strategy to help us understand NNL's material risks and opportunities related to climate change. As part of this process, we will look to identify the likely impacts, both positive and negative, on our business as the effects of climate change accelerate and as society transitions towards a low carbon economy.

#### **Internal Controls**

NNL operates a proactive approach to internal controls that is designed to manage risk to within risk appetite levels. The system of internal controls is aimed at ensuring business objectives are achieved and risks against them are minimised through the application of approved polices and processes.

A structured three lines of defence model is employed through the business to assure the degree of adherence to the controls. The success of this model is verified through NNL's Independent

Assurance Team. This team delivers an annual risk-based assurance programme. Throughout the year the Independent Assurance Team undertake a number of interventions that are aimed at providing additional assurance to the board of directors that internal controls are effective. This work spans all areas of the business with specialisms in nuclear safety and security, environment health and safety, and corporate assurance. Independent Assurance provides assurance over NNL's Risk Management Framework through periodic interventions and routine surveillance via the Company's Risk Management Committee. Other core interventions include those that focus on the operation of NNL's key financial controls, further supporting those assurances provided by external audit.

The three lines of defence model of NNL's internal control is based on a framework of regular information, administrative procedures and a system of delegation and accountability. In particular, it includes:

Comprehensive budgeting and forecasting systems with an annual operating plan which is reviewed and approved by the main board

Regular reviews by the main board of periodic and annual reports which indicate financial performance against the budget and forecast

Setting targets and KPIs to measure financial and other performance with regular monitoring and reporting at all levels in the organisation up to and including the board

Clearly defined capital investment control guidelines

Clearly defined financial delegations

Quality Assurance of Analytical Models

NNL recognises that ensuring quality is imperative to our ability to operate as a national laboratory. As such all technical modelling undertaken within NNL must follow a robust Technical Modelling procedure referenced in NNL's Integrated Management System. NNL has not formally aligned its QA processes to the MacPherson Review or the AQuA Book although our Technical Modelling Procedure reflects many of the principles contained within these documents. As NNL is increasingly undertaking work direct for HMG we intend to carry out a formal review of our processes and procedures during FY 2022/23 to ensure continued compliance and identify whether the AQuA Book provides any additional guidance on good practice which can be incorporated by NNL. We would therefore rate NNL as 'Applicable and working to comply'.

### **Management Information**

The board is satisfied that the management information it receives is of high quality as a result of the:

Assurance mechanisms that are in place, including the newly established internal compliance and assurance function, the ARAC and the EHSSC

Accreditation, certification and regulatory environments within which NNL operates

Findings from external audits

Feedback from the TAB, which includes representatives of strategic partners from academia, government and industrial organisations

### **Modern Slavery Act 2015**

The Modern Slavery Act 2015 (\$54) requires organisations with a global turnover in excess of £36 million to publish an annual slavery and human trafficking statement. NNL is committed to preventing modern slavery and human trafficking. NNL will not tolerate the abuse of men. women or children and strives for total transparency right through its business and supply chains. Accountability is assigned to the NNL Chief Financial Officer with the Procurement Team undertaking day to day management. NNL's Modern Slavery Act Statement for the financial year ending 31 March 2022 (made pursuant to section 54(1) of the Modern Slavery Act 2015) has been approved by the NNL Board and is published on the NNL website www.nnl.co.uk

### **Gender Pay Gap Report**

NNL reported its gender pay gap analysis in March 2022 pursuant to the Equality Act 2010 (Gender Pay Gap Information) Regulations 2017. The Gender Pay Gap Report can be viewed here <a href="https://nnl.foleon.com/nnl/gpgr21/introduction">https://nnl.foleon.com/nnl/gpgr21/introduction</a>

Building on the strong foundations laid down last year through the achievement of the National Equality Standard, NNL's commitment to Equality, Diversity and Inclusion (ED&I) has continued and is now baked into NNL's Strategic Plan 2021: "This is NNL".

As part of the first year of our strategy, we have embedded ED&I into our business' Objectives and Key Results (OKRs) and are investing in a career pathways tool to enable us and our people to better articulate and explore the opportunities we have to offer. We have put in place the mechanisms to enable us in the coming years to capture and scrutinise our ED&I data beyond gender in a way that is anonymised but will allow us

to investigate career processes with an ED&I lens. We are also improving data capture in our recruitment pipeline. The ED&I steering Board presents to the NNL board twice a year.

We are now in our fifth consecutive year of gender pay gap reporting and while it is positive to see that several of our measures are improving, we are making progress more slowly than we would like and we recognise there is still more to do. There is, for example, a distinct upward trend in the percentage of women in our organisation. Although it remains challenging to recruit large numbers of women, especially with Science, Technology, Engineering and Mathematics (STEM) backgrounds, into the nuclear sector, we continue to do our part in working towards the government's Nuclear Sector Deal gender target of 40% women in nuclear by 2030.

#### **Information Governance**

NNL has an appointed Data Protection Officer and has implemented a virtual Data Protection Team comprising deputy data protection officers and data protection specialist advisors who assure personal data is managed appropriately within NNL. The Information Risk Management team is led by the SIRO supported by Information Assurance leaders and comprising senior information asset owners, who are responsible for managing information risk, meet regularly to provide governance of information risk and assurance.

#### **Approval**

This report was approved by order of the Board.

David Dukes Secretary July 2022

# 8.0 Directors' Report

for the year ended 31 March 2022

The directors present their report together with the audited financial statements for the year ended 31 March 2022.

#### **Directors**

The directors of the company who were in office during the year and up to the date of signing the financial statements were:

Sir Andrew Mathews KCB FREng	Chair - resigned 25 January 2022
Ian Funnell	Chair - appointed 26 January 2022
Paul Howarth FREng	Chief Executive Officer
Clare Barlow	Chief HR Officer
David Beacham	Chief Customer Officer
Matthew Miller	Chief Financial Officer
Fiona Rayment OBE FREng	Chief Science and Technology Officer
Iain Clarkson	Non-Executive Director
Ed Emerson	Non-Executive Director - appointed 19 October 2021
Claire Flint	Non-Executive Director
Stephen Garwood FREng	Non-Executive Director
Anna Payton	Non-Executive Director – resigned 19 October 2021

### **Directors' Responsibilities Statement**

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

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have prepared the 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 company and of the profit or loss of the company for that period. In preparing the financial statements, the directors are required to:

select suitable accounting policies and apply them consistently

state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements

make judgements and accounting estimates that are reasonable and prudent; 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 also responsible for safeguarding the assets of the company and for taking reasonable steps for the prevention and detection of fraud and other irregularities.

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 Companies Act 2006.

#### Results

The Statement of Comprehensive Income is set out on page 56 and shows the profit for the year. A detailed review is set out in the strategic report.

The directors do not recommend the payment of a dividend (2021 - £Nil).

### Support for People with Disabilities

Job applicants and NNL employees with disabilities will have the same consideration for job vacancies as any other candidates. NNL is committed to a policy of equal opportunities for all employees. We take great care in our recruitment and selection

procedures to ensure there is no discrimination, and that training is given to meet individual needs. Applications by people with disabilities are given full and fair consideration and wherever practical, provision is made for their special needs to help them realise their potential. The same criteria for training and promotion apply to people with disabilities as to any other employee. If an employee becomes disabled, we make every effort to ensure their continued employment. Reasonable adjustments to the workplace and to working methods will be made wherever it is reasonable and practicable to do so. People with disabilities will have the same scope to realise their potential and the same prospects as any other employees. Managers are encouraged, and

have the authority, to respond to the needs of people with disabilities including adjusting working hours or responsibilities.

### Statement on Engagement with Employees

It is NNL's policy to encourage employee involvement as the directors consider that this is essential for the successful running of the business. NNL keeps employees informed of performance, developments and progress by way of an intranet, e-communications, newsletters and briefing sessions. Employees are represented by trade unions. Additional information can be found in section 6 – Our People and our communities and our Section 172 Statement.

66 | DIRECTORS' REPORT | 67

### 8.0 Directors' Report

### Statement on Engagement with Employees, Suppliers, Customers and Others

Details of all of our stakeholders and how we engage with them is set out in Section 1.5.4 Our Stakeholders. Further information regarding engagement with our people, communities and wider society is included within Section 5 Sustainability and Section 6 Our People and our communities. In our Section 172 statement we explain how we take account of the interests of our stakeholders in our decision making.

### Charitable and Political Contributions

The COVID-19 pandemic once again curtailed the majority of significant opportunities for NNL to participate in outreach projects, as planned. As a result, during the year, there was no significant expenditure on charitable donations to support face to face community projects or for charities promoting Science, Technology, Engineering and Mathematics (STEM) subjects (2021 – £Nil).

NNL has a policy of not making political donations and consequently there were no political donations during the year (2021 – £Nil).

#### **Insurance**

NNL's insurance requirements are provided through policies held in its own name.

### Directors' Insurance and Indemnities

The directors have the benefit of the indemnity provisions contained in the Company's Articles of Association ("Articles") and the Company has maintained throughout the year Directors' and Officers' liability insurance for the benefit of the Company, the directors and its officers.

#### Financial Risk Management

Details of the Company's financial instrument risk exposures and management is discussed in note 17 to the financial statements.

#### Research and Development

During the year, the company carried out research and development activity on behalf of its customer base and invested £3.3m (2021 – £2.0m) in self-funded programmes.

#### **Future Outlook**

The future outlook is discussed in detail in section 1.8 of the strategic report

#### **Directors' Confirmations**

All current directors have taken all the steps that they ought to have taken as a director in order to make themselves aware of any relevant audit information and to establish that the Company's auditors are aware of that information. As far as the directors are aware there is no relevant audit information of which the Company's auditors are unaware.

### Section 172 Statement

In their discussions and decisions during the year ended 31 March 2022, the Directors of National Nuclear Laboratory Limited (NNL) have acted in a way that they consider, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole having regard to the matters set out in sub-sections 172(1)(a) to (f) of the Companies Act 2006:

- (a) the likely consequences of any decision in the long term
- (b) the interests of the company's employees
- (c) the need to foster the company's business relationships with suppliers, customers and others
- (d) the impact of the company's operations on the community and the environment
- (e) the desirability of the company maintaining a reputation for high standards of business conduct, and
- (f) the need to act fairly as between members of the company

Our Strategic Report explains NNL is a purpose led organisation. Our purpose, 'nuclear science to benefit society', reflects our commitment to serving the greater good. The board decision making takes account of the views and impact upon stakeholders as well as considering the expected outcomes and long-term impacts of a decision.

### Principal Decisions - A Definition

NNL defines a principal decision as those pertaining to matters that require a significant amount of board or subcommittee time and that affect the company in a significant way. Principal decisions therefore typically include those relating to:

Matters of strategic importance (e.g. restructurings, changes to strategy, investment decisions)

Matters that are commercially material and of financial or operational importance

Matters that will substantially affect NNL's employees

Decisions on board level policies

NNL's processes have been developed to formally capture future principal decisions making and ensure stakeholder engagement requirements have been considered. Board paper templates incorporate sections identifying where a principal decision is being proposed and requiring completion of a Stakeholder Impact Assessment to support decision-making.

