Company No. 02972325

GENUS PLC / ANNUAL REPORT 2022

DRIVING ANIMAL GENETIC IMPROVEMENT

CONTENTS

Customers choose us because of the strength of our genetics and we have delivered good genetic progress across all species

STEPHEN WILSON
Chief Executive

2022 HIGHLIGHTS

ROBUST PERFORMANCE ACROSS THE BUSINESS DESPITE CHALLENGING MACROECONOMIC EVENTS; GROUP RESULTS ADVERSELY IMPACTED BY CHINA

> Group revenue up 2% in constant currency (3% in actual currency), adjusted profit before tax ('PBT') down 18% in constant currency (16% in actual currency)
> Excluding PIC China, Group adjusted PBT up 25% in constant currency (28% in actual currency) and revenue up 7% in constant currency (9% in actual currency)
> R&D investment increased by 6%[2] as planned
> Statutory PBT reduced by 13% to £48.4m, reflecting lower adjusted profit, lower net IAS 41 biological asset movement and share-based payments

CHALLENGING MARKET CONDITIONS FOR PIC CHINA AS PREVIOUSLY INDICATED, STRONG PIC PERFORMANCE ELSEWHERE

> China pig prices averaged 14.6 RMB/kg through the year, down 50% on the prior year. Since June 2022, these have now recovered to over 21 RMB/kg, which exceeds the cost of production for most producers
> Overall PIC volumes were stable, with revenue down 5%[2], but royalty revenue up 1%.[2] Adjusted operating profit declined by 13%[2]
> Excluding China, PIC's volumes up 8%, revenue up 4%[2], royalty revenue up 8%[2] and adjusted operating profit up 11%[2]
> Strong customer wins drove North America growth; solid performance in Latin America and Europe despite challenging market conditions for customers

GOOD PERFORMANCE IN ABS, WITH ADJUSTED OPERATING PROFIT GROWTH OF 9% AND VOLUME GROWTH OF 3% DESPITE MORE CHALLENGING MARKET FOR PRODUCERS

> Continued success for Sexcel® (supporting sexed volume growth of 18%) and NuEra® beef (with volumes up 21% and total beef volumes up 9%)
> Strong growth in third-party sales of IntelliGen sexed semen production in North America and Europe
> High growth in Asia, particularly China and continued growth in Latin America
> Overall, ABS's adjusted operating profit up 9%[2]

1 Adjusted results are the Alternative Performance Measures ('APMs') used by the Board to monitor underlying performance at a Group and operating segment level, which are applied consistently throughout. These APMs should be considered in addition to, and not as a substitute for or as superior to statutory measures. For more information on APMs, see the APM Glossary
2 Constant currency percentage movements are calculated by restating the results for the year ended 30 June 2022 at the average exchange rates applied to adjusted operating profit for the year ended 30 June 2021
3 The primary intensity ratio is a measure of the Group's Scope 1 and 2 emissions per tonne of animal weight

LOWER CASH GENERATION AND EARNINGS THAN PRIOR YEAR, DIVIDENDS MAINTAINED

> Free cash outflow of £13.5m, reflecting lower profit from PIC China, continued investment in the business as well as expected working capital outflows. Solid cash conversion of 82%[1]
> Net debt increased to £185.0m, with year end net debt to EBITDA ratio of 1.7x[1], within 1.0x–2.0x targeted range
> On 26 August 2022, Genus extended its multi-currency revolving credit facility to 2025 and increased the facility by £40m (to £190m) and USD25m (to USD150m) under an accordion option
> Adjusted earnings per share 18% lower, final dividend in line with prior year, with 2.6x[1] adjusted earnings cover

CONTINUED STRATEGIC PROGRESS AND INVESTMENT FOR GROWTH

> Further genetic progress in pork, beef and dairy, contributing to a reduction in use of energy, water and land in animal protein production. Good progress on reduction of Genus's carbon emissions, with the primary intensity ratio[3] reduced by 25% since 2019
> Acquisition in Canada of Olymel LP's internal elite porcine genetics programme, AlphaGene, for CAD25m (£14.5m) in February 2022 progressing well, generating royalties in the second half
> Significant capital investments to support growth including expansion of the ABS Leeds facility in Wisconsin, completion of the PIC Atlas facility in Canada in June 2022 and further roll-out of the GenusOne enterprise system, now live in more than 60% of Genus's business
> Investments in digitalisation to deliver differentiation for ABS's GENEadvance genetic offering and e-commerce capabilities

BUILDING R&D CAPABILITIES AND OPPORTUNITY PIPELINE

> PRRSv resistant pig programme on track, with final FDA submissions expected to be made by December 2023
> R&D pipeline strengthened from investments, with an increase in the number of projects in the discovery and proof of concept phases

GROUP REVENUE

£593.4m

2021: £574.3m **+3%**

STATUTORY PROFIT BEFORE TAX

£48.4m

2021: £55.8m **-13%**

ADJUSTED PROFIT BEFORE TAX[1]

£71.5m

2021: £84.8m **-16%**

ADJUSTED BASIC EARNINGS PER SHARE[1]

82.7p

2021: 100.9p **-18%**

FREE CASH FLOW[1]

-£13.5m

2021: £37.5m **-136%**

DIVIDEND PER SHARE

32.0p

2021: 32.0p **+00%**

GENETIC IMPROVEMENT

DRIVING GENETIC IMPROVEMENT

PIC's Camborough® is the world's leading commercial sow

MATT CULBERTSON
PIC Global Product Development Director

Genetic improvement lies at the heart of Genus's business. Genus breeds and sells genetically superior animals, which enable farmers to produce more animal protein with fewer resources.

Genus is a global leader in genetic improvement, with 39 Top 100 dairy bulls globally[1], a leading beef breeding programme, and a porcine programme that has delivered over $3.00 profit improvement per commercial pig per year in the past four years[2]. These results are achieved by starting with our world class, proprietary herds, and applying leading technology and capabilities to improve them at a fast rate.

Genus is uniquely positioned as a leading player of scale operating across pork, beef and dairy genetics. Our cash generative businesses serve many of the Top 100 pig producers and dairies globally through our strategic supply chain and distribution networks in over 75 countries. Our cash generation and listed status enables us to invest more in leading technologies[3], which can be leveraged across multiple species. We also attract top talent across our 3,500 employees, which include over 100 PhDs.

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Read more on pg 20 – 25

1 Based on generally available Holstein bulls listed in the Top 100 Genomic Net Merit US$ rankings for genomically tested sires as of August 2022
2 Based on three-year rolling average of our porcine genetic index. See Strategic Framework on page 18
3 See Technology section on page 4

OUR INDUSTRY LEADING NUERA BEEF GENETIC PROGRAMME IS DELIVERING

1 NuEra Genetics Index for Genus proprietary T14 line. Indices are adjusted from time to time to ensure an accurate genetic prediction of animals available for selection
2 Global beef semen sales volumes from NuEra bulls as a proportion of total ABS beef semen sales volumes

Our proprietary beef breeding programme produces leading beef genetics focused on delivering the most profitable, sustainable beef calves for the beef supply chain. These genetics have proven their superiority in customer systems, with farmers benefiting from additional lifetime value per calf of between $88 and $226 when compared with competitor beef genetics in trials involving over 1,000 calves. This has driven demand for our proprietary NuEra Genetics, which from full commercial launch in FY18 now represent over a third of overall ABS beef sales volumes in FY22.

CASE STUDY

Delivering healthier animals through gene editing

Gene editing has the potential to substantially improve animal health, by making them resistant to particular diseases or giving them traits that lead to better well-being.

For example, we are making good technical and regulatory progress in our development programme to produce gene-edited pigs that are resistant to PRRSv.

Genus pioneered this gene edit in partnership with the University of Missouri and we are employing CRISPR/Cas9 technology to generate small changes to pigs' DNA.

However, studying diseases in animals is slow, expensive and needs considerable resources. We are overcoming these issues by adopting stem cell technology. This gives us a source of bovine or porcine cells we can propagate in the lab, so we can produce the cell types that are the natural targets of infection. We can then use these cells to test many different genes and edit them in a variety of ways, as we search for a solution before testing in animals. This reduces time, cost and animal numbers.

We are also exploring other exciting technologies to tackle disease, such as dominant gene silencing. Through a partnership with Tropic Biosciences, we are also investigating the use of RNA interference to shut off host, viral or bacterial genes that cause disease.

Our approach to new technology is broadening our research pipeline. Currently, we are evaluating porcine diseases such as swine influenza, African Swine Fever and porcine epidemic diarrhoea virus, as well as respiratory and intestinal viral diseases in cows, all of which are at the early discovery stage.

TECHNOLOGY

THROUGH LEADING EDGE TECHNOLOGIES

We have built world class teams of scientists spanning core genomic sciences, gene editing, biosystems engineering and reproductive biology

ELENA RICE
Chief Scientific Officer

Our ability to drive genetic improvement in our proprietary herds and deliver superior breeding animals to our customers depends on our ability to leverage leading edge technologies, which we develop in-house and access through strategic partnerships.

Our genome science and bioinformatics teams have a deep understanding of the link between DNA and animals' observable characteristics, aided by our extensive databases of real-world animal performance data. We employ this knowledge in our proprietary breeding programmes to select superior parents with desirable characteristics to breed successive generations of animals.

Our biosystems engineering team uses technology to interrogate and select cells, such as in our proprietary semen sexing technology, IntelliGen, one of only two commercially available bovine sexing technologies globally. Today IntelliGen operates in seven countries, with over seven million female calves having been born since launch.

In gene editing we have built strong in-house technical and regulatory capabilities. In our PRRSv resistance programme we are developing more sustainable, disease-resistant breeding pigs by making precise changes to their genes. This carries animal well-being benefits and could solve a challenge worth billions of dollars to the industry. We are also pursuing other potential traits in bovine and porcine.

We have active R&D workstreams in multiple advanced reproductive technologies, such as IVF, which enables us to select both female and male parents for superior offspring. In the future advanced reproductive technologies have the potential to shorten generation interval, which could have a material impact on product quality and differentiation.

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Read more on pg 24 – 25

INVESTING IN OUR SUPPLY CHAIN

Our bovine facilities operate at the highest animal welfare and sustainability standards in the industry

JIM MERONEK
Global Bovine Supply Chain Director

Genus's global supply chain efficiently delivers porcine and bovine genetics to customers while mitigating risk for us, for example through the use of third-party multipliers.

PIC pure-bred pig lines are housed in strategically located biosecure facilities in four continents. These pigs are bred out into larger breeding herds in over 500 predominantly sub-contracted 'multiplication' farms globally, many of which are operated by customers themselves. PIC boars are housed in over 400 studs globally, where semen is collected for distribution to customers and multiplication herds.

We are growing our global supply of elite porcine genetics by over 80%[1], driven by new farm builds, like our owned Atlas (Canada) and Ankang (China) farms, and acquisitions like Hermitage (Europe). PIC China's supply chain is unparalleled amongst international genetics companies, with over 160,000 GGP and GP sows in owned, JV and contracted farms locally, enabling us to support industry growth.

ABS breeds elite bulls in three continents. The best bulls come to one of ABS's six owned and contracted stud facilities in the US, Europe, Brazil, India and Australia, where over 1,000 bulls' semen is collected for distribution as frozen semen 'straws' or used to create embryos for sale. ABS operates embryo labs in Brazil, Mexico and the US, and sexing operations in the US, Europe, Latin America and Asia.

Animals at ABS's and PIC's facilities benefit from industry-leading welfare standards, and we have commenced the roll-out of solar panels, which today provide over 80% of power requirements in some of our facilities.

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Read more on pg 20 – 23

1 Growth in elite great grandparent and grandparent sows between FY19–FY23F

GROWING OUR SEXING PLATFORM

1 Sexed units delivered or produced for customers in the year

We have continued to grow our sexing platform to support the growing demand for Sexcel, our proprietary genetics sexed by IntelliGen, and third-party demand for sexing services provided directly by IntelliGen.

CUSTOMERS

We have been focused on serving and building trust with Chinese key accounts, by delivering faster genetic progress

RICHARD WILLIAMS
Head of ABS Asia

Genus serves over 50,000 customers in over 75 countries, including many of the Top 100 pig producers and Top 100 dairies globally. Our porcine business is global leader, and in bovine we are a strong #2. We sell products through different channels on multi-annual product and service bundles or transactionally, always looking to align pricing with value delivered to customers. Our technical teams support customers to get the best from our products, delivering a superior customer experience.

'Market' pigs for processing are produced in 'pyramids' over four generations. PIC supplies live animals and semen to customers' pyramids enabling them to produce pigs with the latest, best-performing genetics. We also use third-party herd multipliers and studs to expand our breeding pig populations and produce semen for commercial sale. PIC controls the sale of its animals to protect our intellectual property.

In bovine, customers traditionally purchase semen straws or embryos on a per-unit fee. In FY19 we introduced multi-annual product and service bundles, which typically require customers to commit to a 3-5 year contract and 100% of their product requirements to ABS.[1] Today, this business represents 29%[3] of our direct sales volumes in EMEA. We have introduced digital sales channels, which account for around one third of beef semen sales volumes in Latin America, an early adopter. We have also introduced digital tools and services to support contracted customers in key markets.

We build trust with porcine customers by linking pricing to on-farm performance and by running validation trials. 84% of our sales volumes[2] are on multi-annual royalty contracts, where PIC supplies animals and semen at cost, and customers typically then pay for every parent selected for breeding or every piglet weaned or every pig sent to market. In bovine we price each straw of semen according to a genetic index score used by the industry to estimate the economic value of breeding animals for farmers. We have also introduced beef weaned calf fees (similar to PIC's model).

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Read more on pg 20 – 25

1 Programme offering, customer commitment, pricing and contract lengths vary
2 Including our Brazilian joint venture
3 Contracted business for 1–5 years, including our key account partner programme ('KAPP'), reproductive management services ('RMS'), Breeder Tag programme, and other contracted services where the customer has committed 80–100% business with Genus ABS

PARTNERING WITH OUR CUSTOMERS

CASE STUDY

Offering customers an industry leading digital experience

In ABS, we are increasingly using digital tools to transform the customer experience. This helps us to retain customers, grow our business with them and win new accounts. Digital tools can also improve our efficiency and reduce costs, as well as having the potential to open up new routes to market and new ways to capture value.

Our GENEadvance programme for dairy customers is a great example of how we use digital tools to support our customers. At the outset, we visit the customer to discuss their long-term breeding strategy. We then take small tissue samples from the animals and use genomic testing to screen them, identifying the traits that are most important to the customer based on our discussions.

Using this genomic testing data, we develop a customised breeding plan, with mating recommendations for every female in the herd. We can then track genetic improvement in the herd over time, demonstrating the benefits of the improved selection decisions GENEadvance enables.

Real-time genetic data is at the heart of GENEadvance and farmers can access it whenever they need it, via an ABS app.

The ABS app also provides a range of targeted marketing content, as well as supporting e-commerce. This has great potential to drive sales, with an e-commerce pilot with selected beef customers in the US achieving a 175% increase in semen sales. To date, the app has more than 3,000 active users and more than 250,000 recorded reproduction events, with this set to grow as we release it in more geographies in FY23.

NOURISHING THE WORLD SUSTAINABLY

Genetic improvement is helping feed the world by making animal protein more sustainable and accessible

STEPHEN WILSON
CEO

Genus breeds more productive and resilient breeding animals, which enables farmers to produce meat and milk more efficiently and sustainably. Our superior breeding animals have a significant impact on whole protein value chains and benefit multiple stakeholders.

Our customers are our central stakeholders. Our genetically improved animals are more resilient and productive, helping farmers to produce more milk and meat with fewer resources. In the past 40 years genetic improvement has contributed to the doubling of US dairy farmers' average milk per cow from 5.4 to 10.8 tonnes per year.[1]

Genetic progress has also helped to deliver significant resource savings and environmental benefits in protein production. Today it takes 1.6kg less feed to produce a kilogram of pork in a professional farm system than it did 50 years ago.[2]

By improving the productivity, cost and resource utilisation of animal protein, genetic improvement makes nutritious animal protein more accessible to consumers globally, helping to nourish the world more sustainably in line with our vision.

3,500 employees help to deliver our vision of nourishing the world more sustainably, and over 12,000 shareholders are invested in our opportunity.[3] By sharing in the value that we deliver to meat and milk producers globally, we provide career opportunities to our employees and generate financial returns for our investors.

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Read more on pg 32 – 38

1 USDA ERS data for the period 1980–2020
2 Genus PIC data for the period 1970–2020
3 Number of Genus shareholders as of 30 June 2022
4 Genus PIC data; PIC herd represents top performing PIC customers

PRODUCTIVITY INCREASES IN PIC HERD[6]

Genetic improvement in PIC herds has delivered benefits across multiple observable traits, including pigs weaned per litter and feed conversion. These all contribute to improving the overall pork produced per sow and the resources required to produce it.

PRODUCING MORE SUSTAINABLE BREEDING ANIMALS FOR FARMERS

WHAT WE DO

Genus is a world-leading animal genetics company. We supply high-quality breeding animals with desirable characteristics to farmers, enabling them to produce better quality meat and milk more efficiently to feed the world more sustainably.

Our breeding animals' desirable characteristics include feed efficiency, disease resistance, growth rate, protein and fat content, and fertility. We focus on serving progressive farmers, who are best placed to measure and realise the benefits of superior genetics and technologies.

HOW WE DO IT

We analyse animals' DNA and look for markers that we know are linked to desirable characteristics for farmers. We then select animals with the strongest genetic profile from our proprietary and partner herds and breed them to produce even better offspring, in a continuous cycle. We distribute these superior animals to customers in the form of animals, semen or embryos.

We also own technology that enables us to process semen for desirable traits, such as female sex for the dairy market, and license-in technology to make precise gene edits to animals' DNA, which we are employing in our R&D programmes to produce animals which are resistant to fatal disease.

INVESTMENT CASE

Leading multi-species market positions
We supply 50,000+ customers in 75+ countries, including many top pig and dairy farmers. Our international, multi-species model reduces our reliance on individual markets. In contrast, many of our competitors are regional single-species cooperatives.

People and relationships
Genus attracts top industry talent. Our 3,500 employees, including 100+ PhDs, enable us to deliver superior products and services to 50,000+ customers globally. Close relationships with leading research and strategic partners further strengthen our capabilities.

Focused technology-driven business model
We are focused on delivering high-quality breeding animals to farmers by discovering, developing and delivering pioneering technologies spanning genomics, gene editing, sexing and reproductive technology fields, across multiple species.

Scale and financial strength
Genus is the only large, listed animal genetics company operating in pork, beef and dairy. We are cash generative with a strong financial position and access to strategic capital. We leverage our R&D investment across species to further our genetic lead.

Positive long-term market fundamentals
Genus's genetic improvement technologies enable farmers to produce more animal protein with fewer natural resources, helping to meet the growing global demand for animal protein more sustainably.

OUR INNOVATION-DRIVEN BUSINESS MODEL

Genus's business model is based on creating and delivering genetically improved breeding animals by leveraging a common, innovation-driven technology platform across different species. Genus's innovative R&D function includes over 400 talented employees including scientists, technicians, engineers and bioinformaticians. Our world-leading teams manage our proprietary breeding programmes by leveraging our extensive real-world data collected on farms and DNA analysis. Genus R&D successfully developed and launched a commercial laser-based bovine sexing technology in FY18, and are working on potentially transformational gene-edited and in vitro reproductive technologies..

OUR COMMERCIAL DIVISIONS

Genus's leading porcine and bovine divisions, PIC and ABS, deliver genetically elite breeding animals and services to thousands of farmers globally. Given the different nature of PIC's and ABS's markets and business models, PIC and ABS have different financial profiles.

CUSTOMER PROFILE	Consolidated and vertically integrated	Consolidating
REGIONAL VARIATION	Low	High
GENETIC VALUE BASIS	PIC proprietary index	Moving from public to proprietary indices
GENETICS PURCHASING MODEL	Multi-year, royalty-based contracts	Priced per straw, shifting to multi-year genetic programmes
	▼	▼
# EMPLOYEES	600+	2,300+
REVENUE[1]	£306.6m	£272.0m
ADJUSTED OPERATING PROFIT[1]	£121.2m	£40.5m
ADJUSTED OPERATING MARGIN[2]	36.6%	14.9%

PIC divisional review can be read on pg 20 – 21

ABS divisional review can be read on pg 22 – 23

1 Revenue and Adjusted Operating Profit Includes Joint Ventures
2 Excluding Joint Ventures

CHAIRMAN AND CHIEF EXECUTIVE Q&A

Our Chairman Iain Ferguson ('IF') and Chief Executive Stephen Wilson ('SW') answer key questions about the last financial year and the prospects for the Group.

Market conditions have been challenging for customers in the last 12 months. What were the main impacts?

SW: The macro environment proved particularly difficult for our customers in FY22, including record grain, fuel and fertiliser prices and the ongoing impact of COVID-19 on their operations. The Russian invasion of Ukraine sent shockwaves through the supply chain, adding to the inflationary pressures on input costs. Our customers benefited from rising output prices, but these have generally lagged input prices and put pressure on their margins.

China also has its own issues. There was heavy restocking in the porcine industry after African Swine Fever, which has led to oversupply at the same time as demand has fallen due to COVID-19 lockdowns, so the industry made heavy losses during the year.

How has Genus responded to these conditions?

IF: Genus is a long-cycle business, so the Board needs to ensure the Group delivers sustainable performance for the long term. It can be tempting to boost short-term profits at the expense of investment but it would have been the wrong thing to do. The Board has focused on maintaining the R&D programme, with spend of £67.1m in the year, as well as investing in our capacity, assets and people.

SW: China is a good example of that approach. We continue to see strong long-term prospects for PIC there as a result of our product strength, the investments we've made to significantly increase our supply chain capacity and strengthen our team.

What has this meant for the Group's performance?

SW: The Group has generally done well this year, although China had a meaningful impact on our performance. Although revenue was up 3%, adjusted profit before tax was also lower by 16%, or 18% in constant currency. However, if you exclude PIC China, adjusted profit before tax for the Group was up 28% or 25% in constant currency.

PIC's overall revenue and profits were down but it generally performed well, including delivering its fastest growth in North America for a number of years, as a result of our investment in genetics and capturing market share.

Genus ABS grew volumes by 3% and revenue and adjusted operating profit by 7% and 9% respectively, despite the impact of an IT security incident, now resolved, which affected June's trading in Brazil. We are seeing growing uptake of our NuEra beef genetics in dairy herds, which contributed to a 9% increase in global beef volumes, and further growth in Sexcel sexed genetics, with sexed volumes 18% higher.

IF: We recognise the importance of balancing our investment for the future with ensuring an attractive return for shareholders. The Board is therefore recommending a final dividend of 21.7 pence per ordinary share, consistent with the prior year final dividend. When combined with the interim dividend this will result in a total dividend for the year of 32.0 pence per ordinary share (2021: 32.0 pence per share), the same as the prior year. The final dividend will be paid on 9 December 2022 to the shareholders on the register at the close of business on 18 November 2022.

Genus has operations in Russia and Ukraine. What is your stance on operating in Russia?

IF: When the invasion happened, our immediate concern was to ensure the safety of the small number of people who work for us in Ukraine and to provide the support they needed.

Both PIC and ABS are active in Russia and the Board carefully considered the right course of action. We concluded that we needed to stick to our purpose and principles, as this is in the best interests of our employees, our animals and the many people who ultimately depend on our work for their food. At the same time, we will ensure that in continuing to operate we comply with all laws and sanctions.

You have made good progress with the strategy this year. What have been the highlights?

SW: Customers choose us because of the strength of our genetics and we have delivered further good genetic progress across all species. We enhanced our porcine portfolio through our collaboration with Olymel in Canada, which also expands our footprint in that market.

Iain talked earlier about how we had continued to invest in our capacity. In June 2022, we opened our new elite porcine genetics farm in Canada, called Atlas. Our investment in ABS's facility in Leeds, Wisconsin, has also given us increased bull housing and production capacity, as well as making us more efficient.

Our programme to produce PRRSv-resistant pigs made continued progress, with the expansion of E2 generation homozygous edited animals and further submissions to the FDA as planned. We are focusing on our industry engagement and our industry engagement as the prospect of bringing PRRSv-resistant pigs to market comes closer. We also have a pipeline of other gene editing projects, mainly in porcine, and our investment in reproductive technology is starting to make progress.

Digitalisation is important for us. In particular, we are transforming ABS's digital capabilities, to improve our ability to engage even better with customers, show them how we are driving genetic improvements in their herds and connect with them through digital sales and marketing. We are also progressing the roll-out of our new enterprise system, GenusOne. We went live in Spain and Chile during the year and in the UK shortly after the year end, so over 60% of the Group's business is now using the new system.

IF: The Board is pleased with how well the strategy is working. We held our annual strategy day in January, which confirmed that the Group is on the right path and has the right objectives. We have become more systematic in evaluating and prioritising our R&D portfolio, which will stand us in good stead for the future.

We also recognise that we cannot do everything and that there is great work elsewhere that we can tap into. The Group is increasingly looking at partnerships, such as with universities and other institutions, and we are continually scanning the horizon for developments that will influence our business. The industry also continues to consolidate and we want to be seen as a good partner for that. Our collaboration with Olymel shows this in action.

How are your Sustainability initiatives coming along?

SW: We are a purpose-driven business focused on nourishing the world, so sustainability is core to our business model. We are helping to reduce our customers' environmental impact because our genetic improvements mean they can achieve their business goals while using fewer resources and cutting their carbon footprints. This year, we became a founder member of the Greener Cattle Initiative this year, which is an industry consortium supporting research on how to mitigate methane emissions from cattle. Since 2019, we have also made progress in the business with our own carbon reduction goals, which you can read about later in the report.

Genus is a people-based business. What are you doing to ensure you attract and retain the talent you need?

SW: We work very hard to provide a compelling experience for our people, where they can perform their best and fulfil their potential. We are attracting an ever-more diverse global team and investing in them to help them succeed.

Every two years, we survey our people to measure how they feel about working for us. This year, we had our highest-ever response rate and increases in positive scores for almost every question. Nine in ten said they enjoy working at Genus and 82% said they would recommend Genus to their family or friends, so that was really pleasing.

IF: We recognise that it has been another tough year for many people in our business and while Europe and North America have largely emerged from COVID restrictions, the same has not been true in countries such as China. The Board thanks everyone for their dedication this year and their contribution to our continued success.

One of the pleasing developments this year was being able to restart the Board's site visits. These allow us to meet our people on the ground, as well as other stakeholders such as customers, which among other things gives us more insight into the culture. Combined with the survey results, this has reaffirmed our view that we have a robust and positive culture across the Group, and that Genus is an enjoyable place to work.

I was also pleased during the year to launch the 2021 Chairman's Award. This prestigious award was open to submissions from teams across our global business and celebrates outstanding innovation. I received 17 high-quality applications which showcased projects, and the teams behind them, which demonstrate the inventive spirit that has helped to make Genus the world-renowned company it is today.

What is the outlook for Genus?

IF: As a Board, we are focused on ensuring that Genus continues to deliver over the next ten to 20 years. That means further investment in our research, assets and people. Developing and commercialising the best technology will remain at the core of our business and we believe the Group is well placed to benefit from our strategy, as the global economy recovers.

SW: As noted above, macroeconomic conditions remain particularly challenging for our customers in many parts of the world, however, since the start of the 2023 fiscal year, China's live pig prices have risen above 21 RMB/kg, improving confidence that the country's porcine industry is on the path to recovery. There is still uncertainty as to how sustained this will be and the implications for demand for porcine genetics. Our investments in China position us well to benefit from an upturn. More broadly our clear strategy, strong product portfolio and depth of skill in our sales, services and R&D teams give us confidence that we will continue to make strategic and financial progress in fiscal year 2023 and beyond. The Group remains well positioned to benefit from improving market conditions when these occur and therefore our medium-term growth expectations remain unchanged.

FEEDING THE WORLD MORE SUSTAINABLY

DEMAND DRIVERS FOR GENETIC IMPROVEMENT

GROWING DEMAND FOR ANIMAL PROTEIN

The global population is expanding and urbanising, and seeking a more varied and nutritious diet. This is driving increases in consumption of pork, milk and beef, which are forecast to grow by 1–2% p.a. in the next decade.[1]

FOOD PRODUCTION MUST BECOME MORE SUSTAINABLE

Competition for resources, such as land and water, and the need to reduce greenhouse gas emissions, puts pressure on farmers to become more efficient through the use of technology and genetically superior animals, which are proven to be more sustainable.[2]

CONSUMERS ARE DEMANDING BETTER PRODUCTS

Consumers are increasingly demanding healthier and more sustainable products, which are raised with a focus on animal welfare, traceable and produced with fewer drugs. This increases farmers' demand for genetically superior breeding animals, which are naturally more resilient and sustainable.[3]

FARMS ARE CONSOLIDATING AND TECHNIFYING

Progressive farmers, who are more open to new technologies and measure performance in more detail, are consolidating the sector. They understand the economic and sustainability benefits of genetically superior animals and optimised breeding strategies, such as combining the use of sexed dairy and beef semen on dairy herds to maximise profit.

1 OECD FAO production forecasts for period 2022–2031
2 As demonstrated through Genus real-world data and various trials in porcine, dairy and beef systems
3 Genus animals are selected according to indices that include productivity and health traits

OUR POSITION

Genus is a leading player in global porcine and bovine genetics markets, serving many of the Top 100 pig producers and dairies globally. Investment in our proprietary genetic programmes has delivered world-leading products in all our species, validated by indices and on-farm trials. Genus is also recognised as a global leader in genomic, gene editing and sexing technologies.

4 Source: Government agencies, Eurostat, pork organisations, Genus estimates. Market shares represent the estimated share of pig production in top pig production markets
5 Source: Government agencies, USDA, OECD, genetics and agriculture organisations, Genus estimates. Market shares represent the estimated share of combined dairy and beef volumes in ABS's Top 29 target markets for dairy and Top 8 target markets for beef

TRENDS IN OUR MARKET[6]

TOTAL PORK
121mt

TOP 3 MARKETS

43% 20% 10%

ADVANCED GENETICS USE

PRODUCTION
Pig production is largely technified with similar production systems employed by progressive producers globally. Breeding pigs and semen are typically acquired from specialist genetic improvement companies or sourced from captive breeding programmes to 'stock' a farm, with semen being provided periodically thereafter, enabling farmers to benefit from the latest, best-performing genetics.

Disease poses a significant risk to pig producers, who rely on biosecurity protocols and health products to manage the threat of diseases like PRRSv, a disease which causes billions of dollars of damage to the industry annually.

In China, pigs have historically mainly been produced in small 'backyard' farms. In 2018, the outbreak of African Swine Fever resulted in the national sow herd declining by about one-third. The resulting shortfall in pork drove the expansion of large-scale technified pig production, further aided by the legislative drive to professionalise the sector. Today, the top 50 producers control around one-quarter of the sow herd in China.

GENUS OPPORTUNITY
> Maintain our genetic lead by driving genetic improvement faster than competitors and internal programmes
> Ensure biosecure supply of breeding stock and semen for progressive producers in all key markets
> Make China a 'home market', with local nucleus herds, supply chain and superior customer service
> Launch our gene-edited PRRSv-resistant pigs, and explore technology solutions to other diseases

TOTAL BEEF
72mt

TOP 3 MARKETS

17% 13% 10%

ADVANCED GENETICS USE

PRODUCTION
Beef is produced in a variety of systems globally and from many breeds, using both artificial insemination and 'natural service'. Beef animals are often traded multiple times between birth and processing.

In the US, beef is mainly produced from pure-bred beef animals bred naturally from bulls on farm or sourced from the open market. A modest but growing portion of beef cattle is produced by breeding dairy cattle with beef semen (Beef x Dairy). Beef x Dairy uses 'surplus' dairy breedings to produce high-quality beef animals that are more consistent than those from pure-bred beef systems.

In Brazil, beef is mainly produced from pure-bred 'tropical' beef cattle suited to local conditions, but tropical cattle are increasingly being cross-bred with semen from European breeds. The resulting cross-bred calves have better meat quality and growth rates than tropical animals, and are more heat tolerant than European breeds.

GENUS OPPORTUNITY
> Demonstrate the superiority of our proprietary beef genetics across the value chain through trials and partnerships
> Build on our product leadership in beef semen for dairy and tropical cross-breeding
> Develop naturally more resilient cattle, through genomic selection and gene editing technologies

TOTAL MILK[7]
902mt

TOP 3 MARKETS

22% 17% 11%

ADVANCED GENETICS USE

PRODUCTION
Milk production systems vary due to environment, genetics and technification. The average US cow produces over 10 tonnes of milk annually compared with 2 tonnes in India. Dairy production is fragmented, but progressive farmers are consolidating. Average herd size in the US has grown by 77% over ten years[8], and two Chinese groups now control around half a million cows.

Historically farmers selected breeding animals based on their progeny's performance. In 2008, genomics enabled the selection of animals at birth from their DNA, triggering the consolidation of elite genetics by studs (like ABS). Leading studs transitioned from purchasing bulls to proprietary breeding programmes. Between 2008–2022 total breeders featured in the top bull rankings fell from 107 to 31.

Sexing technology use has grown rapidly, enabling farmers to produce herd replacements from their best cows with fewer breedings, given the ~90% chance of a female. Other animals in the herd are increasingly bred with beef semen to produce a high value cross-bred beef calf. The proportion of ABS's sales to US dairies consisting of sexed and beef genetics has grown from 16% to 76% between FY16–FY22.

GENUS OPPORTUNITY
> Maintain our genetic lead by driving genetic improvement faster than competitors
> Drive the adoption of our sexed and Beef x Dairy genetics amongst dairy farmers, to maximise their profitability
> Grow our presence with progressive industry consolidators globally
> Deploy our proprietary sexing technology with partner studs, delivering value and sustainability to the industry

6 Sources: OECD FAO 2022, Rabobank, Boyar, Journal of Swine Health and Production, Genus Analysis
7 Represents 81% cow milk, 15% buffalo milk, 4% other (OECD FAO 2022)
8 USDA data for the period 2011 to 2021
9 Represents the number of US Holstein breeders represented in the Top 200 NM$ rankings by birth year; 2022 data based on Top 200 Holsteins active using August 2022 data from the Council on Dairy Cattle Breeding

STRATEGIC FRAMEWORK

DELIVERING AND SHARING IN THE VALUE

We harness innovative technologies and know-how to breed genetically superior animals for progressive farmers globally, and link our pricing to the performance of our products on-farm.

STRATEGIC PRIORITIES	WHAT DOES SUCCESS LOOK LIKE?
DELIVER A DIFFERENTIATED PROPRIETARY GENETIC OFFERING **SUCCESS DRIVERS** ELITE ANIMALS TECHNOLOGY AND CAPABILITIES DATA	**GENETIC GAIN** **Creating superior breeding animals for farmers, measured against indices comprising traits that help to drive farmers' productivity and sustainability.**
FOCUS ON PROGRESSIVE PROTEIN PRODUCERS GLOBALLY **SUCCESS DRIVERS** GLOBAL POSITION GLOBAL SUPPLY CHAIN CUSTOMER EXPERIENCE	**VOLUME GROWTH** **Growing volumes, particularly with progressive livestock farmers.**
SHARE IN THE VALUE DELIVERED **SUCCESS DRIVERS** VALUE-BASED PRICING PRODUCT VALIDATION LEVERAGE SCALE	**PROFITABILITY** **Generating profit resulting from the performance of our products in customers' systems, and growing margin as we leverage scale and R&D investment across species.**
SUSTAINABILITY AT THE HEART OF OUR BUSINESS	**Our strategy is underpinned by our approach to sustainable business and the strength of our people. The Board measures the performance of these key areas using the KPIs opposite.**

STRATEGIC IMPLEMENTATION

Our overarching strategy, success drivers (which feed into the focus areas of our business model), and associated KPIs are determined at Group level. The strategy is then implemented at business unit level. Our overarching business unit priorities and strategic progress in FY22 can be found on pages 20 to 25.

Sustainability lies at the heart of our business. KPIs marked with the above icon are considered by the Board to be indicative of our progress in this area. For more information see pages 35 to 36.

HOW DO WE MEASURE THAT SUCCESS IN OUR BUSINESSES?

Measures the genetic improvement we achieve in our porcine nucleus herds, which ultimately filters down to our customers' farms.

DEFINITION: The index measures the marginal improvement in customers' US$ profitability, per commercial pig per year, on a rolling three-year average.

PERFORMANCE: Genus continues to deliver increasing rates of genetic improvement through expanding and maintaining a large nucleus population for high selection intensity, improving technical processes for genomic evaluation, implementing precision data collection from birth to consumer and continuing to add new traits and data streams.

Monitors how many of our bulls are highly ranked, based on economically relevant traits for farmers.

DEFINITION: The number of our generally available Holstein bulls listed in the Top 100 Genomic Net Merit US$ rankings for genomically tested sires.

PERFORMANCE: Genus continues to maintain a strong position in the dairy industry with 39 of the Top 100 Holstein bulls using the Genomic Net Merit US$ rankings. Genus also has a good pipeline of young bulls tested but not yet in production. This is mainly driven by the large proportion of high-quality bulls sourced from our proprietary breeding programme, De Novo[1].

1 De Novo Genetics LLC is 51% owned by Genus

Tracks our global unit sales growth in dairy and beef.

DEFINITION: The change in dairy, beef and sorted units of semen and embryos delivered or produced for customers in the year.

PERFORMANCE: Bovine volumes improved 3% to 25.1 million units, with strong growth in Asia and North America. Sexed volumes were up 18%, reflecting strong growth in both Sexcel and IntelliGen, which also built-on and supported the use of beef-on-dairy genetics, supporting a 9% increase in global beef volumes.

Tracks the growth in the number of commercial pigs with PIC genetics globally.

DEFINITION: The change in volume of both direct and royalty animal sales, using a standardised MPEs measure of commercial slaughter animals that contain our genetics.

PERFORMANCE: Porcine volumes were stable at 188 million MPEs, with growth across North America, Latin America and Europe offset by adverse market conditions in China, where volumes fell by -42%. Excluding China, volumes were up 8% with growth across all North and Latin American territories, as well as in Spain as we leveraged our Sergal investment. Volumes under royalty contracts grew by 7 points.

Monitors porcine profitability per unit.

DEFINITION: Net porcine adjusted operating profit globally, expressed per MPE. Results include our share of Agroceres PIC, our Brazilian joint venture.

PERFORMANCE: Operating profit per MPE was £0.59, £0.06 lower (£0.07 lower in constant currency). This was primarily due to lower breeding stock sales in China, partially offset by royalty growth across our other operating regions.

Monitors bovine profitability per unit.

DEFINITION: Bovine adjusted operating profit globally, expressed per dose of semen or embryo delivered or produced for customers.

PERFORMANCE: Operating profit per dose was £0.71, up £0.02 (flat in constant currency). This was due to profit margin expansion through continued sales growth of our premium Sexcel product, partially offset by investment in our proprietary NuEra beef genetics and expanding our production capacity for sexed bovine genetics.

Measures the emissions intensity of the Group's operations, which are largely driven by animal weight.

DEFINITION: The primary intensity ratio is a measure of the Group's Scope 1 and 2 emissions per tonne of animal weight.

PERFORMANCE: The primary intensity ratio decreased by 16% in FY22, driven down by a change in the age profile of our animals, as well as improved manure management regimes in PIC China.

Measures levels of employee engagement over time.

DEFINITION: The response to the statement "I would recommend a friend to work at Genus".

PERFORMANCE: Genus continues to demonstrate upper quartile levels of employee engagement, with 82% of employees surveyed responding that they would recommend a friend to work at Genus (FY19: 79%).

OPERATING REVIEW: PIC

SUSTAINED LEADERSHIP

Year ended 30 June	Actual currency 2022 £m	2021 £m	Change %	Constant currency change %
Revenue	**306.6**	315.6	(3)	(5)
Adjusted operating profit exc JV	**112.3**	122.9	(9)	(10)
Adjusted operating profit inc JV	**121.2**	135.9	(11)	(13)
Adjusted operating margin exc JV	**36.6%**	38.9%	(2.3)pts	(2.3)pts

DR BILL CHRISTIANSON
CHIEF OPERATING OFFICER
GENUS PIC

Pig producers across the world faced a series of significant challenges, which increased in the second half of the year. China, the world's largest porcine market, experienced a significant cyclical downturn during a period of very restrictive COVID-19 lockdown measures. China pig prices averaged 14.6 RMB/kg through the year, down 50% on the prior year. African Swine Fever ('ASF') is an ongoing challenge for Chinese producers, and during the year the virus spread into Germany. As the year went on, challenging labour markets, and the war in Ukraine contributed to rising inflation, which had a significant impact on input costs for producers. Greater risks faced by producers meant there was less appetite to expand, leading to lower industry growth and lower producer profitability in most major porcine markets.

PIC's adjusted operating profit was 13% lower than in the previous year in constant currency. This was driven particularly by an 84% fall in operating profit within China. Volumes were stable, with revenue down 5% but strategically important royalty revenue up 1% (both in constant currency).

However, outside China, the business delivered solid growth. Excluding China, PIC increased adjusted operating profit by 11%. Volumes rose by 8%, revenue increased by 4% and royalty revenue increased by 8% (both in constant currency).

Overall, therefore, the business continued to make progress in many parts of the world while navigating volatility in China. We also continued to invest in the supply chain to position for further growth. Our largest investment was the new Atlas nucleus farm in Canada, which was completed in June 2022.

BUSINESS PRIORITIES

SHORT TERM
Help producers navigate the challenges they face due to volatility created by world events

MEDIUM TERM
Successfully bring PRRSv-resistant animals to market in the US and Asia

LONG TERM
Expand availability of PRRSv-resistant animals around the world and further strengthen our genetic leadership

STRATEGIC PROGRESS IN 2021–2022

CREATE DIFFERENTIATED PROPRIETARY GENETIC SOLUTIONS

- Continued to drive genetic gain in target traits across our product lines
- Established digital phenotyping at our Apex nucleus facility in South Dakota, delivering continuous and consistent data on leg structure to help improve robustness
- Completed our new nucleus farm in Canada and a new joint venture facility in the US to expand our elite farm network

SERVE PROGRESSIVE PROTEIN PRODUCERS EFFECTIVELY

- Grew adjusted operating profit in every region of the world, excluding China
- Improved adjusted operating profit in North America by 7%, helped by sales of our PIC800 boar to new accounts and expansion of our footprint in Canada through the acquisition of Olymel
- Increased adjusted operating profit in Asia (excluding China) by 25%, including growth of 67% in the Philippines as it continues to recover from ASF
- Delivered adjusted operating profit of 1% in Europe, despite the situation in Russia, aided by a rise of 40% in Spain following our acquisition of Sergal and expansion of our distribution network
- Increased adjusted operating profit in Latin America by 5%, maintaining our industry leadership on both the male and female sides of our business

SHARE IN THE VALUE DELIVERED

- Increased the proportion of our business using royalty contracts by 3% to 88% (excluding China)
- Conducted a further 25 product validation trials, involving 106,130 pigs, to demonstrate the benefits customers gain from using PIC genetics

NORTH AMERICA

Near-record US pig prices in the first six months of the year, driven by robust domestic demand and declines in both building and feed costs were tempered by market volatility, rising inflation and a partial reversal in feed cost trends in the second half. However, the market remains strong, both domestically and for exports, where higher demand from Mexico is making up for lower demand from China. The USDA projects pig production to remain relatively consistent in 2022.

PERFORMANCE: Strongest performance in recent years, with rises in market share of 5% for sireline products (aided by the introduction of the PIC800 to customer herds) and 2% for damline products. Royalties from Olymel commenced in the second half of the year following the acquisition of Olymel's AlphaGene programme in February 2022.

VOLUMES
+9%

REVENUE
+9%

ROYALTY REVENUE
+7%

ADJUSTED OPERATING PROFIT
+7%

LATIN AMERICA

Producer profitability in Latin America was also affected by rising production costs in the second half of the year. However, domestic demand remained strong throughout the period, compared to the previous year. Brazil is the region's largest exporter of pork, but a collapse in demand from China, coupled with rising inflation, means that many producers are currently experiencing margin pressure.

PERFORMANCE: Growth in royalties supported a strong revenue and adjusted operating profit performance with double-digit growth in many countries, partially offset by lower joint venture income in Brazil.

VOLUMES
+8%

REVENUE
+16%

ROYALTY REVENUE
+17%

ADJUSTED OPERATING PROFIT
+5%

EUROPE

Producers across the region experienced challenging conditions in a highly volatile market. While domestic demand remained stable, the spread of ASF into Germany, and the industry downturn in China led to a 22% fall in exports. During the year, pork production and the region's breeding herd declined. The war in Ukraine significantly increased input costs and market uncertainty, which meant that many European producers made losses despite higher pig prices.

PERFORMANCE: Increased breeding stock sales supported by supply chain investments and partnerships with Hermitage, Møllevang and Sergal. Further success through strategic focus on royalty revenues, strong growth in Spain and continued operations in Russia.

VOLUMES
+7%

REVENUE
-6%

ROYALTY REVENUE
+7%

ADJUSTED OPERATING PROFIT
+1%

ASIA

The downturn in China contrasted with market trends elsewhere in Asia. A cyclical oversupply and weak consumer demand (primarily caused by COVID-19 lockdown restrictions) led to a sharp decline in pig prices during the year, with producers incurring significant operating losses. Higher input costs also meant the break-even point for most producers rose to over 18 RMB/kg. However, during June pig prices began to show recovery, as they rose to almost 19 RMB/kg by the end of the month. They reached more than 21 RMB/kg in July and August.

PERFORMANCE: Growth outside China (adjusted operating profit +25% and revenue +19%), particularly in the Philippines, contrasted with the decline in trading in China. Commercial terms with a large PIC China customer were changed in the period to more closely align the economic interests of a unique outcome-based royalty contract in place. This resulted in a one-time refund of £4.1m, related to historical royalties.

VOLUMES
-31%
(China -42%)

REVENUE
-34%
(China -48%)

ROYALTY REVENUE
-32% (China -39%)

ADJUSTED OPERATING PROFIT
-69% (China -84%)

OPERATING REVIEW: ABS

MAINTAINING OUR TRAJECTORY

Year ended 30 June	Actual currency 2022 £m	2021 £m	Change %	Constant currency change %
Revenue	**272.0**	250.1	9	7
Adjusted operating profit	**40.5**	36.4	11	9
Adjusted operating margin	**14.9%**	14.6%	0.3pts	0.2pts

DR NATE ZWALD
CHIEF OPERATING OFFICER
GENUS ABS DAIRY

JERRY THOMPSON
CHIEF OPERATING OFFICER
GENUS ABS BEEF

BUSINESS PRIORITIES

SHORT TERM
Secure more exclusive relationships with large producers, while strengthening digital engagement with customers and prospects

MEDIUM TERM
Accelerate global uptake of NuEra Genetics through new collaborations and partnerships

LONG TERM
Increase use of Sexcel around the world and expand NuEra Genetics range to support all industry segments

In the first half of the year, the Global Dairy Trade Whole Milk Powder price continued to rise, fuelled by increasing demand following the easing of COVID-19 lockdowns in most geographies. It reached its highest level for over eight years in March, but subsequently declined in the face of economic uncertainty and rising inflation. Rising input costs in areas such as feed, fuel, energy and labour in the second half of the year impacted dairy producer profitability. These cost increases, to which the war in Ukraine and weather-related issues were contributory factors, also led to a decline in milk production during the year.

The same issues affected beef producers, but prices remained high during the year, partially due to low cattle numbers in some countries and strong demand from the foodservice industry following the relaxation of COVID-19 restrictions. However, there are some signs that consumer demand may be softening in China (due to COVID-19 lockdowns) and in the US (as consumers spend less in the face of rising inflation), with resultant pressure on beef prices.

ABS maintained its growth trajectory with volumes rising by 3% and revenue by 7% in constant currency. The business increased adjusted operating profit by 9% in constant currency despite the impact of an IT security incident, now fully resolved, which affected Brazil's trading in June and we estimate the profit impact to have been £0.9m. This progress was underpinned by a growing number of partnerships with progressive dairy producers, using the combination of Sexcel and NuEra beef genetics within comprehensive genetic programmes. ABS also continued to expand and strengthen relationships with participants across the beef supply chain. As a result, global sexed volumes rose by 18% and beef volumes by 9% during the year.

STRATEGIC PROGRESS IN 2021–2022

CREATE DIFFERENTIATED PROPRIETARY GENETIC SOLUTIONS

- Accelerated the pipeline of NuEra Genetics beef bulls moving into production for customers
- Grew demand for polled genetics by marketing our elite products and strengthening the role of these genetics in dairy product development
- Increased protection of our elite genetics, by ensuring our terms and conditions and customer contracts give us the option to purchase elite progeny
- Produced our first Wagyu beef calves from embryos, to meet supply chain needs in the UK

SERVE PROGRESSIVE PROTEIN PRODUCERS EFFECTIVELY

- Increased US sales of Sexcel by 10% and Beef InFocus by 24%, enhancing our share of business with top global producers and continuing our strategic shift from conventional semen
- Accelerated growth in Asia, with strong Sexcel sales in China (up 53%) and a record year for Australia, with Sexcel up 30% and beef up 43%
- Began digital sales pilots in EMEA and North America, while expanding digital sales in Latin America to include beef-on-beef alongside dairy genetics
- Implemented digital service tools as part of our GENEadvance customer genetic testing and services programme, to deliver an industry-leading customer digital experience

SHARE IN THE VALUE DELIVERED

- Expanded our GENEadvance programme through exclusive partnerships with more than 200 herds, where we are rewarded for delivering results aligned with customer goals
- Strengthened pull-through relationships with major UK retailers, developing and being rewarded for elite beef genetics that meet their specific commercial requirements
- Conducted two product validation trials in two countries, to demonstrate the superior performance of NuEra Genetics for customers

NORTH AMERICA

Further dairy industry consolidation led to fewer farms with larger herds, but no change in cow numbers. Higher input costs reduced margins for producers, despite record milk prices, increasing caution over investment in replacement heifers for herds. By contrast, the beef market was buoyed by high prices for calves, increasing production and robust export demand, although there are signs that consumer demand is now weakening due to rising inflation.

PERFORMANCE: Strong volume increases driven by growth of exclusive relationships with strategic accounts, continued growth in the IntelliGen third-party business and NuEra beef volumes up 33%.

TOTAL VOLUMES
+8%

BEEF VOLUMES +24%

SEXED VOLUMES +10%

REVENUE
+4%

ADJUSTED OPERATING PROFIT
+4%

LATIN AMERICA

Dairy production declined during the year due to a combination of lower herd numbers, drought and high input costs. In contrast, the beef industry continued to grow, with production up 6% in Brazil (particularly following the lifting of the Chinese embargo on Brazilian beef exports) and 2% in Mexico (with prices in Mexico 20% higher on average than the previous year). Inflation continued to affect consumption of both beef and dairy products during the year, as household purchasing power was eroded across middle-income groups.

PERFORMANCE: Slightly lower volumes (although 89% increase in tropical ABS XBlack genetics, aided by further digital sales campaigns), mitigated by robust pricing policies. Trading in June was affected by the IT security incident, which was resolved in the month. This impacted the business's ability to despatch product prior to the end of the financial year which, by our estimates, impacted FY22 volumes by 4% with an associated profit impact of £0.9m. Without this, Latin America profit growth would have been around 11%.

TOTAL VOLUMES
-5%

BEEF VOLUMES -1%

SEXED VOLUMES -3%

REVENUE
+5%

ADJUSTED OPERATING PROFIT
+2%

EUROPE

The war in Ukraine and its impact on input costs created uncertainty in most markets. Despite these costs and weather-related issues, which contributed to lower production across the region, milk prices remained high and are expected to rise further in the coming months. Beef production declined, with increases in some countries failing to compensate for reductions in countries like Germany and France. Lower production led to higher prices, but rising inflation risks dampening consumer demand.

PERFORMANCE: Partnerships with a growing range of strategic accounts involving genomic testing and comprehensive genetic programmes drove growth in higher-priced sexed and beef products, as well as the IntelliGen third-party business. Robust pricing policies mitigated inflationary cost pressures, however, market uncertainty caused lower volumes and profits, particularly in the UK and distributor markets.

TOTAL VOLUMES
-2%

BEEF VOLUMES +9%

SEXED VOLUMES +8%

REVENUE
+5%

ADJUSTED OPERATING PROFIT
-4%

ASIA

Consolidation of the Chinese dairy industry drove increasing demand for sexed genetics, supported by growth in domestic production and imports, although this tapered off later in the year as consumer demand weakened (a factor which also affected the beef industry). In Australia, favourable weather conditions and low herd numbers fuelled record beef prices, while the dairy industry benefited from China's demand for live heifers.

PERFORMANCE: Good growth across the region, underpinned by strong progress in China and Australia and further contract wins in India.

TOTAL VOLUMES
+13%

BEEF VOLUMES +37%

SEXED VOLUMES +32%

REVENUE
+28%

ADJUSTED OPERATING PROFIT
+24%

OPERATING REVIEW: R&D

STRENGTHENING THE PIPELINE

DR ELENA RICE
CHIEF SCIENTIFIC OFFICER AND HEAD OF R&D GENUS R&D

Year ended 30 June	Actual currency 2022 £m	2021 £m	Change %	Constant currency change %
Porcine product development	**22.5**	21.9	3	1
Bovine product development	**22.7**	19.7	15	13
Gene editing	**7.9**	7.6	4	1
Other research and development	**14.0**	13.3	5	5
Net expenditure in R&D[1]	**67.1**	62.5	7	6

1 Excluding profit attributable to non-controlling interest

During the year, Genus increased its investment in net R&D expenditure by 6% in constant currency. This investment supported gene editing projects, enhanced IntelliGen production capacity, expanded elite porcine farm populations and strengthened the R&D pipeline.

PORCINE PRODUCT DEVELOPMENT

Porcine product development maintained Genus's industry-leading product differentiation. Further progress on genomic selection, coupled with advances in digital phenotyping, enabled Genus to accelerate genetic gain and amplify new traits related to robustness and efficiency. We expect these advances, along with initial production from new elite facilities, Barrick Family Farms (in the US) and PIC's Atlas facility (in Canada) which have both now been completed to increase availability of our industry-leading genetics for North America and global exports during FY23.

BOVINE PRODUCT DEVELOPMENT

Bovine product development delivered a highly competitive portfolio of dairy and beef genetics. De Novo Genetics, our joint venture with De-Su Holsteins, produced over 50% of new Holstein bulls introduced to the market. Further investment in our proprietary NuEra beef genetics (a rise of 25% on the previous year) helped ABS continue to increase their representation within total beef volumes of which NuEra now account for one-third. In parallel, validation trials in customer systems reinforced NuEra's superior performance over competitor genetics. We also expanded production capacity for sexed bovine genetics, internally and with third-party customers, and won a Government of India tender for IntelliGen sexed semen production, which we will begin fulfilling during FY23.

GENE EDITING

Genus continued to advance the PRRSv resistance project according to plan. During the year, we expanded our population of gene-edited animals so we could start additional regulatory studies for the US Food and Drug Administration while pursuing our plan for regulatory approval in target markets around the world. We also continued proactive and positive engagement with stakeholders within and outside the pork supply chain. Through these engagements, we are explaining our responsible use of gene editing technology and exploring the benefits that PRRSv-resistant animals will bring for animal well-being, for farmers and for efforts to meet evolving consumer expectations around environmental sustainability and food security.

OTHER RESEARCH AND DEVELOPMENT

Other R&D expenditure increased by 5%. This focused on supporting research in the field of reproductive biology and expansion of our data science capabilities, as well as further work on genome science and the development of our bioinformatics platform. We also continued to collaborate with external partners in a variety of discovery areas.

BUSINESS PRIORITIES

SHORT TERM
Gain regulatory approval for PRRSV-resistant pigs in the US and continue to improve our proprietary sexing technology

MEDIUM TERM
Obtain approval of PRRSv-resistant pigs in other target markets around the world and continue to advance our work on reproductive technology

LONG TERM
Identify and explore new traits, to reduce the environmental impact of animal agriculture

STRATEGIC PROGRESS IN 2021–2022

GENE EDITING

- Made further submissions as part of the process for regulatory approval of PRRSv-resistant animals in the US, while working with regulatory bodies and agencies in other target markets around the world
- Advanced our project focused on swine influenza and evaluated opportunities for using gene editing to combat ASF, both in collaboration with Kansas State University

GENDER SKEW

- Continued to improve the quality, fertility and number of gender skews delivered through our proprietary bovine sexing technology
- Began using specialist technology in some of our laboratories to increase the ratio of Y chromosomes in straws of sexed semen, with the aim of producing more male offspring
- Established a new IntelliGen Technologies laboratory with a customer, giving us 12 owned and licensed facilities around the world

REPRODUCTIVE BIOLOGY

- Introduced a new medium for embryo culture, to further improve quality and quantity, and harnessed leading-edge technology to enable the identification of the sex of embryos before transfer to recipients
- Continued to work internally and in collaboration with University of California Davis and Missouri State University to explore the role embryonic stem cells could play in enhancing genetic gain

DATA STRATEGY

- Accelerated implementation of our data analytics strategy, making strong progress on initiatives including rapid data inception, data integration, scalable hybrid computing and flexible data storage

INVESTING FOR GROWTH

In the year ended 30 June 2022, the Group achieved revenue growth of 3% in actual currency (2% in constant currency). However, adjusted operating profit including joint ventures fell by 13% (15% in constant currency), due to some significant market challenges. These included rising inflation (driven particularly by increasing energy prices), the impact of the war in Ukraine and, most notably, turbulence in China's porcine industry following the sharp decline in pig prices in 2021. The resultant decline in operating profit in China had a significant impact on the Group's results. Excluding PIC China, however, adjusted operating profit including joint ventures increased by 28% (25% in constant currency).

On a statutory basis, profit before tax was £48.4m (2021: £55.8m). The difference between statutory and adjusted profit before tax principally reflected the reduction in the non-cash fair value net of IAS 41 biological assets and lower share-based payments charge. Basic earnings per share on a statutory basis were 62.5 pence (2021: 72.6 pence).

The Group continued its significant R&D investment strategy, up 7% (6% in actual currency)

ALISON HENRIKSEN
Chief Financial Officer

Year ended 30 June	Adjusted results[1] Actual currency 2022 £m	2021 £m	Change %	Constant currency change %[2]	Statutory results Actual currency 2022 £m	2021 £m	Change %
Revenue	**593.4**	574.3	3	2	**593.4**	574.3	3
Operating profit	**68.8**	76.9	(11)	(13)	**49.4**	47.7	4
Operating profit inc JVs exc gene editing	**85.6**	97.4	(12)	(14)	**n/a**	n/a	n/a
Profit before tax	**71.5**	84.8	(16)	(18)	**48.4**	55.8	(13)
Free cash flow	**(13.5)**	37.5	(136)	n/m[3]			
Basic earnings per share (pence)	**82.7**	100.9	(18)	(20)	**62.5**	72.6	(14)
Dividend per share (pence)					**32.0**	32.0	–

1 Adjusted results are the APMs used by the Board to monitor underlying performance at a Group and operating segment level, which are applied consistently throughout. These APMs should be considered in addition to, and not as a substitute for or as superior to statutory measures. For more information on APMs, see APM Glossary
2 Constant currency percentage movements are calculated by restating the results for the year ended 30 June 2022 at the average exchange rates applied to adjusted operating profit for the year ended 30 June 2021
3 n/m = not meaningful

The Group continued its significant R&D investment strategy, up 7% (6% in constant currency). Excluding gene editing costs, adjusted operating profit including joint ventures fell by 12% (14% in constant currency) and adjusted profit before tax was down 16% (18% in constant currency).

The effect of exchange rate movements on the translation of overseas profits was to increase the Group's adjusted profit before tax for the year by £1.8m compared with 2021, primarily due to the weakness of Sterling. All growth rates quoted are in constant currency unless otherwise stated. Constant currency percentage movements are calculated by restating the results for the year ended 30 June 2022 at the average exchange rates applied to adjusted operating profit for the year ended 30 June 2021.

REVENUE

Revenue increased by 2% in constant currency (3% in actual currency) to £593.4m (2021: £574.3m). PIC's revenue declined by 5% (3% in actual currency) as a result of the downturn of the porcine market in China impacting our customers' demand for genetics. In ABS, revenue was up 7% (9% in actual currency) reflecting the continuing success of Genus's sexed and beef genetics, particularly in China and Australia.

ADJUSTED OPERATING PROFIT INCLUDING JOINT VENTURES

Year ended 30 June Adjusted Profit Before Tax[1]	Actual currency 2022 £m	2021 £m	Change %	Constant currency change %
Genus PIC	**121.2**	135.9	(11)	(13)
Genus ABS	**40.5**	36.4	11	9
R&D	**(67.1)**	(62.5)	(7)	(6)
Central costs	**(16.9)**	(20.0)	16	18
Adjusted operating profit inc JVs	**77.7**	89.8	(13)	(15)
Net finance costs	**(6.2)**	(5.0)	(24)	(24)
Adjusted profit before tax	**71.5**	84.8	(16)	(18)

1 Includes share of adjusted pre-tax profits of joint ventures and removes share of adjusted profits of non-controlling interests

Adjusted operating profit including joint ventures was £77.7m (2021: £89.8m), 15% lower in constant currency. The Group's share of adjusted joint venture operating profit was lower at £9.2m (2021: £13.0m), primarily due to weaker results in our porcine joint ventures in China.

Gene editing investment, which is primarily focused on creating pigs resistant to PRRSv, increased to £7.9m (2021: £7.6m) as we expanded our population of gene-edited animals. Adjusted operating profit including joint ventures and excluding gene editing investment was £85.6m (2021: £97.4m), 14% lower, due to PIC China's performance. However, the underlying business continues to perform well and over the last five years our compound annual growth rate this profit measure has been 10% in constant currency, in line with our medium-term objective.

PIC's performance during the year was affected particularly by the situation in China and by market volatility in Latin America and Europe. As a result, adjusted operating profit including joint ventures was down 13% in constant currency. However, excluding China, adjusted operating profit rose by 11%. Volumes were stable and up 8% when China is excluded. Strategically important royalty revenue was up 1% (8% excluding China), aided by increases of 17% in Latin America and 7% in Europe, despite the challenging market conditions. Royalty revenues in North America also grew by 7%, primarily through strong sales of both our damline and sireline products (particularly the PIC800 boar) and were further supported by the integration of Olymel's AlphaGene breeding programme.

ABS's volumes rose by 3% and adjusted operating profit rose by 9%. The popularity of our proprietary bovine sexed product, Sexcel, continued to increase, supporting sexed volumes up 18% compared to a very high prior year growth rate of 29%. Increasing use of NuEra beef genetics in dairy herds drove beef volume growth of 9%. Asia increased adjusted operating profit by 24% in constant currency, aided by strong growth in China and Australia. Latin America's profits rose by 2%, lower than expected due to an IT security incident in June which was quickly resolved but impacted the business's ability to despatch product prior to the end of the financial year. Europe's adjusted operating profit declined by 4%, due particularly to market uncertainty driven by the Ukraine war and rising input costs for producers, which were felt particularly in the UK business and among our European distributors. In North America, adjusted operating profit was 4% higher, with growth of third-party IntelliGen production contributing to profit growth.

Central costs were 18% lower, at £16.9m (2021: £20.0m) in constant currency, primarily due to a combination of prudent cost management and lower performance-related employee rewards.

FINANCIAL REVIEW CONTINUED

STATUTORY PROFIT BEFORE TAX

The table below reconciles adjusted profit before tax to statutory profit before tax:

	2022 £m	2021 £m
Adjusted Profit Before Tax	**71.5**	84.8
Operating profit attributable to non-controlling interest	**0.3**	0.1
Net IAS 41 valuation movement on biological assets in JVs and associates	**(1.4)**	3.1
Tax on JVs and associates	**(2.6)**	(3.0)
Adjusting items:		
Net IAS 41 valuation movement on biological assets	**(5.4)**	(10.8)
Amortisation of acquired intangible assets	**(8.3)**	(7.4)
Share-based payment expense	**(3.7)**	(7.7)
Exceptional items	**(2.0)**	(3.3)
Statutory Profit Before Tax	**48.4**	55.8

Statutory profit before tax was £48.4m (2021: £55.8m), largely reflecting the decrease in the underlying trading performance, being partially offset by the lower share-based payment expense, lower exceptional items and a lower non-cash fair value net IAS 41 biological asset movement. Within this, there was a £24.5m uplift (2021: £6.4m uplift) in porcine biological assets and a £29.9m reduction (2021: £17.2m reduction) in bovine biological assets, due to certain fair value model estimate changes. Share-based payment expense was £3.7m (2021: £7.7m). These reconciling items are primarily non-cash, can be volatile and do not correlate to the underlying trading performance in the year.

EXCEPTIONAL ITEMS

There was a £2.0m net exceptional expense in the year (2021: £3.3m expense), which included legal fees of £1.4m (2021: £2.5m) in relation to Genus ABS's litigation with STgenetics. It also includes a £3.3m credit relating to a non-refundable cash receipt (net of fees) received for the assignment of rights to a legacy legal claim in Brazil and a £2.8m expense relating to a restructuring programme in ABS North America's supply chain, principally the closure of barns in Canada. Also contributing to this expense was £0.5m of one-time costs to help us resolve the IT security incident.

NET FINANCE COSTS

Net finance costs increased to £6.2m (2021: £5.0m). This was primarily caused by an increase in average borrowings from £122.0m in 2021 to £173.9m in 2022, increasing interest costs by £0.8m. Higher market interest rates also increased interest costs by £0.3m and there were also higher margin and utilisation fees of £0.2m.

Amortisation costs in the year were £0.9m (2021: £0.9m) and within other interest there was £1.1m (2021: £0.8m) of IFRS 16 finance lease interest and £0.4m (2021: £0.9m) from the unwinding of discount interest on the Group's pension liabilities and put options.

TAXATION

The tax charge on the statutory profit in the year of £14.3m (2021: £12.0m) represented an effective tax rate ('ETR') of 28.0% (2021: 20.4%).

The statutory tax charge included a one-off charge of £2.2m (4.3%) in the year to reflect higher deferred tax rates on China Porcine IAS 41 assets and increased by 6.0% due to the reduced share of Group profits arising in China, which benefits from the availability of tax relief on owned production agricultural activities.

The tax charge on adjusted profits in the year was £17.4m (2021: £19.1m), which represented an adjusted ETR of 24.3% (2021: 22.5%). The adjusted tax charge for the year increased by approximately 3% due to the reduced availability of tax relief in China on owned production agricultural activities mentioned above. This adverse movement was partially offset by a reduction in foreign and withholding taxes due of 1.9%, increases in US R&D and foreign tax credits of 1.2% and UK fixed asset timing difference credits of 1.3%. The prior year adjusted tax rate benefited by 3.3% from the revaluation of UK deferred tax assets to the future UK tax rate of 25%.

The outlook for the Group adjusted ETR is in the range of 23–25%, consistent with the current year and including the impact of the future UK tax rate increase to 25% from April 2023.

EARNINGS PER SHARE

Adjusted basic earnings per share decreased by 18% (20% in constant currency) to 82.7 pence (2021: 100.9 pence) reflecting the impact of some significant market challenges, most notably in China's porcine industry. Basic earnings per share on a statutory basis were 62.5 pence (2021: 72.6 pence), as above but also reflecting the impact of net IAS 41 biological asset movement, lower share-based payments and lower exceptional items.

BIOLOGICAL ASSETS

A feature of the Group's net assets is its substantial investment in biological assets, which under IAS 41 are stated at fair value. At 30 June 2022, the carrying value of biological assets was £387.7m (2021: £337.3m), as set out in the table below:

	2022 £m	2021 £m
Non-current assets	**333.7**	279.9
Current assets	**33.1**	39.6
Inventory	**20.9**	17.8
	387.7	337.3
Represented by:		
Porcine	**278.8**	227.4
Dairy and beef	**108.9**	109.9
	387.7	337.3

The movement in the overall balance sheet carrying value of biological assets of £50.4m includes the effect of exchange rate translation increases of £36.7m. Excluding the translation effect there was:

- a £25.9m increase in the carrying value of porcine biological assets, due principally to an increase in the number of animals held in our new genetic nucleus farm in Canada; and
- a £12.2m reduction in the bovine biological assets carrying value, primarily due to increased production costs and a higher risk adjusted discount rate.

The historical cost of these assets, less depreciation, was £77.2m at 30 June 2022 (2021: £65.1m), which is the basis used for the adjusted results. The historical cost depreciation of these assets included in adjusted results was £10.7m (2021: £10.0m).

RETIREMENT BENEFIT OBLIGATIONS

The Group's retirement benefit obligations at 30 June 2022 were £8.3m (2021: £11.1m) before tax and £7.0m (2021: £9.0m) net of related deferred tax. The largest element of this liability now relates to some legacy unfunded pension commitments dating prior to the acquisition of PIC by Genus.

During the year, contributions payable in respect of the Group's defined benefit schemes amounted to £3.5m (2021: £7.4m). Deficit repair contributions to the Milk Pension Fund ('MPF') ended in September 2021 which accounts for the reduction in contributions, and we expect the cash payments for pension contributions to reduce to £1.0m in FY23.