68 | DIRECTORS' REPORT | 69

### 8.0 Directors' Report

The following are some of the principal decisions made by the board this year which demonstrate how the board have taken account of the Section 172 factors in discussions and decision making:

### Matters of Strategic Importance

Decision	Implementation of a series of strategic decisions to further the development of the Clean Energy Focus Area
Context	The Clean Energy Focus Area forms a key pillar of the NNL Strategy. NNL's vision for clean energy is to secure the UK's place as a global leader in the clean energies of the future by developing advanced nuclear technologies and leading their deployment.
	NNL is supporting the wider UK nuclear sector to recognise and position itself to deliver the potential benefits of advanced nuclear technologies, through its work on reactors, fuel cycle and energy applications.
	During 2021/22 NNL has been developing its Clean Energy Strategy and engaging across a broad range of stakeholders within government, the nuclear industry and the academic and research community in order to enable the NNL board to make a number of key decisions to advance the Clean Energy Strategy.
Stakeholder Considerations	Government: BEIS made the key strategic decision to launch a pilot advanced nuclear science campus in 2021 – the Advanced Nuclear Science and Innovation Campus (ANSIC). In partnership with BEIS, NNL facilitated the creation of this campus at our Preston site where we are hosting a programme of training and research activities on a nuclear licensed site. These activities are not only aimed at progressing the next generation of clean energy technologies but also the next generation of scientists and engineers that will make them a reality.
	Academia/Research Community: In 2021 we continued to deliver the world leading Advanced Fuel Cycle Programme (AFCP), a key activity within our Clean Energy strategy. Approximately, a third of AFCP has been delivered by our partners in industry and academia, with 16 universities contributing towards the successful outcomes in fuel development and advanced recycle and waste management technologies. This resulted in a significant extension to the programme by BEIS to allow the UK nuclear research sector to continue to develop these key net zero technologies facilitated by the national laboratory.
	Nuclear Industry and Supply Chain: In July 2021 BEIS issued a Call for evidence on the potential for High Temperature Gas Reactors (HTGRs) to support net zero. NNL engaged both with BEIS, international nuclear operators and the wider nuclear sector to respond to the Call for Evidence. NNL worked closely to align UK nuclear sector stakeholders, including EdF Energy, Atkins, Cavendish and Jacobs behind a UK response. NNL has also worked with a range of international partners to further consider the potential for AMR technologies in the UK, including discussions with both industrial and government organisations in Japan, Canada and the United States.
	<b>Customers</b> : NNL made a significant contribution to the success of the UK SMR Phase 1 programme and is now set to take a significant role in the larger Phase 2 activities across a range of disciplines including nuclear physics, licensing and security.

The following are some of the principal decisions made by the board this year which demonstrate how the board have taken account of the Section 172 factors in discussions and decision making:

### Matters of Strategic Importance

Decision	Implementation of a series of strategic decisions to further the development of the Clean Energy Focus Area
Strategic actions supported by the Board	The strategic actions supported by the board:
	<ul> <li>Advanced Modular Reactor Demonstration: NNL responded to BEIS's call for evidence to support down-selection of a preferred technology by setting out its intention and capability to perform a substantial role in demonstration of any AMR technology, and that it is prepared to work with any technology/vendor selected by BEIS. The response also set out that High Temperature Gas Reactors (HTGRs) represent NNL's preferred AMR technology</li> </ul>
	<ul> <li>National Thermal Hydraulics Facility: NNL has been in discussions with BEIS and the Welsh Government regarding the potential establishment and operation of the NTHF that would support UK advanced reactor programmes</li> </ul>
	<ul> <li>UK Small Modular Reactor (SMR) Programme: NNL to continue to participate in Phase 2 of the UKSMR Programme</li> </ul>
Expected outcomes	The board expects that the strategic actions will produce the following outcomes to support our purpose:
	<ul> <li>Selection of HTGR as the preferred AMR Technology which would allow NNL to utilise its skills and experience as regards fuel, graphite and high temperature materials required for HTGRs. On 2 December 2021 Government confirmed its preference to utilise HTGR technology in the AMR programme</li> </ul>
	<ul> <li>Active participation by NNL in the design and construction of the NTHF would allow NNL to build capability in reactor development which is a key component of the Clean Energy Focus Area</li> </ul>
	<ul> <li>NNL's continued participation in the UK SMR programme supports its strategic aim to build the national reactor capability required to support the UK's future deployment of reactor technologies including AMR</li> </ul>

70 | DIRECTORS' REPORT | 71

# 8.0 Directors' Report

Decision	Sustainability: Sustainability Ambitions
Context	During 2021 the Government published its net zero Strategy: Build Back Greener, setting out the roadmap for the UK to deliver net zero by 2050. As explained elsewhere in this report, NNL has focussed its strategic development this year on positioning itself to support this policy using its role as a national laboratory to use nuclear science to benefit society.
	The NNL board and Executive Team have held a number of workshops to explore and articulate what sustainability means to NNL as a business and to clarify its own sustainability ambitions.
Stakeholder considerations	Government (Government and Policy): As both a private limited company and public corporation, NNL has taken into consideration the developing legal and regulatory landscape in relation to sustainability. It has also had regard to best practice approaches to operating as a sustainable business to maximise the benefit to society derived from all its activities. For example, the Social Value Model has been used to guide revisions to our Procurement, scorecard and approach.
	Employees (TU representatives): Our employees are becoming increasingly engaged in sustainability initiatives, as well as expressing a desire for the business to leverage its influence to set and maintain higher standards across a broad range of sustainability topics, from climate to social value and inclusion.
	NNL has engaged with its workforce throughout the development of its sustainability strategy and in particular its Sustainability Ambitions. All employees have been offered access to an employee sustainability platform that enables staff to measure and reduce their environmental impacts. To further enable this, NNL has initiated a 'responsive employer' approach to considering related employee requests, for example, on site EV charging infrastructure and by launching Innovation challenges for internal and external audiences. Employee activism is being encouraged and the NNL Employee Value Proposition is being re-examined to reflect the priority the sustainable business ambitions hold.
	Nuclear Industry and Supply Chain: NNL has offered to join as a founding member of the proposed AIRTO Sustainability Group and been nominated to join as member of the NILG Sustainability Group, furthering its reach and fostering collaboration across industry.
	NNL has used its role as convener of the Global Integrated Energy Systems Summit in January 2021 to encourage sustainable business goals across the international laboratory community.
	Customers: NNL made a significant contribution to the success of the UK SMR Phase 1 programme and is now set to take a significant role in the larger Phase 2 activities across a range of disciplines including nuclear physics, licensing and security.
	Communities and Wider Society: In developing its sustainability strategy the NNL board has considered the wider impact on and opportunities for positive contributions to society. In particular, our contributions to education and the approach to making a career in nuclear a choice for a wider section of society 'extending a wider welcome to nuclear' is a priority for the 2022 Sustainable Business ambitions.

Sustainability: Sustainability Ambitions
The strategic actions supported by the board are:
<ul> <li>Adoption of our Sustainability Ambitions (section 5), support and advocacy for benchmarking and target setting for Science Based Targets and 'gold standard' net zero plans</li> </ul>
· Commitment to the development of our Good Growth Sustainability Plan
• The board expects that the strategic actions will produce the following outcomes to support our Purpose:
· Roadmap to achievement of net zero by 2030
Clarity on the Sustainability Ambitions of NNL
· An enabled culture to support the organisational wide delivery of this agenda

Decision	Approval of the 2022/23 Strategic Plan				
Context	NNL adopted its Strategy in 2019/20 and each year it develops a strategic plan to review and refresh its strategic themes and business objectives.				
Stakeholder Considerations	Government: In the development of its strategic plans the NNL board and Executive take account not only of the wider HMG Policy Objectives but also the direction from BEIS as its sole shareholder. As a result, NNL board and executive work closely with colleagues at both UKGI and BEIS to ensure that its strategic plan aligns with the policy direction of government.				
	Customers and Potential Customers: As well as being a purpose-led organisation, NNL is a strong customer-focussed commercial organisation. As such, in the development of its strategic plan, NNL takes account of the upcoming requirements of its customers.				
	Employees: We value the skills, knowledge and energy of our people and our strategic plan recognises that in order to meet the aims of our Strategy we need to ensure that we can attract, retain and engage our talented, innovative and diverse workforce. Our strategic plan has been widely socialised within our workforce and feedback considered in the final plans.				
Strategic actions	The strategic actions supported by the Board are:				
supported by the Board	Approval of our strategic plan				
	Approval of our strategic themes and business objectives				
Expected Outcomes	<ul> <li>The board expects that the strategic actions will produce the following outcomes to support our purpose:</li> </ul>				
	Influencing and supporting UK policy				
	<ul> <li>Develop NNL into a purpose-driven and sustainably-led organisation</li> </ul>				
	Enable NNL to build on its success and prepare for tomorrow				

72 | DIRECTORS' REPORT | 73

# 8.0 Directors' Report

# Matters that are commercially material and of financial or operational importance

Decision	Approval of the MoD Futures ROM and the extension to the Naval Propulsion Lifetime Management (NPLM) contract				
Context	NNL currently provides services to MoD under the Naval Propulsion Lifetime Management Contract (NPLM) between Rolls-Royce Submarines plc and NNL. The MoD Futures programme will succeed the NPLM.				
	NNL has developed a ROM offer related to a new contract ('Futures') designed to supply services directly contracted to Rolls Royce Submarines plc. This contract ultimately requires NNL to provide data, through in-cell operations within the Active Handling Facility (AHF), in support of Rolls-Royce's obligations to meet Ministry of Defence (MoD) requirements. It is understood that the 'Futures' contract will be a new contract on the same terms as the existing NPLM contract and will commence on 1 January 2023, running until 31 December 2032.				
Stakeholder Considerations	Employees: Securing a role in the Futures programme offers our employees security and longevity of employment. It will allow NNL to maintain capability carrying out interesting and meaningful work.				
	However, the contract is likely to have an impact on working patterns. The impact of this programme on our people in AHF is under discussion with our Trade Unions and staff forums to enable the development and implementation of alternative working patterns.				
	Government: The Futures programme represents a critical enabler to HMG Policy on Continuous at Sea Deterrent (CASD). NNL has built on its existing relationship with MoD under the NPLM contract and by attending stakeholder forums to understand the requirements of MoD and to align its ROM to that requirement.				
	Customers: In order to develop our ROM we have engaged extensively in stakeholder forums. In particular, we recognise that the Futures programme will impact our existing customers. We have worked closely with our customers (MoD/Rolls Royce and Sellafield) to oversee development and implementation of the Safety Case.				
Strategic actions	The strategic actions supported by the board are:				
supported by the Board	<ul> <li>Agreement of submission of ROM to Rolls-Royce Submarines plc for the Futures programme and of the requirement to increase the total value of the existing NPLM contract by £17,183,025m, to allow for mobilisation of the necessary resources and capacity.</li> </ul>				
Expected Outcomes	The board expects that the strategic actions will produce the following outcomes to support our purpose:				
	• Secure the opportunity to invest in long-term capacity and capability planning				
	<ul> <li>Commitment to the MoD Futures PIE programme, supporting CASD and underpinning the long term future of Active Handling Facility</li> </ul>				
	<ul> <li>Maintenance of the UK's PIE capability and development and improvement of the facility</li> </ul>				
	<ul> <li>Commitment to a long term programme will provide stability of employment in AHF and underpin the case for future</li> </ul>				

# Matters that will substantially affect NNL's employees

Decision	Implementation of a series of strategic decisions to further the development of the People Strategy					
Context	In response to the continuing impact of COVID-19 pandemic, NNL Board has maintained its focus on the safety, health and wellbeing and development of its people.					
	NNL is now three years into its five-year People Strategy and throughout the pandemic we have continued to make progress with strategic decisions being taken by the board in collaboration with our stakeholders.					
Stakeholder Considerations	Employees and Trade Unions: We hold monthly forums with our trade unions, maintaining an open and transparent relationship which allows us to consult with employee representatives and Trade Unions on all our strategic initiatives. This is in both the design and implementation of any activities.					
	Government: We work closely with our shareholder, BEIS and our shareholder representative, UKGI on any proposals regarding pay and reward. The new HR Functional Governance standards have been integrated into the People Plan where possible.					
	Academia and Wider Research Community: We work with a variety of stakeholders across the research community in relation to the development of skills and capability and early careers.					
	Nuclear Industry and Supply Chain: We have developed strong links with Nuclear Skills Strategy Group and Women in Nuclear on the skills and ED&I Agenda.					
Strategic actions	The strategic actions supported by the board are:					
supported by the board	<ul> <li>Launch of the NNL New Clear Leadership development programme: A commitment from the board and trade unions to the introduction of revised leadership competencies and an upskilling programme for NNL Leaders</li> </ul>					
	<ul> <li>Hybrid Working: Through regular employee surveys and liaison with both the Trade Union and board NNL have agreed to move to a permanent hybrid working model to be implemented post the pandemic. Enabling activity such as office refurbishment has also been approved</li> </ul>					
	<ul> <li>Health and Wellbeing: Decision to roll out H&amp;W training and coaching across NNL to help people in their self-care and care of others</li> </ul>					
	<ul> <li>NNL Value Proposition: The board and trade union agreed to support the proposed development of an NNL Employee Value Proposition, ensuring we are able to attract and retain the key resources required for NNL's strategy</li> </ul>					
	<ul> <li>NNL Terms and Conditions: Full review to modernise policies and practices</li> </ul>					
	<ul> <li>Increase in Early Careers: The board signed off the decision to increase our early careers intake by 100 % during 2021 to help address the future skills and capability requirements</li> </ul>					

74 | DIRECTORS' REPORT | 75

# 8.0 Directors' Report

### Matters that will substantially affect NNL's employees

Decision	Implementation of a series of strategic decisions to further the development of the People Strategy
Expected Outcomes	The board expects that the strategic actions will produce the following outcomes to support our Purpose:
	<ul> <li>The leadership development programme will equip our leaders with the skills and capabilities to drive forward our strategy</li> </ul>
	<ul> <li>The adoption of the Employer Value Proposition will support our recruitment drive, providing the resources and capability to deliver our purpose and strategy</li> </ul>
	<ul> <li>Hybrid Working Model: It is expected that the short-term outcomes of a hybrid working model will enable NNL to protect and support its people throughout the pandemic. In the longer term it is anticipated that the adoption of a hybrid working model will both support our existing workforce and attract new talent</li> </ul>

### Matters that will substantially affect NNL's employees

Decision	Approval of ED&I Strategy				
Context	In Autumn 2020 NNL embarked on a journey to become accredited to the National Equality Standard (NES). The accreditation process looked at 35 key competencies, related to processes, procedures and best practice legally required by organisations to demonstrate compliance with the Equality Act. NNL was awarded the National Equality Standard (NES) Accreditation.				
	Together with the accreditation the National Equality Standard committee made a number of recommendations. NNL has developed a five year plan to address those recommendations to allow it to achieve and sustain a truly inclusive culture to underpin NNL's Strategy and help to deliver a talented workforce able to lead NNL forward.				
Stakeholder Considerations	Employees: The team engaged widely with employees throughout both the NES Assessment and development of the ED&I Strategy. Feedback from several employee surveys, engagement with site representatives at each NNL location and dialogue with trade unions was reflected within the final ED&I Strategy.				
	Nuclear Industry and Supply Chain: The board recognised that the adoption of the ED&I Strategy would help to position NNL as a sector-leader for ED&I principles and best practices, together with improving our employee/ talent value proposition – complementing and embracing the successes to date in achieving our ED&I agenda.				
Strategic actions	The strategic actions supported by the board are:				
supported by the Board	<ul> <li>Approval of the ED&amp;I Strategy: The NNL board approved and adopted an ED&amp;I Strategy which comprises a 5-year delivery plan aligned to the NES Recommendations</li> </ul>				
Expected Outcomes	The board expects that the strategic actions will produce the following outcomes to support our Purpose:				
	• The ED&I Strategy provides a long term commitment to NNL's societal impact				
	<ul> <li>Stability in the recruitment for talent, given the current fragility in the labour market</li> </ul>				
	Enable us to engage with disadvantaged communities across the UK				

By order of the board

David Dukes Secretary July 2022

76 | DIRECTORS' REPORT DIRECTORS' REPORT | 77

# 9.0 Independent Auditors' Report

To the Members of National Nuclear Laboratory Limited For the Year Ended 31 March 2022

Report on the Audit of the Financial Statements

### **Opinion**

In our opinion, National Nuclear Laboratory Limited's financial statements:

Give a true and fair view of the state of the company's affairs as at 31 March 2022 and of its profit and cash flows for the year then ended

Have been properly prepared in accordance with UK-adopted international accounting standards; and

Have been prepared in accordance with the requirements of the Companies Act 2006

We have audited the financial statements, included within the annual report, which comprise: the Statement of Financial Position as at 31 March 2022; the Statement of Comprehensive Income, the Statement of Cash Flows, the Statement of Changes in Equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

### **Basis for Opinion**

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Independence

We remained independent of the company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

# Conclusions Relating to Going Concern

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the company's ability to continue as a going concern.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

# Reporting on Other Information

The other information comprises all of the information in the annual report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material

misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic report and Directors' report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on our work undertaken in the course of the audit, the Companies Act 2006 requires us also to report certain opinions and matters as described below.

# Strategic Report and Directors' Report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic report and Directors' report for the year ended 31 March 2022 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements.

In light of the knowledge and understanding of the company and its environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic report and Directors' report.

78 | INDEPENDENT AUDITORS' REPORT INDEPENDENT AUDITORS' REPORT

### 9.0 Independent Auditors' Report

# Responsibilities for the Financial Statements and the Audit

# Responsibilities of the Directors for the Financial Statements

As explained more fully in the Statement of directors' responsibilities in respect of the financial statements, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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

### Auditors' Responsibilities for the Audit of the Financial Statements

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

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

Based on our understanding of the company and industry, we identified that the principal risks of non-compliance with laws and regulations related to the Companies Act 2006 and local tax regulations, and we considered the extent to which noncompliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the financial statements such as the Companies Act 2006. We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to posting inappropriate journal entries to increase revenue or release provisions, and management bias in accounting estimates. Audit procedures performed by the engagement team included:

Discussions with management and those charged with governance including consideration of known or suspected instances of non-compliance with laws and regulations through fraud or error

Reviewing minutes of meetings of those charged with governance

Challenging assumptions and judgements made by management in their significant accounting estimates (because of the risk of management bias), in particular, in relation to the post operational clean-out provisions, severance and loss making provisions and lease liabilities; and

Auditing the risk of management override of controls, including through testing journal entries and other adjustments for appropriateness, testing accounting estimates and evaluating the business rationale of significant transactions outside the normal course of business

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: <a href="www.frc.org.uk/auditorsresponsibilities">www.frc.org.uk/auditorsresponsibilities</a>. This description forms part of our auditors' report.

### Use of this Report

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

### Other Required Reporting

# Companies Act 2006 / Exception Reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

we have not obtained all the information and explanations we require for our audit; or

adequate accounting records have not been kept by the company, or returns adequate for our audit have not been received from branches not visited by us; or

certain disclosures of directors' remuneration specified by law are not made; or

the financial statements are not in agreement with the accounting records and returns

We have no exceptions to report arising from this responsibility.

toband about

Edward Moss
(Senior Statutory Auditor)
for and on behalf of
PricewaterhouseCoopers LLP
Chartered Accountants and
Statutory Auditors
Manchester
July 2022

80 | Independent Auditors' report

# Statement of Comprehensive Income

For the Year Ended 31 March 2022

# Statement of Financial Position

For the Year Ended 31 March 2022

	Note	2022	2021
		£'000	£'000
Revenue	2	131,579	127,944
Cost of sales		(92,872)	(86,837)
Gross profit		38,707	41,107
Administrative expenses		(35,496)	(35,072)
Profit from operations	3	3,211	6,035
Finance income	6	78	26
Finance expense	6	(73)	(364)
Profit before tax		3,216	5,697
Taxation	7	5,490	7,665
Profit for the year		8,706	13,362
Other comprehensive income/(expense)			
Items that will not subsequently be reclassified to profit or loss:			
Actuarial gains/(losses) in defined benefit pension schemes, net of tax	20	1,775	(1,106)
Total other comprehensive income/(expense), net of tax		1,775	(1,106)
Total comprehensive income		10,481	12,256

The notes on pages 88 to 117 form part of these financial statements

	Note	2022 £'000	2022 £'000	2021 £'000	2021 £'000
Assets					
Non-current assets					
Property, plant and equipment	9	95,035		81,791	
Right of use assets	10	12,569		9,944	
Intangible assets	11	5,762		5,760	
Trade and other receivables	12	431		431	
Retirement benefit obligations	20	2,598		-	
Total non-current assets			116,395		97,926
Current assets					
Trade and other receivables	12	45,804		40,947	
Cash and cash equivalents	13	42,144		40,232	
Total current assets			87,948		81,179
Total assets			204,343		179,10
Equity and liabilities					
Equity					
Share capital	18	25		25	
Retained earnings	19	88,096		77,615	
Total equity			88,121		77,64

82 | STATEMENT OF COMPREHENSIVE INCOME | 83

## 11.0 **Statement of Financial Position** (continued)

	Note	2022 £'000	2022 £'000	2021 £'000	2021 £'000
Trade and other payables	14	43,880		31,027	
Lease liabilities	10	10,811		8,171	
Provisions	15	13,928		13,938	
Deferred tax	16	3,738		1,535	
Retirement benefit obligations	20	-		51	
Total non-current liabilities			72,357		54,722
Current liabilities					
Trade and other payables	14	41,321		43,631	
Lease liabilities	10	1,541		1,725	
Provisions	15	1,003		1,387	
Total current liabilities			43,865		46,743
Total liabilities			116,222		101,465
Total equity and liabilities			204,343		179,105

The financial statements on pages 82 to 117 were approved and authorised for issue by the board of directors on July 2022 and signed on its behalf by:

Matt Miller Chief Financial Officer

The notes on pages 88 to 117 form part of these financial statements.