Robust investment strategies and higher bond yields during the year for our two main defined benefit obligation schemes have led to strengthened financial positions. Prior to any IFRIC 14 amendments, both the Dalgety Pension Fund and our share of the MPF reported IAS 19 surpluses.

CASH FLOW

Cash flow (before debt repayments)	2022 £m	2021 £m
Cash generated by operations	**56.6**	86.6
Interest and paid taxes	**(22.3)**	(19.1)
Capital expenditure	**(50.9)**	(33.8)
Cash received from JVs	**3.2**	3.7
Other	**(0.1)**	0.1
Free cash flow	**(13.5)**	37.5
Acquisitions and investments	**(19.5)**	(16.9)
Dividends	**(20.9)**	(19.5)
Shares issued	**–**	0.1
Net cash (outflow)/inflow (before debt repayments)	**(53.9)**	1.2

Cash generated by operations of £56.6m (2021: £86.6m) represented cash conversion of 82% (2021: 113%) of adjusted operating profit excluding joint ventures. The cash conversion rate of adjusted operating profit to cash was below our objective to achieve conversion of at least 90% annually, however, we expect this to return to meeting this objective in the coming year. The decrease in cash generation primarily reflected the impact of some significant market challenges, most notably in China's porcine industry and higher working capital outflows primarily due to increased inventories, trade receivables and other receivables. The increase in inventory is for Sexcel units and IntelliGen equipment to support continued growth and availability of our industry leading Sexcel product. Trade receivables increased through sales activity, particularly in North America, and other debtors primarily relate to China farm production security deposits.

Capital expenditure cash flow of £50.9m (2021: £33.8m) included continued investment in the ABS supply chain (with state-of-the-art new bull housing in Wisconsin), increasing PIC's supply chain capacity (with a new genetic nucleus farm being constructed in Canada) and investment in software development. Cash inflow from joint ventures was £3.2m (2021: £3.7m). After interest and tax paid, total free cash flow was £13.5m outflow (2021: £37.5m inflow).

The cash outflow from investments was £19.5m (2021: £16.9m), primarily involving £14.5m to acquire all intellectual property in Olymel's elite porcine genetics, £2.2m to increase production capacity through a China joint venture and £1.0m of deferred consideration payments from previous acquisitions.

NET DEBT AND CREDIT FACILITIES

Net debt increased to £185.0m at 30 June 2022 (2021: £105.6m), primarily due to the planned large capital expenditure investments and acquisitions. On 30 June 2022, the Group had headroom of £77.8m (2021: £129.3m) under its available credit facilities.

During the year, the Group's principal credit facilities comprised a £150m multi-currency revolving credit facility ('RCF'), a USD125m RCF and a USD20m bond and guarantee facility. The original term of this facility was for three years to 24 August 2023, with options to extend by a further year before each of the first and second anniversaries. The credit facility also included an uncommitted £100m accordion option, which can be requested on a maximum of three occasions over the lifetime of the facility. On 24 August 2021, the Group and its lenders extended the facility by a further year to 24 August 2024. With effect from 26 August 2022, the Group and its lenders increased the multi-currency RCF by £40m to £190m and the USD RCF by USD25m to USD150m and extended the maturity date of the total facilities to 24 August 2025.

EBITDA, as calculated under our financing facilities, includes cash received from joint ventures. Net debt as calculated under our financing facilities excludes IFRS 16 lease liabilities up to a cap of £30m but includes bank guarantees. The ratio of net debt to EBITDA on this basis at the year end has increased to 1.7 times (2021: 0.9 times) which remains in line with our medium-term objective of having a ratio of net debt to EBITDA of between 1.0 and 2.0 times. At the end of June 2022, interest cover was at 27 times (2021: 45 times).

RETURN ON ADJUSTED INVESTED CAPITAL

The Group's return on adjusted invested capital is measured using adjusted operating profit including joint ventures after tax, divided by the operating net assets of the business on the historical cost basis and excluding net debt and pension liabilities. This removes the impact of IAS 41 fair value accounting, the related deferred tax and goodwill. The post-tax return on adjusted invested capital was lower at 13.9% (2021: 23.0%), reflecting the lower profit and an increased asset base from the capital investments in supply chain capacity and acquisition of Olymel's AlphaGene programme. The total increase in the invested capital base was £119m of which circa £40m was due to foreign exchange translation impacts.

DIVIDEND

Recognising the importance of balancing investment for the future with ensuring an attractive return for shareholders, the Board is recommending a final dividend of 21.7 pence per ordinary share, consistent with the prior year final dividend. When combined with the interim dividend this will result in a total dividend for the year of 32.0 pence per ordinary share (2021: 32.0 pence per share), the same as the prior year. Dividend cover from adjusted earnings of 2.6 times (2021: 3.2 times), is within the medium-term target of an adjusted earnings cover range of 2.5 to 3.0 times.

It is proposed that the final dividend will be paid on 9 December 2022 to the shareholders on the register at the close of business on 18 November 2022.

Alison Henriksen
Chief Financial Officer
7 September 2022

A VIBRANT AND COLLABORATIVE GLOBAL COMMUNITY

ANGELLE ROSATA
Group HR Director

We provide a compelling employee experience to attract and retain top scientific and agriculture talent around the world

We currently employ nearly 3,500 colleagues in 25 countries (more detail on our workforce is provided in the Governance section).

ENDURING VALUES

Our culture is founded on five core values we developed with input from our people more than a decade ago. They remain as relevant as ever and run deep in everything we do. We recently developed a new visual identity for them and introduced a dedicated values e-learning module, which is used for employee onboarding and as annual refresher training for existing employees. Our values are also embedded within our annual performance management process.

INCLUSIVE ENVIRONMENT

We welcome talented people of high integrity and embrace new and different views. We ensure an open and engaging working environment, where every individual can perform to their best and fulfil their potential.

This culture is explained in our employee handbook, which sets out expectations of behaviour that are embedded through our recruitment, onboarding, development and performance management processes. It is helping us attract and retain an ever-more diverse global team, for example, increasing the number of management positions held by women by promoting existing colleagues and attracting new talent.

In addition, our employee resource group AWAKE (Advancing Women's Advocacy, Knowledge and Empowerment) continues to help us increase gender inclusion and develop more diverse teams. It has more than 500 members and allies across the Company and organised a wide range of events, coaching and leadership training sessions during the year.

OUR VALUES

CUSTOMER CENTRIC

We are one team, dedicated to helping customers thrive. We anticipate their needs and help them seize opportunities, acting as partners to improve quality, efficiency and output. If we're not adding value for our customers, we stop and think again.

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Read more on pg 01 – 29

RESULTS DRIVEN

We are proactive, determined to be the best we can be and to exceed expectations. We redefine standards for ourselves, our customers and our industry. Every one of us takes pride in delivering the highest level of performance. If something can be improved, we find a simpler, better way to do it.

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Read more on pg 01 – 29

PIONEERING

We are an innovative, forward-thinking company. We have the courage and confidence to explore new ideas, and the energy and enthusiasm to deliver them. We are creative, tenacious and resourceful in every area of our work.

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Read more on pg 01 – 29

PEOPLE FOCUSED

We are a business rooted in science but built around our people. We inspire, challenge and support everyone to perform, develop and grow. We treat others with respect and we invite views and feedback to help us improve.

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Read more on pg 30 – 31

RESPONSIBLE

We are ethical to our core. We feel a deep sense of responsibility to our customers, colleagues, animals, communities and shareholders. We are honest, reliable and trustworthy. We mean what we say and do what we say.

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Read more on pg 32 – 40

Practical steps to help us maintain a culture free from discrimination of any kind include mandatory annual training on preventing workplace harassment, which helps all employees understand how to nurture a positive working environment.

BROAD RANGE OF BENEFITS

To help us attract and retain talent in local markets, we offer a competitive package of benefits with elements for people with contrasting needs. To support this aim, we have now introduced a global minimum level of family leave provision, to help parents or carers when a new child joins their family through natural birth, adoption or a long-term fostering arrangement. This applies to any Genus employee, anywhere in the world, and underpins policies that align with local legislative requirements. We have also introduced a new policy outlining options for flexible working, for roles in which this is feasible, and the requirements and responsibilities involved.

DEVELOPMENT OPPORTUNITIES

We aim to ensure that everyone has opportunities to learn, grow and succeed throughout their time with Genus. This year, we continued to enhance and expand the courses and content we offer, including instructor-led development programmes, online courses and self-study options in multiple languages.

We also have drawn together previously separate mandatory training modules into one course on the Genus Code of Conduct. This covers topics such as anti-bribery and corruption, animal well-being principles and IT security. Employees take this course every year to refresh their knowledge. Colleagues working directly with animals also receive role-specific safety training.

EMPLOYEE ENGAGEMENT

We have continued to inform and involve employees around the Company. This has included enhancing our programme of global, regional and local town halls and CEO roundtable discussions. Our progress on engagement is highlighted in the case study opposite.

Our two Non-Executive Director 'employee representatives' – Lesley Knox and Lykele van der Broek – also held their first in-person meeting with colleagues since the onset of the COVID-19 pandemic. They engaged with employees at our DeForest, Wisconsin site in the US, exploring their experience of the Company and answering questions. Insights from this session have been shared with the rest of the Board for discussion with the executive team.

HEALTH AND SAFETY

We continued to monitor the COVID-19 pandemic and maintained measures and guidance to protect employees and their families. We also ensured clear protocols were in place for colleagues returning to offices as local public health restrictions were relaxed.

More widely, we introduced further initiatives to support employees in different areas. These included on-farm seminars to help frontline colleagues anticipate and take action to reduce risks during their work. In addition, we added front-facing cameras to company vehicles, as part of our focus on reducing vehicle incidents.

We continued to focus on strengthening health and safety performance. We aim to achieve a 5% reduction in our recordable injury frequency rate each year, against the benchmark of 2.6 incidents per 100 employees set in 2020. Although the rate rose by 0.02 to 2.07 during the year, this was below the target of 2.36 for the year. We also reduced our vehicle incident rate by 3.28% compared to the previous year.

ROUTES FOR RAISING CONCERNS

We have a range of mechanisms for raising any concerns about unethical behaviour, including an independent and anonymous hotline, which supports our whistleblowing policy. We communicate regularly regarding these mechanisms. For example, as local COVID-19 restrictions were relaxed and we were retuning to offices, our Group HR Director hosted a series of virtual meetings reminding employees of our Code of Conduct, the Company's grievance procedures and the support available for employees who may have experienced or witnessed unethical behaviour by anyone.

Any hotline reports are immediately referred to the Group General Counsel and Company Secretary. They are investigated and discussed with the Group HR Director, Head of Risk Management, Internal Audit and the Company's Audit & Risk Committee. This process is regularly reviewed as part of our annual Audit & Risk Committee activity.

HUMAN RIGHTS

Genus is committed to respecting the human rights of workers throughout our value chain and the local communities in which we operate. We aim to ensure that anyone who might be affected by Genus can enjoy the human rights described in the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work.

We monitor this through the same process used for the policies outlined earlier and there were no issues identified during the year.

YOUR VOICE

Our latest global employee survey, Your Voice, attracted feedback from 83% of our people – our highest-ever response rate. We saw increases in positive scores for nearly all questions, demonstrating high levels of engagement despite challenges created by the COVID-19 pandemic.

Employees provided positive feedback on areas including our vision and strategy, health and safety, management effectiveness and our response to COVID-19. The survey also highlighted strong progress on priority areas for action identified in 2019: development of people managers and reward and recognition.

In addition, nearly 90% of respondents said they enjoy working at Genus and more than 80% would recommend a friend to work at the Company.

Our business units and functions have developed action plans to address opportunities for improvement. We have also identified three Company-wide priorities: enhancing the employee experience (for new and existing employees alike), continuing to invest in training and development, and increasing communication about our sustainability aims and initiatives.

Each member of our executive team has a performance objective relating to the implementation of the action plan for their area of the Company.

SUSTAINABILITY AT THE HEART OF OUR BUSINESS

Our genetic improvement work is directly focused on helping farmers to meet the challenge of producing meat and milk more efficiently and sustainably.

Sustainability lies at the heart of our business. It informs our purpose of pioneering animal genetic improvement to help nourish the world and infuses the core values that shape our work, every day.

We make a positive contribution to the world around us. According to the UN, the global population is almost 8 billion people today and is projected to reach 9.7 billion people by 2050. Our genetic improvement work is directly focused on helping farmers to meet the challenge of producing meat and milk more efficiently and sustainably, increasing the availability of high-quality, affordable animal protein around the world. This challenge is exacerbated by global climate change, and risks to food security which flow from it. As a result of bovine and porcine genetic improvement, our customers require fewer animals and use far less land, water and other natural resources to produce more milk or meat than they did some decades ago. We are therefore providing fundamental sustenance to the world whilst reducing the impact agriculture has on the environment. We continue to drive our genetic improvement and gene editing programmes as we aim to lead the market in sustainable animal protein production.

In parallel, we continue to reduce the environmental impact of our own operations, guided by our Climate Change Policy. This policy, which is available on the Company's website, commits us to a 25% reduction in our primary intensity ratio against our 2019 baseline by 2030, and becoming a net-zero greenhouse gas ('GHG') emissions business by 2050. Our operations will always have animal-related emissions associated with them. Whilst our genetic improvement programmes will make our animals more efficient, our environmental focus is on delivering practical activities to reduce or offset our residual emissions to net zero by 2050.[1]

1 More information on the impact of genetic improvement can be found on our website: www.genusplc.com/sustainability

We fulfil our commitment by challenging ourselves and those around us to think differently. From small improvements in working practices to innovations that address stakeholder needs, we constantly develop and explore new ideas for enhancing our contribution and delivering positive, sustainable change. To reflect the importance of sustainability to our business, we continued to refine our governance to ensure that sustainability issues are receiving focus at the highest levels of our organisation. Our Sustainability Committee, chaired by the Chief Executive Officer, is attended by our executive team, along with Lysanne Gray, our Non-Executive sustainability champion. The Committee's activities are reported directly to the Board of Directors, ensuring that oversight of sustainability is a matter for the Board as a whole.

For Genus, sustainability also means ensuring our operations around the world are underpinned by policies and practices which reflect our core principles such as the protection of animal well-being, supporting community causes, and ensuring we foster a dynamic, inclusive and safe working environment for our people. We articulate expectations, provide information and deliver training where needed to ingrain responsible business practices across our organisation and the people we work with. For more information, refer to www.genusplc.com/sustainability.

We set and monitor progress of key performance indicators and risk factors (see pages 35 to 36). We also ensure employees have multiple routes to raise any concerns (including the independent whistleblowing hotline explained earlier). No material issues were reported during the year.

TAKING URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

As a business producing animals used in breeding programmes across the globe, Genus's emissions are largely from livestock sources – the methane from animals' manures, but also power to operate our facilities and laboratories, and transport. This year, we have significantly reduced our emissions intensity through a combination of measures, including the way we manage our farms, our installation of renewable power systems, including 1,084 kWp in Wisconsin and the use of anaerobic digestion and composting of manures. The combined impact of these investments this year are around 180 tonnes CO_2e.

In the current year, we have also changed the way we manage our land and soils, to provide greater opportunity for carbon sequestration into soils and biomass and to improve their habitat value for nature. We have started to supplement our direct measurement of soil organic carbon with satellite remote sensed 'flux' of carbon over the course of the year, to show us how well we are achieving our aims and to help us better quantify these impacts.

BUILDING KNOWLEDGE AND CAPACITY TO MEET CLIMATE CHANGE

Carbon reduction related to Genus Breeding Programmes

As global climate change increases the risks to global food security, our work in genetic improvement provides livestock which is more resilient to climatic extremes and helps farmers produce milk and meat using fewer natural resources and less carbon. We measure progress by assessing the factors that shape each animal's carbon footprint during their lifetime, including the efficiency with which animal feeds are turned into meat and milk, and other health-related traits. We set targets each year which relate to life-cycle carbon emissions we have reduced, and which are directly related to breeding. We have met all of our targets in respect of these. In our porcine business, this improvement is equivalent to 678,300 tonnes CO_2e annual reduction in our customer herds.

SUSTAINABLE MANAGEMENT AND USE OF NATURAL RESOURCES

Genus's R&D division uses a variety of raw materials and recycles wastes, including plastics, glass and isopropyl alcohol. The division established a recycling programme in partnership with social enterprise partners, Adam Can in 2021. Aluminium cans are just one of a dozen wastes which are now recycled and contribute towards our sustainable development goal aim of 'sustainable resource use' and support for community programmes aiming to help all. Erika (pictured) receives payment for some 264 pounds of aluminium she recycles each month: she buys recycling bins which she installs at client sites which increases participation in recycling activities and in turn grows her business.

BUILDING KNOWLEDGE AND CAPACITY TO MEET CLIMATE CHANGE

Life-cycle Carbon and Welfare Focus of Genus Breeding

Genus provides elite bovine genetics to Australia and New Zealand, where climate-related stress and extremes have generated additional demand for genetics which offer lower carbon and water footprints and enhanced welfare. Guided by customer concerns around these issues, ABS has sought to validate environmental claims which are important to our stakeholders and customers.

In partnership with independent consultants, Integrity Ag, life-cycle carbon emissions of steers grown using ABS Beef InFocus™ genetics were investigated as part of a full life-cycle assessment.

The study shows almost 42% lower emissions compared with traditional Australian feedlot systems and results from a combination of factors including greater efficiency in the way animal feeds are converted into meat, reduced incidence of disease and premature death and reduction of 'waste' animals – where 'bobby' (male) calves are born into dairy, rather than beef herds. Instead, ABS InFocus™ genetics create high value, high-quality beef calves, providing an additional income stream to the dairy farmer and a lower 'carbon' and 'water' cost of bringing it into the world.

SUSTAINABILITY STRATEGY

OUR SUSTAINABILITY STRATEGY COMPRISES FIVE PILLARS WHICH SUPPORT OUR PURPOSE

PROGRESSING OUR SUSTAINABILITY STRATEGY

Our Sustainability Committee contains experts from around our global Company. The Committee sets our sustainability strategy, articulates annual objectives and monitors progress.

Our progress with our sustainability strategy, including key performance indicators where relevant, is summarised opposite.

For more information on our work, progress against the five pillars of our strategy and our Sustainability Committee, please see our website:

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www.genusplc.com/sustainability

SUSTAINABILITY OBJECTIVE (AND RELATED SDG)	HIGHLIGHTS IN THE YEAR	FY23 GOALS
SUSTAINABLE PROTEIN PRODUCTION AND FOOD QUALITY Advancing animal genetic improvement to help our customers breed more productive and resilient animals which produce high-quality milk and meat more efficiently and sustainably zero hunger productivity and incomes of small-scale food producers strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	> Genetic improvement targets have been agreed > The PRRSv project continues forward and is on track	> Continue driving porcine and bovine genetic improvement and rapidly disseminate the genetics to customers globally by: (i) increasing porcine genetic improvement index by 0.75 standard deviation[1] per generation (ii) increasing dairy genetic improvement index by one standard deviation[1] per generation (iii) increasing beef genetic improvement index by one standard deviation[1] per generation > Continue responsible development of gene editing technology, to aid disease resistance and animal well-being > Using robust life-cycle analyses, quantify the potential reduction of GHG emissions from the launch of PRRSv-resistant pigs
ENVIRONMENT Reduce the environmental impact of our own operations waste/manures renewables and energy efficiency low carbon transition	> We have developed a 'net zero' carbon reduction strategy outlining our plans for emission reduction. Within this, we have: – commenced the phased replacement of UK fleet vehicles, with 27 petrol hybrid and 12 battery electric vehicles added – replaced 'static' pile manures with lower carbon composting alternatives – commissioned new PV solar installations at Dekorra (US) and Cremona (Italy) – initiated manure methane capture at slurry ponds at our Aurora facility which will include a generator to convert biogas into electricity – have started to manage lands at Whenby in the UK using techniques which will improve soil carbon stocks > We have started to engage with energy suppliers to explore the use of renewable power at our facilities > We have completed internal audits of 12 PIC sites in relation to our planned schedule of audits in FY22 (equivalent to 81.7% of animal population)	> Launch environmental sustainability initiatives across the Company: – No new petrol or diesel cars in the UK (Battery Electric or Petrol Hybrid only) – Establish a baseline of soil carbon content as a basis for enhancing the soil's carbon content via Carbon sequestration at Whenby – Develop land management plans which offer carbon and biodiversity benefits at two PIC sites in Kentucky (US) and Lipetsk (Russia) – Capture and validate remotely sensed satellite carbon flux data for 11 sites, including two PIC sites in Kentucky (US) – Implement solar energy projects at our office site in Cheshire (UK) and in Cremona (Italy), York (UK) and Ankang (China) – Complete manure composting project at our ABS site in Dekorra, Wisconsin (US) – Submit responses to CDP for climate, forests and water – Complete work on our PIC Saskatchewan biogas pilot project – Power procurement – develop advanced plans to ensure 100% UK procured electricity is from (certificate of origin backed) renewable supplies or on-site generated energy > Conduct environmental audits of material facilities > Long-term target: achieve Net Zero Carbon Emissions by 2050 and adopt a validated Science Based Target as soon as published methodology is available for our sector

1 Genetic improvement considers factors that shape each animal's carbon footprint during their lifetime. These include farm inputs which support growth (such and feed, supplements and water) and outputs from the animals and their manures (including direct emissions and manure methane/nitrous oxide emissions). By calculating inputs and outputs in this way, we can identify total emissions involved in the production of milk or meat and track the reduction from one generation to the next. For a detailed explanation of how these targets are set and calculated, and the impact of genetic improvement on our and our customers' carbon footprints, see our website: www.genusplc.com/sustainability

SUSTAINABILITY REPORT CONTINUED

SUSTAINABILITY OBJECTIVE (AND RELATED SDG)	HIGHLIGHTS IN THE YEAR	FY23 GOALS
ANIMAL WELL-BEING Continuously improve animal well-being across our business worldwide responsible consumption and production	> 100% of employees with animal care responsibilities received training on Genus animal care standards > Continued investment in PIC and ABS animal housing facilities including construction of Atlas > Maintained animal care standards	> Ensure employees with animal care responsibilities are regularly trained on Genus animal care standards > Continue investment in animal housing facilities, including: – Gourley – Bluegrass > Maintain and improve animal care standards and operating procedures, to ensure alignment with best practice, ensuring that these are rolled out globally
RESPONSIBLE EMPLOYER OF CHOICE Be a people magnet with a dynamic, inclusive and safe working environment gender equality	> Reduced vehicle incidents by 3.28% to 177 > Achieved recordable injury frequency rate[2] of 2.07 against a target of 2.36 > Participation in Your Voice increased by 7% to 83% overall, with overall increase in engagement. Net Promoter Score improved from 79% to 82%	> Achieve at least a rolling 5% year-on-year reduction in occupational road risk through expansion of in-vehicle technology throughout the fleet; driver training programmes; continued monitoring of driver behaviour, performance and route planning > Achieve at least a rolling 5% year-on-year reduction in recordable injury frequency rate, equivalent to at least 2.24 or less from the 2020 baseline through continued investment in facilities infrastructure and equipment; enhancing training offering – online and face-to-face; continuous improvement activities surrounding job design in high risk areas; ongoing development of tools and resources to support mental health and well-being > Maintain or improve employee engagement, making Genus an enjoyable and fulfilling place to work by: – Implementing 'Your Voice' Action Plans – Launch an awareness campaign of Company Values to further embed – Diversity and inclusion: increase proportion of female employees in management roles (target new appointments female%: minimum 33%; stretch 50%)
COMMUNITY Proactively engage and make a positive contribution in communities of which we are a part disaster deaths equitable sharing of genetic resources	> Recruited 120 staff into PIC and ABS production sites	> Support measures to prevent and continue to respond to local community crises, recruit into local farms and encourage support for charities close to the local businesses and aligned with our mission

2 Recordable injury frequency rate is the number of work related incidents that result in injury or illness, work restriction, or require treatment other than first aid

CLIMATE CHANGE POLICY AND GREENHOUSE GAS ('GHG') REPORTING

Genus acknowledges the reality of climate change and recognises the lasting negative impact it will have on our business and our communities.

Genus has committed to take action on climate change in a number of ways, including:

> driving porcine and bovine genetic improvements which support productivity gains and improve feed efficiency, enabling a reduction in the production of GHG emissions per unit of milk or meat produced;

> reducing the carbon footprint of our operations through developing a better understanding of how energy is used. We are committed to the sustainable development of new facilities and are applying renewable power solutions on a number of our farms; and

> partner and advocate for policies that advance positive climate goals and identified United Nations Sustainable Development Goals ('SDGs').

OUR REPORTING APPROACH

In FY20, we refined our methods to measure GHG emissions and developed a Tier 2 FY19 emission baseline ('FY19 Baseline').

We are committed to reducing GHG emissions in our operations and we use the 'primary intensity ratio' to report emission reductions. We aim to reduce the primary intensity ratio by 25% by 2030 and to have net zero GHG emissions by 2050[1]. This means that even as our business grows, we are seeking to ensure that our GHG emissions shrink.

We use operational control as our reporting approach. We have determined and reported the emissions we are responsible for within this boundary and believe there are no material omissions. We have included our share of joint venture emissions, and omit some livestock held by third parties, due to our limited control over operating policies.

GHG EMISSIONS REPORTING OUTCOMES

Our GHG emissions are primarily methane produced by our animals, carbon dioxide from consuming fuel and other materials, and from transport.

Our total (all scopes) GHG emissions have remained at previous year levels (<1% difference) 12% less than our FY19 Baseline. Increase in animal numbers and manures are the significant factor in this change, however, our primary intensity ratio has decreased significantly (by 16% from FY22) as we have continued to invest in methane abatement technologies, including composting, anaerobic digestion, renewables and fleet transformation. We have noted a Scope 3 increase in FY23 emissions related to staff travel as we emerge from pandemic-related travel restrictions.

In FY23, we have implemented an enterprise sustainability data management system which has enhanced the reliability of data (ahead of planned external assurance of this data) and has offered us more representative emission factors.

ASSESSMENT METHODOLOGY

World Resources Institute/World Business Council for Sustainable Development *'The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard'*

DEFRA *'Guidance on how to measure and report your greenhouse gas emissions'*

DEFRA *'Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance'*

EMISSIONS FACTOR DATA SOURCE

IPCC *'Guidelines for National Greenhouse Gas Inventories'*

DEFRA/DECC *'Conversion Factors for Company Reporting'*

ENERGY EFFICIENCY

We use energy to power our vehicles, buildings and equipment. We are endeavouring to access lower carbon sources of power and renewable energy and fuels to heat and power our buildings. At our Benxi and Chunhua sites in China, we ceased the use of coal during the year as we implement energy efficient replacement heating systems which saved 2,830 tonnes of CO_2e.

We operated a solar PV energy systems across our global portfolio which produced 258 MWh in FY22, saving the equivalent of 178.93 tonnes CO_2e.

We have continued to invest in, and support, our facilities over FY22 and have integrated energy efficient design into the build of Atlas, our new porcine nucleus facility in Canada. Our R&D team have implemented awareness and schemes which target laboratory waste recycling and energy efficiency which has led to a reduction in downstream carbon emissions in hazardous waste disposal.

GENUS ENERGY DATA

In line with the UK Government's energy and carbon reporting requirements, further information on our energy consumption for the last two years across Genus is set out on the next page. This is sourced from data for the carbon data reported in this section and is tracked internally. All data is collected from metered data for electricity. Biogas combustion information is calculated using assumptions based on records in China and Brazil. Fuel use is reported based on financial records of fuel purchased. We have applied assumptions on standard calorific values to convert all liquid and gas fuel types to a common energy metric (kWh) and data is reported for the period 1 July 2021 to 30 June 2022.

1 More information on our pathway to net-zero emissions by 2050 can be found on our website: www.genusplc.com/sustainability

SUSTAINABILITY REPORT CONTINUED
CLIMATE CHANGE POLICY AND GHG REPORTING CONTINUED

	FY22 Tonnes of CO_2e		FY21 Tonnes of CO_2e		FY20 Tonnes of CO_2e		FY19 Tonnes of CO_2e		FY22
Emissions from	UK and offshore	Global (excluding UK and offshore)	UK and offshore	Global (excluding UK and offshore)	UK and offshore	Global (excluding UK and offshore)	UK and offshore	Global (excluding UK and offshore)	% change from FY19 Baseline
Scope 1 – combustion of fuel, own transport and livestock emissions	2,461	68,217	2,626	72,314	2,630	77,673	3,178	78,773	-13.8%
Scope 2 – purchased electricity, steam, heat and cooling	150	10,223	130	6,695	168	6,850	171	7,268	39.4%
Total Scope 1 and 2	2,611	78,440	2,756	79,009	2,798	84,523	3,349	86,041	-9.3%
Scope 3 – material usage and waste, third-party distribution and business travel	16,195		14,664		16,119		21,489		-24.6%
Total emissions	**97,246**		**96,429**		**103,440**		**110,879**		**-12.3%**
Primary intensity measure – animal weight (tonne)	11,611		9,839		10,488		9,543		21.7%
Secondary intensity measure – turnover (£m)	593.4		574.3		551.4		488.5		21.5%
Primary intensity ratio – Scope 1 and 2 (tCO_2e/tonne animal weight)	6.98		8.31		8.33		9.37		-25.5%
Secondary intensity ratio – Scope 1, 2 and 3 (tCO_2e/turnover)	163.9		167.9		187.6		227.0		-27.8%

Annual emissions figures have been calculated based on actual nine-month data for July to March for travel and distribution and ten-month data for July to April, with both extrapolated to full year.

Energy type	Source	Units	FY22	FY21	FY20	FY19	% change from FY19 Baseline
Electricity	Electricity imported	kWh	16,871,327	15,309,577	20,156,010	17,599,380	-4%
	Electricity generated from renewable sources and used on site	kWh	590,330	384,012	334,670	303,800	94%
	Electricity generated from renewables sources and exported	kWh	0	0	0	0	–
Gas fuels	Gas imported from the grid	kWh	13,274,273	10,876,063	9,617,802	4,491,962	196%
Liquid fuels	Fuel used by plant (gas oil and diesel)	kWh	25,780,244	18,548,964	18,268,089	18,003,380	43%
Total	Total energy used (i.e. annual quantity of energy consumed from activities for which the Company is responsible, including combustion of fuel and operation of facilities)	kWh	58,134,896	45,118,616	48,376,571	40,398,522	44%
	Total energy imported (i.e. annual quantity of energy consumed resulting from the purchase of electricity and gas. No imports of heat, steam or cooling)	kWh	30,145,600	26,185,640	29,773,812	22,091,342	36%
	Proportion of energy use (UK)	kWh	1,236,728	1,081,538	1,156,200	965,524	
	Proportion of energy use (RoW)	kWh	56,898,168	44,037,078	47,220,371	39,432,996	

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES ('TCFD') STATEMENT

Genus has complied with the requirements of LR 9.8.6(8)R by including climate-related financial disclosures substantially consistent with the TCFD recommendations and recommended disclosures.

Genus has not complied with the following: (i) During FY22 the Group undertook limited qualitative analysis of climate-related risks and opportunities under different climate scenarios; and (ii) The Group is continuing to develop climate modelling and scenario analysis capabilities to quantify climate risk over short, medium and long-term horizons and embed this analysis within our financial planning processes.

Genus will continue to work over the medium term to complete a quantitative analysis of climate-related risks and opportunities under different climate-related scenarios.

We have considered the potential impacts and opportunities related to climate-change on our business and considered the strategy actions in response.

GOVERNANCE, OVERSIGHT AND SCRUTINY

Board Oversight

Overall responsibility and accountability for our Climate Change Policy, risks and opportunities rests with the Board. Genus's Chief Executive, Stephen Wilson, has formal responsibility for implementing and monitoring the strategy to manage climate-related risks and realise opportunities. Genus updated its oversight on climate-related issues in FY22 to ensure that climate change risks and opportunities receive management focus at the highest level.

Management's Role

As a result of this review, all members of the GELT as well as the Chairman of the Board's Audit & Risk Committee have been appointed to the Sustainability Committee, alongside operational leaders and subject-matter experts with accountability for delivering the Group's sustainability objectives including emissions reduction. The Sustainability Committee meets three times a year and is chaired by Genus's Chief Executive.

Genus has proposed amendments to its remuneration policy for Executives to include incentives for the management of climate-related issues. Strategic objectives covering strategy, leadership and culture, innovation and sustainability account for 25% of the Executive Directors' and other Group Executives' total annual bonus opportunity. In FY22 and beyond, 20% of the Performance Share Plan opportunity for the Chief Executive and Chief Financial Officer will be linked to the delivery of specific actions targeted at emissions reductions within the Company's operations and driving genetic improvements which make our customers' operations more efficient and sustainable.

STRATEGY

Resilience of our Business Model

Genus derives almost all of its revenue from products and services which make a positive contribution towards climate change mitigation and adaptation. Based on independent research, life-cycle carbon emissions of our Beef InFocus product are almost 42% less than traditional feedlot cattle bred for beef. Yet, whilst these planned breeding approaches are available and affordable on a global basis, they currently account for only 10% of cattle pregnancies with 90% of pregnancies taking place using conventional breeding approaches, representing a market opportunity for Genus. We see strong demand for our genetics at present and anticipate that this will grow over time, and particularly where customer demand is supported and stimulated by high ambition policies towards decarbonisation. Our business strategy and investment priority therefore targets further development of climate-relevant genetic traits (such as feed conversion efficiency, life-cycle GHG reduction and animal resilience), validation of these impacts and increasing the reach of our products and services.

In preparing the Group's financial statements, we have considered the impact of climate-related risks on our financial position and performance.

RISK MANAGEMENT

Process for Identifying and Assessing Climate-Related Risks

In our first year of assessment, we have undertaken a limited qualitative analysis of climate-related risks for alternative climate scenarios (RCP 2.6 vs RCP 4.5). This has informed our risk descriptions and management response in relation to our aim to lead the market in climate-focused breeding and our focus towards our customers' challenge of managing fluctuations in animal feed costs which we believe will be exacerbated by climate-related factors over the medium to long term.

This qualitative review of climate-related risks and opportunities has considered, through a series of reviews and workshops, the impact of climate on existing principal risks and financial decision making. The process has been guided by independent risk management consultants and will be refined on an annual basis to incorporate quantitative approaches. Outcomes from the assessment offer initial insights into the potential business and financial impacts which form input to our strategic and financial planning process.