# 12.0 Statement of Cash Flows

For the Year Ended 31 March 2022

	Note	2022 £'000	2022 £'000	2021 £'000	2021 £'000
Cash flows from operating activities					
Profit before tax		3,216		5,697	
Adjustments for:					
Depreciation	3	7,392		7,583	
Amortisation	3	810		1,014	
Asset impairment		453		962	
Non-cash movements relating to share of defined benefit pension scheme obligations		(287)		(439)	
Non-cash movements in provisions		753		1,108	
Interest receivable	6	(4)		(26)	
Interest payable	6	(1)		364	
Cash flows from operating profit before changes in working capital and provisions			12,332		16,263
				45	
Increase in trade and other receivables		(4,688)		(2,711)	
Increase in trade and other payables		10,662		3,919	
Utilisation of provisions		(1,072)		(1,199)	
Total changes in working capital and provisions			4,902		9

84 | STATEMENT OF FINANCIAL POSITION STATEMENT OF FINANCIAL POSITION

# 12.0 Statement of Cash Flows (continued)

	Note	2022	2022	2021	2021
	Note	£'000	£'000	£'000	£'000
Cash generated from operations			17,234		16,272
Tax received			6,937		5,484
Net cash flows generated from operations			24,171		21,756
Cash flows from Investing activities					
Purchases of property, plant and equipment		(19,645)		(8,428)	
Purchases of intangible assets		(812)		(206)	
Cash flows used in investing activities			(20,457)		(8,634)
Cash flows from Financing activities					
Interest received	6	4		26	
Interest paid	6	(70)		(89)	
Principal elements of lease payments		(1,736)		(1,717)	
Cash used in financing activities			(1,802)		(1,780)
Net increase in cash and cash equivalents			1,912		11,342
Cash and cash equivalents at beginning of the year	13		40,232		28,890
Cash and cash equivalents at end of the year	13		42,144		40,232

The notes on pages 88 to 117 form part of these financial statements.

# Statement of Changes in Equity

For the Year Ended 31 March 2022

	Share Capital £'000	Retained Earnings £'000	Total equity £'000
At 1 April 2020	25	65,359	65,384
Profit for the year	-	13,362	13,362
Actuarial losses in defined benefit pension schemes	-	(1,106)	(1,106)
Total comprehensive income		12,256	12,256
At 31 March 2021 and 1 April 2021	25	77,615	77,640
Profit for the year	-	8,706	8,706
Actuarial gains in defined benefit pension schemes	-	1,775	1,775
Total comprehensive income	-	10,481	10,481
At 31 March 2022	25	88,096	88,121

No amounts recognised as other comprehensive (expenses)/losses will subsequently be reclassified through Profit & Loss

86 | STATEMENT OF CASH FLOWS | 87

For the Year Ended 31 March 2022

### **1 Accounting Policies**

# 1.1 Summary of Principal Accounting Policies

The following principal accounting policies have been applied consistently in the preparation of these financial statements in accordance with the Companies Act 2006. The policies have been consistently applied to all the years presented, unless otherwise stated.

### 1.1.1 Basis of Preparation

The directors have considered the impact of COVID-19 on the company's business and believe that there is a reasonable expectation that the company has adequate resources to continue to adopt the going concern basis in preparing these financial statements. Further detail on the steps taken to reach this conclusion can be found in section 1.10 of the Strategic report. These financial statements have therefore been prepared on a going concern basis, and in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006.

The financial statements have

been prepared on a historical cost basis, except, as where stated in the accounting policies, in accordance with IFRS. The preparation of financial statements in compliance with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise judgement in the most appropriate application in applying NNL's accounting policies. The areas where significant judgements and estimates have been made in preparing the financial statements and their effect are disclosed below.

NNL has a non-trading subsidiary

- Nexia Solutions Limited,
company number 06729401. Nexia
Solutions Limited is registered
and domiciled in England
and Wales and its registered
address is Chadwick House,
Warrington Road, Birchwood Park,
Warrington WA3 6AE.

NNL is exempt from preparing consolidated financial statements on the grounds that it qualifies under S400 of the Companies Act 2006 as a wholly owned subsidiary of a company registered in England and Wales for which consolidated financial statements are prepared. These financial

statements therefore present information about NNL as an individual undertaking and not about its group.

All amounts are presented in sterling and, unless otherwise stated, rounded to the nearest £1,000.

### 1.1.2 Revenue

Revenue represents income derived from contracts with customers for the provision of goods and services in exchange for consideration in the ordinary course of the company's activities.

At the start of each contract the transaction price is estimated as the amount of consideration the company expects to be entitled to in exchange for transferring the promised goods or services to the customer, excluding VAT. Variable consideration, such as price escalation, is included based on the expected value or most likely amount only to the extent that it is highly probable that there will not be a reversal of the cumulative amount of revenue recognised. The transaction price does not include estimates of consideration resulting from contract variations, such as change orders, unless they have been approved by both

parties to the contract. The total transaction price is allocated to the performance obligations identified in the contract in proportion to their stand-alone selling prices. Given the bespoke nature of many of the company's products and services there are typically no observable selling prices, instead stand-alone selling prices are typically estimated based on expected costs plus contract margin.

For each performance obligation under a contract the company determines whether it is satisfied over time or at a point in time. Performance obligations are satisfied over time if one of the following criteria is satisfied:

the customer simultaneously receives and consumes the benefits provided by the company's performance as it performs;

the company's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or

the company's performance does not create an asset with an alternative use to the Company and it has an enforceable right to receive payment for performance satisfied to date.

The company has determined that all of its contracts satisfy the over time criteria.

For each performance obligation to be recognised over time the company recognises revenue based on an input method based on costs incurred in the year. Revenue and attributable margin are calculated by reference to reliable estimates of transaction price and total expected costs, after making suitable allowance for technical and other risks. Revenue and associated margin

are therefore recognised progressively as costs are incurred and risks have been mitigated or retired.

The company applies the practical expedient included in paragraph 121 of IFRS 15 and does not disclose information about its remaining performance obligations for contracts as the company recognises revenue in line with the value of the services received by the customer to date.

Where it is probable that total contract costs will exceed total contract revenue the expected loss is recognised immediately as an expense.

Interest income is accrued on a time basis, by reference to the principal outstanding at the effective interest rate applicable.

### 1.1.3 Foreign Currency

Transactions entered into by NNL in a currency other than sterling are recorded at the spot rate when the transactions occur. Foreign currency monetary assets and liabilities are translated at the closing rates ruling at the reporting date. Exchange differences arising on the retranslation of unsettled monetary assets and liabilities are recognised immediately in the profit and loss for the year.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss shall be recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in the profit or loss, any exchange component of that gain or loss shall be recognised in the profit or loss.

NNL's policy is to hedge against

significant foreign exchange exposures, however, at the Statement of Financial Position date NNL did not hold nor had it issued any derivative instruments, intended to hedge our exposures.

### 1.1.4 Leased Assets

NNL leases its trading locations from third parties. In all cases a significant proportion of the risks and rewards of ownership are not transferred to NNL.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following payments:

Fixed payments less and lease incentives receivable; and

Variable payments that are based on an index or rate, initially measured using the index or rate as at the commencement date

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot readily be determined, which is usually the case for the Company's leases, then a discount rate based on Gilts of an equivalent average duration to the lease is used as an approximation of the company's incremental cost of borrowing.

The company is exposed to potential future increases in variable lease payments based on and index or rate which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect the lease liability is reassesses and adjusted against the right of use asset.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit and loss over the lease

period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

# Right of Use Assets are measured at cost comprising the following:

The amount of the initial measurement of the lease liability

Any lease payments made at or before the commencement date less any incentives received; and

Any initial direct costs

Right of use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Payments associated with shortterm leases of vehicles are recognised on a straight-line basis as an expense in the Statement of Comprehensive Income. Shortterm leases are leases with a lease term of 12 months or less.

Information about the critical accounting estimates and judgements in the application of lease accounting is disclosed in note 1.2.3.

### 1.1.5 Exceptional Items

Unusually large or uncommon items which are caused by events or transactions that fall within ordinary activities are disclosed as exceptional items.

# 1.1.6 Retirement Benefits: Defined Benefit Schemes

A defined benefit scheme is a pension plan that defines an amount of pension benefit that an employee will receive on retirement.

In respect of a defined benefit scheme, the pension scheme surplus or deficit represents the difference between:

The fair value of scheme assets at the Statement of Financial Position date; less

Scheme liabilities calculated using the projected unit credit method discounted to its present value using yields available on high quality corporate bonds that have maturity dates approximating to the terms of the liabilities

Plus, adjustments for unrecognised past service costs

The Statement of Comprehensive Income charge is split between an operating service cost and a financing charge, which is the net of the interest cost on pension scheme liabilities and expected return on plan assets.

Actuarial gains and losses are recognised in full during the year, in the Statement of Comprehensive Income. If NNL cannot benefit from a scheme surplus in the form of refunds from the plan or reductions in future contributions, any asset resulting from the above policy is restricted accordingly.

Any difference between the expected return on assets and that actually achieved, and any changes in the liabilities over the year due to changes in assumptions or experience within the scheme, are recognised in other comprehensive income in the year in which they arise.

Past service costs are recognised directly in income, unless the changes to the pension plan are conditional on the employees remaining in service for a specified period of time. In this case, the past service costs are

amortised on a straight-line basis over the vesting period.

Where improvements are made to benefits payable under a defined benefit scheme, the effect on the plan liability is recognised in the Statement of Comprehensive Income on a straight-line basis over the average period until the employees become entitled to the improved benefits. Where the benefits vest immediately, the effect of the change is recognised immediately.

Where the fair value of pension scheme assets exceeds the present value of future scheme liabilities the excess is recognised in the statement of financial position as an asset. Conversely, where the present value of future scheme liabilities exceeds the fair value of pension scheme assets the excess is recognised in the statement of financial position as a liability.

### 1.1.7 Retirement Benefits: Defined Contribution Schemes

A defined contribution scheme is a pension plan under which the company pays fixed contributions to a separate entity. Contributions to defined contribution pension schemes are charged to the Statement of Comprehensive Income in the year to which they relate. The group has two defined contribution pension schemes.

The CPS is a multi-employer scheme which provides defined benefits to its members. In common with other unfunded public sector schemes the CPS does not have the attributes of typical defined benefit schemes. Any surplus of contributions made in excess of benefits paid out in any year is surrendered to the Consolidated Fund and any liabilities are met from the Consolidated Fund via an annual

Parliamentary vote. His Majesty's Government does not maintain a separate fund. In common with defined benefit pension schemes NNL does however bear the risk that it will have to increase its contributions in accordance with the Government Actuaries Department's.

A further defined contribution scheme is operated for employees. The company pays fixed contributions to Royal London and once contributions have been paid, the Company has no further payment obligations. The contributions are recognised in the Statement of Comprehensive Income in the year in which they become payable in accordance with the rules of the scheme. The assets of the plans are held separately from the Company in independently administered funds.

# 1.1.8 Property, Plant and Equipment

Property, Plant and Equipment (other than assets in the course of construction) are stated in the Statement of Financial Position at cost less accumulated depreciation. Assets in the course of construction are stated at cost and are not depreciated until commissioned. The cost of assets will include directly attributable staff costs associated with bringing the asset into the location and condition for it to be capable of operating in the manner intended by management. This includes the cost of testing whether the asset is functioning properly.

The carrying values of Property, Plant and Equipment are reviewed for impairment if events or changes in circumstances indicate that a provision for impairment is required. Accumulated depreciation includes any additional charges made where

necessary to reflect impairments in value. IAS 36 also requires management, on an annual basis, to determine the recoverable amount of assets and the estimated useful life to determine if this is still reasonable.

Depreciation is calculated to write off historical costs less residual value of assets, by equal annual instalments over their estimated useful economic lives as follows:

Land and Buildings – Over the lease term

Plant and machinery – 3 to 20 years

Fixtures and fittings – 3 to 10 years

### 1.1.9 Intangible Assets

Intangible assets are measured initially at cost and are amortised, as an administrative expense, on a straight-line basis over their estimated useful lives. The carrying amount is reduced by any provision for impairment where necessary.

Internal expenditure is capitalised as internally generated intangibles only if it meets the definition and recognition criteria of IAS 38 'Intangible Assets'.

Criteria of IAS 38 - the asset is

separable, i.e., it is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so, or arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

The cost of the intangible asset must be able to be measured reliably.

The service concession arrangement on Phase 2 works at the Company's Central Laboratory consists of future revenue, some of which is guaranteed. An intangible asset is recognised for the non-guaranteed future revenue where it is probable that the revenue will be generated.

Intangible assets are amortised on a straight-line basis over their estimated useful lives:

Computer software - 1 to 5 years

Service concessions – 6 to 20 years

### 1.1.10 Trade and Other Receivables

Trade and other receivables arise principally through the provision of goods and services to customers (trade debtors), but also incorporate other types of contractual monetary asset.

NNL applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets. Trade and other receivables are stated net of expected credit losses.

Expected credit losses are recognised when there is objective evidence (such as significant financial difficulties on the part of the counterparty or default or significant delay in payment) that NNL will be unable to collect all of the amounts due. The expected credit loss being the difference between the net carrying amount and the future expected cash flows associated with the receivable.

90 | NOTES TO THE FINANCIAL STATEMENTS | 91

For trade receivables, which are carried at cost less any expected credit loss; such losses are recorded in a separate allowance account with the loss being recognised within administrative expenses in the Statement of Comprehensive Income. On confirmation that the trade receivable will not be collectable, the gross carrying value of the asset is written off against the expected loss.

### 1.1.11 **Deferred Taxation**

Deferred tax assets and liabilities are recognised where the carrying amount of an asset or liability in the Statement of Financial Position differs to its tax base, except for differences arising on the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction affects neither accounting or taxable profit.

Recognition of deferred tax assets and unused tax losses is restricted to those instances where it is probable that taxable profit will be available against which the difference can be utilised.

The amount of the asset or liability is determined using tax rates that have been enacted or substantially enacted by the Statement of Financial Position date and are expected to apply when the deferred tax liabilities are settled. Deferred tax balances are not discounted.

### 1.1.12 Cash and Cash Equivalents

These include cash in hand and deposits held at call with banks.

# 1.1.13 Trade and Other Payables

Trade payables and other short-term monetary liabilities are recognised at fair value and subsequently held at amortised cost.

### 1.1.14 Government Grants

Grants relating to expenditure on property, plant and equipment are recognised in the Statement of Comprehensive Income at the same rate as the depreciation on the assets to which the grant relates. The deferred element of grants is included in liabilities as other payables. Grants relating to revenue expenditure are recognised in the Statement of Comprehensive Income in the same year in which the revenue expenditure arises.

### 1.1.15 **Provisions**

Provisions are recognised, at current price levels, for liabilities of uncertain timing or amount that have arisen as a result of past transactions and are discounted at a pre-tax rate reflecting current market assessments of the time value of money and the risks specific to the liability.

### 1.1.16 Pension Assumptions

The group's share of costs, assets and liabilities of the defined benefit scheme are determined using methods relying on actuarial estimates and assumptions. Details of the key assumptions are set out in note 20.

The group takes advice from independent actuaries relating to the appropriateness of the assumptions. Changes in the assumptions used may have a

significant effect on the Statement of Comprehensive Income and the Statement of Financial Position. Sensitivity to key assumptions is disclosed in note 20.

### 1.1.17 **Revalorisation**

Revalorisation arises because provisions are stated in the Statement of Financial Position at current price levels and discounted from the eventual payment dates. The revalorisation charge is the adjustment that results from restating these liabilities to take into account the effect of inflation in the year and to remove the effect of one year's discount as the eventual dates of payment become one year closer. The inflation rate used is specific to the expected cost increase in the underlying liability. Each year the finance charges in the Statement Comprehensive Income include revalorisation required to discharge one year's inflation and discount from the liability.

# 1.2 Critical Accounting Estimates and Judgements

NNL makes estimates and assumptions regarding the future. Estimates and judgements are continually evaluated based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. In the future, actual experience may differ from these estimates and assumptions. The areas where the estimates and assumptions used could have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

### 1.2.1 **Provisions**

The provisions recorded in the financial statements represent the Directors' best estimates of the costs expected to be incurred as at the Statement of Financial Position date.

Further details of the types of provisions, together with details of relevant estimates and, where appropriate sensitivities, are included in note 15.

### 1.2.1 Revenue Recognition

Revenue is recognised to the extent that work has been completed and an agreed purchase order from a customer covering the work is held. As a result, at 31 March 2022 £19.1m (2021 - £10.8m) of accrued income was recognised as NNL had completed work before the balance sheet date and held agreed purchase orders. Key to the recognition of revenue is the directors' estimate of the stage of completion of each contract. The estimate is based on the ratio of actual costs incurred to date to estimated total costs.

NNL carries out work for a number of customers under discrete purchase orders which are placed under larger framework agreements. The directors believe that the separate purchase orders constitute separate performance obligations and have treated them as such in determining the amount of revenue to be recognised.

### **1.2.2 Leases**

The lease liability disclosed in the statement of financial position represents the directors' best estimate of the present value of future leasing cash outflows. In arriving at this estimate the directors have assessed the incremental cost of borrowing to be used in the calculation. The

rates used and sensitivities of both the lease liability and the right of use asset values to the rate are shown in note 10. Any lease modifications are first assessed to establish whether or not they cause a separate lease. Where a separate lease is caused then the modification is accounted for as a new lease, where no new lease is caused then the lease liability is remeasured to reflect the modified terms.

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

Right of use assets are evaluated for indicators of impairments on an annual basis.

# 1.3 New Standards and Interpretations

The accounting policies adopted are consistent with those of the previous year, except as follows:

In preparing the company financial statements for the current year, the company has adopted the following new International Financial Reporting Standards (IFRS), amendments to IFRS and International Financial Reporting Interpretations Committee (IFRIC) interpretations:

- COVID-19-Related Rent Concessions – amendments to IFRS 16, and
- Interest Rate Benchmark Reform

   Phase 2 amendments to

   IFRS 9, IAS 39, IFRS 7, IFRS 4 and
   IFRS 16.

NNL also elected to adopt the following amendments early:

- Annual Improvements to IFRS Standards 2018–2020, and
- Deferred Tax related to Assets and Liabilities arising from a Single Transaction – amendments to IAS 12. 7

The amendments listed above did not have any impact on the amounts recognised in prior periods and are not expected to significantly affect the current or future periods.

Standards, amendments and interpretations to published standards not yet effective:

Certain new accounting standards and interpretations have been published which are not mandatory for the 31 March 2022 reporting period and which have not been early adopted by the company. These standards are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

### 2 Revenue

NNL's principal activity is the provision of technology services across the nuclear fuel cycle.

The directors are of the opinion that NNL's activities fall within one operating segment – being the provision of technology services across the nuclear fuel cycle. Accordingly, all revenue recognised from contracts with customers has the same economic factors affecting the nature,

amount, timing and uncertainty of revenues and cash flows. There are three key areas of this cycle: waste management and decommissioning, fuel cycle solutions and reactor operations support.

Revenue arises entirely from the sale of services principally in the UK. Sales to overseas customers make up a small proportion of total revenue at £1,694,618 (2021 – £2,104,764).

As far as practicable customer contracts are constructed to match revenue recognition profiles with payment application. As NNL also operates standard 30-day payment terms there are no significant delays between revenue recognition and subsequent cash receipt.

### **3 Profit From Operations**

	2022 £'000	2021 £'000
This has been arrived at after charging/(crediting)		
Staff costs (see note 4)	80,108	70,471
Depreciation (see note 9)	5,826	6,024
Depreciation charge on right of use assets - buildings (see note 10)	1,566	1,559
Amortisation (see note 11)	810	1,014
Asset impairment (see note 9)	453	962
Government assistance	-	(1,652)
Research and development expenses	3,280	2,012
Lease expenses	7	1
Auditors' remuneration:		
• audit services	116	81
• other services	0	6
Foreign exchange loss (see note 6)	4	5
Interest expense on leases (see note 6)	52	68

Government assistance relates to grants received for specific (ring-fenced) purposes. NNL has not benefited from any grant-in-aid during the period under review.

Research and development (R&D) expenses reflect all the company's self-funded R&D programme expenditure excluding staff costs.

### **4 Staff Costs**

	2022 £'000	2021 £'000
Staff costs (including executive and non-executive directors) comprise:		
Wages and salaries	62,917	55,148
Social security costs	7,158	6,347
Other Pension costs	10,033	8,976
	80,108	70,471

The average monthly number of employees during the year was as follows:

	2022 Number	2021 Number
Scientific, technical, engineering and facilities	848	741
Administrative	316	316
	1,164	1,057

### 5 Directors' Remuneration

	2022 £'000	2021 £'000
Directors' remuneration for both executive and non-executive directors consists of:		
Aggregate emoluments	1,181	1,099
Company contributions to money purchase schemes	44	41
Compensation for loss of office	-	-
	1,225	1,140

There were three directors in NNL's defined benefit scheme over the course of the year.

There are two directors to whom retirements benefits are accruing under a money purchase pension scheme in respect of qualifying service.

	2022 £'000	2021 £'000
The remuneration amounts above include the following in respect of the highest paid director:		
Emoluments (excluding pension contributions)	268	261
Pension contributions	31	31
	299	292

At the end of the year the highest paid director has accrued an entitlement to a pension of £21k (2021 £19k) and lump sum of £64k (2021 £58k) which is excluded from the figures above.

### 6 Finance income and expense

	2022 £'000	2021 £'000
Finance income:		
Bank interest receivable	4	26
Revalorisation on provisions	74	-
	78	26
Finance expense:		
Bank charges	17	21
Revalorisation on provisions	-	270
Foreign exchange loss	4	5
Interest on leases	52	68
	73	364

Revalorisation is the adjustment that results from restating provisions to take into account the effect of inflation in the year. This includes removing the effect of one year's discount as the eventual dates of payment become one year closer. Due to the nature of the calculation this may be recognised as finance income or expense in the year.