Technology and Market Opportunity

As customers and policy makers, increasingly seek strategies for reducing carbon and associated costs, Genus offers genetic-based technologies which have demonstrable value and opportunity for wider uptake where elite genetics and genetic technologies such as gene editing provide this. In order to increase market penetration of genetic technologies, we must be able to quantify and validate the reduction in life-cycle carbon emissions. We have developed measures of success and Company targets (see page 40) which we include in customer discussions and advocacy of our work to reduce the carbon impacts of milk and meat production.

Resource Efficiency Opportunity

Energy used for heating is the third largest category of Genus' emissions, following animal-related emissions and transport. Implementing renewable energy systems based on solar panels or biogas that we produce ourselves enables us to tackle increasing fossil fuel costs (by self-generation), offers a low-carbon productive use for otherwise waste products and builds energy security at our facilities. **Actions taken:** We have ceased the use of coal at our Chinese sites in favour of lower carbon alternatives, and implemented solar PV at our sites in Wisconsin and Italy. We are building a biogas capture facility to generate electricity at our porcine site in Saskatchewan and will apply this technology to other sites in our portfolio.

Regulatory Risks

Carbon pricing: We have considered the potential for carbon pricing in the form of direct and indirect taxation to increase the cost of high-carbon farm inputs such as fertilizer and natural gas. Whilst these costs are likely to impact on our own production costs, (additional costs related to CO_2 taxation on combustion are in the range 0.5–0.9% revenue by 2050), these costs may be more significant to our customers and ultimately consumers of meat and dairy products. Under high-ambition scenarios, we consider that this may depress demand regionally, but do not consider that this will impact demand globally. **Water resources:** We operate in areas where water stress is likely to drive regulatory intervention to preserve water

SUSTAINABILITY REPORT CONTINUED
TCFD STATEMENT CONTINUED

availability and quality. Our modelling suggests this risk is higher in China and India. **Actions taken:** We continue to invest in measures to reduce our exposure to carbon costs, including utility-scale solar PV and electrification generally, biogas capture and use and bovine manure composting. In relation to water use and efficiency, we are adopting relevant best practice water-saving techniques as outlined in section 1.4 of 'Best Available Techniques' for food, drink and milk industries, including design standards for water efficient porcine facilities and 'monitoring and targeting' methods for water efficiency.

Technology Risks
As a business offering technology (genomic) solutions for reduced livestock carbon emissions and resilience to disease, our investment in research and product development is geared to maintain our leading market position. Where climate becomes an increasing focus within national and customer strategies, it will become increasingly necessary to further invest in and deliver the climate efficacy of our products against those of our competitors. **Actions taken:** In FY22, R&D spend was equivalent to 11.3% of our total revenue. We have invested in our gene editing technology.

Physical Risks
Extreme weather events: We are a globally diversified business with sufficient agility and preparedness to overcome local climate-related disruption to production or transport. We have experienced acute flooding impacts related to climate in India on a number of occasions over the last four years and are using what we have learnt from these events to support future resilience and contingency-planning. **Chronic impacts:** Using the WRI Aqueduct model, we have established that 23% of our global water demand takes place in areas which are currently within the highest two risk categories (Cat 4 or 5) and are likely to experience increased competition over the next decade and beyond. **Actions taken:** where we extract water from groundwater sources, we undertake long-term water quality monitoring. New facilities we build apply design standards to ensure water efficiency and flood prevention where relevant.

METRICS AND TARGETS USED TO ASSESS AND MANAGE CLIMATE-RELATED RISKS

We have selected targets which describe organisational progress in reducing carbon emissions, monitoring and managing risk and opportunity. The Sustainability Committee oversees performance and make recommendations to the Board in relation to business strategy and risk management.

Our carbon emissions are summarised below.

	FY22 t CO_2e	FY21 t CO_2e	FY20 t CO_2e	FY19 t CO_2e	Change from FY19 Baseline
Scope 1 and 2 emissions	**81,051**	81,765	87,321	89,390	-9.3%
Scope 3 emissions	**16,195**	14,664	16,119	21,489	-24.6%

Targets Used to Manage Climate-Related Risks, Opportunities and Performance
In view of the impact of our products and services on the carbon emissions in our value chain, we have adopted targets which consider generational change in carbon impacts for pork, beef and dairy products which use our genetics. These are considered (together with performance) below. For a detailed explanation of how these targets are set and calculated, and the impact of genetic improvement on our and our customers' carbon footprints, see our website: www.genusplc.com/sustainability.

	Target description	KPI targeted	KPI achieved	Target achieved?
Porcine	2.22kg reduction in life-cycle carbon emissions required to produce one market pig	One standard deviation of improvement/ equivalent to 20 index points on PIC's proprietary index. -2.22kg CO_2eq per market pig	-3.57kg per market pig	Yes
Bovine	0.126kg reduction in the life-cycle carbon emissions required to produce 1kg of beef	Change in FCR 0.8, equivalent to a yearly change in CO_2e emission is 0.1260kg CO_2e/kg carcass weight	0.1260kg CO_2e/carcass weight	Yes
Dairy	Yearly improvement of $66.9 in the $ Net Merit Index (an independent industry measure which considers multiple factors related to the efficiency of milk production and sustainability)	Yearly change of $66.9NM	$82.7NM	Yes
Company Carbon Reduction	Reduction in primary intensity ratio by 25% by 2030 compared to FY19 Baseline	2.5% annual reduction	16% reduction	Yes

NON-FINANCIAL INFORMATION STATEMENT

The table below, and the information it refers to, is intended to help stakeholders understand our position on key non-financial matters in line with the non-financial reporting requirements contained in sections 414CA and 414CB of the Companies Act 2006.

Reporting requirement	Policies and standards which govern our approach	Risk management and additional information
Environmental matters	Sustainability Framework	See pages 32 to 40
Employees	Global Employee Handbook;	See pages 30 to 31
	Whistleblower Policy	See page 31
Human rights	Global Employee Handbook;	See page 31
	Whistleblower Policy	See page 31
Social matters	Charitable Donations Policy	See page 36
Anti-corruption and anti-bribery	Anti-Bribery and Corruption Policy	See page 31
Policy embedding, due diligence and outcomes	Global Employee Handbook	See Strategic Report on pages 1 to 29
Description of principal risks and impact of business activity	n/a	See Principal Risks and Uncertainties on pages 43 to 46
Description of the business model	n/a	See Business Model on pages 2 to 11
Non-financial key performance indicators	Sustainability Framework	See page 34 to 36

SECTION 172 STATEMENT

Section 172(1) of the Companies Act 2006 imposes a general duty on every company director to act, in good faith, in the way they consider would be most likely to promote the success of the company for the benefit of its shareholders. In doing so, directors must take into account a list of factors that include:

> the likely long-term consequences of board decisions;
> how the company's actions and behaviours affect customers, employees, suppliers, the community and the environment;
> the desirability of maintaining a reputation for high standards of business conduct; and
> the need to act fairly between shareholders.

This statement explains how the Board complies with its obligations under section 172.

LONG-TERM CONSEQUENCES OF BOARD DECISIONS

Genus has a business model and strategy that deliver results on a multi-year basis. For example, we target customers where we can build long-term and mutually beneficial relationships, rather than seeking one-off transactions. Our investment in R&D can also take several years to result in revenue generating products, meaning our success in the short-term depends on long-term decisions taken in previous years. As a consequence, long-term decision making is a natural part of the Board's approach.

Examples of decisions and their likely long-term impact are set out below.

MANAGING OUR STAKEHOLDER RELATIONSHIPS

To effectively consider the impact of decisions on our stakeholders, we must have a good understanding of their needs and issues. We therefore actively listen to our stakeholders at all levels of the organisation, to ensure we take account of and respond to their interests. Information on how we engage with our stakeholders, including the Board's direct and indirect engagement with them, can be found on page 42.

The agenda for each Board meeting indicates the relevant stakeholder groups against each item, ensuring the Directors are aware of the stakeholder interests they need to consider in their decisions.

STANDARDS OF BUSINESS CONDUCT

The Board is aware of the need to maintain high standards of business conduct. The Group has a strong ethical culture, underpinned by our values and policies, which are endorsed by the Board. The Group also has specific policies and procedures to prevent bribery and corruption, as described on page 31 and as made available on our website genusplc.com.

Maintaining high standards of business conduct also relies on having the right culture within the Group. Page 54 describes how the Board maintains oversight of culture.

ENVIRONMENTAL IMPACT

Information on the Group's environmental impact can be found on pages 32 to 40.

Lysanne Gray is the Board's Sustainability Sponsor. She is a member of the Sustainability Committee, which monitors progress against the five pillars of the Group's sustainability framework including the actions identified in the Group's Climate Change Policy.

TREATING SHAREHOLDERS FAIRLY

The Company's shares are owned by a wide range of institutional and individual shareholders, with no shareholder having a majority holding or significant influence over the Group. As a result, no situations arise in which any shareholders can be treated differently, ensuring fair treatment for all.

STAKEHOLDER ENGAGEMENT

The Group actively engages with its stakeholders, to keep them updated and ensure we understand their priorities.

We look to understand our customers' and consumers' priorities, support our employees in pursuing our strategic goals and maintain strong relationships with shareholders while being a responsible and environmentally conscious citizen within our communities. The Board carries out some engagement directly, while other engagement occurs during the running of the business, with the Board being kept informed through reports from management. The table below describes our key stakeholders and examples of engagement during the year and actions which arose.

	CUSTOMERS AND CONSUMERS Board representative: All Directors	**EMPLOYEES** Board representative: Lesley Knox, Lykele van der Broek	**SHAREHOLDERS** Board representative: Iain Ferguson	**COMMUNITIES AND ENVIRONMENT** Board representative: Lysanne Gray
HOW WE ENGAGE	> The Board visits key customers and operators at different levels of the supply chain, including meeting with meat packers and processors, to understand what they look for in genetics to meet consumer demands > Regular Board updates on targeted customers and customer wins > Regular customer visits as part of our service offering, enabling our teams to work closely with customers to better understand their needs > Keeping under review growth of alternative non-animal proteins, in light of consumer preference	> Direct engagement by Workforce Engagement Directors > Employee Your Voice survey > Chief Executive video updates, manager-led updates and updates via intranet following results announcements > Global town hall meetings > Leadership calls and quarterly manager briefings > Regular internal communications from management > Employee-led resource groups > Health and safety training programme and regular updates/ briefings	> Investor roadshows, led by the Chief Executive and Chief Financial Officer > Results announcements, presentations and webcasts > AGM and trading update in November 2021 > Annual Report > Regular news flow on key developments > Shareholder consultation on new Remuneration Policy	> A range of placement and employment opportunities offered for students and apprentices > Support for charities close to local businesses > Providing educational support for agriculture and animal science programmes > Investing in activities designed to reduce GHG emissions, consistent with our Climate Change Policy
KEY ISSUES IDENTIFIED	> Need for high-quality customer digital experience	> Improvement areas raised in the Your Voice survey: – Strengthen employee experience – Learning and development – Increase focus on sustainability	> Ongoing shareholder interest in sustainability and environmental performance (see adjacent)	> Potential impact of climate change on the business and our communities
ACTIONS ARISING	> Continued to roll-out GenusOne for customers in Latin America, Europe and the UK > The Board reviewed feedback from customers using ABS's digital tools and digital engagement initiatives	> The Board reviewed feedback from employees received directly and through the Your Voice survey, and approved management's plans to address the key points raised > Ensuring safe working environments, in line with local governmental advice, as more regular working patters resume following the COVID-19 pandemic	> Continued focus on sustainability, including the development of clear key performance indicators to demonstrate the sustainability benefits of the Company's genetics (see page 35) > Developed specific environmental performance targets for inclusion in executive pay arrangements from FY23 (see Remuneration Policy on pages 77 to 85)	> The Board continued to scrutinise management's strategy, plans and actions to achieve climate change targets > The Board reviewed and approved the Company's TCFD disclosures, including the assessment of the Company's climate-related risks and opportunities (see pages 39 to 40)

ACTIVE APPROACH TO RISK

Genus is exposed to a wide range of risks and uncertainties as it fulfils its purpose of providing farmers with superior genetics, which in turn supports the fulfilment of its vision of nourishing the world more sustainably.

Some of these risks relate to the current business operations in our global agricultural markets, while others relate to future commercial exploitation of our leading-edge R&D programmes. We are also exposed to global economic and political risks such as trade restrictions heightened by the Russia-Ukraine conflict.

As part of our risk management process we monitor emerging risks and consider when to include them in our main risk assessment process. This year our reviews included:
> the impact of the Russia-Ukraine conflict;
> macroeconomic conditions;
> cyber security; and
> the impacts of COVID-19.

The Russia-Ukraine conflict has increased several principal risks and we have added cyber security to the principal risks as a result of the increasing sophistication and frequency of cyber crime and a recent IT security incident. In addition, we continue to monitor the impact of COVID-19 across our global operations and Brexit for our European operations, although both have not materially impacted our operations to date.

In our first year of reporting TCFD, we have undertaken a limited qualitative analysis of climate-related risks for alternative climate scenarios (RCP 2.6 vs RCP 4.5) with the support of an external specialist. This has informed our risk descriptions in relation to climate change as they relate to our principal risks and to our TCFD reporting on pages 39 to 40. We continue to monitor emerging risks related to the worsening global macroeconomic impact on our business.

In June 2022, the Company experienced an IT security incident which had a limited impact on the Company's systems. The incident, which involved ransomware, was confined to on-premise systems, with minimal impact to entities operating on GenusOne. However, impacts on certain local systems did disrupt operations for a short period, particularly in Latin America. With the support of external specialists, management fully restored all systems and files prior to the June month-end. Improvements to system controls and monitoring activities to detect and help prevent future security incidents have been implemented across the IT environment. No ransom was paid.

From our broad risk universe, we have identified 11 principal risks, which we regularly evaluate based on an assessment of the likelihood of occurrence and the magnitude of potential impact, together with the effectiveness of our risk mitigation controls.

The Directors confirm that they have undertaken a robust assessment of the principal and emerging risks and uncertainties facing the Group. More information on our risk management framework can be found in the Corporate Governance Statement on pages 68 to 69.

LINK TO STRATEGY

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Read more on pg 16 – 17

Delivering a differentiated proprietary genetic offering

Focusing on large and progressive protein producers globally

Sharing in the value delivered

Considered for Viability Assessment

Risk item focused on sustainability and TCFD reporting

PRINCIPAL RISKS AND UNCERTAINTIES CONTINUED

RISK	RISK DESCRIPTION	HOW WE MANAGE RISK	RISK CHANGE IN FY22
Strategic Risks			
DEVELOPING PRODUCTS WITH COMPETITIVE ADVANTAGE STRATEGIC LINK	> **Development programmes fail to produce best genetics for customers.** > **Increased competition to secure elite genetics.**	Dedicated teams align our product development to customer requirements. We use large-scale data and advanced genomic analysis to ensure we meet our breeding goals. We frequently measure our performance against competitors in customers' systems, to ensure the value added by our genetics remains competitive.	No change. Our analysis and benchmarking continue to support our genetic improvements.
CONTINUING TO SUCCESSFULLY DEVELOP INTELLIGEN TECHNOLOGY STRATEGIC LINK	> **Failure to manage the technical, production and financial risks associated with the rapid development of the IntelliGen business.**	Our continued development of the technology and its deployment to new markets is supported by dedicated internal resources and agreements with suppliers. Current patent infringement proceedings initiated by STgenetics in the US are being vigorously defended.	New Gen2 machines launched during the year are being monitored and recalibrated seeking to optimise performance in line with specifications. Uncertainty over further legal actions and uncertainties in relation to patent infringements.
DEVELOPING AND COMMERCIALISING GENE EDITING AND OTHER NEW TECHNOLOGIES STRATEGIC LINK	> **Failure to develop successfully and commercialise gene-editing technologies due to technical, intellectual property ('IP'), market, regulatory or financial barriers.** > **Competitors secure 'game-changing' new technology.**	We stay aware of new technology opportunities through a wide network of academic and industry contacts. Our Genus Portfolio Steering Committee oversees our research, ensures we correctly prioritise our R&D investments and assesses the adequacy of resources and the relevant IP landscapes. We have formal collaboration agreements with key partners, to ensure responsible exploration and development of technologies and the protection of IP. The Board is updated regularly on key development projects.	Key initiatives continue to progress through the R&D life cycle, and we maintain the high level of investment needed to bring the end products to market.
CAPTURING VALUE THROUGH ACQUISITIONS STRATEGIC LINK	> **Failure to identify appropriate investment opportunities or to perform sound due diligence.** > **Failure to successfully integrate an acquired business.**	We have a rigorous acquisition analysis and due diligence process, with the Board reviewing and signing off all material projects. We also have a structured post-acquisition integration planning and execution process.	We continue to work diligently to identify areas of opportunity consistent with our strategic plans and our aim to accelerate growth and create value for our shareholders. Our experiences with post-acquisition integration provide a platform for integrating newly acquired businesses.
SUCCEEDING IN GROWTH MARKETS STRATEGIC LINK	> **Failure to appropriately develop our business in China and other growth markets.**	Our organisation blends local and expatriate executives, supported by the global species teams, to allow us to grow our business in key markets, while managing risks and ensuring we comply with our global standards and comply with sanctions. We also establish local partnerships where appropriate, to increase market access.	This is due to market price volatility and uncertainty affecting production and profitability in the China porcine market, the Russia-Ukraine conflict and the worsening global macroeconomic conditions.

Strategic Risks continued

RISK	RISK DESCRIPTION	HOW WE MANAGE RISK	RISK CHANGE IN FY22
SUSTAINABILITY STRATEGIC LINK	> **Failure to lead the market in sustainable animal protein production and help our customers to meet the challenge of producing meat and milk efficiently and sustainably as climate change increases demand.** > **Failure to fulfil our commitment to reduce the environmental impact of our own operations and implement our Climate Change Policy and TCFD reporting.**	We have a global sustainability strategy and Climate Change Policy that are approved, and regularly reviewed, at Board level. Our Sustainability Committee oversees the implementation of the strategy and the annual objective setting process as well as monitoring progress using key performance indicators. The Board is updated regularly on the progress of the key initiatives and our progress against the annual targets. The Company ensures climate-related responsibilities and incentives are appropriate at management levels and considers climate-related implications within important processes including capital expenditure and procurement. With support from external risk specialist consultants, we have undertaken comprehensive analysis of our climate-related risks and opportunities which forms a basis of future monitoring and quantitative assessment.	We have developed our 2030 emissions reduction plan (and 2050 net zero plan) and developed quantifiable, robust performance indicators in relation to life-cycle carbon reduction (per generation) of pigs, beef and dairy cows.

Operational Risks

RISK	RISK DESCRIPTION	HOW WE MANAGE RISK	RISK CHANGE IN FY22
PROTECTING IP STRATEGIC LINK	> **Failure to protect our IP could mean Genus-developed genetic material, methods, systems and technology become freely available to third parties.**	We have a global, cross-functional process to identify and protect our IP. Our customer contracts and our selection of multipliers and joint venture partners include appropriate measures to protect our IP. We maintain IP appropriate landscape watches and where necessary conduct robust 'freedom to operate' searches, to identify third-party rights to technology.	No change. We continue actively to protect our IP by filing patents attributed to our R&D activity.
ENSURING BIOSECURITY AND CONTINUITY OF SUPPLY STRATEGIC LINK	> **Loss of key livestock, owing to disease outbreak.** > **Loss of ability to move animals or semen freely (including across borders) due to disease outbreak, environmental incident or international trade sanctions and disputes.** > **Lower demand for our products, due to industry-wide disease outbreaks.**	We have stringent biosecurity standards, with independent reviews throughout the year to ensure compliance. We investigate biosecurity incidents, to ensure learning across the organisation. We regularly review the geographical diversity of our production facilities, to avoid over-reliance on single sites.	This is due to the continued global supply chain challenges imposed by the COVID-19 outbreak, the continued spread of ASF and trade sanctions. Our geographically diverse production facilities and the expert knowledge of our supply chain and commercial teams allowed for a swift and comprehensive response to these challenges, which helped to reduce their impact.
HIRING AND RETAINING TALENTED PEOPLE STRATEGIC LINK	> **Failure to attract, recruit, develop and retain the global talent needed to deliver our growth plans and R&D programmes.**	We have a robust talent and succession planning process, including annual assessments of our global talent pool and active leadership development programmes. The Group's reward and remuneration policies are reviewed regularly, to ensure their competitiveness. We work closely with several specialist recruitment agencies, to identify candidates with the skills we need.	An increased demand post COVID-19 for more flexible working, and current inflationary pressures across the globe may lead to greater attrition.

PRINCIPAL RISKS AND UNCERTAINTIES CONTINUED

RISK	RISK DESCRIPTION	HOW WE MANAGE RISK	RISK CHANGE IN FY22
Operational Risks continued			
CYBER SECURITY **STRATEGIC LINK**	> **Failure to adequately detect and mitigate a malicious cyber attack by internal or external activists and the ability to quickly recover.** > **Failure to properly protect our data and systems from an attack.**	We utilise a flexible multi-layered approach that focuses on employee awareness and training, policies, software, and a third-party 24 x 7 monitoring Security Operations Centre and follow ISO 27001 standards. We have improved our system and data backup procedures and hardened our servers to further strengthen our resilience. Our GenusOne programme continues to progress well, improving our operational controls and IT security as we move to the cloud.	We have noted an increased sophistication and frequency of cyber crime and have been subjected to a ransomware attack, which was successfully resolved without payment of a ransom.
Financial Risks			
MANAGING AGRICULTURAL MARKET AND COMMODITY PRICES VOLATILITY **STRATEGIC LINK**	> **Fluctuations in agricultural markets affect customer profitability and therefore demand for our products and services.** > **Increase in our operating costs due to commodity pricing volatility.** > **Longer-term influence of climate factors on the cost and availability of agricultural inputs (animal feed).** > **Macroeconomic downturn accelerated by COVID-19 and geopolitical tensions.** > **The Russia-Ukraine conflict impact on agricultural markets.**	We continuously monitor markets and seek to balance our costs and resources in response to market demand. We actively monitor and update our hedging strategy to manage our exposure. Our porcine royalty model and extensive use of third-party multipliers mitigates the impact of cyclical price and/or cost changes in pig production. Our R&D programmes measure and track progress in our breeding programmes which reduce the life-cycle carbon footprint of meat and dairy production for each new generation which is quantifiable.	This is due to increased feed input costs as a result of higher grain prices, due to the Russia-Ukraine conflict, changes in weather patterns, and strong demand. In addition, the China pork market continued to deal with the challenges of ASF, price decline, higher input costs and rolling COVID-19 lockdowns.

GOING CONCERN AND VIABILITY STATEMENT

In assessing the appropriateness of adopting the going concern basis of preparing the financial statements as well as in assessing viability, the Board have considered:

- Genus's Strategic Plan which forms management's best estimate of the future performance and position of the Group;
- Genus's results on 30 June 2022 whereby the Group recorded adjusted profit before tax of £71.5m in actual currency;
- Genus's cash position on 30 June 2022 with net debt of £185.0m (2021: £105.6m) and had substantial headroom of £78.0m (2021: £130.0m) under the Group's credit facilities of £263m;
- with effect from 26 August 2022, the Group and its lenders increased the Company's multi-currency RCF by £40m to £190m and the USD RCF by USD25m to USD150m, and extended the maturity date of the total facilities to 24 August 2025, and had a USD20m bond and guarantee facility; and
- the potential use of mitigating actions including reduction in dividends and postponing certain capital spend and investments.

As part of the Directors' consideration of the appropriateness of adopting the going concern basis in preparing the financial statements, as well as their assessment of the Group's viability, the Board considered several key factors, including our business model (see page 2) and our strategic framework (see page 18). In addition, all principal risks identified by the Group were considered in a downside scenario within the viability assessment with specific focus paid to those that could reasonably have a material impact within our outlook period, including:

	Three-year cumulative impact to free cash flow £m
Succeeding in growth markets, which we have modelled through reductions to short-term growth expectations, particularly in China; **Managing agricultural market and commodity prices volatility**; modelled through reductions in price expectations, particularly in China;	(98.4)
Developing products with competitive advantage, modelled through reductions to short-term growth expectations because of failing to produce best genetics for our customers or to secure elite genetics;	(30.5)
Ensuring biosecurity or continuity of supply, which is modelled through one-off impacts of disease outbreaks and border closures; and	(33.0)
Impact of the war in Ukraine, modelled through reduction in profit expectations and cash restrictions.	(41.7)

We have considered the position if each of the identified principal risks materialised individually and where multiple risks occur in parallel. In addition, we have overlaid this downside scenario, net of mitigating actions, with reverse stress tests on both our headroom and banking covenants to ensure the range beyond the downside scenario is fully assessed.

Based on this assessment our headroom under these sensitivities and reverse stress tests, including our mitigating actions, remain adequate.

In their assessment of the Group's viability, the Directors have determined that a three-year time horizon, to June 2025, is an appropriate period to adopt. This was based on the Group's visibility of its product development pipeline, for example, because of the genetic lag of approximately three years between the porcine nucleus herds and customers' production systems and the pipeline of young bulls. The Board also considered the nature of the principal risks affecting Genus, including the agricultural markets in which it operates.

Based on this assessment, the Directors have a reasonable expectation that the Group has adequate resources to continue its operational existence for the foreseeable future and for a period of at least 12 months from the date of this report. Accordingly, the Directors continue to adopt and consider appropriate the going concern basis in preparing the Annual Report.

Also, based on this assessment, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period to 30 June 2025.

There are no indications from this assessment that change this expectation when looking beyond 30 June 2025 at the Group's longer-term prospects.

The Strategic Report was approved by the Board of Directors on 7 September 2022 and signed on its behalf by:

Stephen Wilson
Chief Executive
7 September 2022

Alison Henriksen
Chief Financial Officer
7 September 2022

MAINTAINING HIGH STANDARDS

We fully support having a broad range of views and experiences represented on the Board and recognise the business benefits this can bring

IAIN FERGUSON CBE
Non-Executive Chairman

CONTENTS

The link between effective governance and sustainable corporate success is well established and I am pleased to report that Genus continues to maintain high standards of corporate governance.

During the year, we completed an externally facilitated evaluation of the Board and its committees, which showed that the Directors continued to work well together, in addition to highlighting potential focus areas as we look to improve continuously. More detail can be found on page 60.

The Board's work has been aided by the return to face-to-face meetings, as we have emerged from the pandemic. However, we have also retained the positive aspects of working virtually, using video calls to supplement our formal meetings. As a result, the Board now communicates more frequently than before the pandemic.

In June 2022, we undertook our first Board visit to North America for three years, visiting our facilities in Wisconsin, US and Saskatchewan, Canada and meeting our people and customers. This followed a Board visit to our sites in Ruthin and Stapeley in the UK, during July 2021. These events play a vital role for the Board, enabling us to hear first-hand from key stakeholders and giving us insight into the Group's operations, markets and culture. More information on these visits can be found on page 55.

More broadly, the Board is highly aware of the importance of understanding stakeholder views and ensuring we fully consider them in our discussions and decision-making. The Company Secretarial team has a robust process for identifying the relevant stakeholders for each matter we consider, so there is appropriate rigour in meeting our s172 responsibilities.

There is increasing focus on the diversity of company boards. We fully support having a broad range of views and experiences represented on the Board and recognise the business benefits this can bring. The Board already meets the Financial Conduct Authority's recently introduced targets for female representation on the Board as a whole and within specific roles on the Board. Enhancing ethnic diversity will be a key consideration in future recruitment to the Board.

Iain Ferguson CBE
Non-Executive Chairman
7 September 2022

STATEMENT OF COMPLIANCE WITH THE 2018 CORPORATE GOVERNANCE CODE

During the year ended 30 June 2022, Genus plc applied all the principles of the Code and has complied with all the provisions except for Provision 38.

Provision 38 provides that Executive Director pension contribution rates should be in line with those available for the wider workforce. Our Remuneration Policy, which was approved by shareholders on 14 November 2019, states that pension contribution rates for Executive Directors appointed after that date will be in line with rates available to the wider workforce. The pension contribution rate for Stephen Wilson was reduced at that time from 15% of base salary to 10% of base salary. In line with investor expectations, the allowance paid to Stephen Wilson will reduce to 6% of salary effective 1 January 2023.

A copy of the Code can be obtained from www.frc.org.uk.

FURTHER INFORMATION

The following pages include the disclosures required by the Code.

Further information can be found on our website at: https://www.genusplc.com/investors/corporate-governance/

Here you can download:
> Terms of reference for the Board Committees
> Matters reserved for the Board
> Our Board diversity policy
> Our non-audit services by auditors policy

BOARD OF DIRECTORS AND COMPANY SECRETARY

	IAIN FERGUSON CBE Non-Executive Chairman	**STEPHEN WILSON** Chief Executive	**ALISON HENRIKSEN** Chief Financial Officer
COMMITTEE MEMBERSHIP			
BOARD APPOINTMENT	July 2020	January 2013	January 2020
SKILLS AND EXPERIENCE	> Extensive Board, governance and leadership experience > Strong commercial, science and agribusiness expertise across a range of industries, with a particular focus on consumer goods and food > Deep appreciation of capital markets and investor sentiment	> Six years as Group Finance Director at Genus with wide-ranging operational, strategic and business development responsibilities > Extensive experience over 30 years in technology businesses, including finance, mergers and acquisitions, IT transformation and investor relations > International experience, living and working in Europe and the US > Fellow of the Chartered Institute of Management Accountants	> Over 25 years of international experience in finance, mergers and acquisitions, business transformation and investor relations, operating across Europe, Australia, Asia, the US and South Africa > Proven track record of driving performance in public and privately held organisations, both business to business and business to consumer > Qualified as Chartered Accountant with Ernst & Young
CURRENT APPOINTMENTS	Chairman of Crest Nicholson Holdings plc; Chairman of Personal Assets Trust plc; Non-Executive Director of Copenhagen Topco Ltd; Pro-Chancellor of Cranfield University.	Non-Executive Director of Renishaw plc.	None
PAST APPOINTMENTS	Senior Independent Director of Sygen International plc; Chairman of Berendsen plc; Chairman of Stobart Group Ltd; Senior Independent Director of Balfour Beatty plc; Non-Executive Director of Greggs plc; Lead Independent Director at the Department for Environment, Food and Rural Affairs; Chief Executive of Tate & Lyle plc; General Manager of Unilever AgriBusiness; Chair, Unilever Plantations and Plant Sciences Group; and Senior Vice President, Corporate Development at Unilever.	Group Finance Director of Genus plc; Executive Vice President and Chief Financial Officer of Misys plc; finance and business development roles at IBM; and Non-Executive Director and Audit Committee Chair of Xchanging plc.	Chief Financial Officer of V.Group, a global leader in ship management; Finance Director, UK & Ireland and Finance Director, Australia, at Compass Group plc; and Chief Financial Officer of Specialty Fashion Group Ltd, a former ASX-listed company.

KEY TO COMMITTEES

Member of the Nomination Committee
Member of the Remuneration Committee
Member of the Audit & Risk Committee
Committee Chair

LYSANNE GRAY Non-Executive Director	**LYKELE VAN DER BROEK** Non-Executive Director; Workforce Engagement Director	**LESLEY KNOX** Senior Independent Director; Workforce Engagement Director	**PROFESSOR JASON CHIN** Non-Executive Director	**DAN HARTLEY** Group General Counsel and Company Secretary
April 2016	July 2014	June 2018	April 2021	June 2014
> Significant experience of risk management, audit, business operations, acquisitions and disposals, and corporate governance, gained within the food sector > Chartered accountant > Lysanne is the Board's Sustainability Sponsor	> Vast experience of growing companies and working in agricultural businesses throughout the world, including in emerging markets	> Broad international, strategic and financial services experience, both through executive and non-executive roles > Has advised numerous companies including manufacturers and distributors of food products, encompassing poultry and poultry breeding companies	> Extensive experience in academic and commercial research institutions, giving him deep scientific expertise > Working to develop and apply methods for reprogramming the genetic code of living organisms, with research spanning chemistry, chemical biology and synthetic biology > Holds Associate Faculty status at the Wellcome Sanger Institute, where he researches synthetic genomics > Fellow of the Academy of Medical Sciences, Trinity College, Cambridge, and the Royal Society	> Significant experience in multi-jurisdictional patent litigation, mergers and acquisitions, patent and technology licensing and managing product life cycles > Degrees in science and law
Executive Vice President Sustainable Business Performance and Reporting at Unilever plc.	Chair of Eden Research plc.	Non-Executive Director, Voice of the Employee Director and Remuneration Committee Chair of Legal & General plc and Chairman of Legal & General Investment Management Holdings.	Head of the Centre for Chemical and Synthetic Biology at the Medical Research Council Laboratory for Molecular Biology, and Founder and Chief Scientific Officer of Constructive Biology.	None
Financial Controller at Unilever plc and Unilever NV; Chief Auditor of Unilever; Chief Financial Officer of Unilever's global food service business; and a number of other senior operational and financial positions within Unilever.	Member of the Board of Management of Bayer CropScience, a division of Bayer AG; senior international roles including the Head of Bayer CropScience's BioScience division; and President of the Bayer HealthCare Animal Health division.	Founder Director of British Linen Advisers; Governor of British Linen Bank Group; senior roles at Dresdner Kleinwort Benson; solicitor at Slaughter & May; and numerous non-executive roles, including Centrica, SAB Miller, Alliance Trust, Hays, Scottish Provident, Bank of Scotland, Grosvenor Group and Thomas Cook.	Positions on the scientific advisory boards of a number of companies, including Synaffix BV, where he retains an advisory role.	Senior Vice President and International Counsel of Shire plc; and senior and global roles in private practice, in the UK and the US.