### 7 Taxation

	2022 £'000	2021 £'000
United Kingdom corporation tax credit		
Current year	(1,521)	(2,706)
Adjustments in respect of prior years	(27)	4,268
Tax reclaimed on research and development	8,653	7,532
Total current tax credit	7,105	9,094
Deferred tax Origination and reversal of temporary differences	(1,615)	(1,429)
Total deferred tax charge	(1,615)	(1,429)
Total tax credit on profit before tax on ordinary activities	5,490	7,665

### 7 Taxation (continued)

The reasons for the difference between the actual tax credit for the year and the standard rate of corporation tax in the United Kingdom applied to profits before tax for the year are as follows:

	2022 £'000	2021 £'000
Profit before tax	3,216	5,697
Expected tax charge based on the standard rate of corporation tax in the UK of 19% (2021 - 19%)	(611)	(1,082)
Items not deductible for tax purposes and other items	53	(348)
Other timing differences	(1,961)	(1,071)
Movement in deferred tax not recognised	1,056	-
Tax credits on research and development	(1,673)	(1,634)
Tax reclaimed on research and development	8,653	7,532
Adjustments in respect of prior years	(27)	4,268
Total taxation credit for the year	5,490	7,665

NNL's tax reclaim for 2021/2022 is £8,653k (2021 – £7,532k). This is due to tax credits received from HMRC for research and development activities.

Future tax liabilities arising from operations are expected to be offset by tax credits on research and development. In the Spring Budget 2021, the government announced that the corporation tax rate would remain at 19% until 31 March 2023 and that effective from 1 April 2023 the rate would, increase to 25%. The deferred tax liability as at both 31 March 2022 and 31 March 2021 has been calculated using a Corporation Tax rate of 25% (2021–19%).

### 8 Dividends

No dividends have been declared or paid during the current or previous year.

### 9 Property, Plant and Equipment

	Land and Buildings £'000	Plant and Machinery £'000	Fixtures and fittings £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1 April 2021	538	19,121	56,837	33,251	109,747
Additions	-	-	-	19,523	19,523
Transfers from assets in course of construction	-	4,383	43	(4,426)	-
Disposals	-	(519)	(1,494)	-	(2,013)
At 31 March 2022	538	22,985	55,386	48,348	127,257
Accumulated depreciation and impairment					
At 1 April 2021	225	10,830	16,901	-	27,956
Depreciation charge for the year	-	1,937	3,889	-	5,826
Impairment	-	453	-	-	453
Disposals	-	(519)	(1,494)	-	(2,013)
At 31 March 2022	225	12,701	19,296	-	32,222

	Land and Buildings £'000	Plant and Machinery £'000	Fixtures and fittings £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1 April 2020	538	18,717	49,756	33,694	102,705
Additions	-	-	-	8,197	8,197
Reclassification	-	-	-	(566)	(566)
Transfers from assets in course of construction	-	1,030	7,081	(8,074)	37
Disposals	-	(626)	-	-	(626)
At 31 March 2021	538	19,121	56,837	33,251	109,747

### 9 **Property, Plant and Equipment** (continued)

Accumulated depreciation and impairment					
At 1 April 2020	195	8,294	13,107	-	21,596
Depreciation charge for the year	30	2,200	3,794	-	6,024
Impairment	-	962	-	-	962
Disposal	-	(626)	-	-	(626)
At 31 March 2021	225	10,830	16,901	-	27,956
Net book value					
At 31 March 2021	313	8,291	39,936	33,251	81,791
At 31 March 2022	313	10,284	36,090	48,348	95,035

Assets in the course of construction refers to a number of ongoing major projects to enhance our critical infrastructure. Additions include £516k of accrued costs not yet invoiced (2021 – £122k). At the end of the reporting period there is no capital expenditure contracted for but not recognised as a liability (2021 – £Nil).

The directors believe that the characteristics of certain items previously classified as tangible assets more closely resemble intangible assets. As a result there has been no reclassified during the year (2021 – £566k).

### 10 **Leases**

This note provides information for leases where NNL is the lessee. NNL has no leases where it is the lessor. The balance sheet includes the following amounts relating to leases:

Right of use Assets, categorised as Land and Buildings	2022 £'000	2021 £'000
Opening balance	9,944	22,837
Additions	7	-
Remeasurement	4,184	(11,334)
Depreciation charged in the year	(1,566)	(1,559)
Closing balance	12,569	9,944

All right of use assets relate to property leases

### 10 **Leases** (continued)

Lease Liability	2022 £'000	2021 £'000
Opening balance	9,896	22,946
Additions	7	-
Remeasurement	4,184	(11,334)
Interest charged in the year	52	68
Cash payments	(1,787)	(1,784)
Closing balance	12,352	9,896

The ageing of lease liabilities are as follows:	2022 £'000	2021 £'000
Less than 1 year	1,541	1,725
2 - 5 years	4,869	3,784
Over 5 years	5,942	4,387
	12,352	9,896

The increase in both the right of use asset and lease liability values relates to the remeasurement of the lease liability associated with one of the company's laboratories. It is probable that the lease term which was due to end on 31 March 2022 will extend to 31 March 2032. Right of use asset and lease liability values are calculated using a discount rate which is based on Gilt rates, if the discount rates used in the calculation of the individual asset and liability values were 0.5% higher the right of use asset values at the balance sheet date would be £0.2m lower than stated, the lease liability values would be £0.5m lower than stated and the profit for the year would be £0.2m higher than stated.

### 11 Intangible Assets

	Computer software £'000	Service concession £'000	Assets in the course of construction £'000	Total £'000
Cost				
At 1 April 2021	5,851	3,782	166	9,799
Additions	-	-	812	812
Transfers from assets in course of construction	111	-	(111)	-
Disposal	(822)	-	-	(822)
At 31 March 2022	5,140	3,782	867	9,789

### 11 **Intangible Assets** (continued)

Accumulated amortisation				
At 1 April 2021	3,294	745	-	4,039
Amortisation charge for the year	597	213	-	810
Disposal	(822)	-	-	(822)
At 31 March 2022	3,069	958	-	4,027

	Computer software £'000	Service concession £'000	Assets in the course of construction £'000	Total £'000
Cost				
At 1 April 2020	5,501	3,782	25	9,308
Additions	-	-	206	206
Reclassification	-	-	566	566
Transfers from assets in course of construction	595	-	(631)	(36)
Disposals	(245)	-	-	(245)
At 31 March 2021	5,851	3,782	166	9,799
Accumulated amortisation				
At 1 April 2020	2,816	454	-	3,270
Amortisation charge for the year	723	291	-	1,014
Disposal	(245)	-	-	(245)
At 31 March 2021	3,294	745	-	4,039
Net book value At 31 March 2021	2,557	3,037	166	5,760
At 31 March 2022	2,071	2,824	867	5,762

Assets in the course of construction refer to IT software and the software implementation costs additions in the year include no accrued costs (2021 – £Nil). At the end of the reporting period there is no capital expenditure contracted for but not recognised as a liability (2021 – £Nil).

The directors believe that the characteristics of certain items previously classified as tangible assets more closely resemble intangible assets. As a result, £Nil has been reclassified during the year (2021 – £566k).

Amortisation of £810k (2021 – £1,014k) is included in Administrative expenses in the Statement of Comprehensive Income.

100 | NOTES TO THE FINANCIAL STATEMENTS | 101

### 12 Trade and Other Receivables

	2022 £'000	2021 £'000
Trade receivables	9,526	21,113
Amounts due from group undertakings	174	171
Prepayments and accrued income	21,300	12,502
Corporation tax	7,155	6,963
Grants receivable	7,144	-
Other receivables	936	629
Total trade and other receivables	46,235	41,378
Less: non-current trade and other receivables	(431)	(431)
Current trade and other receivables	45,804	40,947

NNL operates standard payment terms of 30 days.

Prepayments and accrued income include £19,118,568 of accrued income (2021 £10,773,839). Invoicing schedules for a number of contracts are based on milestones rather than on value of work done or time elapsed – variability in the value of accrued income at the year-end is therefore to be expected. All accrued income is receivable within less than one year.

Grants receivable relates to government grants for specific (ring fenced) purposes. Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and NNL will comply with all attached conditions. NNL does not have uncommitted grant funds in hand.

The ageing of non-current trade and other receivables are as follows:

	2022 Other £'000	2022 Total £'000	2021 Other £'000	2021 Total £'000
1 year	86	86	-	-
2-5 years	345	345	431	431
	431	431	431	431

The fair value of trade and other receivables approximates to their carrying value as at 31 March 2022 and 31 March 2021.

### 12 **Trade and Other Receivables** (continued)

The carrying value of NNL's trade and other receivables, and amounts due from group undertakings are denominated in the following currencies:

	2022 £'000	2021 £'000
Pound sterling	36,859	31,999
US Dollar	5,208	5,211
Euro	3,958	3,958
Other	210	210
	46,235	41,378

At 31 March 2022 no trade receivables were impaired (2021 – £Nil). At 31 March 2022 trade receivables of £5,720 (2021 – £539,575) were past due but had no expected credit loss provision. None of the overdue debt from the year end remains unpaid. (2021 – £82,724)

The ageing of trade receivables are as follows:

	2022 Related parties £'000	2022 Third parties £'000	2022 Total £'000	2021 Related parties £'000	2021 Third parties £'000	2021 Total £'000
Not yet due	2,602	6,918	9,520	12,060	8,514	20,574
1-30 days	-	6	6	1	151	152
31-60 days	-	-	-	-	304	304
Over 91 days	-	-	-	-	83	83
	2,602	6,924	9,526	12,061	9,052	21,113

NNL has applied the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables.

NNL considers that all its customers have shared risk characteristics and has therefore considered the expected loss allowance for all its customers as one group. The expected loss rates are based on the payment profile of sales over a period of 24 months before 31 March 2022 and 31 March 2021 respectively and the corresponding historical credit losses experienced within this period.

NNL has considered the forward looking macro-economic factors and does not believe any adjustment is required to historical loss rates to ensure they reflect relevant future economic conditions.

On this basis the loss rate is 0% and the loss allowance as at 31 March 2022 is £Nil (2021-£Nil).

### 13 Cash and Cash Equivalents

The cash and cash equivalent balances are broken down as follows:

	2022 £'000	2021 £'000
Cash available on demand	42,144	40,232

Book values equal fair values as at 31 March 2022 and 31 March 2021. All day-to-day banking matters are dealt with by the NatWest Bank, part of the RBS group.

### 14 Trade and Other Payables

	2022 £'000	2021 £'000
Payments received on account	9,400	11,564
Trade payables	6,081	5,434
Taxation and social security	3,302	4,231
Accruals	66,418	53,429
	85,201	74,658
Less: non-current trade and other payables	(43,880)	(31,027)
Current trade and other payables	41,321	43,631

Non-current other payables which represent capital grants are aged as follows:

	2022 £'000	2021 £'000
1-2 years	1,837	1,510
2-5 years	4,785	4,298
Over 5 years	37,258	25,219
	43,880	31,027

The carrying value of the company's trade and other payables are denominated in the following currencies:

	2022 £'000	2021 £'000
Pound sterling	85,159	74,658
Euro	42	-
	85,201	74,658

Book values equal fair values at 31 March 2022 and 31 March 2021.

### 14 **Trade and Other Payables** (continued)

The ageing of the trade payables are as follows:

	2022 Related parties £'000	2022 Third Parties £'000	2022 Total £'000	2021 Related parties £'000	2021 Third Parties £'000	2021 Total £'000
Not yet due	163	5,830	5,993	1,514	3,735	5,249
1-30 days	-	88	88	-	-	-
Over 91 days	-	-	-	-	185	185
	163	5,918	6,081	1,514	3,920	5,434

### 15 **Provisions**

	Severance £'000	Loss making contracts £'000	Other £'000	Total £'000
At 1 April 2021	4,911	1,302	9,112	15,325
Restatement	-	(2)	2	-
Charged to profit or loss	2	26	1,107	1,135
Utilised in year	(389)	(135)	(599)	(1,123)
Revalorisation/(devalorisation)	246	27	(297)	(24)
Released in the year	-	(289)	(93)	(382)
At 31 March 2022	4,770	929	9,232	14,931
At 31 March 2021				
Due within one year	379	792	216	1,387
Due after more than one year	4,532	510	8,896	13,938
	4,911	1,302	9,112	15,325
At 31 March 2022				
Due within one year	361	426	216	1,003
Due after more than one year	4,409	503	9,016	13,928
	4,770	929	9,232	14,931

### 15 **Provisions** (continued)

Details of each category of provision are shown below.

### Severance

The severance provision relates to severance obligations payable as pensions to employees who left NNL through redundancy. The amounts provided are based on best estimates of the pension payments and will be utilised over the next 32 years. The provision value uses a discount rate of 1.86% and a life expectancy of 88 years. A decrease of 0.25% in the discount rate would increase the provision value by £0.1m and separately an increase of 1 year in life expectancy would increase the provision by £0.3m.

### **Loss Making Contracts**

These are onerous contract provisions and have been calculated based on the latest technical evaluation of the

processes and methods likely to be used and reflect current knowledge. The provision relates to fixed-price, loss-making contracts. The loss has been calculated based on current costs and performance in line with the agreed schedule of work for the remaining duration of the contracts.

### **POCO**

These provisions are based on such commercial agreements that are currently in place and reflect the directors' understanding of the current Company policy and regulatory framework.

NNL is responsible for Post Operational Clean Out (POCO) costs or removing and disposing of the plant, equipment and consumables which have become radiologically contaminated during operations within the facilities.

Of the total other provision £8.9m relates to POCO (2021 -£8.9m). The provision has been estimated based on the weight, packing density and levels of contamination of the plant, equipment and consumables contaminated, multiplied by the agreed cost of disposal with the appropriate supplier. The provision represents the best estimate of the future cashflows required to meet these obligations. Due to the nature of the provision the future utilisation of the provision is uncertain.

The POCO provision value above is based on disposal in 10 years' time, inflation of 3% and a discount rate of 1.61% based on UK Gilt 10-year yields. A delay of 1 year in the disposal date would increase the provision value by £0.1m, an increase of 0.25% in the inflation rate would increase the provision value by £0.2m and separately an increase of 0.25% in the discount rate would decrease the provision by £0.2m.

### 16 **Deferred Tax**

At 31 March 2022 a deferred tax liability is recognised as disclosed below.

	2022 £'000	2021 £'000
Provision at start of year	1,535	366
Deferred tax charged / (credited) to Profit and Loss in the year	1,615	1,429
Deferred tax credited to Other Comprehensive Income in the year	588	(260)
Provision at end of year	3,738	1,535

### 16 **Deferred Tax** (continued)

At 31 March 2022 the deferred tax provision consists of:

	2022 £'000	2021 £'000
Depreciation in excess of capital allowances	5,654	3,640
Other timing differences – pension and post-retirement benefits	649	(10)
Other timing differences – provisions	(1,317)	(1,030)
Tax credit and loss carry forward	(1,248)	(1,065)
Provision at end of year	3,738	1,535

The provision balance is not expected to be utilised in the next year.

# 17 Financial Instruments - Risk Management

### Principal Financial Instruments

The principal financial instruments used by NNL, from which financial instrument risk arises, are as follows:

Trade receivables

Cash at bank

Trade and other payables

NNL is exposed to risks that arise from its use of financial instruments. This note describes NNL's policies and processes for managing those risks and the methods used to measure them including quantitative information in respect of these risks.

# NNL is exposed through its operations to the following financial risks:

Foreign exchange risk – transactional risk from receipts/ purchases in a foreign currency

Credit risk – suppliers not able to fulfil contractual obligation due to financial difficulty and customer inability to pay

Liquidity risk - managing the cash flows of NNL effectively

There have been no substantive changes in NNL's exposure to financial instrument risks or its objectives, policies, and processes for managing those risks from the previous year.

# Financial Risk Management Objectives

NNL's treasury policy is structured to ensure that adequate financial resources are available for the development of its business whilst managing its currency, interest rate and counterparty credit risks. NNL's treasury policy is approved by the board of directors.

The overall objective of the board is to set polices that seek to reduce risk as far as possible without unduly affecting NNL's competitiveness and flexibility. Further details regarding these policies are set out below:

### 17 **Financial Instruments - Risk Management** (continued)

### Foreign Exchange Risk Management

Foreign currency exposures are limited as NNL's functional currency is Sterling, although a minor proportion of revenue and expenditure is denominated in Euros and U.S Dollars.

The carrying value of NNL's cash and cash equivalents are denominated in the following currencies:

	2022 £'000	2021 £'000
Pound Sterling	41,916	40,169
US Dollar	26	1
Euro	202	62
	42,144	40,232

Foreign exchange risk is not considered to be material in either the current or the preceding year.

### **Credit Risk Management**

At the statement of financial position date NNL's maximum exposure to credit risk at the end of the reporting period is the carrying amount of each class of financial assets mentioned below.

Financial assets	2022 Carrying value £'000	2022 Maximum Exposure £'000	2021 Carrying value £'000	2021 Maximum Exposure £'000
Cash and cash equivalents	42,144	42,144	40,232	40,232
Trade and other receivables*	36,475	36,475	41,378	41,378
Total financial assets	78,619	78,619	81,610	81,610

<sup>\*</sup>Excluding non-financial assets

### Financial Liabilities

The table below analyses NNL's financial liabilities into relevant maturity groups based on contractual maturities:

At 31 March 2022	Trade payables* £'000	Accruals £'000	Lease Liabilities £'000	Total £'000
Less than 1 year	6,081	22,538	1,541	30,160
2-5 years	-	6,622	4,869	11,491
Over 5 years	-	37,258	5,942	43,200
	6,081	66,418	12,352	84,851

At 31 March 2021	Trade payables* £'000	Accruals £'000	Lease Liabilities £'000	Total £'000
Less than 1 year	5,434	22,402	1,725	29,561
2-5 years	-	5,808	3,784	9,592
Over 5 years	-	25,219	4,387	29,606
	5,434	53,429	9,896	68,759

<sup>\*</sup>Excluding non-financial liabilities

### **Financial Liabilities** (continued)

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. NNL is exposed to credit risk from its trade receivables due from customers and cash deposits with financial institutions.

Trade receivables balances are not covered by credit insurance, but customers are deemed to be of sufficient credit worthiness in order that NNL will continue to conduct trade with them. The following internal procedures are undertaken to assess whether NNL will grant a credit facility to them:

Obtaining status reports and reference reports for new companies; and

Reviewing their trading history and payments records

### Additional safeguards include the following:

Internal credit limits being set on all accounts which are only increased by credit controllers

Stop-lists produced on overdue accounts; and

Vigorous collection strategy in place

Credit risk also arises from cash and cash equivalents and deposits with banks and financial institutions. NNL maximises the use of publicly procured banking services and shall only hold money outside government banking service accounts with consent from HM Treasury. Only commercial banks which

are members of relevant UK clearing bodies may be considered for this purpose.

At the end of the current year and preceding year there were no significant concentrations of credit risk.

### Liquidity Risk Management

NNL's policy is to ensure that it will always have sufficient resources to allow it to meet its liabilities as they become due.

Budgets are set and agreed by the board of directors in advance, to enable NNL's cash requirements to be anticipated.

### **Capital Management**

NNL manages its capital to ensure that it will be able to continue as a going concern. There have been no changes to NNL's objectives, policies, and processes for managing capital from the previous year.

NNL's capital consists of cash and cash equivalents (note 13) and equity attributable to equity holders of the parent. Such equity comprises share capital (note 18) and retained earnings (note 19). There have been no changes in what NNL manages as capital from the previous year.

The Board of Directors reviews NNL's capital requirements on a regular basis. Based on this review, NNL will balance its overall capital requirements through new share issues and requests for capital contributions from the parent company where considered necessary. Capital is monitored alongside liquidity risk management.

### 18 **Share Capital**

Authorised, issued and fully paid	2022	2021	2022	2021
	Number	Number	£'000	£'000
Ordinary shares of £1 each	25,000	25,000	25	25

No dividends were paid or payable during the year (2021 - £Nil)

### 19 Retained Earnings

	2022 £'000	2021 £'000
Reserves at beginning of the year	77,615	65,359
Profit for the year	8,706	13,362
Other comprehensive profit/(loss)	1,775	(1,106)
Total comprehensive income	10,481	12,256
Reserves at end of the year	88,096	77,615

# 20 Retirement Benefit Obligations

# Schemes Accounted for as Defined Contribution

Combined Pension Scheme (CPS)

The CPS is a multi-employer scheme which provides defined benefits to its members. In common with other unfunded public sector schemes the CPS does not have the attributes of typical defined benefit pension schemes. Any surplus of contributions made in excess of benefits paid out in any year is surrendered to the Consolidated Fund and any liabilities are met from the Consolidated Fund via the annual parliamentary vote.

His Majesty's Government does not maintain a separate fund.

The CPS is accounted for as a defined contribution scheme. The pension charge for the year represents contributions payable by NNL to the scheme and amounts to £6,359,569 (2021 – £6,484,384).

# Schemes Accounted for as Defined Benefit

Combined Nuclear Pension Plan (CNPP)

The CNPP is a funded scheme (previously named GPS). The company's contribution rate is 49.5%. The CNPP is accounted for as a defined benefit scheme. A full actuarial valuation was carried

out for the Trustees at 31 March 2019. This has been updated to 31 March 2022 by a qualified independent actuary. The actuarial assumption for salary increases was 4.4%.

Electricity Supply Pension Scheme (ESPS)

The ESPS is a funded scheme. The company's contribution rate is 50.4%. The ESPS is accounted for as a defined benefit scheme. A full actuarial valuation was carried out for the trustees at 31 March 2019. This has been updated to 31 March 2022 by a qualified independent actuary. The actuarial assumption for salary increases was 4.4%.

Details of NNL's defined benefit schemes are as follows:

	2022 CNPP £'000	2022 ESPS £'000	2022 Total £'000	2021 CNPP £'000	2021 ESPS £'000	2021 Total £'000
Fair value of scheme assets	6,349	13,275	19,624	5,934	12,386	18,320
Present value of scheme liabilities	(5,834)	(11,192)	(17,026)	(6,259)	(12,112)	(18,371)
Surplus/(Deficit) in the scheme	515	2,083	2,598	(325)	274	(51)

### Principal actuarial assumptions

Assumptions regarding future mortality experience are set based on advice in accordance with published statistics and experience.