GENUS EXECUTIVE LEADERSHIP TEAM ('GELT')

	ANGELLE ROSATA Group HR Director	DR BILL CHRISTIANSON Chief Operating Officer, Genus PIC	JERRY THOMPSON Chief Operating Officer, Genus ABS Beef
SKILLS AND EXPERIENCE	> Deep and broad expertise spanning resourcing, talent management, succession planning, leadership development and health and safety > Extensive HR strategic planning skills and commercial acumen > Masters in Human Resource Development from Vanderbilt University	> Deep understanding of agriculture and biotechnology, with broad industry knowledge and extensive commercial and global experience > DVM and PhD in Veterinary Medicine from the University of Minnesota	> A natural entrepreneur with deep industry knowledge, commercial skills and international experience > Has helped Genus establish and grow businesses in countries as diverse as the UK, Russia, India and China > Holds a degree in Agriculture from the University of Plymouth and is a graduate of Harvard Business School's Advanced Management Program
CAREER	> Joined Genus in September 2013, following more than 20 years in the healthcare sector > Developed and delivered PIC's people strategy, before becoming HR Director for ABS and then Group HR Director on 1 July 2017	> Joined Genus in 1993 and subsequently worked in operational roles spanning Europe, South America and the US, before becoming General Manager of PIC North America in 2007 > Led the combined ABS and PIC business across the Americas from 2010, before becoming COO of Genus PIC in 2012	> Joined PIC in 1992, working initially in the UK and then Siberia and Romania, before leading PIC in Central and Eastern Europe and then Europe as a whole > Led PIC and ABS in Russia and Asia Pacific, before becoming COO for Genus Asia in 2012 and then COO for Genus ABS Beef in July 2016

DR NATE ZWALD
Chief Operating Officer, Genus ABS Dairy

- Deep expertise and experience of dairy genetics, strong commercial focus and passion for people development
- Board member of the Council on Dairy Cattle Breeding and Vice President of the National Association of Animal Breeders
- Degree in Dairy Science, MBA and PhD in Dairy Cattle Genetics from the University of Wisconsin

- Joined Genus in January 2017 after 15 years at Alta Genetics, including ten years as General Manager of its US business and more than two years as Global Marketing Director
- Remains involved in his family's commercial dairy operation, Bomaz farm in the US, which has produced high-ranking industry and ABS sires

DR ELENA RICE
Chief Scientific Officer and Head of R&D

- Deep expertise in running R&D programmes, regulatory science and portfolio management
- Has led the development and introduction of genetic improvement technologies and nurtured a portfolio of gene editing projects
- BSc and MSc in Biology from Moscow State University, and PhD in Plant Physiology and Biochemistry from the Timiryazev Institute of Plant Physiology in Moscow

- Joined Genus as Chief Scientific Officer and appointed to GELT on 15 July 2019
- Spent 18 years in increasingly senior roles within Bayer, leading teams using pioneering science and cutting-edge technology to help farmers grow food more sustainably

STEPHEN WILSON
Chief Executive

ALISON HENRIKSEN
Chief Financial Officer

DAN HARTLEY
Group General Counsel and Company Secretary

See pages 50 and 51 for Stephen's, Alison's and Dan's biographies.

BOARD LEADERSHIP AND PURPOSE

THE BOARD'S ROLE

The Board is responsible for ensuring our long-term success. It:

> approves our strategy and corporate goals and monitors our performance against them;
> determines that we have the necessary resources, systems and controls to achieve our objectives; and
> sets the culture and standards of behaviour we want to see throughout Genus.

The Board is also responsible for other critical decisions. These include approving the corporate budget; stress-testing our scenario planning, to ensure we have the right funding; approving material contracts, acquisitions, licences and investments; and reporting to shareholders.

PURPOSE, CULTURE AND VALUES

Genus is a purpose-driven business, which is reflected in our vision of pioneering animal genetic improvement to help nourish the world. This purpose provides the bedrock for our strategy, with its focus on improving genetics for the benefit of progressive livestock farmers and helping them to maximise their performance on their farms.

To deliver our strategy and achieve our purpose, we must have the right culture. Genus aims to maintain a positive, inclusive and cooperative culture, with a global outlook and a focus on excellent customer service. This culture is underpinned by a set of values that exemplify the business we want to be: customer centric, results driven, pioneering, people-focused and responsible. These values are completely aligned to both our purpose and our strategy. More information on our values can be found on page 30.

The Board has a number of ways of understanding and monitoring the culture around the business. In particular, these include the results of the Group's Your Voice employee survey and the Workforce Engagement Directors' interactions with employees during the year, as described below. The Board believes that health and safety performance is another important indicator of culture and the Directors monitor performance on a regular basis.

The Directors also meet numerous people from around the Group, including members of management who present at Board meetings and through site visits, giving them further insight into the culture. During the year, the Board undertook visits to sites in the UK and North America (see page 55).

The Board ensures its own culture is aligned to the culture across the Group, through the annual evaluations of the Board and its Committees. More broadly, the Group's performance management process also has a strong focus on behaviours that are aligned to our values.

The Group has a Whistleblowing Policy and an independent hotline to allow employees to raise any concerns anonymously. This process is overseen by the Audit & Risk Committee on the Board's behalf. More information can be found on page 31.

The Board is therefore satisfied that the Group's culture is aligned with its purpose, values and strategy and that our workplace policies and practices are consistent with them.

STRATEGY

The Group's corporate governance framework plays a key role in the successful delivery of our strategy. The table on pages 56 to 57 shows how the Board's discussions during the year related to specific aspects of the strategy. In addition, the Board holds an annual strategy session, focusing on the strategic direction and goals of the Group and its business units. This took place in January 2022. More information can be found in the Chairman and Chief Executive's Statement on pages 14 to 15 of the Strategic Report.

WORKFORCE ENGAGEMENT

Lykele van der Broek and Lesley Knox are the designated Workforce Engagement Directors.

They continued to engage with employees this year, holding face-to-face meetings with ABS staff in the UK, the AWAKE leadership team in North America, and ABS staff in the US. The key points raised at town hall meetings are set out in our Section 172 Statement on page 41. The Board will continue to monitor progress made against these points as well as feedback received in our latest global employee survey, Your Voice, which attracted feedback from more than 83% of our employees for more information see page 31.

The Workforce Engagement Directors will continue to work around the Group's different sites, to collect feedback and wherever possible to hold face-to-face meetings with employees as part of the Board's programme of annual visits.

ENGAGEMENT WITH OTHER STAKEHOLDERS

The Groups' interactions with its other stakeholders, including engagement undertaken directly by the Board, is summarised on page 42 in the Strategic Report.

INFORMATION FLOW TO THE BOARD

The diagram to the right sets out our process for providing information to the Directors, ahead of scheduled Board meetings. This ensures our Board is well informed and the Directors can contribute effectively to discussions.

To assist the Directors with discharging their duties under s172 of the Companies Act, each item included in the Board papers indicates the relevant s172 considerations. More information can be found in the s172 statement on page 41.

1. The Chairman sets the agenda for the meeting, with input from the Chief Executive, Chief Financial Officer and Group Company Secretary.
2. A week before the meeting, the agenda and Board papers are sent to the Directors using a secure electronic system.
3. Board meetings take place at least eight times per year.
4. Decisions and actions agreed at the meeting are monitored by the Group Company Secretary.
5. The updated list of actions becomes part of the agenda for the next Board meeting.

THE BOARD'S YEAR IN REVIEW

The Board held eight scheduled meetings during the year. At each scheduled meeting, the Board receives updates on:

> business performance, business development, talent development and competitive landscape developments from the Chief Executive;
> financial performance of the business and forecasts from the Chief Financial Officer; and
> corporate governance and legal issues from the Group General Counsel and Company Secretary, and external advisers.

The table below shows how many scheduled Board and Committee meetings each Director attended during the year.

Director	Board	Nomination	Audit & Risk	Remuneration
Non-Executive Chairman				
Iain Ferguson	8/8	1/1	5/5[1]	5/5
Executive Directors				
Stephen Wilson	8/8	1/1	5/5[1]	5/5[1]
Alison Henriksen	8/8	1/1[1]	5/5[1]	4/5[1]
Non-Executive Directors				
Jason Chin	6/8[2]	1/1	4/5[2]	4/5[2]
Lesley Knox	8/8	1/1	5/5	5/5
Lykele van der Broek	8/8	1/1	5/5	5/5
Lysanne Gray	8/8	1/1	5/5	5/5

Note: The maximum number of meetings that Directors could have attended during the year: Board 8, Nomination Committee 1, Audit & Risk Committee 5 and Remuneration Committee 5.

1 By invitation
2 Jason Chin notified the Company prior to joining the Board in April 2021 of a number of pre-existing commitments which prevented him from attending two scheduled meetings during the year

VISITING OUR SITES

As discussed in the Chairman's Letter on page 48, site visits are a key part of the Board's calendar and the Directors were pleased to be able to resume these events for the first time since the pandemic.

In July 2021, the Board visited our Stapeley and Ruthin sites in the UK. This included a tour of the barns and IntelliGen laboratory, a customer site visit and ABS business presentations.

In June 2022, the Board went to the Group's locations in Wisconsin, United States and Saskatchewan, Canada. This included tours of new ABS barns, ABS Beef nucleus, IntelliGen and R&D laboratories, new PIC nucleus farm, customer visits and PIC and ABS business presentations. The Board also had opportunities to meet with employees at all locations.

CORPORATE GOVERNANCE STATEMENT CONTINUED

The table below provides more detail of the Board's discussions and activities, and the outcomes from them. It also sets out how each topic supports the delivery of our strategy and the fulfilment of the Directors' duties under s172 of the Companies Act.

Topic and link to our strategy	Activity	Actions arising	Progress
LEADERSHIP AND EFFECTIVENESS **LINK TO OUR STRATEGY** Stakeholders: E, S s172 considerations: a, b	Monitor Board effectiveness	External evaluation undertaken during the year.	Focus areas identified (see pages 60 to 61)
	Monitor pipeline of senior talent		
BUSINESS DEVELOPMENT & STRATEGY **LINK TO OUR STRATEGY** Stakeholders: S, C, SC s172 considerations: a	Monitor progress against our strategic objectives	Held strategy session with GELT and other business leaders.	See above
	Review and approve business activities	Approved: > Expansion of existing ABS facilities in Whenby and Ruthin, including the construction of a solar array and rainwater harvesting facilities. > Investment in IntelliGen facilities. > Acquisition of all intellectual property in Olymel LP's elite porcine genetics.	
	Monitor strategic developments	Received updates on: > The activities of the Sustainability Committee, sustainability strategy and progress against the Company's Climate Change Policy targets. > Litigation relating to IntelliGen technology. > Material business development opportunities, including summaries of due diligence. > Competitor activities. > Continued progress with the PRRSv development programme. > GenusOne enterprise management system.	
RESEARCH & DEVELOPMENT **LINK TO OUR STRATEGY** Stakeholders: S, C s172 considerations: a, c	Monitor R&D progress	Received updates on: > R&D programmes and material investments. > The R&D stage gate review process for research programmes. > The progress of the PRRSv development programme and IntelliGen improvements. > Progress in the areas of reproductive technologies and scientific data. > Jason Chin's attendance at GPSC meetings. > The formation of a new Scientific Advisory Board, to be chaired by Jason Chin..	See pages 24 to 25
EMPLOYEES **LINK TO OUR STRATEGY** Stakeholders: E s172 considerations: a, b	Review recruitment pipeline	Received updates on: > Key vacancies and hires, including key roles in Group Finance, Marketing, R&D and Commercial. > Talent development in leadership below GELT level. > Your Voice employee engagement survey.	See pages 30 to 31
	Update on employee feedback	Held town hall meetings with employees and the Chief Executive, and received updates on meetings between employees and the Workforce Engagement Directors.	See pages 30 to 31

Topic and link to our strategy	Activity	Actions arising	Progress
SHAREHOLDERS **LINK TO OUR STRATEGY** Stakeholders: S s172 considerations: c, f	Monitor investor attitudes towards Genus	Updated on meetings with shareholders, potential investors and analysts.	See page 42
COMPANY PERFORMANCE AND FINANCE **LINK TO OUR STRATEGY** Stakeholders: S s172 considerations: a, f	Monitor performance against plan	Received updates on the operational performance of the business and market conditions for each division. Monitored the Group's performance against its strategy, budget and goals.	See pages 20 to 25
	Review past and projected financial performance	Approved the annual and interim results and dividends. Approved the FY22 budget.	
	Monitor key financial issues Monitor performance against plan	Received tax and treasury updates. Received pension updates. Received updates on renewal of the Group's external borrowing facilities. Reviewed going concern and viability, and reviewed reports from the Company's auditors.	See pages 26 to 29
EXECUTIVE/GELT UPDATES **LINK TO OUR STRATEGY** Stakeholders: E, S, C, SC s172 considerations: a	Monitor business unit performance and plans	Received financial and operational performance updates. Received regular presentations from each business unit. Conducted strategy session comparing performance of each business unit against previously presented strategic goals.	
HEALTH & SAFETY **LINK TO OUR STRATEGY** Stakeholders: E s172 considerations: b	Ensure strong culture of health and safety	Reviewed FY22 targets for health and safety and reviewed progress throughout the year. Received updates from the Head of Health & Safety, including progress against relevant KPIs.	See pages 35 to 36 See pages 35 to 36
RISK MANAGEMENT **LINK TO OUR STRATEGY** Stakeholders: S s172 considerations: a, c	Monitor risk management and control	Monitored the Group's risk register. Received updates on the whistleblowing hotline reports and investigations. Received updates on the IT security incident and the Company's response.	See pages 43 to 46

Key to stakeholders:
E = Employees, S = Shareholders, C = Customers, SC = Supply Chain, EN = Environment

Key to s172 considerations:
(a) Consequence of decisions in the long term
(b) Interests of the Company's employees
(c) Need to foster the Company's business relationships with supplies, customers and others
(d) Impact of the Company's operations on the community and environment
(e) Desirability of the Company maintaining a reputation for high standards of business conduct
(f) Need to act fairly between members of the Company

DIVISION OF RESPONSIBILITIES

BOARD ROLES AND RESPONSIBILITIES

To ensure we have clear responsibilities at the top of the Company, the Board has set out well-defined roles for the Chairman and Chief Executive. These, along with the responsibilities of our other Directors, are summarised in the table below.

Title	Responsibilities
Chairman Iain Ferguson	Iain's primary responsibility is to lead the Board and ensure it operates effectively. He achieves this in part through promoting an open culture, which allows people to challenge the status quo, and holding meetings with the NEDs without the Executives present. Iain also communicates directly with shareholders.
Chief Executive Stephen Wilson	Stephen is responsible for devising and implementing our strategy and for managing our day-to-day operations. He is accountable to the Board for the Group's development, in line with its strategy, taking into account the risks, objectives and policies set out by the Board and its Committees.
Chief Financial Officer Alison Henriksen	Alison is responsible for helping the Chief Executive to devise and implement the strategy, and for managing the Group's financial and operational performance.
Senior Independent NED Lesley Knox[1]	Lesley provides a sounding board for the Chair and is an alternative line of communication between the Chair and other Directors. She leads meetings of the NEDs, without the Chair present, to appraise the Chair's performance, and consults with shareholders in the absence of the Chair and Chief Executive.
NEDs Lysanne Gray[2], Lykele van der Broek[1], Jason Chin	The NEDs constructively challenge, oversee and help to progress the execution of our strategy, the management of the Group and the management of our governance structures, within the risk and control framework set by the Board.

1 Also a Workforce Engagement Director
2 Also the Board's Sustainability Sponsor

BOARD COMMITTEES

The table below shows Board Committee membership at the year end:

	Committee		
Director	Audit & Risk	Nomination	Remuneration
Iain Ferguson	–	C	M
Stephen Wilson	–	M	–
Alison Henriksen	–	–	–
Lysanne Gray	C	M	M
Lykele van der Broek	M	M	M
Lesley Knox	M	M	C
Jason Chin	M	M	M

The Committee Chairs oversee and lead the Committees' activities, within their terms of reference, and are responsible for their effective operation. More information about the roles and work of the Board Committees can be found in their statements on pages 62 to 103, and in their terms of reference on our website at www.genusplc.com.

NON-EXECUTIVE DIRECTOR INDEPENDENCE

The Board believes that all of the NEDs are independent in character and judgement, and that there are no relationships or circumstances that are likely to affect (or could appear to affect) their judgement. As required by the Code, the Chairman was independent on appointment.

BOARD AND COMMITTEE STRUCTURE

The diagram below shows the Board and the Committees that report to it:

BOARD COMMITTEES

AUDIT & RISK COMMITTEE
Ensures the integrity of our financial reporting, evaluates our risk management and internal control system, and oversees the internal and external auditors.

REMUNERATION COMMITTEE
Determines remuneration for our Executive Directors and senior management, to support our growth strategy and deliver value for stakeholders.

NOMINATION COMMITTEE
Reviews the Board's structure, size and composition and proposes candidates for appointment to the Board.

GENUS PLC BOARD

SUSTAINABILITY COMMITTEE
Provides direction and oversight for continuous improvement in our environmental sustainability, health and safety, animal well-being and community engagement.

GELT
Leads our strategic delivery and ensures organisational alignment, engagement and efficient execution.

GENUS PORTFOLIO STEERING COMMITTEE
Gives us a comprehensive view of our R&D programme and involves our business units in prioritising our R&D initiatives.

OTHER TEAMS REPORTING TO THE BOARD

COMPOSITION, SUCCESSION AND EVALUATION

THE BOARD'S COMPOSITION

At the year end, the Board comprised the Non-Executive Chairman, four independent Non-Executive Directors and two Executive Directors – the Chief Executive and the Chief Financial Officer. The Non-Executive Directors therefore form a majority on the Board, as required by the Code.

The Board has an appropriate blend of skills and professional backgrounds. Almost all of our Directors have held leadership positions in international companies, with several having run businesses overseas. Several of our Directors, including the Chair of the Audit & Risk Committee, have significant financial experience, while others have strong backgrounds in scientific research or in leading science-based businesses. This breadth helps to ensure the Board provides even-handed oversight, works in a constructive and focused manner and has the capabilities to manage the challenges of a complex and evolving global business environment.

YEAR 1
An external Board effectiveness review produces an action plan for the areas of focus identified by the review.

YEAR 2
A follow-up questionnaire by the same external consultant enables us to monitor our progress with the focus areas.

YEAR 3
An internal review using questionnaires and interviews with the Chair of the Board.

ASSESSING THE BOARD'S EFFECTIVENESS

To ensure the Board provides effective leadership to the Group, we have a three-year evaluation cycle, using a mixture of internal and external evaluations.

This was the first year of the current three-year cycle and we therefore undertook an externally facilitated evaluation. This was led by David Robinson and Barry Gould of Gould Consulting, which has no other connection with the Company or with individual Directors.

The evaluation comprised the observation of Board and Board Committee meetings, tailored questionnaires and one-to-one interviews with each of the Directors and certain other key management employees.

THE EVALUATION'S CONCLUSIONS

The review showed that the Board is effective in most areas, is well led, and the Directors generally challenge constructively and effectively. The review highlighted that the Board is focused on activities that deliver value to shareholders including:

> accelerating the drive into new geographies,
> resolving people and resourcing challenges, and
> pushing the sustainability agenda into all three business units.

The Board identified the following focus areas for FY23:

> enhanced engagement from the Board in shaping the Board's agenda, including the preparation of a balanced score card of actions from the annual strategy session, to ensure that the Board is able to spend its time discussing and challenging management on its highest priority strategic topics;
> using time around Board meetings, such as at Board dinners, to discuss key themes emerging from management briefings by the Chief Executive, Chief Financial Officer, and General Counsel and Company Secretary, allowing the Board more time during its meetings for discussion of its highest priority strategic topics; and
> ensuring an ongoing focus on succession issues including Board succession, Board size and skills, and executive team succession.

BOARD FOCUS AREAS FOR FY22

Last year's internal evaluation identified the following priorities for FY22:

Priority	Progress
Retaining a strong focus on outward-facing awareness.	The Board approved the constitution of a Scientific Advisory Board to give the Group access to a broader range of capabilities and improve our ability to 'horizon scan'.
Supporting management as it navigates the post-COVID world.	The Board receives regular reports from management on the impacts of COVID-19 on the Group's operations and is confident that mitigating controls have operated successfully.
Ongoing Board succession.	The Board continues to focus on Board succession planning. Refer to the Nomination Committee Report on pages 62 to 64 for more information.
Bolstering experience in key geographies.	The Board receives detailed reports regarding the Company's performance in each of its key geographies.
Focusing on ESG and sustainability.	The Board receives regular updates from the Chief Executive, Chief Financial Officer and the Board's Sustainability Sponsor following Sustainability Committee meetings as well as periodic updates from management on sustainability topics and progress against the Company's carbon reduction initiatives.

RE-ELECTION OF DIRECTORS

As required by the Code, all the Directors will offer themselves for re-election at the next AGM. Details can be found in the Notice of AGM. Following the performance evaluation described above, the Board confirms that all the Directors continue to be effective in their roles.

NOMINATION COMMITTEE REPORT

IAIN FERGUSON
Chair of the Nomination Committee

	Meetings
Iain Ferguson (Chair)	1/1
Stephen Wilson	1/1
Alison Henriksen	1/1[1]
Jason Chin	1/1
Lesley Knox	1/1
Lykele van der Broek	1/1
Lysanne Gray	1/1

1 By invitation

Dear Shareholder

With no changes to Board membership during the year, the Committee focused on succession planning for Executive roles, as well as our ongoing responsibilities including evaluating the balance of the Board and its diversity. The Board is well placed in terms of gender diversity, but we recognise the importance of other aspects of diversity, including ethnic backgrounds, and this will continue to form part of our criteria for future Board appointments.

Iain Ferguson
Chair of the Nomination Committee
7 September 2022

THE COMMITTEE'S ROLE AND RESPONSIBILITIES

The Committee is responsible for:
> making recommendations to the Board on the structure, size and composition of the Board and its Committees;
> evaluating the balance of skills, experience, independence, knowledge and diversity on the Board;
> succession planning for the Non-Executive and Executive Directors and other senior executives; and
> identifying and recommending suitable candidates to become Directors, based on merit.

The Committee has written terms of reference, which set out the authority delegated to it by the Board. These are available from our website:
–
www.genusplc.com

FOCUS AREAS FOR FY22

In last year's report, we identified two focus areas for the Committee in FY22. These were:
> Executive Director succession planning; and
> talent development.

Information on succession planning is set out below. Talent development has been hampered by COVID-19, which made it more difficult to bring people together from different parts of the business for learning opportunities, resulting in an increased emphasis on distance learning. As a result, this will remain a focus area for the year ahead.

SUCCESSION PLANNING

The Committee has a formal three-phase succession planning process:

ASSESSMENT

The Committee reviews the Board's current skills and experiences across a range of relevant areas.

This results in a skills matrix (see below), which identifies the skills coverage across all Board members.

Potential skills gaps are identified, so they can be incorporated into future succession planning at Board and Executive level.

Areas for ongoing Board upskilling are identified and discussed.

1

APPROACH

The Committee applies engagement rules for succession planning, including:

> ensuring succession planning is in line with the Committee's terms of reference;
> considering the need to replace the skills of any departing NED; and
> filling any missing skills required for the Company's strategic direction.

Job specifications for the Non-Executives and Executives are kept up to date.

2

EXECUTION

The Committee identifies the desired skills for any new NED, for use in filling any future vacancies on the Board.

Potential internal candidates for promotion to Executive Director are identified.

3

Management succession planning is one of the business's top priorities and the Committee has continued to assess the succession plans for GELT members. The Group HR Director engaged with the Board twice during the year to discuss these plans. This work showed that the Group has good coverage of many key positions internally. The Committee also maintains relationships with a number of major search firms, recognising the importance of being able to consider external candidates as well. The Group has a strong track record of external recruitment into senior roles.

BOARD SKILLS MATRIX

The table opposite shows the key experience and skills the Committee has identified as desirable and indicates their depth on the Genus Board.

Competence	Low/medium	Good/high
Board and corporate governance	–	100%
Strategy	–	100%
Finance, banking and capital markets	43%	57%
Risk, culture change and change management	–	100%
Politics and public affairs	43%	57%
Stakeholder and customer communications	14%	86%
Sustainability implementation and communications	57%	43%
Human resources	–	100%
IT systems, transformation and data/cyber security	57%	43%
Science and biotechnology	43%	57%
Food sector	–	100%
Review, launch and marketing of FDA regulated products	86%	14%
International business	14%	86%
North America market	28%	72%
EMEA market	28%	72%
Asian market	43%	57%
LATAM market	72%	28%

The Committee continues to assess the balance of skills and experience on the Board and will keep the skills matrix in mind in any future recruitment to the Board.

NOMINATION COMMITTEE REPORT CONTINUED

BOARD TRAINING AND DEVELOPMENT

The Group provides continuing education to its leaders, including Board members. This includes compulsory online training modules which are designed to refresh the Directors' knowledge in key areas, such as animal welfare, corporate conduct and anti-bribery and corruption. All the Directors completed this training in FY22. The Group General Counsel and Company Secretary also plays an important role in keeping the Board up to date with any changes to corporate governance requirements.

DIVERSITY

The Committee believes that the different viewpoints represented on a diverse Board can help Genus to maintain its competitive advantage. Diversity also links to our values, by being people-focused and responsible, and to our strategy by encouraging new ideas which deliver for our customers and ultimately drive our results.

The Board is therefore committed to building recruitment and leadership development programmes that capture inclusivity in our succession planning and talent development, including a focus on appropriate representation from female candidates and those from a minority ethnic background. The Group has an employee-led forum called AWAKE (Advancing Women's Advocacy, Knowledge and Empowerment), which brings together female leaders and a cross-section of other women to develop ideas for increasing diversity and improving working practices.

At the year end, three of the seven Directors were female (43%), ahead of the 33% target set by the Hampton-Alexander Review. There were also three female members of GELT, comprising 38% of the total. The direct reports to GELT, excluding support staff, were 33% female and 67% male.

The Committee also notes the Financial Conduct Authority's ('FCA') new reporting requirements on diversity, which will come into force for our next financial year. The Company already exceeds the FCA's targets of 40% female representation on the Board and that at least one of the Chair, CEO, CFO or SID should be female, with both our CFO and SID being women.

The FCA has also set a target for at least one Board member to be from a minority ethnic background, in line with the aspirations of the Parker Review. We share these aspirations and have amended our Diversity Policy to ensure they are fully considered in any future recruitment to the Board.

Diversity Policy

Our Board diversity policy aims to ensure that we consider diversity in its broadest sense. A diverse Board has members with different skills, backgrounds, regional and industry experiences, races, genders and other qualities.

The Board, with the support of the Nomination Committee:

> consider all aspects of diversity when reviewing the Board's composition and when conducting the annual Board effectiveness evaluation;
> encourage development of internal high-calibre people to help develop a pipeline of potential Executive Directors;
> consider a wide pool of candidates for appointment as Non-Executive Directors, including those with little or no listed company board experience;
> ensure a significant portion of the long list for Non-Executive Director positions are women and candidates from a minority ethnic background;
> consider candidates against objective criteria and with regard to the benefits of Board diversity; and
> only engage executive search firms who have signed up to the voluntary Code of Conduct on gender and ethnic diversity and best practice.

The Board complied with the policy throughout the period. A copy of the policy can be found on our website: www.genusplc.com. The Committee reviewed the policy during the year and noted that whilst all Board appointments are based on individual merit, the Board aspires to have at least 40% female members, including at least one of the Chair, Chief Executive, Chief Financial Officer or Senior Independent Director, and at least one member from a minority ethnic background on the Board.

More information about diversity across Genus can be found in the Strategic Report on pages 30 to 31.

SCIENTIFIC ADVISORY BOARD

The Group has established a Scientific Advisory Board, with this work being led by Chief Executive Stephen Wilson, Chief Scientific Officer Dr Elena Rice and Non-Executive Director Professor Jason Chin. The Advisory Board will give the Group access to a broader range of capabilities, improving our ability to 'horizon scan'. While the Committee does not have a formal role in creating the Advisory Board, it supports the move and believes it will benefit both the Group and the plc Board in its deliberations.

SERVICE CONTRACTS AND LETTERS OF APPOINTMENT

Copies of service contracts and letters of appointment between the Directors and the Company will be available for inspection at the Company's registered office during normal business hours until the conclusion of the AGM on 23 November 2022, and at the AGM from at least 15 minutes prior to the meeting until its conclusion.

FOCUS AREAS FOR FY23

In the coming year, the Committee will continue to focus on talent development and succession planning, ensuring it remains cognisant of the FCA's targets for Board diversity.

AUDIT & RISK COMMITTEE REPORT

LYSANNE GRAY
Chair of the Audit & Risk Committee

	Meetings
Lysanne Gray (Chair)	5/5
Stephen Wilson	5/5[1]
Alison Henriksen	5/5[1]
Iain Ferguson	5/5[1]
Jason Chin	4/5
Lesley Knox	5/5
Lykele van der Broek	5/5

1 By invitation

Dear Shareholder

The Audit & Risk Committee acts on behalf of the Board and shareholders, to ensure the integrity of the Group's financial reporting, evaluate its system of risk management and internal control, and oversee the performance of the internal and external auditors. We have an annual work programme that is designed to deliver these commitments, which we followed during the year.

There was no change to the Committee's membership this year and I am happy to report that the membership continues to comply with the UK Corporate Governance Code and related guidance. All members are independent NEDs, who bring a sound range of financial, commercial and scientific expertise to the Committee.

All members received regular updates from the external auditor, to ensure they continue to have current knowledge of the accounting and financial reporting standards relevant to the Group and the regulatory changes and revisions to auditing standards relevant to the provision of external audit services. We also kept up to date with developments in relation to the corporate governance requirements.

Our focus on risk management continued throughout the year, with regular reviews and assessment of the Group's existing and emerging risks. During the year, we received and discussed detailed input from management on key risks and mitigation plans. In particular, we focused on the risks associated with cyber security, sustainability targets, the impacts of the Russia-Ukraine conflict, and biosecurity and continuity of supply, as well as the developing macroeconomic conditions and their impact on our global operations. A task force has been created to monitor the Russia-Ukraine conflict and the impact on operations and people, and to ensure compliance with trade sanctions.

Following the IT security incident in June 2022, which had a limited impact on the Company's systems, we reviewed the IT security improvements implemented in response, and the plans to further enhance our IT security controls. We are satisfied these will further strengthen our control environment.

We reviewed the progress being made with regard to the implementation of the GenusOne enterprise management system. This included updates on the approach being taken to realise opportunities to standardise and strengthen the Group's processes and controls as the system roll-out continues to progress.

We have carefully considered the critical accounting policies and judgements and assessed the quality of disclosures and compliance with financial reporting standards, and reviewed the half-year and Annual Report, together with the related management and external audit reports. We also supported the Board in reviewing the going concern and viability statements and supporting analysis and disclosure.

We have assessed the effectiveness of internal and external audit during the year by reviewing the work done, interviews, and questionnaires. We continue to focus on improving communication and driving efficiencies. The Committee was satisfied with the performance of both the internal and external auditors.

Lysanne Gray
Chair of the Audit & Risk Committee
7 September 2022

AUDIT & RISK COMMITTEE REPORT CONTINUED

The Committee has formal terms of reference, approved by the Board, that comply with the UK Corporate Governance Code. These are available from our website:

www.genusplc.com

The Committee's annual review of these terms took place during the year.

COMMITTEE COMPOSITION

The Committee members' biographies, along with information on Genus's other Board members, can be found on pages 50 to 51.

The Board has confirmed that it is satisfied that Committee members possess an appropriate level of independence and relevant financial and commercial experience across various industries relevant to the Company.

The Committee has formal terms of reference, approved by the Board, that comply with the UK Corporate Governance Code. These are available from our website: www.genusplc.com. The Committee's annual review of these terms took place during the year.

COMMITTEE ROLE AND RESPONSIBILITIES

The Committee's role and responsibilities include reviewing and monitoring:

> the financial reporting process and any significant financial reporting judgements;
> the integrity of the Group's financial statements and any formal announcements relating to financial performance;
> the Annual Report, to ensure it is fair, balanced and understandable;
> the Company's reporting to shareholders;
> the effectiveness of the Group's accounting and financial reporting systems;
> the effectiveness of the Group's system of risk management and internal controls;
> the effectiveness of the internal audit function; and
> the effectiveness, independence and objectivity of the Group's external auditor, including any non-audit services it provides to the Group.

The Committee also:

> ensures that the Group maintains suitable confidential arrangements for employees to raise concerns; and
> reviews the Group's systems and controls for preventing bribery.

The Committee reports its findings to the Board, identifying any matters that require action or improvement, and making recommendations about the steps to be taken.

COMMITTEE EFFECTIVENESS

Every three years the Board appoints an external consultant to independently evaluate its performance, and that of its Committees. The last review was performed in 2022. The next external evaluation will be in 2025.

In 2022, the Committee's effectiveness was assessed through a structured questionnaire and interviews with Gould Consulting, and concluded that the Committee was effective, with a strong focus on risk identification and management.

THE COMMITTEE'S MAIN ACTIVITIES DURING THE YEAR

During the year, the Committee held five meetings and invited the Company's Chairman, Chief Executive, the Chief Financial Officer, the Group Financial Controller, the Head of Financial Control, the Head of Risk Management and Internal Audit, and senior representatives of the external auditor to attend these meetings. The Committee also held separate private sessions during the year with the Head of Risk Management and Internal Audit and the external audit lead partner. At its meetings, the Committee focused on the following topics:

Financial reporting
The main areas of focus and matters where the Committee specifically considered management's judgements are set out below:

Financial reporting area	Judgements and assumptions considered
IMPACT OF RUSSIAN SANCTIONS ON FINANCIAL REPORTING	The Committee has reviewed the Group's assessment of the impact of Russian Sanctions on the year-end financial reporting. In assessing the impact the Committee considered whether the Group still has control, as defined under IFRS 10 'Consolidated financial statements', over the assets and operations of the Russian entities and whether it is still appropriate to consolidate the entities in the Group's financial statements. In addition, the Committee considered whether any impairment of assets held in those entities is required and whether the Russian entities have sufficient cash resources to allow for day-to-day operations to continue. In making their assessment the Committee debated and considered management assumptions on whether it has control, as defined under IFRS 10 'Consolidated financial statements', over the operations and assets, given the current international sanctions in place on Russia, reviewed management's impairment analysis and discussed the FY23 plans and cash flow projections over a period of 18 months. The Committee was satisfied with management's conclusion that it is still appropriate to consolidate the Russian entities, as defined under IFRS 10 'Consolidated financial statements', that there is no impairment of assets required at the year end and that the entities have sufficient cash flow to enable the businesses to operate on a day-to-day basis and be able to meet their liabilities as they fall due. The Committee also reviewed the disclosures in note 4 – Critical Accounting Judgements, relating to restricted cash balances held in Russia, the judgements that management has made in applying the accounting policies and the key assumptions and sources of estimation that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year. Following this detailed review and discussion with management the Committee has concluded that the presentation of the financial statements and the associated disclosures is appropriate.
BIOLOGICAL ASSETS VALUATION	In compliance with IAS 41, Genus records its biological assets at fair value in the Group Balance Sheet (£366.8m), with the net valuation movement shown in the Income Statement. The Committee has reviewed the methodology, which has remained unchanged, and outcomes of the biological assets valuation. The Committee debated and considered management's assumptions and estimates, through the current period, and discussed and reviewed the external auditor's report on this area, before concurring with management's proposals. The Committee also received updates on management's streamlining and automation of the models which are used for the valuation process. The Committee was satisfied with management's accounting treatment, including the Income Statement increase of £24.5m in the value of porcine biological assets and the decrease of £29.9m in the value of bovine biological assets.
GOING CONCERN AND VIABILITY STATEMENT	The Committee has reviewed the Group's assessment of going concern over a period of 12 months and viability over a period of three years. In assessing viability, the Committee has considered the Group's budget and strategic plan, its credit facility agreement, its principal risks and uncertainties, as detailed on pages 43 to 46, and the liquidity and capital projections over the period and is satisfied that this is appropriate in supporting the Group as a Going Concern. The Committee has concluded that the assumptions are appropriate and that the viability statement could be provided, and advised the Board that three years was a suitable period of review. The Committee was also satisfied with the disclosures in relation to the appropriateness of the assessment period selected, the assumptions made and how the underlying analysis was performed. The going concern and viability statement is disclosed on page 47 of the report.
PRESENTATION AND DISCLOSURE OF EXCEPTIONAL AND ADJUSTING ITEMS	Genus had £17.4m of adjusting items, including £2.0m of exceptional items in the Group Income Statement. The Committee considered the presentation of these items in the financial statements, due to the nature of these items and the guidelines on the use of alternative performance measures, issued by the European Securities and Markets Authority. The Committee received detailed reports from management outlining the judgements applied in relation to the disclosure of adjusting items, which include net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items. For adjusting items, the Committee took into consideration their volatility and lack of correlation to the underlying progress and performance of the business. Specifically, for exceptional items, the Committee took into consideration the materiality, frequency and nature of the items. Following this detailed review and active discussion with management, the Committee has concluded that the presentation of the financial statements is appropriate.