The average life expectancy in years of a pensioner retiring at 65 on the Statement of Financial Position date is as follows:

	2022 CNPP years	2021 CNPP years	2022 ESPS years	2021 ESPS years
Male	21	21	24	24
Female	24	24	25	25

The average life expectancy in years of a pensioner retiring at 65, twenty years after the Statement of Financial Position date is as follows:

	2022 CNPP years	2021 CNPP years	2022 ESPS years	2021 ESPS years
Male	23	23	25	25
Female	26	25	27	26

Expected increases in pensions in payment, discount rates, and inflation are as follows:

	2022 CNPP	2021 CNPP	2022 ESPS	2021 ESPS
Expected increase in pensions-in-payment	3.4%	3.3%	3.4%	3.3%
Discount rate pensioner liabilities	2.6%	1.9%	2.6%	1.9%
Discount rate deferred and active liabilities	2.6%	2.1%	2.6%	2.1%
Inflation rate	3.4%	3.3%	3.4%	3.3%

Expected discount rates are based on market yields on AA rated corporate bonds. Different discount rates have been applied to each group of members to recognise the cash flow timings attributable to each group.

### Reconciliation of scheme assets

	CNPP £'000	ESPS £'000	Total £'000
At 1 April 2020	5,127	10,688	15,815
Expected return on plan assets	117	243	360
Employer contributions	274	333	607
Benefits paid	(252)	(215)	(467)
Contributions by scheme participants	8	16	24
Actual return less expected return on pension scheme assets	660	1,321	1,981
At 31 March 2021	5,934	12,386	18,320

### 20 **Retirement Benefit Obligations** (continued)

### Reconciliation of scheme assets (continued)

	CNPP £'000	ESPS £'000	Total £'000
At 1 April 2021	5,934	12,386	18,320
Expected return on plan assets	122	250	372
Employer contributions	181	336	517
Benefits paid	(80)	(222)	(302)
Contributions by scheme participants	8	17	25
Actual return less expected return on pension scheme assets	184	508	692
At 31 March 2022	6,349	13,275	19,624

The expected return on scheme assets is equal to the weighted average return appropriate to each class of asset within the schemes. The return attributed to each class has been reached following discussions with the external actuaries.

The fair value of the scheme assets at 31 March 2022 and at 31 March 2021 were as follows:

CNPP	2022 Fair value £'000	2021 Fair value £'000
Growth Assets	3,054	2,934
Index-linked gilts	2,472	1,495
Corporate bonds	660	1,344
Cash	163	161
	6,349	5,934

At both 31 March 2022 and 31 March 2021 all the growth assets, index linked-bonds and corporate bonds were held in unquoted pooled investment vehicles.

ESPS	2022 Fair value Quoted £'000	2022 Fair value Unquoted £'000	2022 Fair value Total £'000	2021 Fair value Quoted £'000	2021 Fair value Unquoted £'000	2021 Fair value Total £'000
Target Return / Diversified Growth Fund	4,340	3,801	8,141	4,101	3,689	7,790
Index linked gilts	-	4,810	4,810	-	4,184	4,184
Cash	-	324	324	-	412	412
Defined benefit pension cost	4,340	8,935	13,275	4,101	8,285	12,386

### 20 **Retirement Benefit Obligations** (continued)

### Reconciliation of plan liabilities

	CNPP £'000	ESPS £'000	Total £'000
At 1 April 2020	5,117	9,822	14,939
Interest cost	114	221	335
Current service cost	73	120	193
Benefits paid	(252)	(215)	(467)
Changes in financial assumptions	1,199	2,148	3,347
Contributions by scheme participants	8	16	24
At 31 March 2021	6,259	12,112	18,371

	CNPP £'000	ESPS £'000	Total £'000
At 1 April 2021	6,259	12,112	18,371
Interest cost	129	244	373
Current service cost	86	143	229
Benefits paid	(80)	(222)	(302)
Changes in financial assumptions	(568)	(1,102)	(1,670)
Contributions by scheme participants	8	17	25
At 31 March 2022	5,834	11,192	17,026

### Defined benefit obligation trends of scheme as a whole as at 31 March 2021 $\,$

	CNPP £'000	ESPS £'000	Total £'000
Scheme assets	5,934	12,386	18,320
Scheme liabilities	(6,259)	(12,112)	(18,371)
Scheme (deficit)/surplus	(325)	274	(51)

	£'000	£'000	£'000
Experience adjustments on assets	660	1,321	1,981
As a % of scheme assets	11.1%	10.7%	10.8%

### 20 **Retirement Benefit Obligations** (continued)

### Defined benefit obligation reconciliation of scheme as a whole as at 31 March 2022

	CNPP £'000	ESPS £'000	Total £'000
Scheme assets	6,349	13,275	19,624
Scheme liabilities	(5,834)	(11,192)	(17,026)
Scheme (deficit) / surplus	515	2,083	2,598

	£'000	£'000	£'000
Experience adjustments on assets	184	508	692
As a % of scheme assets	2.9%	3.8%	3.5%

### Movement in overall scheme asset/(deficit) from 1 April 2020 to 31 March 2021

	CNPP £'000	ESPS £'000	Total £'000
Surplus as at 1 April 2020	10	866	876
Operating costs	(73)	(120)	(193)
Expected return on pension scheme assets	117	243	360
Interest on pension scheme liabilities	(114)	(221)	(335)
Actuarial losses	(539)	(827)	(1,366)
Contributions paid	274	333	607
(Deficit) / surplus as at 31 March 2021	(325)	274	(51)

### Movement in overall scheme (deficit)/ asset from 1 April 2021 to 31 March 2022

	CNPP £'000	ESPS £'000	Total £'000
(Deficit) / surplus as at 1 April 2021	(325)	274	(51)
Operating costs	(86)	(143)	(229)
Expected return on pension scheme assets	122	250	372
Interest on pension scheme liabilities	(129)	(244)	(373)
Actuarial gains	752	1,610	2,362
Contributions paid	181	336	517
Surplus at 31 March 2022	515	2,083	2,598

### 20 **Retirement Benefit Obligations** (continued)

### Amounts recognised in the financial statements Analysis of amounts recognised in the statement of financial position

CNPP	2022 £'000	2021 £'000	2020 £'000	2019 £'000
Fair value of scheme assets	6,349	5,934	5,127	5,208
Present value of scheme liabilities	(5,834)	(6,259)	(5,117)	(5,608)
Net pension asset/(liability)	515	(325)	10	(400)

ESPS	2022 £'000	2021 £'000	2020 £'000	2019 £'000
Fair value of scheme assets	13,275	12,386	10,688	10,719
Present value of scheme liabilities	(11,192)	(12,112)	(9,822)	(11,176)
Net pension asset / (liability)	2,083	274	866	(457)

Total	2022 £'000	2021 £'000	2020 £'000	2019 £'000
Fair value of scheme assets	19,624	18,320	15,815	15,927
Present value of scheme liabilities	(17,026)	(18,371)	(14,939)	(16,784)
Net pension asset/(liability)	2,598	(51)	876	(857)

### Included in administrative expenses

	2022 CNPP £'000	2022 ESPS £'000	2022 Total £'000	2021 CNPP £'000	2021 ESPS £'000	2021 Total £'000
Current service cost	86	143	229	73	120	193
Expected return on plan	(122)	(250)	(372)	(117)	(243)	(360)
Interest cost	129	244	373	114	221	335
Defined benefit pension cost	93	137	230	70	98	168

### 20 **Retirement Benefit Obligations** (continued)

The sensitivity of the defined benefit obligations to the principal actuarial assumptions is as follows:

	2022 CNPP £'000	2022 ESPS £'000	2022 Total £'000	2021 CNPP £'000	2021 ESPS £'000	2021 Total £'000
0.25% reduction in discount rate	325	600	925	350	650	1,000
0.25% increase in rate of inflation	325	600	925	350	650	1,000
Life expectancy increased by 1 year	175	400	575	200	425	625

The table above shows the increase in liabilities in each scheme which would result from the stated change in assumption.

The above sensitivity analyses are based on a change in assumption while holding all other assumptions constant. In practice this is unlikely to occur and changes in some of the assumptions might be correlated. When calculating the sensitivity of the defined benefit obligation to the principal actuarial assumptions the same method (that is the projected Unit Credit method) has been applied as when calculating the defined benefit liability recognised in the balance sheet.

Contributions to defined benefit plans in the year to March 2022 are:

	2022 CNPP £'000	2022 ESPS £'000	2022 Total £'000	2021 CNPP £'000	2021 ESPS £'000	2021 Total £'000
Employer contributions	181	336	517	179	333	512
Employee contributions	8	17	25	8	16	24
Total	189	353	542	187	349	536

### **21 Related Party Transactions**

### Trading transactions

During the year NNL entered into the following transactions with related parties as follows:

	2022	2021	2022	2021	2022	2021	2022	2021
					Purchases of goods/ services		Amounts owed to related parties	
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
BEIS	20,843	29,084	1,626	4,557	138	-	-	24
MOD	652	3	-	-	-	87	-	-
NDA	9,396	5,081	693	262	1,237	1,111	154	53
SL	44,127	40,106	38	7,108	5,303	4,989	-	1,437
RWM	379	417	-	134	16	-	9	-
Dounreay	335	262	245	-	-	-	-	-
Innovate	61	542	-	-	-	-	-	-
Magnox	67	12	-	-	44	-	-	-
Total	75,860	75,507	2,602	12,061	6,738	6,187	163	1,514

Undertakings under common control of the government are the Department for Business, Energy and Industrial Strategy (BEIS), Ministry of Defence (MOD), Nuclear Decommissioning Authority (NDA), Sellafield Limited (SL), Radioactive Waste Management Limited (RWM), Dounreay Site Restoration Limited (Dounreay), Innovate UK and Magnox Limited.

Since the financial year ended 31 March 2022 all of the amounts owed by related parties have been settled by cash and a balance of £Nil remains (2021 – £Nil).

### 22 Controlling Party

All of the share capital of NNL is owned by its parent, NNL Holdings Limited. NNL Holdings Limited's country of incorporation is the United Kingdom, and its registered address is Chadwick House, Warrington Road, Birchwood Park, Birchwood, Warrington WA3 6AE. The results of NNL are consolidated in the group financial statements of NNL Holdings Limited which are publicly available.

The entire issued share capital of NNL Holdings Limited is owned by the Secretary of State for Business, Energy, and Industrial Strategy. In the directors' opinion, NNL's ultimate controlling party is His Majesty's Government.

### 23 Subsidiary Company

NNL owns all of the share capital of Nexia Solutions Limited, a non-trading company with issued share capital of £1.



### **National Nuclear Laboratory**

5th Floor, Chadwick House Warrington Road, Birchwood Park Warrington WA3 6AE

**T**. +44 (0) 1925 933 744

**E.** customers@uknnl.com

W. nnl.co.uk