AUDIT & RISK COMMITTEE REPORT CONTINUED

Monitoring business risks
The Committee discussed the principal risks identified with management and the external and internal auditors, along with management's plans to mitigate them, and received regular detailed updates from the risk owners and their direct reports. In addition to reviewing the principal risks, the Committee received detailed updates on the following:
> Sustainability targets: the related current and emerging risks and the roadmap of actions identified in support of the climate change action plan and TCFD reporting.
> Biosecurity and continuity of supply: the risk of losing key livestock or losing our ability to move animals and/or semen freely (including across borders), due to disease outbreak.
> Cyber security: the cyber security risk faced by the Group and the actions being taken to strengthen infrastructure and systems security. In addition, we had regular updates in relation to the IT security incident.
> Russia-Ukraine conflict: a task force was created with regular updates provided to the Board to understand the impact on our operations and people in these regions and report on how compliance with sanctions are ensured.

The Committee also received regular updates on the project to implement GenusOne, a new Group-wide enterprise management system.

Internal control system
Management is responsible for identifying and managing risks, and for maintaining a sound system of internal control. The internal control framework is intended to effectively manage rather than eliminate entirely the risks to achieving our business objectives. The key elements of the Group's internal control framework are monitored throughout the year and the Committee has conducted a review of the effectiveness of the Group's risk management and internal control systems on behalf of the Board. Our risk management process and system of internal control are described in detail on pages 68 to 69.

The Committee conducted its annual review of the effectiveness of the Group's internal controls and disclosures. The Committee's review of the effectiveness of internal controls has encompassed a review of various reports provided by management, Risk and Internal Audit, Internal Control and External Audit. The Committee reviewed the results of the key financial controls self-assessment process, which is performed every six months; internal audit's findings at each scheduled meeting, including updates on the implementation of management's remedial actions; and the Group's Whistleblowing Policy and bribery prevention procedures.

The review did not identify any significant control failings. However, Genus routinely identifies and implements control improvement opportunities and the Committee discussed with management various opportunities to further strengthen the Group's system of internal control.

Oversight of internal audit and external audit
Internal audit
The Committee reviewed and approved the internal audit function's scope, terms of reference, resources and activities. The Committee reviewed the changes made to how internal audit activities were delivered, as a result of travel restrictions and remote working requirements. The Committee was satisfied that the coverage and quality of the internal audit process remained appropriate. The Head of Risk Management and Internal Audit provided regular reports to the Committee on the work undertaken and management's responses to proposals made in the internal audit reports issued during the year. The Committee continued to meet the Head of Risk Management and Internal Audit without management being present. The Committee reviewed and was satisfied with the internal audit function's performance.

External audit
Deloitte LLP was first appointed as the Company's external auditor for the period ended 30 June 2006. Following a formal tender process, Deloitte was reappointed for the audit of the financial year ended 30 June 2016.

In accordance with our current audit partner rotation timeline, the Committee expects to conduct an external audit tender for our FY25 audit. The Company has complied with the Statutory Audit Services Order for the financial year under review.

The Committee reviewed and agreed the external auditor's scope of work and fees, held detailed discussions of the results of its audit and continued to meet the external auditor without management being present. The Committee reviewed the external auditor's objectivity and independence and the Group's policy on engaging the external auditor to supply non-audit services. The Committee obtained confirmation that the Revised Ethical Standard has been complied with and received the details of the external auditor's non-audit services to the Group, reviewed the nature and monetary levels of these services, which stood at 2% of audit fees, and reviewed compliance with the Group's Non-Audit Services by Auditor Policy (see note 8 to the financial statements for further details). The Committee was satisfied that using Deloitte for such services did not impair its independence as the Group's external auditor.

The Committee assessed the external auditor's performance in conducting the audit for the June 2021 year end, based on discussions with key finance staff and Committee members. The questionnaires covered the external auditor's fulfilment of the audit plan, the auditor's robustness and perceptiveness in its handling of key accounting and audit judgements, the content of the external auditor's reports, and cost effectiveness. The Committee also considered the results of regulatory reviews performed on the external auditor. While noting some opportunities for further improvement, specifically around communication, the Committee concluded that the external auditor was effective and was satisfied with the plan put forward by the external auditor to respond to the opportunities for improvement identified.

RISK MANAGEMENT AND INTERNAL CONTROLS

Risk management
The Board is responsible for our risk management system, which is designed to identify, evaluate and prioritise the risks and uncertainties we face. The Board sets our risk appetite, monitors the Group's risk exposure for our principal risks and ensures appropriate executive ownership for all risks. This ongoing risk management process for the Group's significant risks was in place for the year under review and up to the date of approval of the Annual Report and Accounts. Our principal risks and how we mitigate them are summarised on pages 43 to 46.

To further assist its understanding of risk, the Board has restarted its programme of visits to our local operations as COVID-19 travel restrictions have eased. The Board received regular political, economic and industry risk updates from the relevant business groups. The Board performed its annual risk review in May 2022. This involved a fresh review of the types and levels of risk facing Genus as it executes its strategy and was designed to identify and evaluate any new or emerging risks and ascertain whether the risk register covered all relevant risks. As a result cyber was added to the principal risks.

Internal control
The key elements of our internal control system are set out below. An internal control system cannot completely eliminate the risks we face or ensure we do not have a material misstatement or loss.

MANAGEMENT STRUCTURE

The Board sets formal authorisation levels and other controls that allow it to delegate authority to run our businesses to the Chief Executive, GELT and their management teams. Our management supplements these controls by setting the operating standards that each subsidiary needs for its business and location.

GELT regularly reviews our performance against strategy, budget and a defined set of operational key performance indicators. The Chief Executive, Group Finance Director, Group General Counsel and Company Secretary, and Group Financial Controller also hold monthly reviews with each business unit.

QUALITY AND INTEGRITY OF OUR PEOPLE

We strive to operate with high integrity in everything we do. Our control environment depends on high-quality people who maintain our ethical standards. We ensure our people's ability and integrity through our recruitment standards, training and consistent performance management. The Board is informed of appointments to our most senior management positions.

INFORMATION AND FINANCIAL REPORTING SYSTEMS

We create detailed operational budgets for the year ahead, along with five-year strategic plans, which the Board reviews and approves. We then monitor our performance throughout the year, so we can address any issues. The information we consider includes our monthly financial results, key performance indicators and variances, updated full-year forecasts and key business risks.

The main internal control and risk management processes relating to our preparation of consolidated accounts are our Group-wide accounting policies and procedures, segregation of duties, system access controls, a robust consolidation and reporting system, various levels of management review and centrally defined process control points and reconciliation processes.

INVESTMENT APPRAISAL

We control our capital expenditure through our budget process and by having clear authorisation levels, above which our businesses must submit detailed written proposals to the Board for approval.

We carry out due diligence for business acquisitions and material licences, and conduct post-completion reviews of major projects, to ensure we identify areas for improvement and correct any areas of underperformance or overspend.

INTERNAL AUDIT

Our internal audit activities are provided by in-house and external resources, under the leadership of our Head of Risk Management and internal audit. During the year, Internal Audit completed a risk-based audit programme agreed by the Audit & Risk Committee. The Committee reviews the results of these audits and the subsequent actions we take, which we also communicate to the external auditor.

All business units complete risk and control self-assessments twice a year. Internal audit, as part of its work programme, performs independent reviews of these assessments to identify any deficiencies in our controls and how we should address them. The external auditor also provides observations on the control environment as part of its audit work. The results are communicated to senior management and the Audit & Risk Committee.

EFFECTIVENESS OF INTERNAL CONTROLS

The Board, with the help of the Audit & Risk Committee, reviewed the effectiveness of our internal control system, as well as our financial, operational and compliance controls and our risk management.

The review considered our internal control self-assessment process, which is designed to assess compliance with our minimum control standards, the independent internal audit programme, and the reports management prepared when the Board approved the interim and final results and financial statements.

It also assessed:
> whether we had identified, evaluated, managed and controlled significant risks; and whether any significant weaknesses had arisen, and
> if so, whether we had addressed them.

The assessment also took into account any risk or control issues we identified through our divisional business reviews, Board and GELT meetings, and insurers' reviews.

We have an internal control continuous improvement work programme and routinely identify opportunities to strengthen our control environment and improve our risk management capabilities. However, the Board has not identified or been told of any significant failings in our internal controls.

REMUNERATION COMMITTEE REPORT
SECTION A – ANNUAL STATEMENT

LESLEY KNOX
Senior Independent Non-Executive Director and Chair of the Remuneration Committee

	Meetings[1]
Lesley Knox (Chair)	7/7
Iain Ferguson	7/7
Stephen Wilson	7/7[2]
Alison Henriksen	6/7[2]
Jason Chin	6/7
Lykele van der Broek	7/7
Lysanne Gray	7/7

1 The Committee had five scheduled and two ad hoc meetings during the year
2 By invitation

INTRODUCTION

I am pleased to present the Directors' Remuneration Report for 2022. This has been a year where overall financial outcomes have been dominated by challenging market conditions in PIC China. However, we saw good performance in many other areas of the business, with continued growth in profitability (excluding PIC China) and demonstration of strategic progress across bovine and porcine, including through genetic improvement and the linkage through to sustainability. This report covers activity by the Committee during the year, including our shareholder consultation on our proposed new Remuneration Policy, determination of reward outcomes linked to 2022 and future target setting.

OUR NEW REMUNERATION POLICY

We last renewed our Remuneration Policy in 2019. At that point we concluded that the core structure of the Remuneration Policy was working well, which was echoed through shareholder consultation at the time. We made a small number of changes, primarily in response to shareholder expectations in certain areas (e.g. strengthening of malus and clawback provisions and the introduction of a post-cessation shareholding period).

As a Committee we have reviewed the Policy in detail and considered potential further amendments. The past three years have seen significant levels of business volatility as outlined elsewhere within this Annual Report. However, our findings were that we continued to see alignment between performance and reward outcomes, and that the core essence of the Policy was fully aligned to our business strategy.

As part of our review, there were a small number of areas that we actively engaged with shareholders to discuss, covering both the Policy itself, and also our proposed approach towards future implementation. A table summarising these topics and the shareholder feedback we received is contained later in this disclosure. We heard widespread support for the limited changes we propose to the Policy, and I would like to thank all shareholders and shareholder representatives who engaged with us through the consultation process.

The two key changes are outlined below, with only the second point an actual proposed change to the Policy itself.

Further incorporation of ESG metrics into reward assessment
We will make some changes to the way we assess performance for awards under the PSP plan, beginning with awards we will make in September 2022. We have identified two key existing business metrics that we will bring into future reward assessment, each accounting for 10% of the total award. We announced a target for reduction in the carbon intensity of our operations in 2019, initially towards a 25% reduction by 2030 and to net zero by 2050. Progress towards our 2030 goal will form one of these targets, and we have set a performance range for the level of reduction we look to be achieved over the next three years through to and including 2025.

The other target will look at the rate of genetic progress achieved over the forthcoming three-year period. This is core to enabling superior environmental outcomes from our own activities and that for the farmers we work with – enabling more protein to be produced from fewer inputs. Progress in each of the species will be assessed against disclosed targets, with the Committee using this information to form an overall judgement on the award level when considering progress across the respective species.

More details on each of these metrics, the specific targets that have been set and the way we will make ongoing disclosures around performance is included within the report. Shareholders indicated support for our approach, including a preference for a smaller number of metrics clearly linked to our business strategy, rather than a wider list of multiple metrics, each with lesser weighting.

Exceptional Award Level under our Performance Share Plan ('PSP')
Genus operates across multiple global markets, including locations where typical reward structures differ in terms of quantum or operation. This is particularly evident in the US (where many Genus employees are based), where long-term awards and quantum can be far higher than seen in the UK. While we recognise that we are a UK-listed organisation, we believe it is important that we are able to attract talent from across the world.

We therefore propose that we increase the limit available under the Plan for use in exceptional circumstances, such as recruitment, to 400% of salary (currently 300%). The intention is that this allows us greater flexibility in certain situations, and in particular may allow us to consider a wider talent pool in the event of future recruitment. Where used, we would expect the exceptional limit to apply for a single award only, and then for the individual to revert to the standard opportunity levels within the Policy (to which we are proposing no changes).

REWARD OUTCOMES FOR 2022

Our overall performance fell short of the annual financial targets we set for the business for the year, and this is seen in the associated reward outcomes for individuals, which are a material reduction compared to those received a year ago.

These financial outcomes have been heavily influenced by the market conditions experienced within China. We reviewed closely performance achieved in 2022 in the way we determined final award levels for participants under the annual bonus plan, and a diagram showing the factors we considered is contained within the wider report. The Committee reached the following conclusions:

> While short-term performance in 2022 was disappointing, this was primarily attributable to China. Elsewhere we continued to see growth (PBT increased by 25% excluding PIC China) and there was clear evidence of significant strategic progress during the year as evidenced throughout this disclosure and wider Annual Report.
> 2021 was an exceptional year for the business. Results can be volatile but even with greater volatility still consistent with our stated medium-term growth aspirations
> We want Executives to develop and sustain a significant level of shareholding in the business and be aligned to future share price movement. We liked the fact that a significant level of any bonus would be deferred into shares.
> There is a material reduction in the single figure values from 2021 to 2022.

The Committee considered the overall appropriateness of the formulaic bonus outcome against the agreed metrics. This showed award levels of around 25% of total opportunity reflecting the robust strategic progress achieved, and which is documented within this disclosure and elsewhere in the Annual Report.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION A – ANNUAL STATEMENT

The Committee was conscious of the need to appropriately recognise the achievements of the management team who have responded robustly to key macroeconomic and market challenges facing the business, to ensure the business is strongly positioned for future growth. Alongside this, the Committee considered the overall experience of shareholders over the past 12 months, including the reduction in profitability year on year. Taking all of the above into account, the Committee, in consultation and agreement with the CEO, has used its discretion to apply a reduction in the annual bonus outturn for the CEO. This discretion will reduce the total bonus payable to the CEO to be equal to that payable to the CFO. The resulting bonus payments will continue to be payable partly in cash and partly in shares deferred for three years.

The Performance Share Plan awarded in September 2019 was subject to EPS performance over the three financial years ending 30 June 2022. Against a performance range of 5% to 15% annual EPS growth the business achieved 7.7% which equates to a vesting level of 41.4% of the initial award. While EPS performance has been subject to volatility through the performance period, the Committee was comfortable that the overall formulaic vesting level was consistent with the aggregate business performance achieved over the full three-year performance period.

On balance the Committee were comfortable that the annual bonus levels (when considered in conjunction with the vesting levels of the PSP) represented total reward that aligned with business performance, and that the Remuneration Policy has operated as intended over the past year.

APPROACH TO REWARD FOR 2023

The Annual Bonus opportunity will be 175% of salary (consistent with 2022), and below the 200% of salary limit within our Remuneration Policy. Following review we will use the same performance metrics, but amend the weighting such that greater weighting is placed on delivery of key financial metrics.

We will make PSP awards worth 200% of salary to both Stephen Wilson and Alison Henriksen in September 2022, with performance assessed over the three years ending June 2025. As highlighted above, EPS will continue to be the primary metric (80% of the total award) with the remaining 20% split between Greenhouse Gas Reduction and Genetic Improvement measures, which are explained in more detail on pages 93 to 97.

Neither executive will receive a salary increase for the year ahead, with salaries maintained at the level set in September 2021. In line with previous communication to shareholders, the pension allowance payable to Stephen Wilson will move from 10% of salary to 6% of salary effective 1 January 2023, aligning to that paid to Alison Henriksen and reflective of the wider UK workforce rate.

We have set a scale for profit delivery in 2023 that continues to require growth in profit (in constant currency) before any awards are made. The range has been set between 0% and 12% growth from 2022 in constant currency. At the time of setting targets we continue to face specific areas of material uncertainty, both around pork prices in China and the ongoing geopolitical events following the Russian invasion of Ukraine. While it is difficult to accurately forecast both of these situations, we believe the ranges to be a fair structure to motivate individuals across the Group for the year ahead and is one that is cascaded through the business to all employees assessed against Group performance metrics.

We have committed to focus on overall performance for the Group in determining final awards for the business, considering the respective performance in two key markets (Russia and China) but also ensuring that robust performance has been achieved in other markets where we operate.

Two changes to the way we set targets for the PSP award have been incorporated. The first is that we will cease to exclude gene editing costs from the calculation of these awards, and these amounts will be included in both the base year and final year of the performance period when calculating vesting levels. This is a recognition of the progress made towards gaining FDA approval, which we expect to receive during the next respective three-year performance period. We want Executives incentivised towards the commercialisation of gene editing and to move us closer to alignment of statutory financial outcomes in driving reward outcomes.

Secondly, we will move the performance range to be annual EPS growth of 4% to 12% (previously 5% to 15%). This aligns around our medium-term double-digit growth aspirations, but recognises the increase in scale and profitability of Genus since the previous scale was introduced in 2017, and our desire to maintain a meaningful range to enable differentiation between performance outcomes. The Committee believes that 12% per annum growth for full vesting would reflect exceptional performance for the business over the performance period.

WIDER WORKFORCE ALIGNMENT

As in previous years, the Committee discussed and reviewed the approach to reward for all employees across the business, and the way that targets and structure in place for GELT is cascaded through the business. This aligns people to outcomes and expected behaviours and ensures that we deliver a pay for performance philosophy.

We reviewed the latest Gender Pay disclosure for Genus Breeding Limited in the UK, and the way that we continue to see far more gender diversity in those joining the business and subsequent progression into bigger or different roles.

The CEO pay ratio illustrates a significant reduction year on year, illustrating the greater degree of pay at risk within the reward structure of our senior leaders in the business, and in particular the reduction in the single figure value from 2021.

SUMMARY

I hope this introduction and accompanying disclosures give you insight into the operation of the Committee, our considerations over the past year and the way we continue to seek alignment between business performance and reward outcomes. I look forward to your support of both the way we have implemented the Policy over the past year, and the proposed changes to the Policy itself. If you have any feedback, I can be contacted at remunerationchair@genusplc.com.

Lesley Knox
Senior Independent Non-Executive Director and Chair of the Remuneration Committee

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION B – AT A GLANCE 2022 (YEAR ENDING 30 JUNE 2022)

(For more detail please see pages 89 to 93)

WHAT EXECUTIVE DIRECTORS WERE PAID IN 2022:

CHIEF EXECUTIVE STEPHEN WILSON | **CHIEF FINANCIAL OFFICER ALISON HENRIKSEN**

1 BASE SALARY AND BENEFITS

- Benefits include a car allowance for each Executive Director
- Pension allowance for Stephen Wilson was reduced to 10% of salary on appointment to CEO. The allowance payable for Alison Henriksen is 6% of salary

2 ANNUAL BONUS

- Metrics used and weighting: Adjusted profit before tax (50%), Cash generation (15%), Strategic measures (35%)
- Following consultation between the Committee and CEO, downward discretion was exercised to align the final level of the award for the CEO to the financial value of the CFO
- Overall award 18% of maximum for Stephen Wilson and 26% of maximum for Alison Henriksen
- One-third of the total award under this element made in shares deferred for three years

CHIEF EXECUTIVE STEPHEN WILSON

Formulaic Bonus Outcome	25% of maximum	Calculated Bonus £264,496
Agreed reduction	*7% of maximum*	*Reduction: (£72,385)*
Final Award	18% of maximum	Final Bonus £192,111

CHIEF FINANCIAL OFFICER ALISON HENRIKSEN

Final Award	26% of maximum	Final Bonus £192,111

3 PSP

- Awards granted linked to 3-year performance ending on 30 June 2022 vested at 41.4% of maximum based on average annual adjusted earnings per share growth achieved of 7.7% per annum

Chief Executive: INDICATIVE VALUE[1]

Chief Financial Officer: INDICATIVE VALUE[1]

1 Calculated based on the average share price for the final quarter of the year ended 30 June 2022 (2,587p)

4 REMUNERATION BREAKDOWN

CHIEF EXECUTIVE STEPHEN WILSON | **CHIEF FINANCIAL OFFICER ALISON HENRIKSEN**

WHAT EXECUTIVE DIRECTORS CAN EARN IN 2023 AND HOW:

		CHIEF EXECUTIVE STEPHEN WILSON	CHIEF FINANCIAL OFFICER ALISON HENRIKSEN
1	**BASE SALARY AND BENEFITS** > No changes to base salaries (usually effective September) > Benefit provision unchanged for 2023 > Reduction in pension allowance to 6% of salary for the CEO from January 2023 (previously 10%), aligning to CFO, and aligning to wider workforce		
2	**ANNUAL BONUS** > Annual bonus opportunity of 175% of salary split between profit, cash and strategic metrics as shown > Change in weighting across key business metrics with greater weighting on financial delivery (increase from 65% to 75% of total opportunity)	**STEPHEN WILSON:** MAXIMUM OF 175% OF SALARY	**ALISON HENRIKSEN:** MAXIMUM OF 175% OF SALARY
3	**PSP SEPTEMBER FROM 2019** > The vesting of these awards depends on the adjusted earnings per share (excluding gene editing costs) achieved in the three financial years ending 30 June 2023	Awards over 30,877 Genus shares	Awards over 18,317 Genus shares
4	**PSP (SEPTEMBER 2021 AWARDS)** > These awards will vest subject to performance against identified metrics > 80% of the award is linked to adjusted earnings per share growth, with the 2025 adjusted earnings per share being compared to the 2022 adjusted earnings per share (including gene editing costs) > This will be assessed based on a scale of 4% annual growth (threshold with 20% vesting) through to full vesting at 12% annual growth or above (straight-line basis) > Remainder linked to two new metrics core to our strategy (greenhouse gas reduction and genetic improvement)	**STEPHEN WILSON:** 200% OF SALARY	**ALISON HENRIKSEN:** 200% OF SALARY

Salaries are reviewed annually and any changes made in September. Following consideration of wider business performance during 2022 they will remain unchanged for the year ahead.

	Annual Salary to 1 Sep 2022	Annual Salary from 1 Sep 2022	Change %
Stephen Wilson	£616,900	£616,900	Nil
Alison Henriksen	£418,200	£418,200	Nil

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION B – AT A GLANCE 2023 (YEAR ENDING 30 JUNE 2023)

(For more detail please see pages 93 to 97)

1 YEAR – ANNUAL BONUS

ELEMENT/WEIGHTING	DESCRIPTION OF TARGET	ALIGNMENT TO STRATEGY
Profit Growth (60%)	Delivery of year-on-year profit growth	> Sharing in value created to deliver returns for shareholders
Cash (15%)	Generation of free cash flow	> Generation of cash for reinvestment and dividends
Strategic Objectives (25%)	Delivery of strategic objectives in pursuit of stated business strategy	> Building foundations for future growth

LONG TERM – PERFORMANCE SHARE PLAN)

ELEMENT/WEIGHTING	DESCRIPTION OF TARGET	ALIGNMENT TO STRATEGY
EPS Performance (80%)	Average annual growth in adjusted earnings per share	> Alignment to our stated medium-term growth aspirations
Genetic Improvement (10%)	Improvement (expressed in standard deviations of improvement per generation) of genetics in Porcine, Bovine and Dairy	> Helping farmers produce more output with fewer inputs > At the heart of our business: 'Pioneering animal genetic improvement to help nourish the world'
Greenhouse Gas Reduction (10%)	Reduction in overall primary intensity ratio of our operations in pursuit of our stated 25% reduction by 2030 against our 2019 baseline	> Driving reduction in carbon intensity of our operations > Alignment to our stated target of 25% reduction by 2030 against our 2019 baseline

SECTION C – DIRECTORS' REMUNERATION POLICY

We are seeking shareholder approval for a new Directors' Remuneration Policy at our 2022 AGM. In line with legislation, this is a policy that would be expected to apply for three years from November 2022.

In developing our proposed new Remuneration Policy, we carried out a full review to consider the effectiveness of the existing Policy and the extent to which the stated aims of the Policy agreed in 2019 had been achieved through implementation and remain applicable for the business. Our conclusion of this process was:

- Our core structure is working effectively, aligning reward outcomes with performance achieved.
- Following some changes to our Policy in 2019, our existing Policy continues to conform to the expectations of shareholders and shareholder bodies.
- The existing Policy and approach to target setting has allowed us to consider and set annual targets effectively, and make changes year on year, while in pursuit of our stated medium-term growth objectives.

KEY DESIGN/PHILOSOPHY OF OUR FUTURE REMUNERATION POLICY

What we are trying to achieve	How we are looking to achieve it
> Continued transformation into a global agricultural biotechnology pioneer > Pursuit of leading-edge technology and focus on long-term innovation and opportunity to enable future value creation for shareholders > Sustainable robust short-term delivery of financial performance as we invest in the future > Ability to recognise innovation and progress, which are crucial to securing long-term bottom-line performance > Ability to attract and motivate a high-quality leadership team and drive focus and behaviours on long-term achievement in a global market for talent > Recognise expectations of shareholders on reward and governance	> Draw upon the aspects of our current Policy that are working > Include strategic/ESG measures within PSP assessment, linked to core strategy > Enable an increase in the level of exceptional awards permissible under the PSP (with no change to the standard award level) – designed primarily to support recruitment if needed

Approach to consultation
We used a consultation process to cover the one item we were looking to change within our Policy, and additionally discuss key areas around expected implementation of our Policy, linked to the business strategy. This was designed to provide visibility on the way the Committee expects to implement the Policy over the duration of the next Policy, and while not part of the Policy itself, were shared to provide context and gain input from shareholders. These included topics previously discussed with shareholders, such as treatment of gene editing costs in determining remuneration outcomes.

We discussed our proposals through a comprehensive shareholder engagement process, approaching our largest 20 shareholders and shareholder representative bodies. Feedback through subsequent meetings and discussions indicated strong support for the alignment of the Policy to the business. It also highlighted a small number of specific themes which are summarised on the next page to provide transparency. After consideration of all feedback from shareholders by the Committee, no further changes to our original proposals were deemed necessary, albeit investors gave useful insight and suggestions as to the way we could make meaningful future disclosures, which we have looked to reflect through this Annual Report. We thank all shareholders and shareholder groups for their contribution to our consultation process.

Role of Committee and Independence
The Remuneration Committee sets the Policy for remuneration for Executive Directors and senior executives of the business, and has oversight of the way reward is operated across the whole organisation. The Committee believes that the metrics used within variable reward plans consider the balance between risk and reward, and encourage individuals to pursue long-term value creation opportunities aligned with our business strategy, and that this is not compromised by short-term value seeking activity. No Director or employee participates in discussions pertaining to their own remuneration to manage any conflict of interest. The Committee reviews the performance of its external advisers on an annual basis to ensure that the advice provided is independent in nature.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION C – DIRECTORS' REMUNERATION POLICY

Specific topics covered through consultation	Key points/rationale	Shareholder feedback/key findings from engagement
Proposed Policy change Exceptional award limits within Performance Share Plan ('PSP')	> Increase in exceptional limit to 400% of salary (currently 300%) > Designed primarily to support recruitment activity and broaden prospective talent pool (especially potential hires from the US), recognising differences in reward structure globally > Intention for single use (where required) before reverting to core Genus reward structure	> Acknowledgement of variation in reward across different geographical markets, in particular the level of long-term incentives that can be found in the US > Overall support for the change with associated expectation that this flexibility only used where necessary
Expected future Policy implementation Incorporation of ESG metrics into PSP assessment	> Primary performance metric within PSP to remain a financial metric (currently earnings per share) > Introduction of two metrics linked to ESG, aligned to our business strategy > Disclosable targets and tracking of performance against them	> Support for inclusion of metrics linked to ESG within long-term assessment > Some differences in views across shareholders but with a preference towards a smaller number of metrics, aligned to our strategy > Desire for tangible metrics that can be measured and disclosed > Comfort for the Committee to use judgement to determine overall award levels for genetic improvement, having reviewed specific progress across each of the respective species > Looked for assurance that the same metrics would not be used in both annual bonus and long-term PSP, but acknowledgement that specific actions or milestones in pursuit of a longer-term ESG goal could be included within the strategic measures part of the Annual Bonus
Treatment of Gene Editing costs	> In the short term, to continue to exclude gene editing costs from the assessment of variable reward (as agreed with shareholders in 2017) > Principle of always treating like with like in base year and final year of calculation (i.e. costs are either included or excluded in both the base year and the final year of performance > To continue to show the associated outcomes within reward disclosures if costs had not been excluded	> Support for continued exclusion through to the point of securing FDA approval, and for these costs to then represent 'business as usual' costs and be included in future reward assessment > Agreement to principle of consistency between base year and final year to drive fairness of approach for participants and transparency of shareholders
Target setting within Annual Bonus	> Proposal to continue to set targets based on year-on-year growth > These growth levels may change year on year (as was the case in 2022) linked to business projections for the respective year	> Comfort with ongoing approach and prospective disclosure of target ranges > Support for annual variation (where felt necessary in light of business forecasts) in pursuit of stated medium-term growth aspirations

CORPORATE GOVERNANCE

We are confident that the Proposed Policy continues to provide strong alignment against Section 40 the Provisions of the 2018 Code as summarised below:

Alignment of our Remuneration Policy to the 2018 Code

Clarity Implementation of the strategy is monitored through KPIs including those used within the Annual Bonus and PSP. This ensures alignment between strategy execution and reward outcomes.	**Simplicity** We look to describe the structure of reward clearly to both participants and shareholders through effective disclosures, so all stakeholders are clear on the underlying reward principles and the way reward outcomes are determined.	**Alignment to culture** The Policy aligns to our business model and focus on the experience of customers and employees. Metrics linked to culture are used within variable plans, alongside delivery of long-term sustainable performance.
Predictability Examples of the range of outcomes under the Policy are shown within the scenario graphs. This demonstrates the way that different performance levels change reward outcomes for individuals and the associated impact of changes in the Company share price.	**Proportionality** A significant proportion of the total reward opportunity is performance driven, with clear linkage between business metrics and reward outcomes through clear targets and use of KPIs. Shares form the majority of variable reward and Executives are required to develop and maintain a material shareholding in the business to fully align to the shareholder experience.	**Risk** The Committee retain ultimate discretion to vary outcomes from formulaic results if they do not judge this to accurately reflect underlying business performance. Malus and clawback provisions apply to all awards and we operate post-cessation shareholding requirements to further align Executives to long-term business performance.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION C – DIRECTORS' REMUNERATION POLICY

EXECUTIVE DIRECTORS' POLICY TABLE

	Base salary	Benefits	Pension	Annual Bonus	Performance Share Plan	Shareholding
Purpose	To provide competitive fixed remuneration that will attract and retain employees with the experience necessary to develop and execute our strategy.	To provide a competitive range of benefits to drive engagement and commitment to Genus.	To provide a competitive Company contribution that enables effective retirement planning.	To motivate and incentivise delivery of annual performance targets covering a combination of financial and strategic measures.	To incentivise Executives to achieve superior returns to shareholders over a three-year period, to retain key individuals and align with shareholder interests.	To align Executives and shareholders.
Operation	Payable in cash. Reviewed annually by the Committee with any change effective from 1 September. Factors considered when reviewing salary include: > Salary increases awarded to other employees in the country where the individual is based. > Comparable salaries when benchmarked against relevant market comparators (both in the UK and internationally). > The experience of the individual and the nature of the contribution they are making and their responsibilities. > Overall Group performance and wider economic conditions.	Benefits generally include a car allowance and insured benefits (e.g. life assurance and private medical insurance). Where additional benefits are offered in a particular location (or across the Group) Executive Directors are typically eligible to receive those benefits on similar terms. These could include access to employee discounts or salary sacrifice benefits. Directors may participate in a Share Incentive Plan ('SIP') or any other all employee share scheme on the same terms as other eligible employees. Where Executive Directors are recruited from overseas or required to relocate (including on an international assignment), benefits such as travel and relocation costs and tax equalisation arrangements may be provided.	Directors may participate in the Company pension plan (a defined contribution arrangement) or an alternative pension saving vehicle that the Company may provide. Alternatively, the Company may provide a cash supplement' in lieu of pension contributions into a scheme. Only base salary is pensionable.	One-third of the Annual Bonus is deferred into Company shares for a period of three years, subject to continued service. The remaining award is payable in cash. Malus and clawback provisions exist for awards made under the Annual Bonus. A dividend equivalent provision enables dividends to be paid (in cash or shares) on deferred shares that vest. See explanatory notes for further details on the operation including leaver provisions.	Awards scheduled to vest three years from grant, subject to continued employment and satisfaction of challenging three-year performance targets. Following vesting the post-tax number of vested shares must be held for at least a further two-year period. A dividend equivalent provision enables dividends to be paid (in cash or shares) on shares that vest. Malus and clawback provisions may apply for a period of three years. See explanatory notes for further details on the operation including leaver provisions.	Executives are required to achieve a shareholding of 200% of salary. It is expected that this is achieved within five years of appointment, and that this shareholding is generated through retention of at least half of the shares that vest under the Deferred Share Bonus Plan ('DSBP') and Performance Share Plans. Once met, individuals are expected to maintain at least this level of shareholding and it will be reviewed by the Committee annually. A post cessation shareholding policy will apply for Executive Directors that requires 100% of shareholding for 24 months following cessation (or actual applicable shareholding in place at point of leaving if lower). This will apply considering shares awarded in respect of 2020 and beyond (including to any new appointments), and we have not amended existing conditions for awards made before 2020. Malus and clawback provisions exist beyond cessation of employment, and in certain leaver situations the expected share treatment would continue to drive ongoing alignment between the individual and share price performance.
Maximum	There is no set maximum, but changes are typically in line with the wider workforce. Individual changes may be made at the discretion of the Committee outside of these levels by exception. This could include the following situations: > Significant change in responsibility. > Change in the Group's size and complexity. > To enable salary progression for newly appointed Directors as they develop in role.	The car allowance is capped under the Policy at £20,000 per annum. The value of insured benefits will vary each year, based on the cost of the premiums paid, and will be reflected within the respective single figure table for the year.	An allowance will be made available in line with the rate available to the wider UK workforce.	Maximum opportunity of 200%.	Maximum annual award of 200% of salary (400% of salary in exceptional circumstances, such as recruitment).	n/a

	Base salary	Benefits	Pension	Annual Bonus	Performance Share Plan	Shareholding
Performance conditions	n/a	n/a	n/a	Bonus awards are subject to achievement against a sliding scale of challenging financial and strategic objectives, which the Committee sets each year to reflect priorities for the year ahead. The specific performance measures are reviewed every year to ensure they continue to support the Company's strategy. Financial measures govern the majority of the bonus and are typically linked to key performance indicators (e.g. profit and cash generation). Strategic measures reflect key areas of importance identified by the Committee in advance. For financial performance targets are based on a graduated scale. The level of payment at threshold is set annually but will not exceed 25% of maximum. Full awards are for substantial outperformance against targets set. The Committee has discretion to adjust the bonus outcome in light of overall underlying performance. Any adjustment will be disclosed within the following Annual Report on Remuneration. Once set, performance measures and targets are expected to remain unaltered. The exception would be if events were to occur which, in the opinion of the Committee, made it appropriate to make adjustments to ensure that the scheme operates as originally intended.	Awards vest based on three-year performance against a challenging range of targets, aligned with the delivery of the Company's long-term strategy. Financial targets (including adjusted earnings per share growth) will determine the vesting of a majority of awards granted in any year. The threshold level of vesting for financial targets is 20% of the maximum. For performance between threshold and maximum, awards vest on a straight-line basis. The Committee has discretion to scale back (but not scale up) vesting, if the Group's performance over the period is not considered to reflect the progress made against strategic business targets. The Committee will review performance conditions annually, specifically the range of earnings per share targets and the metrics and weightings applied to each element of the PSP. Any revisions to the metrics and/or weightings will only take place if it is necessary because of developments in the Company's strategy and, where these are material, following dialogue with the Company's major shareholders.	n/a
Key change	Change: > No change.	Change: > No change.	Change: > No change.	Change: > No change.	Change: > Increase in exceptional limit to 400% (currently 300%).	Change: > No change.

Explanatory notes to Policy table

How pay of the wider organisation is taken into account when determining and implementing the Policy

We have a consistent philosophy that underpins reward at all levels of the organisation, which aligns pay with performance. The structure for the Genus Executive Leadership Team ('GELT') follows the same approach but with lower maximum variable opportunity. Metrics are consistent in nature and include an element linked to the specific individual business unit where applicable for operational leaders.

Below this leadership group many of our employees have access to variable compensation plans. These may directly replicate those in place for GELT members or may be linked to the specific job of the individual. This could include production type bonuses (linked to the individual performance and success of a production site) or commission structures for some of our sales teams.

The Company does not formally consult with employees on the Remuneration Policy. However, each year the Committee is provided with a detailed update on reward across the organisation, any changes we are making to remuneration design across the business, and feedback from staff on satisfaction with reward in the business. In addition, designated members of Board discuss employee satisfaction and understanding of reward as part of wider activity around employee engagement as described elsewhere in the Annual Report.

We have made significant progress in standardising the approach to reward across Genus, simplifying legacy plans and driving a common philosophy through the organisation.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION C – DIRECTORS' REMUNERATION POLICY

How are views of shareholders considered?
We are committed to constructive ongoing dialogue with the Company's shareholders on remuneration. We are grateful to all shareholders who took the time to engage with us, and for their comments and perspectives. We were pleased with the support indicated through this consultation process, the response to the changes we are proposing, and the challenges that can be faced in setting remuneration in Genus, given the evolution of the business and the international scope of its activities.

Operation of the Annual Bonus and Performance Share Plan within the Policy
The Committee operates the annual bonus and Performance Share Plan in accordance with the Listing Rules and HMRC requirements and following shareholder approval of plans. To support ongoing operation of the proposed Policy we will be seeking approval for an addendum to our Performance Share Plan ('PSP') at the forthcoming AGM to allow for the amended exceptional award limit proposed in the Policy.

Malus and clawback provisions
Malus and clawback provisions exist covering both the Annual Bonus and long-term incentives which give the ability for the Company to reclaim cash payments made to participants or adjust or reduce to nil grants of awards over company shares. These provisions (which were enhanced through the 2019 Policy renewal) enable the Company to reduce the payout and vesting levels or to recover the relevant value from cash bonus payout or vesting of shares. Any adjustment is at discretion of the Committee and includes (but is not limited) to the following factors.
> Erroneous or misstated financial accounts or other performance indicators.
> Calculation error leading to inaccurate award or vesting level.
> Misconduct of a participant (which could reasonably have resulted in dismissal as a result).
> Corporate failure.
> Material business event or events leading to significant reputational damage.

These provisions could take effect in respect of events or other performance indicators raised within two years of the reporting date. The Committee also has the ability to reduce future awards such that the full value of any identified overpayment is recouped from the individual. The table below summarises the potential application of malus and clawback provisions within the incentive plans.

	Annual Bonus (cash)	Annual Bonus (deferred shares)	PSP
Malus	Up to the date of payment of a cash bonus	Over vesting period	Over vesting period
Clawback	Two years from the reporting date to which the award relates in event of restatement of financial accounts	Three years from the date of grant of a deferred award	Third anniversary of date of vest or third set of audited accounts following vesting

Minor changes
The Committee has the ability to make minor changes to the Policy for situations such as changes in regulatory requirements, exchange control, tax or administration needs, or to take account of a change in legislation without seeking shareholder approval for such a change.

Potential awards under different performance scenarios
The table below illustrates the total remuneration for a single year under different performance scenarios. This year we have included an additional scenario illustrating the impact of an increase in share price of 50% for awards under the PSP. The table shows the total indicative value of awards under the Policy as opposed to timing of access to value by the Executive, which will differ due to both mandatory deferral and required additional holding periods.

Assumptions
Fixed – Shows the value of fixed pay using a salary value of £617k for Chief Executive and £417k for Group Finance Director, with benefits as per the 2022 single figure value. Pension contributions are shown based on 6% of salary for illustration. Assumes no awards under variable plans.

Target – Calculation as per fixed with awards of 50% of maximum under the Annual Bonus (assuming 175% of salary opportunity) and 50% vesting under the PSP (assuming 200%) opportunity.

Maximum – Calculation as per fixed with full awards under the Annual Bonus and maximum vesting under the PSP.

Maximum plus share price growth – As maximum, but assumes a 50% share price increase between award and vesting of PSP awards.

RECRUITMENT POLICY

Area	Policy and operation
Overall	When hiring a new Executive Director or making internal promotions to the Board, the Committee will apply the same policy as for existing Executive Directors, as detailed in the Remuneration Policy. The rationale for the package offered will be explained in the next Annual Report on Remuneration. For internal promotions, commitments made prior to appointment will typically be honoured, as the executive transitions to the new remuneration arrangements. Awards made in the transition year would be prorated to reflect the remaining period of the vesting period or financial year. Any award will take into consideration awards granted prior to promotion.
Base salary	Base salary would be set at an appropriate level, to recruit the best candidate based on their skills, experience and current remuneration, and determined against the context of market rates for equivalent roles in companies of similar size and complexity. The base salary is used to determine an overall expected package level, and it is this that is considered for candidates appointed from other geographies where the underlying structure of reward packages may differ to that typically seen in the UK. If the salary is initially set at a discount to those offered in companies of a similar size, geographical reach and complexity, the salary will be increased over a period of time to bring the salary to the desired level, subject to individual performance.
Benefits	Benefits provisions would be in line with the normal policy. In addition, we retain flexibility to reimburse reasonable legal fees that an individual may incur as part of recruitment. Where appropriate, the Executive may also receive relocation benefits or other benefits reflecting normal market practice in the territory in which the Executive Director is employed.
Pension	Pension provision would be in line with provision for the wider UK workforce as outlined in our Policy table.
Annual Bonus	Incentive awards would be made under the annual bonus, in line with the normal policy. The maximum award under the Policy is 200% of salary. Where an individual joins after the start of a performance year, awards may be pro-rated for the portion of the financial year that they were employed.
Long-term incentives	Awards under the Performance Share Plan would be granted in line with the policy outlined for the current Executive Directors, including the use of any exceptional limit where deemed necessary by the Committee. In the event of internal promotion, existing awards made under the Plan will continue over their original vesting period and remain subject to their terms at the date of grant. The Committee may choose to make an additional award (on the same basis as other Executive Directors), subject to the overall limit permitted under the Plan in any year. Where an individual joins after the start of the incentive grant, an award may be made to bring the Executive onto the 'in-flight' cycle, subject to the limits set out in the Policy. Awards may be prorated for the portion of vesting period served.
Buyout awards	In addition to normal incentive awards, the Committee will assess whether it is necessary to buyout remuneration which would be forfeited by an individual from their previous employer. If required, the Committee would seek to reflect the nature, timing and value of awards forgone in any replacement awards. Awards may be made in cash, shares or any other method as deemed appropriate by the Committee. Where possible, share awards will be replaced with share awards. Where performance conditions apply to the forfeited awards, performance conditions will be applied to the replacement award, or the reward size adjusted downwards. In establishing the appropriate value of any buyout, the Committee would also take into account the value of the other elements of the new remuneration package. The Committee would aim to minimise the cost to the Company. However, buyout awards are not subject to a formal maximum. Any awards would be no more valuable than those being replaced. The Committee will use existing remuneration plans where applicable, although it may be required to grant outside of these using exemptions as permitted under the Listing Rules. Full disclosure of any remuneration arrangements for a new hire would be disclosed.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION C – DIRECTORS' REMUNERATION POLICY

The Committee recognises that Executive Directors joining the business may be Non-Executive Directors of other organisations, or that existing Executive Directors may be invited to accept such a position in the future. The Committee acknowledges that these appointments can develop experience and knowledge that is to the benefit of the Company. Subject to approval from the Board, Executive Directors are allowed to accept a non-executive appointment and retain any fees payable for such services they offer to another organisation.

Service contracts and policy on termination
Under the Executive Directors' service contracts, the Company is required to give 12 months' notice of termination of employment, while Executive Directors are required to give six months' notice. If either party services notice, the Executives can continue to receive basic salary, benefits and any pension allowance for the duration of their notice period, during which time the Company may require the individual to fulfil their duties or assign a period of garden leave.

The Company may elect to make a payment in lieu of notice for up to 12 months' base salary and benefits, in the event of the Company terminating employment. These payments would be made on a monthly basis and the Executive would be required to take all reasonable steps to find alternative employment. The principle of mitigation applies whereby the Company may reduce the monthly payments based on actual earnings received by the Executive or the Company's assessment of the earnings that the Executive could have received had they sought alternative employment.

The Company retains discretion to settle other amounts reasonably payable to the Executive Director including (but not limited to):
- legal fees incurred by the individual linked to the termination of employment; and
- outplacement and relocation costs for the Executive Director and their family.

In certain circumstances, such as gross misconduct, the Company may terminate employment immediately without notice or payment. In certain circumstances the Committee may make any statutory entitlements or payments to settle or compromise claims in connection with a termination of any existing or future Executive Director as necessary. The Company also retains the discretion to meet any outplacement costs, if deemed necessary.

Executive Directors' service contracts, which include details of remuneration, will be available for inspection at the AGM or at the Company's registered office.

Remuneration on cessation of employment (including share treatment)
The Committee makes a distinction between the reason for leaving of an Executive for the purposes of operating the Remuneration Policy. This is done in the context of the overarching pay for performance philosophy and that poor performance (either in terms of business or individual performance) should not lead to inappropriate reward outcomes. The reason for leaving will be determined by the Committee and the rationale for this decision will be explained in the Annual Report on Remuneration.

Any share entitlement on cessation of employment granted to an Executive Director under the DSBP or PSP will be determined in accordance with the relevant plan rules. These describe the standard approach linked to circumstances as to why a Director may cease employment with the Company, and an overview of the range of discretion available to the Committee. A summary of the overall default approach for all aspects of reward in the event of termination of employment is provided below:

	Leaver reason Any other reason not covered by the column to the right	**Leaver reason** Death, retirement or ill-health retirement, redundancy, change of control, any other reason as determined by the Committee
Salary in lieu of notice	Salary for proportion of notice period employed.	Payment of up to 12 months' salary and benefits.
Pension and benefits	Pension and benefits for proportion of notice period employed.	Payment of up to 12 months' pension and benefits.
Bonus (in year)	No bonus payable to an Executive Director if they have given notice to resign from the business (even if they continue to be employed at the scheduled payment date).	Awards will be prorated for the time employed during the respective performance period. Part of any award is made in shares which are deferred and released after three years.
Genus plc Deferred Share Bonus Plan 2014	Awards lapse if cessation of employment is before vesting date.	Awards will ordinarily vest in full at cessation of employment (albeit the Committee has ability to apply proration).
Genus plc Deferred Share Bonus Plan 2019[1]		Awards will ordinarily vest at the scheduled vesting date with no proration (albeit the Committee has ability to apply proration).
Genus plc Performance Share Plan ('PSP') 2014		Awards will ordinarily vest at the scheduled vesting date subject to performance achieved, with proration to reflect the time period employed during the performance period.
Genus plc Performance Share Plan ('PSP') 2019[1]		As above, albeit Committee has ability to disapply proration.

1 As approved by shareholders at the November 2019 AGM

NON-EXECUTIVE DIRECTORS' REMUNERATION POLICY

The table below outlines the approach to remuneration for the Chairman and Non-Executive Directors. Neither the Chairman nor other Non-Executive Directors participate in any bonus or share plans. All Non-Executive Directors have specific terms of engagement. Their appointment is for a fixed term of three years and is subject to one month's notice of termination by either the Company or the Non-Executive Director, and to annual re-election at the Company's AGM in accordance with the UK Corporate Governance Code.

	Fees
Purpose	To provide compensation that attracts high-calibre individuals and reflects their experience and knowledge.
Operation	Payable in cash. The Committee determines the Chairman's fee. The Board periodically reviews Non-Executive Directors' fees. Additional fees are paid to Non-Executive Directors who chair a Board Committee and to the Senior Independent Director ('SID'). No Directors take part in meetings where their own remuneration is discussed. Fees are based on the time commitments involved in each role and set with reference to the fees paid in other similarly sized UK listed companies.
Maximum	Any increase in Non-Executive Director fees may be above the level awarded to employees, given that they are only reviewed periodically and may need to reflect any changes to time commitments or responsibilities. The periodic review may result in an increase beyond the fees currently payable. Non-Executive Directors also receive reimbursement of reasonable expenses incurred in connection with Company business and the Company may settle any tax incurred in relation to these.
Performance conditions	None
Key change	None

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION D – WIDER WORKFORCE REMUNERATION

The Committee developed the Remuneration Policy agreed by shareholders in 2019 having reviewed the wider framework for reward across the organisation and the way that this drives alignment of individuals towards organisational goals. It receives updates annually on any material changes to wider workforce arrangements and additionally considers employee feedback on reward matters. This is from Group-wide mechanisms (such as our Your Voice survey) but additionally from direct interaction between designated Non-Executive Directors and employees.

Our reward principles apply to all employees within the business and are designed to ensure we can attract, motivate and retain people fundamental to achieving our vision, and be part of a global organisation. We want people within the business engaged and delivering because they are excited by our vision, the part they can play in this, and the difference they can make.

These principles are applied as consistently as we can, such that reward is standardised wherever possible, and delivered in line with our values. While the quantum may vary between roles, the principle of aligning reward outcomes with performance is fundamental to the way we operate.

Reward element	Our approach
Base salary	Pay rates are determined with reference to the skill set and experience of the individual. Most pay rates are reviewed annually across the Group, with adjustments with reference to individual performance levels, market pay competitiveness and overall business affordability.
Benefits	The countries we operate in display different practices in terms of benefit provision. Typical benefits include access to life insurance, pension or retirement provision and may include medical cover. Our approach is typically driven by local market factors (which may include legislative requirements) rather than a single common benefit offering globally. On some People Policies we have established global minimum levels of benefit provision that should apply (e.g. our Family Leave Policy) to Genus employees.
Variable pay	We operate a range of annual variable reward schemes and most of our employees participate in one of these arrangements. These include: **Annual Bonus** > Based on a combination of financial performance and non-financial metrics assessed through our performance management processes (which all employees participate in). > Financial metrics based around profitability and cash performance. > Where metrics are consistent with those used for Executive Directors or GELT members, then the same target/performance scale is used for everyone to drive alignment. **Production facilities – KPI plans** > Linked to the balanced scorecard of local KPIs for facility, covering metrics such as production output levels and health and safety. **Commissions** > Derived from individual sales performance of the individual. In addition, we make discretionary awards of shares across the business annually, reflecting the contribution of the individual and to drive future alignment with our performance.

OUR CEO PAY RATIO FOR 2022

Our CEO pay ratio is shown below.

Year ended	CEO single figure £k	25th percentile FTE reward	25th percentile Ratio	Median FTE reward	Median Ratio	75th percentile FTE reward	75th percentile Ratio	Median ratio vs CEO target remuneration
30 June 2022	1,327	£27,774	48:1	£33,999	39:1	£44,818	30:1	54:1

No elements of pay have been omitted from the calculation and pay quartiles determined as at 30 June 2022 and values are calculated based on those employed at this date. Where required, actual levels of remuneration were adjusted to create full-time equivalent ('FTE') values by considering both the employees full-time equivalent hours and (where applicable) the proportion of the year that the individual was employed. The quartile values, split between salary and benefits are as follows:

	25th percentile	Median	75th percentile
Salary (FTE)	£25,446	£28,595	£37,817
Total pay and benefits	£27,774	£33,999	£44,818

The median ratio is consistent with pay and reward policies in operation within the business. Salaries are set with reference to market levels of pay, with progression linked to experience and performance in role. The structure of reward in operation means that a greater proportion of pay is linked to variable pay in more senior roles and will therefore fluctuate linked to business and individual performance outcomes against targets set, and to changes in the Genus share price.

OUR CEO PAY RATIO HISTORY

To provide additional context we have also shown the ratio for the previous four years. For illustration we have also shown the ratios against the target level of reward we disclosed within our Remuneration Policies as agreed by shareholders and provided commentary below.

The CEO ratio (the ratio of CEO pay as shown within the single figure) to the median full-time equivalent ('FTE') level of pay in the UK has fallen from 91:1 in 2021 to 39:1 in 2022. This reduction can be seen through a number of contributory factors:

CEO pay
Reward structure – That the overall CEO package is more highly geared towards variable pay than most other employees within the UK.

Business performance – Our financial performance for 2022 was weaker than in 2021, primarily due to market conditions within PIC China. As a result, no awards were made under the financial metrics within the Annual Bonus. Additionally, our overall end EPS performance meant that vesting of the long-term PSP award was at 41.4%, compared to an equivalent percentage of 81.2% in 2021.

Share price impact – The share price for the last quarter of 2022 was £25.87 compared to £50.62 for the same period 12 months before. This further reduces the value of awards vesting under the long-term PSP plan within the 2022 single figure.

Comparator pay
Median pay value in UK – Median pay increased between 2021 and 2022 by just under 5%, to £28,595.

Median total pay and benefits – Total median reward (calculated on the same basis as the single figure within the CEO disclosure) also increased by just under 5% between 2021 and 2022.

Total pay and benefits	CEO single figure	25th percentile		Median		75th percentile		Median ratio vs target CEO single figure
Year ended	CEO	FTE reward	Ratio	FTE reward	Ratio	FTE reward	Ratio	Ratio
30 June 21	£2,948k[1]	£27,374	108:1	£32,464	91:1	£43,796	67:1	54:1
30 June 20	£2,257k[2]	£25,230	89:1	£31,748	71:1	£42,426	53:1	56:1
30 June 19	£815k	£24,638	33:1	£31,867	26:1	£41,792	20:1	57:1
30 June 18	£2,549k	£24,204	105:1	£30,759	83:1	£40,203	63:1	59:1

1 The CEO single figure has been restated to reflect the actual value of PSP awards at the point they vested (see page 89 for further detail)
2 This value reflects the change in CEO during the year and includes salary and benefits for Karim Bitar through to his resignation and all applicable reward elements for Stephen Wilson from the date of his appointment as CEO (13 September 2019) to 30 June 2020

METHOD OF CALCULATION AND RATIONALE

We have elected to use calculation Method A as outlined within the legislation. We have done this to get as accurate a picture as possible for the reward of all our UK employees compared to the CEO. This contrasts with our disclosure on gender pay which focuses on our largest UK subsidiary (Genus Breeding Limited) only as required by the respective legislation.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION E – REMUNERATION AND PERFORMANCE STATEMENT

GENUS'S STRATEGY AND ITS LINK TO PERFORMANCE-RELATED PAY

Our strategy and the way this is linked to variable reward is shown below.

	SUCCESS MEASURED BY	LINK TO REMUNERATION POLICY
INCREASE GENETIC CONTROL AND PRODUCT DIFFERENTIATION	**R&D and business innovation** **Proprietary genetic improvement and dissemination positions**	Strategic measures within the Annual Bonus focus on key activities in pursuit of our defined longer-term strategy Strategic objectives recognise wider progress than financial measures alone
TARGETING KEY MARKETS AND SEGMENTS	**Volume growth** **Operating profit**	Measured through the profit element of the Annual Bonus Over the longer term will flow into EPS and Genetic Improvement, both used to determine vesting under the PSP
SHARING IN THE VALUE DELIVERED	**Cash conversion**	Measured through the cash element of the Annual Bonus

PERFORMANCE COMPONENTS AND THEIR IMPACT ON REMUNERATION

	2021	2022	Movement %	Impact on remuneration
Adjusted results				
Revenue	£574.3m	**£593.4m**	3%	Input to Annual Bonus profit and earnings per share in PSP
Adjusted profit before tax	£84.8m	**£71.5m**	(16)%	Annual Bonus measure
Generation of free cash flow	£37.5m	**£(13.5)m**	(136)%	Annual Bonus measure
Adjusted earnings per share	100.9p	**82.7p**	(18)%	PSP performance condition
Dividend per share	32.0p	**32.0p**	0%	Executives rewarded via dividends on shares held post vesting
Share price at year end	4,960p	**2,508p**	(50)%	Determines the value of deferred bonuses and PSP awards

Values in the table are in actual currency as shown in the Annual Report. A number of adjustments are made to these for the purposes of calculating awards under our incentive plans as described in this report and in line with our Remuneration Policy.

EXECUTIVE DIRECTORS' ALIGNMENT TO SHARE PRICE

The table below shows the value of shares currently held by the Executive Directors and those awarded under the Deferred Share Bonus Plan ('DSBP'), but not yet released (on a post-tax basis). It does not include those awards under the PSP which are scheduled to vest in the future subject to Company performance, which have the potential to significantly increase the alignment of the Executives, subject to the resulting level of vesting.

	Shares owned	Shares awarded under the DSBP (post-tax)	Total share exposure	Indicative value on 30 June 2022 (£)[1]	Consequence of a +/- 10% share price change (£)	Conclusion
Stephen Wilson	64,047	11,067	75,114	1,943,206	194,321	CEO is aligned to share price movement through ordinary shareholding
Alison Henriksen	Nil	3,429	3,429	88,720	8,872	CFO was appointed into role in January 2020 and has yet to see awards vest that were made under the PSP plan

1 Value calculated using the average share price for the final quarter of the financial year ended 30 June 2022 (2,587p)

SECTION F – ANNUAL REPORT ON REMUNERATION

INTRODUCTION

This section of the Directors' Remuneration Report is subject to an advisory vote at the 2022 AGM. Remuneration in respect of 2022 is determined by our Remuneration Policy agreed by 93.4% of shareholders at the 2019 AGM. The detailed Policy, approved by shareholders at the 2019 AGM on 14 November 2019, can be found in our 2019 Annual Report which is available from our website at www.genusplc.com.

We have split this section into the following chapters to balance our formal disclosure obligations with our desire to have a clear and understandable report:

1. What the Executive Directors Were Paid in 2022.
2. What the Executive Directors Can Earn in 2023.
3. The Process the Committee Followed to Arrive at These Decisions.
4. How the Chief Executive's Pay Compares to Shareholder Returns Over the Past Ten Years and to Employees' Pay.
5. The Chairman and Non-Executive Directors' Fees.
6. Details of the Directors' Shareholdings and Rights to Shares.
7. Details of the Executive Directors' Contracts and Non-Executive Directors' Letters of Appointment.

1. WHAT THE EXECUTIVE DIRECTORS WERE PAID IN 2022

Executive Directors' single total remuneration figure (audited)

The following table shows a single total figure of remuneration for the 2022 financial year for each of the Executive Directors and compares this figure to the prior year.

	Year	Salary and fees £000s	Benefits[1] £000s	Pension[2] £000s	**Subtotal for fixed pay £000s**	Annual bonus[3] £000s	PSP £000s	**Subtotal for variable pay £000s**	**Total £000s**
Stephen Wilson	2022	614	13	61	**689**	192	446[4]	**638**	**1,327**
	2021	600	13	60	**673**	998	1,277[5]	**2,275**	**2,948**
Alison Henriksen	2022	417	13	25	**454**	192	240[4]	**432**	**886**
	2021	407	12	24	**443**	689	–	**689**	**1,132**

1 Benefits included an annual car allowance of £12,000 for Stephen Wilson and Alison Henriksen respectively. Insured benefits include life assurance, private medical insurance and a medical screen
2 Executive Directors receive a cash allowance in lieu of pension, which is shown in the Pension column. The percentage contribution payable to Stephen Wilson was reduced on appointment to CEO (from Group Finance Director) from 15% of salary to 10% of salary. Alison Henriksen receives a pension contribution of 6% of salary
3 Bonus earned includes the part of the award which is deferred into Company shares. The value shown for the CEO is after the application of downward discretion to align the bonus value to that for the CFO
4 The value of the PSP is determined by the number of awards vesting in relation to performance in the period ended 30 June 2022. Dividend equivalents are not added to awards made under the PSP. The value shown for 2022 is based on the average share price for the final three months of the 2022 financial year (which was 2,587p). This compares to the share price at grant of 2,832p (-9%). Of the value shown (£55k) is attributable to share price reduction between award and vesting
5 The 2021 values shown as estimated in the previous Annual Report have been restated to reflect the actual value at point of vesting. The share price was 5,310p on 8 October 2021 when awards vested for Stephen Wilson

How the bonuses for 2022 were calculated

Annual Bonus

The 2022 bonuses for Executive Directors were calculated by reference to performance against a challenging sliding scale of profit, cash flow and strategic measures. Targets were set by the Committee to exclude the costs of gene editing in line with our Remuneration Policy. This was a decision by the Committee (as was the case in prior years) to ensure that management's reward was not unfairly affected by decisions to make the right long-term investment decisions on behalf of the business.

The following results were achieved for each element of the annual bonus incentive.

Bonus target[1]	Strategic objective	Weighting	Actual 2022 performance	Threshold (0% award)	Target (50% award)	Stretch (full award)	Extent to which targets were met (%)
Adjusted profit before tax	Year-on-year profit growth	50%	£77.3m[2]	£92.4m	£97m	£101.6m	0%
Generation of free cash flow	Generate cash for reinvestment and dividends	15%	£(21.5)m[3]	£(0.8)m	£2.2m	£5.2m	0%
Strategic measures	To build the foundation for future growth	35%	See table				Chief Executive 70% Chief Financial Officer 75%

1 The financial elements of the bonus are payable on a straight-line basis between each threshold, target and stretch level
2 Bonuses are calculated in constant currency and excludes gene editing costs. This explains the difference between the value shown and the Adjusted profit before tax number on page 88
3 The number excludes £8.0m of the IFRS 16 lease adjustments included in our free cash flow number on page 88

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

DETERMINING OUTCOMES UNDER THE ANNUAL BONUS OUTCOMES FOR 2022

We reviewed closely performance achieved in 2022 in the way we determined final award levels for participants under the Annual Bonus plan. The diagram below illustrated the factors we considered and a summary of our conclusions under each point, with our overall decision shown lower down.

FACTORS INFLUENCING DETERMINATION OF ANNUAL BONUS OUTCOMES

READ ACROSS TO OTHER PARTICIPANTS
Around 2,000 Genus colleagues globally participate in the Annual Bonus plan, with an element linked to individual and/or strategic objectives. We continued to reflect and deliver outcomes under the individual element of the plans for all participants around the business.

SHAREHOLDER EXPERIENCE
There was a material reduction in share price during the year, with an ending share price similar to the level at the end of 2019. We continue to pay dividends to shareholders.

STRATEGIC DELIVERY
The bonus structure is designed to consider specific elements of business and strategic performance in determining overall awards. While two key financial metrics in the bonus were not met, these was robust delivery against the strategic targets set for each Executive, in line with our stated strategy.

DEFERRAL INTO SHARES/ALIGNMENT WITH SHARE OWNERSHIP
One-third of any bonus for Executives is deferred into Genus shares that vest after three years, driving continued alignment with the shareholder experience. Participants have seen the impact of the deterioration of share price over the prior 12 months and the impact this has had on in-flight awards.

PROFITABILITY
Profit targets were set based on growth from 2021 (where we experienced record levels of performance). Deterioration in profitability was highly correlated with market conditions in China during the year and the resultant level of the pork price.

OVERALL QUANTUM OF REWARD
Both the CEO and CFO have experienced a material reduction in reward (as captured through the single figure) between 2021 and 2022.

ALIGNMENT TO SUSTAINABILITY
Part of the strategic objectives were linked to 'Delta C' which looks at progress against our sustainability goals. We made robust progress against these objectives during the year.

LINKAGE TO MEDIUM-TERM DELIVERY
PSP awards granted in September 2019 were linked to EPS performance over the full three-year period. Ultimate vesting of these awards was 41.4% of maximum, even though this included two years of very strong EPS delivery.

Having considered the above factors, the Committee reached the following conclusions:
> While short-term performance in 2022 was disappointing, there was clear evidence of strategic progress during the year as evidenced throughout this disclosure and wider Annual Report.
> 2021 was an exceptional year for the business. Results can be volatile but even with greater volatility still consistent with our stated medium-term growth aspirations.
> We want Executives to develop and sustain a significant level of shareholding in the business and be aligned to future share price movement. We liked the fact that a significant level of any bonus would be deferred into shares.
> We also acknowledged the overall reward outcomes and reduction in the single figure values from 2021 to 2022.

The Committee considered the overall appropriateness of the formulaic bonus outcome against the agreed metrics. This showed award levels of around 25% of total opportunity reflecting the robust strategic progress achieved, which is documented within this disclosure and elsewhere in the Annual Report.

The Committee was conscious of the need to appropriately recognise the achievements of the management team who have responded robustly to key macroeconomic and market challenges facing the business, to ensure the business is strongly positioned for future growth. Alongside this, the Committee considered the overall experience of shareholders over the past 12 months, including the reduction in profitability year on year. Taking all of the above into account, the Committee, in consultation and agreement with the CEO, used discretion to apply a reduction in the Annual Bonus outturn for the CEO. This discretion reduces the total bonus payable to the CEO to be equal to that payable to the CFO.

Strategic measures
The Committee reviewed and discussed achievement against targets set for strategic measures for each Executive Director in determining overall award levels. Performance against these targets is disclosed retrospectively, as follows:

	Theme	Objective	Key achievements in year	Payout against maximum
Stephen Wilson	Strategy Development and Execution	Maintain/grow genetic leadership	> Strong progress across Dairy, Beef and Porcine when assessed against rate of genetic gain, industry rankings and competitive traits	70%
		Grow PIC in US, Spain, Russia and China key accounts	> Gain of five global top 250 accounts across identified markets	
		Grow presence in global top 100 dairies	> Share gains with leading dairies driven by Sexed Beef and use of multi-year contracts in US, Italy and China	
		Leverage technology/genetics across broader bovine industry	> Growth in third-party sales through IntelliGen, including in Europe, New Zealand and India	
		Develop Genus portfolio through additional proteins	> Advancement of relationship with Xelect	
	Leadership and culture	Sustain/improve employee engagement	> Record results (and response levels) through our biannual Your Voice employee survey with significant increases in key questions including "Recommend a friend to work in Genus" and "I enjoy working at Genus"	
		Improve gender diversity at Manager level	> 37% of appointments into M band roles were female against target of 33%	
		Maintain strong health and safety culture	> Achieved injury frequency rate below target and reduced vehicular incidents	
	Innovation	Gene editing	> Porcine Reproductive Respiratory Syndrome virus ('PRRSv') resistance development programme progressing to plan	
		Establish industry leadership in reproductive biology	> World class biology team created and strategic partnerships with leading external collaborators	
		Deliver positive user adoption of GenusOne globally	> Demonstrable progression in user adoption and continued roll-out into new markets (e.g. Chile and Spain) and ready for UK launch in summer 2022	
		Transform ABS customer digital experience	> Digital plans on track with roll-out of GENEadvance and growth of digital sales	
		Progress the establishment of a Scientific Advisory Board ('SAB')	> Initial membership now secured and scheduled for first meeting in second half of 2022	
	Sustainability	Drive adoption and implementation of 'Delta C'	> Good progress with carbon reduction with reduction in primary intensity ratio	

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

	Theme	Objective	Key achievements in year	Payout against maximum
Alison Henriksen	Strategy Development and Execution	Develop Genus portfolio through business development activity in relation to species and new technologies	> New relationships formed with key partners (current or prospective)	75%
		Maintain strong IR, expanding knowledge of Genus outside UK market and investors' understanding of our ESG progress	> Growth in shareholdings amongst identified shareholder base. Increased knowledge of importance and focus of sustainability through shareholder interactions	
		Implement Procurement Target Operating Model ('PTOM') and drive implementation of Wave 1 & 2 procurement savings	> Savings delivered in line with budgeted projections	
	Leadership and culture	Sustain/improve employee engagement in Finance, Business Development and Procurement	> Strong results through internal Your Voice survey, including "When I perform well I feel this is appreciated & recognised", "We work effectively as a team", "I'm confident I can achieve my career objectives"	
		Build succession plans across team	> Succession plans completed for senior roles across global team	
		Roll-out of Finance Target Operating Model ('FTOM') – people & org design, process roll-out, reporting & performance management, finance technology	> Centre of Expertise for FP&A launched and operational to agreed timescales	
		Cement relationships across the Group and deepen understanding of customers and operations	> Multiple workshops and events to build cohesion across the team and focus on evolution of finance operating model and use of GenusOne	
	Innovation	Support positive adoption of GenusOne through Adoption and Optimisation ('A&O') Framework	> Increase in user satisfaction of technology	
	Sustainability	Reduce carbon intensity of own operations by 2.5% through implementation of 'Delta C'	> Integration of sustainability risks and opportunities into corporate risk management and strategic planning frameworks	

As a result of this performance, the total Annual Bonus awarded to the Executive Directors was:

		Annual Bonus		
		Extent to which overall targets were met	Annual Bonus – cash	Annual Bonus – deferred shares[1]
Stephen Wilson	Formulaic outcome	25%	£176,331	£88,165
	Outcome following agreed reduction	18%	£128,074	£64,037
Alison Henriksen		26%	£128,074	£64,037

1 The number of shares awarded will be calculated in September 2022 when bonuses are paid. One-third of bonus payable is deferred into Genus shares for three years

How the PSP figure was calculated in the single total remuneration table

PSP awards granted to Stephen Wilson on 11 September 2019 and Alison Henriksen on 7 April 2020 were subject to a performance condition, based on the growth in adjusted earnings per share from 2019 to 2022. The range of targets applicable to the award, which had a value of 200% and 175% of salary at grant was as follows:

Average annual growth in adjusted earnings per share	% of award vesting[1]
Less than 5% per annum	Nil
5% per annum	20%
15% per annum	100%

1 Straight-line vesting between the points in the above table

The Committee set targets to calculate the long-term award after excluding gene editing costs incurred during the performance period, to avoid an unintended impact on the Executives' remuneration whilst making long-term decisions in support of value creation. This is consistent with the approach previously communicated to shareholders within our Policy and as taken in each of the last three years.

The adjusted 2022 earnings per share after the cost of share-based payments and adjusting for costs relating to gene editing was 87.6p. This represents an average annual growth in adjusted earnings per share of 7.7% compared to the comparable 2019 adjusted earnings per share figure (after the cost of share-based payments). The resulting level of vesting is 41.4% of maximum. Therefore, the number of shares that will vest will be 17,249 for Stephen Wilson and 9,288 for Alison Henriksen, and these will vest on 11 September 2022.

The Company's average share price for the period from 1 April 2022 to 30 June 2022 was 2,587p, meaning that the value shown for these awards within the single figure table is £446,250 for Stephen Wilson and £240,283 for Alison Henriksen.

Breakdown of value of PSP for CEO (2019–2022 Performance)
Share price on award = £28.32

Share price (three months ending 30 June 2022) = £25.87

Share price change over period = (9)%

1 The average annual earnings per share growth including gene editing costs after share-based payments was 8.5% and the associated vesting level would have been 48.4% of maximum

Joining award
There were no joining awards made to Directors in the year ending 30 June 2022.

Material contracts
There were no other contracts or arrangements during the financial year in which a Director of the Company was materially interested and/or which were significant in relation to the Group's business.

Payments for loss of office and payments to former Directors (audited)
There were no payments for loss of office in the year or to any former Directors of the business.

Discretion
Having reviewed overall business performance, and in consultation with the CEO, the Committee used discretion to apply a reduction in the Annual Bonus outturn for the CEO. The Committee was satisfied that the final outcomes represented a balanced overall position.

External Directors' external appointments
Executive Directors are permitted to accept an external non-executive position, with the Board's approval. Any fees received in respect of these appointments may be retained by the Executive. Stephen Wilson was appointed as a Non-Executive Director of Renishaw effective from 1 June 2022. He received fees totalling £5.8k during the year.

2. WHAT THE EXECUTIVE DIRECTORS CAN EARN IN 2023

A summary of this chapter is given on page 75.

Base salary
In line with other UK employees, the date of salary review is 1 September 2022. Any change is considered against changes made to the wider workforce. Following consideration of Company performance during 2022, no changes to salaries have been made for either Executive Director.

	Annual salary to 1 Sep 2022	Annual salary from 1 Sep 2022	Change
Stephen Wilson	£616,900	£616,900	Nil
Alison Henriksen	£418,200	£418,200	Nil

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

Benefits
The Executive Directors receive benefits including a car allowance, life assurance, an annual medical screen and private medical insurance.

Pension
On appointment to the CEO role in September 2019, the pension allowance payable to Stephen Wilson reduced to 10% of salary (from 15%). Alison Henriksen receives a pension allowance of 6% of salary, consistent with our stated Policy to align rates for new hires to the wider workforce. In line with investor expectations, and as previously communicated to shareholders, the allowance paid to the CEO will reduce to 6% of salary effective 1 January 2023.

Performance-related Annual Bonus
The structure for variable remuneration for Executive Directors for 2023 will be as follows:

Annual Bonus

Value of bonus	A maximum of 175% of salary for the Chief Executive and Chief Financial Officer based on profit, cash generation and strategic measures.
Performance measures	Assessed across the following metrics: > Adjusted Profit Before Tax – 60% of opportunity > Cash Generation – 15% of opportunity > Strategic measures – 25% of opportunity
Calibration of profit target	The targets for the coming year are outlined below and have continued to be disclosed on a prospective basis, expressed in terms of growth. The targets have been set having considered the budgets in place for the year and represent stretching business performance. The Committee considered budgets, analyst expectations and the market conditions in our key countries in determining the range and is comfortable that the range set is stretching, and fully aligned to our stated medium-term growth objective. No bonus is payable in respect of profit unless the prior year's result is exceeded. The bonus award will be determined with reference to the following points: Growth on prior year adjusted before tax[1] — Award level (profit element) Nil growth — Nil award 6.66% growth — 50% 12% growth — 100% 1 In constant currency and excluding gene editing costs
Calibration of cash generation target	The cash target is the budgeted figure, with a specific range of £6m below the target and £3m above. Specific numbers were set (rather than a percentage range) to ensure Executives are focused on actual cash generation. The target set and resulting performance achieved will be disclosed in the Annual Report next year.
Calibration of strategic measures	Specific measurable targets have been set against this category linked to our strategic priorities identified by the Board for the year ahead. It would be commercially sensitive to disclose these targets in advance and we will retrospectively disclose the targets and associated performance against them in the subsequent Annual Report.
Bonus deferral	One-third of any bonus award will be deferred by way of shares for three years and will vest subject to continued employment, other than in certain leaver circumstances.
Malus and clawback	The Committee can apply malus to deferred bonuses and clawback any element of paid bonuses that should not have been awarded or paid, in the event of a material misstatement of the Group's annual results or other substantive reason.

Long-term incentives
Awards to be granted in September 2022 will be granted under the 2019 PSP approved by shareholders on 14 November 2019. Stephen Wilson and Alison Henriksen will be granted awards over 200% of salary in line with that permitted under the Policy. Grants will be determined in line with the Plan Rules, using annual salary as at the point of grant to determine awards. Awards granted will continue to require the Executive to retain the after-tax number of shares vesting in September 2025 for two years. Enhanced clawback and malus provisions will apply to these awards as outlined within our Remuneration Policy, including for reputational damage and corporate failure.

The performance targets for the awards to be granted in September 2022 will be assessed against three targets which will operate independently of each other.

Metric	Weighting	Metric detail	Target for 2022 awards	
Earnings Per Share	80%	Average annual growth in adjusted earnings per share, measured over three years, inclusive of gene editing costs in the base year and final year of calculation.	**Average annual growth in adjusted earnings per share**[1]	Vesting %
			Less than 4% per annum	0%
			4% per annum	20%
			12% per annum	100%
			Straight-line vesting between performance points shown above.	
Genetic Improvement	10%	Improvement (expressed in standard deviations of improvement per generation) of genetics in Porcine, Bovine and Dairy. Target of one standard deviation of genetic improvement per generation across Dairy and Bovine, and 0.75 standard deviations of improvement per generation in Porcine.	**Overall assessment guidelines** (Final award will be determined by Committee having reviewed progress in each of the respective species)	Indicative award (max 10%)
			Performance at or exceeding target over period across all species or significant outperformance in one or more species with no 'weak' progress	8–10%
			Progress overall in line with stated target	5–7%
			Robust performance in one or two species, slower progress elsewhere	2–4%
			Progress below target each year in all species	No award
Greenhouse Gas Reduction	10%	Reduction in overall primary intensity ratio of our operations for the three-year period commencing 1 July 2022 and ending 30 June 2025.	**Cumulative % reduction across three years ending June 2025**	Vesting %
			Below 3%	Nil
			3% (threshold)	20%
			10% (stretch)	100%
			Straight-line vesting between threshold and stretch values in the above table	

1 Growth in adjusted earnings per share over the three-year performance period will be calculated on a simple average annual growth rate after the cost of share-based payments

The Committee retains the discretion to be able to scale back overall vesting if it does not consider the vesting result to be consistent with the progress achieved against the Company's strategy during the performance period. This is considered appropriate to broaden the Executive team's focus beyond financial performance.

The Committee also recognises that the Genus share price has changed materially over the past year and is currently at a level similar to that when PSP awards were granted in 2019 which will vest in September 2022. Executives have been exposed to this share price movement (both through ordinary shares held and any in-flight awards). The Committee will make these awards in the usual way in September 2022 and will review the ultimate level of vesting and associated business performance. In the event that the share price used to determine awards was not felt to be representative (or gave rise to what were deemed to be any unjustified gains by recipients having considered the overall reward experience for Executives and Shareholders) then the Committee has the ability to adjust ultimate vesting levels.

SPOTLIGHT ON PERFORMANCE METRICS AND TARGET SETTING WITHIN PSP AWARDS FOR 2022

Earnings Per Share

The Committee continues to believe that using adjusted earnings per share is an appropriate measure of long-term performance of the business, demonstrates alignment to our stated medium-term growth aspirations, and is the metric used to assess awards granted under the PSP for many years.

How will this be assessed?
We use adjusted earnings per share, which considers simple average annual growth in adjusted earnings per share, measured over three years of share-based payments.

How will targets be set?
Targets are set having considered future internal projections of the business, analyst forecasts and market conditions in each of the respective countries where we operate.

How does this align with our strategy?
Growth in earnings per share is a key metric for us, showing how the value we create for customers leads to returns for our investors.

Do the targets set represent stretching performance?
The Committee believes the above performance range is appropriately challenging, incentivises Executives to deliver the Company's growth strategy and is therefore aligned with shareholders' interests.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

Greenhouse Gas Reduction
We are committed to driving sustainability within the way we operate and additionally the way we can support the wider industry through our leadership. We have set a clear target of 25% reduction in our primary intensity ratio by 2030 (measured against our 2019 baseline).

How will this be assessed?
We will use our primary intensity ratio. This is an existing metric already disclosed by the business and looks at tCO_2e/tonne animal weight. It includes Scope 1 and Scope 2 emissions.

How will targets be set?
The values within the set range equate to the cumulative reduction over the respective three-year period beginning 1 July 2022 and ending on 30 June 2025.

What will be disclosed around our performance?
As has been the case since 2014, we will disclose this primary intensity ratio within our Annual Report and provide regular updates to shareholders on our progress.

Do the targets set represent stretching performance?
We do not expect a straight-line reduction through to our 2030 target, but rather this will be achieved through a series of initiatives and activities across the business. We set a range to reflect our plans for the next three years, with stretch outcomes reflecting superior performance ahead of our current plans. This has been done to incentivise leaders to make progress more quickly and for full awards to superior outperformance against our plans.

Genetic Improvement
Genetic improvement enables us to produce superior environmental outcomes for customers – enabling them to produce more protein with fewer inputs. This is at the heart of our strategy – 'Pioneering animal genetic improvement to help nourish the world'. Genetic improvement supports productivity gains and improved feed efficiency, enabling a reduction in the production of GHG emissions per unit of milk or meat produced.

What is genetic improvement?
It allows for selection of traits that can help farmers increase profits. This can be through optimisation of inputs (e.g. feed efficiency), quality of outputs (such as milk) and minimisation of susceptibility to health issues (such as probability of certain diseases or incidence of birthing challenges or stillbirth). All of these ultimately drive efficiency and emissions associated with production.

As an example, we have estimated that the target improvement in porcine equates to a reduction in CO_2 emissions of 2.22kg per CO_2e per market pig per generation.

How will performance be assessed?
Genetic indices have existed for many years, allowing dairy animals to be ranked based on their combined merit for economically important traits. By analysing this data over time, it is possible to identify genetic improvement in animals.

The Dairy index is an externally published index, and Genus has developed similar approaches to assess in both pork and beef. It is assessment against these indices that will drive assessment of genetic improvement.

What will be disclosed around our performance?
We will disclose targets for each of the species for next three years (expressed in terms of standard deviation of improvement per generation). The generation length will differ between species but we will look at the aggregate performance in each species across the three year performance period.

How does this align with our strategy?
Driving genetic improvement is for the benefit of the whole industry, creating efficiencies in animals born and grown within our facilities, but also in the operations of our customers who have access to our genetics and in our supply chain.

Do the targets set represent stretching performance?
Targets are expressed in terms of genetic improvement, considering gains per generation. They have been set having considered our track record of delivery of genetic progress as a business and are considered to represent stretching performance.

The target for porcine is lower than the other species. This is a reflection of the more advanced nature of genetic improvement that has already occurred within pigs over the recent years.

How will ultimate awards be determined?
The Committee will consider actual progress in each of the three species, and then use their judgement to determine an overall award, in line with the performance grid disclosed when each award is made.

ESG metrics and assessment within reward plans
As governments, regulators, organisations and other agencies progress monitoring of metrics linked to ESG we expect that new ways of measurement will evolve, and standards will change. We have agreed the following principles to guide the Committee in incorporating these metrics within reward plans. We are committed to transparent disclosures of our performance against targets, designed to be transparent to shareholders and fair to participants.

> We are consistent in measurement between the base year and final year of assessment.
> If opportunities for opportunities/legislation/standards change such that enhanced or different disclosure is possible (or required) then the Committee will consider these, which could involve:
  - Adjustment to base year and final year for future awards only.
  - Changes to targets for in-flight awards to utilise new measurement techniques.
  - If any adjustment to targets is considered, any adjustment is done only to utilise enhanced measurement opportunities: the intention is that any target remains equally stretching as the point at which it was set by the Committee and subsequently communicated to shareholders.
> We follow externally endorsed approaches in event of major divestment or acquisition to reflect an amended baseline position where needed – using approach from GHG Corporate Reporting Protocol.

3. THE PROCESS THE COMMITTEE FOLLOWED TO ARRIVE AT THESE DECISIONS

The Committee complies with the UK Corporate Governance Code. It makes recommendations to the Board, within agreed terms of reference, on remuneration for the Executive Directors and other members of GELT. The Committee's full terms of reference are available on the Company's website at www.genusplc.com.

During 2022, the Committee comprised:

Director	Independent	Attendance at meetings[1]
Lesley Knox (Chair)	Yes	7/7
Iain Ferguson	Yes	7/7
Jason Chin	Yes	6/7
Lykele van der Broek	Yes	7/7
Lysanne Gray	Yes	7/7

1 The Committee had five scheduled and two ad hoc meetings during the year

None of the Committee members has any personal financial interest (other than as shareholders), conflicts of interests arising from cross-directorships or day-to-day involvement in running the business. The Chief Executive and the Chief Financial Officer attend meetings at the Committee's invitation but are not present when their own remuneration is being discussed. The Committee is supported by the Group HR Director, Group Reward Director, Finance and Company Secretariat functions.

During the year, the Committee continued to use PricewaterhouseCoopers ('PwC') for advice it considers is of value, objective and independent. PwC's fees were £45k for its remuneration advice to the Committee. PwC were appointed by the Committee following a competitive tender process and their performance and independence as advisers is regularly reviewed. PwC is a member of the Remuneration Consultants Group and complies with its Code of Conduct. Separate teams within PwC provide unrelated advisory service to the Group, including taxation and actuarial advice to the Group.

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

During the year to 30 June 2022, the Committee met 7 times and considered the following matters:

July 2021[1]
- Profit targets & range for FY22 bonus
- Proposed objectives for other GELT members for FY22
- Indicative reward outcomes for FY21 and CEO pay ratio
- Pay review proposals for Executive Directors
- Review draft DRR disclosure

August 2021[2]
- Profit targets/structure for FY22 Annual Bonus

September 2021[1]
- Approve vesting of Performance Share Plan for 2018 awards
- Approve DRR
- Approve Annual Bonus targets and structure for FY22
- Review GELT shareholding at year end
- Approve future long-term incentive awards (for GELT and below)

November 2021[1]
- Review of shareholder vote post AGM
- Update on GELT remuneration vs rest of Genus employees
- Remuneration Policy review

January 2022[1]
- Remuneration Policy development

April 2022[2]
- Review shareholder feedback from consultation/agree any next steps
- Market trends/AGM update
- Gender Pay and external disclosures
- Discuss approach to Pay review for 2022 across business

June 2022
- Finalise Policy content for renewal and key messages
- Discuss draft strategic objectives for FY23 for CEO
- Update on GELT remuneration vs Genus employees
- Review bonus structure below GELT for FY23
- Committee effectiveness review

1 Scheduled meeting
2 Ad hoc meeting

How shareholders' views are taken into account
We consulted with shareholders ahead of proposing our existing Remuneration Policy to shareholders at our 2019 AGM which received high levels of shareholder support. The results of the most recent votes were as follows:

	Vote on Directors' Remuneration Report 2021 AGM (advisory)		Vote on Directors' Remuneration Policy 2019 AGM (binding)	
	Total number of votes	% of votes cast	Total number of votes	% of votes cast
For	48,090,655	96.9	42,801,233	93.4
Against	1,554,432	3.1	3,046,755	6.6
Total number of shares in respect of which votes were validly made	49,645,087	100	45,847,988	100
Votes withheld	128,957		11,770	

How employees' pay is taken into account
While the Company does not consult employees on matters of Directors' remuneration, the Committee does take account of the policy for employees across the workforce when determining the Remuneration Policy for Directors.

The Group Reward Director facilitates this process, presenting to the Committee reward structures and approach across the organisation including the way reward levels are set with reference to internal and external factors, and how performance metrics align with those used for GELT members (including Executive Directors). The process also includes sharing feedback received through staff engagement surveys that include questions on pay, as well as consulting employees informally on their views of the current overall Remuneration Policy. Additionally, discussions on reward have formed part of dialogue between the nominated Non-Executive Directors and employees as part of wider engagement activity as outlined elsewhere in the Annual Report. This forms part of the feedback provided to the Committee and is used to assess the Remuneration Policy's ongoing effectiveness and any changes that should be made.

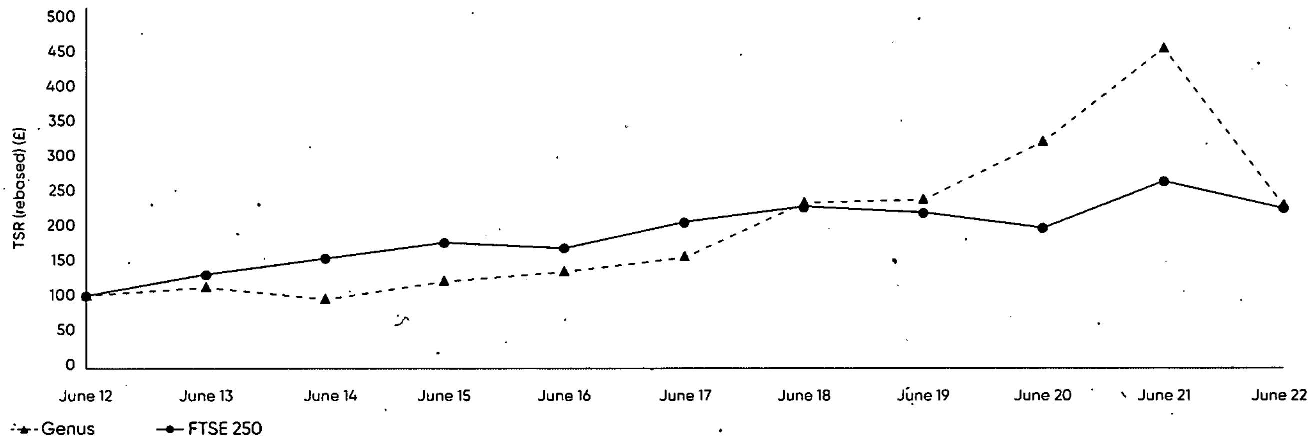
When setting the Executive Directors' base salaries, the Committee compares the salary increases proposed for each Executive Director with those proposed for employees in their geographical location, as well as considering the typical increase proposed across our UK business and the wider Group.

4. HOW THE CHIEF EXECUTIVE'S PAY COMPARES TO SHAREHOLDER RETURNS OVER THE PAST TEN YEARS AND TO EMPLOYEES' PAY

Total shareholder return

The following graph shows the Company's performance measured by total shareholder return ('TSR'), compared with the TSR performance of the FTSE 250 Index. The FTSE 250 Index was selected as it represents a broad equity market of which the Company is a member.

Ten years of total shareholder return



As required under the reporting regulations, the table below shows the 'single figure' pay for the Chief Executive over the same period, to allow comparison between variability in reward and the shareholder experience over the same period.

	Karim Bitar								Stephen Wilson		
	2013	2014	2015	2016	2017	2018	2019	2020	2020	2021	**2022**
Total remuneration (£000s)	£868	£877	£1,622	£1,704	£2,856	£2,549	£815	£183	£2,161	£2,888	**£1,327**
Annual Bonus (% of max)	31%	32%	99%	78%	59%[1]	64%[1]	Nil[2]	Nil[2]	91%	95%	**18%**
Total PSP vesting (% of max)	–	–	26%	34%	79%	56%	Nil[3]	Nil[3]	44.9%	81.2%	**41.4%**

1 Includes the award under the Company Milestone element of the Annual Bonus under the previous Remuneration Policy
2 No awards were payable following the decision of Karim to resign from the business
3 Vesting was nil as Karim's employment cessation date was before scheduled vesting of PSP awards

Director remuneration compared to Genus employees

Change in remuneration received

The table below shows the percentage change in the annual remuneration of Directors from 2019 onwards. Also provided for comparison is a UK comparator number for each respective time period which considers all employees of Genus plc on 30 June 2022 (excluding Directors) and calculating on an FTE basis changes in salary, benefits and bonus compared to the previous year.

	Salary/fees (% change)			Benefits (% change)			Bonus (% change)		
	2021 to 2022	2020 to 2021	2019 to 2020	**2021 to 2022**	2020 to 2021	2019 to 2020	**2021 to 2022**	2020 to 2021	2019 to 2020
Stephen Wilson[1]	**2**	9	41	**2**	0	0	**(81)**	6	158
Alison Henriksen[2]	**2**	2	n/a	**3**	0	n/a	**(72)**	7	n/a
Iain Ferguson	**46**	n/a	n/a	**0**	n/a	n/a	**n/a**	n/a	n/a
Lykele van der Broek	**0**	0	0	**(100)**	(60)	25	**n/a**	n/a	n/a
Lysanne Gray	**0**	0	0	**0**	0	0	**n/a**	n/a	n/a
Lesley Knox	**0**	(5)	15[3]	**0**	0	0	**n/a**	n/a	n/a
Jason Chin	**0**	n/a	n/a	**0**	n/a	n/a	**n/a**	n/a	n/a
UK comparators	**2.5**	2.6	2.3	**0**	0	0	**(66)**	24	124

1 Stephen was appointed into the CEO role on 13 September 2019. The 2020 year (July 2019 to June 2020) includes part year of salary as CFO through to 13 September 2019 and part year as CEO. Salary increase received in September 2020 was 2%
2 Amounts have been annualised for 2020 for Alison to reflect her joining date of 13 January 2020
3 Includes back payments for membership of respective Committees not received during 2019

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

Distribution statement

	2021	2022	% change
Employee costs (£m)	£194m	**£197m**	2%
Distributions to shareholders[1]	£19.5m	**£20.9m**	7%

1 Includes dividends and share buy-backs

5. THE CHAIRMAN AND NON-EXECUTIVE DIRECTORS' FEES

Fees payable to the Non-Executive Directors per annum effective from 1 July 2022 are as follows:

Position	2020 fees	2021 fees	2022 fees
Chairman	£160,000	£230,000[1]	**£230,000**
Base Non-Executive Director fee	£55,000	£55,000	**£55,000**
Additional fee for Chair of Audit & Risk Committee/Remuneration Committee	£5,000	£5,000	**£10,000**
Additional fee for Scientific Adviser to R&D Global Portfolio Steering Committee ('GPSC')	£10,000	£10,000	**£10,000**
Additional fee for Chair of Scientific Advisory Board[2]	n/a	n/a	**£10,000**

1 The Chairman fee was reviewed prior to the appointment of Iain Ferguson and was determined following a review of market data, as disclosed in the 2020 Annual Report. This fee level was applied following appointment to Iain Ferguson as Chairman effective 25 November 2020
2 Role held by Jason Chin

The Committee reviewed fees paid for Non-Executive Directors against market data. The Committee determined that no changes would be made to the core level of Non-Executive Director fees, although the Committee agreed to review this again during 2023. A change was agreed so that the additional fee payable for acting as a Chair to a Board Committee was increased from £5k to £10k effective 1 July 2022.

Total single figure of remuneration (audited) for 2021 and 2022 are as follows:

Non-Executive Directors		Fees £000s	Taxable expenses £000s	Benefits £000s	Total £000s
Iain Ferguson[1]	**2022**	**230**	**–**	**–**	**230**
	2021	157	–	–	157
Lykele van der Broek	**2022**	**55**	**–**	**–**	**55**
	2021	55	2	2	59
Lysanne Gray	**2022**	**60**	**–**	**–**	**60**
	2021	60	–	–	60
Lesley Knox	**2022**	**60**	**–**	**–**	**60**
	2021	60	–	–	60
Jason Chin	**2022**	**65**	**–**	**–**	**65**
	2021	16	–	–	16
Total	**2022**	**470**	**–**	**–**	**470**
	2021	348	2	2	352

1 Joined the Company on 1 July 2020 and became Chairman on 25 November 2020. Values for 2021 include core fees as non-executive director prior to appointment as Chairman on 25 November 2020

The Non-Executive Directors' taxable expenses are travel expenses related to their role and have been grossed up for tax where applicable, in line with HMRC rules.

6. DETAILS OF THE DIRECTORS' SHAREHOLDINGS AND RIGHTS TO SHARES

Directors' shareholdings (audited)

At the year end, the Directors had the following interests in the Company's shares:

	Ordinary shares as at 30 June 2022 Number	% of salary held[1]	Shareholding guideline[2]	Unvested DSBP awards at 30 June 2022 Number	Unvested PSP awards held at 30 June 2022 Number	Ordinary shares as at 30 June 2021 Number
Iain Ferguson	**9,000**	**n/a**	**n/a**	**n/a**	**n/a**	4,000
Stephen Wilson	**64,047**	**315%**	**200%**	**21,386**	**94,522**	65,342
Alison Henriksen	**–**	**21%**	**200%**	**6,627**	**53,789**	–
Jason Chin	**–**	**n/a**	**n/a**	**n/a**	**n/a**	–
Lesley Knox	**2,000**	**n/a**	**n/a**	**n/a**	**n/a**	2,000
Lykele van der Broek	**3,750**	**n/a**	**n/a**	**n/a**	**n/a**	3,750
Lysanne Gray	**–**	**n/a**	**n/a**	**n/a**	**n/a**	–
Total	**78,797**			**28,013**	**148,311**	75,092

1 Based on the combined number of beneficially held shares and the net of tax DSBP awards held and the average closing share price over the three months to 30 June 2022 of 2,587p
2 Executive Directors are expected to work towards achieve a shareholding of 200% of salary as set out in our Remuneration Policy

There were no changes in the Directors' interests between 30 June 2022 and the date of this report.

Company share price

The market price of the Company's shares on 30 June 2022 was 2,508p and the lowest and highest share prices during the financial year were 2,186p and 6,310p respectively.

Performance share awards granted in 2022 (audited)

The awards granted under the 2019 PSP were as follows:

Executive	Number of shares comprising award	Face/maximum value of awards at grant date (% salary)[1]	% of award vesting at threshold	Performance period
Stephen Wilson	21,979	£1,233,800 (200%)	20	01.07.21–30.06.24
Alison Henriksen	13,037	£731,850 (175%)	20	01.07.21–30.06.24

1 The closing average share price over the three days prior to the award being granted has been used to determine the maximum face value of the awards which was 5,613p (award granted on 15 September 2021)

The awards were granted as nil-cost share options and vesting will be subject to achieving a challenging sliding scale of adjusted earnings per share growth target and a strategic underpin, consistent with our Remuneration Policy. The adjusted earnings per share growth performance target for the above awards is:

Average annual growth in adjusted earnings per share[1]	Vesting (% award)
Less than 5% per annum	0%
5% per annum	20%
15% per annum	100%

Straight-line vesting between performance points.

1 Growth in adjusted earnings per share over the three-year performance period will be calculated on a simple average annual growth rate after the cost of share-based payments and adjusted for gene editing costs in line with previous awards

Deferred bonus awards granted in 2022 (audited)

The following DSBP awards were granted in relation to the 2021 annual bonus:

Executive	Number of shares comprising award	Face value of awards at grant date[1]
Stephen Wilson	5,925	£332,620
Alison Henriksen	4,091	£229,670

These awards are not subject to any further performance conditions and will normally vest in full on 15 September 2024 subject to continued service.

1 The closing average share price over the three days prior to the award being granted has been used to determine the maximum face value of the awards. This was 5,613p (award granted on 15 September 2021)

REMUNERATION COMMITTEE REPORT CONTINUED
SECTION F – ANNUAL REPORT ON REMUNERATION

Summary of scheme interests (audited)
As at 30 June 2022, the Executive Directors had the following beneficial interests in share awards and share options:

Stephen Wilson

Grant date	Award	Vesting period	Share price at grant	At 30 June 2021 Number	Granted in year Number	Lapsed in year Number	Exercised in year Number	At 30 June 2022 Number
9 October 2018	PSP	9 October 2018 to 9 October 2021	2,317p	29,613	–	(5,567)	(24,046)	0
9 October 2018	DSBP	9 October 2018 to 9 October 2021	2,317p	7,559	–	–	(7,559)	0
11 September 2019	PSP	11 September 2019 to 11 September 2022	2,832p	41,666	–	–	–	41,666
11 September 2019	DSBP	11 September 2019 to 11 September 2022	2,832p	7,382	–	–	–	7,382
14 September 2020	PSP	14 September 2020 to 14 September 2023	3,898p	30,877		–	–	30,877
14 September 2020	DSBP	14 September 2020 to 14 September 2023	3,898p	8,079		–	–	8,079
15 September 2021	PSP	15 September 2021 to 15 September 2024	5,613p	0	21,979			21,979
15 September 2021	DSBP	15 September 2021 to 15 September 2024	5,613p	0	5,925			5,925
Total				**125,176**	**27,904**	**(5,567)**	**(31,605)**	**115,908**

Alison Henriksen

Grant date	Award	Vesting period	Share price at grant	At 30 June 2021 Number	Granted in year Number	Lapsed in year Number	Exercised in year Number	At 30 June 2022 Number
7 April 2020	PSP	7 April 2020 to 11 September 2022	3,120p	22,435	–	–	–	22,435
14 September 2020	PSP	14 September 2020 to 14 September 2023	3,898p	18,317		–	–	18,317
14 September 2020	DSBP	14 September 2020 to 14 September 2023	3,898p	2,536		–	–	2,536
15 September 2021	PSP	15 September 2021 to 15 September 2024	5,613p	0	13,037			13,037
15 September 2021	DSBP	15 September 2021 to 15 September 2024	5,613p	0	4,091			4,091
Total				**43,288**	**17,128**	**–**	**–**	**60,416**

For the share awards to Stephen Wilson and Alison Henriksen granted on 15 September 2021, the closing average share price over the three days prior to 15 September 2021 (the grant date for the PSP awards) of 5,613p was used to determine the number of shares comprising individual awards.

The performance targets applying to the PSP awards made during the year are as described above. An earnings per share range also applied to awards made in previous years to recipients. No further performance conditions apply to DSBP awards other than continued employment with the business.

Dilution
The aggregate dilution of all relevant share incentives is 3.34% as at 30 June 2022, which is less than the permissible 10% in ten years dilution limit.

7. DETAILS OF THE EXECUTIVE DIRECTORS' CONTRACTS AND NON-EXECUTIVE DIRECTORS' LETTERS OF APPOINTMENT

Director	Appointment date	Current contract date	Expiry date	Notice period (months)
Executives				
Stephen Wilson	12 December 2012	13 September 2019	n/a	12 (from Company), 6 (from Executive)
Alison Henriksen	13 January 2020	14 November 2019	n/a	12 (from Company), 6 (from Executive)
Non-Executives				
Iain Ferguson	1 July 2020	1 July 2020	1 July 2023	6
Jason Chin	1 April 2021	1 April 2021	1 April 2024	1
Lesley Knox	1 June 2018	1 June 2021	1 June 2024	1
Lykele van der Broek	1 July 2014	4 September 2020	1 July 2023	1
Lysanne Gray	1 April 2016	1 April 2022	1 April 2025	1

Non-Executive Directors' service contracts, which include details of remuneration, will be available for inspection at the AGM or at the Company's registered office.

Approved by the Board and signed on its behalf by:

Lesley Knox
Chair of the Remuneration Committee
7 September 2022

DIRECTORS' REPORT

DAN HARTLEY
Group General Counsel and Company Secretary

INFORMATION INCORPORATED BY REFERENCE

The following information required to be included in a Directors' Report is provided elsewhere in the Annual Report and is incorporated into the Directors' Report by cross reference.

Content	Location
Directors	Pages 50 to 51
Dividends	Page 29
Financial results	Pages 26 to 29
Greenhouse gas emissions and energy consumption	Pages 37 to 38
Research and development activities	Pages 24 to 25
Financial risk management	Pages 26 to 29
Future developments in the business	Page 20 to 25
Directors' interests	Page 101 to 102
Engagement with employees, customers, suppliers and others	Page 42
Post balance sheet events	Note 41
Long-term incentive schemes	Note 30

EQUAL OPPORTUNITIES/EMPLOYEES WITH DISABILITIES

Genus values diversity and aims to make best use of everyone's skills and abilities. We are therefore committed to equal opportunities at every stage of our employees' careers. Our policy on employees with disabilities is to fully and fairly consider people with disabilities for all vacancies.

We interview and recruit people with disabilities and endeavour to retain employees if they become disabled while they work for us. Where possible, we will retrain employees who become disabled and adjust their working environment, so they can maximise their potential.

POLITICAL CONTRIBUTIONS

The Group does not make political contributions.

SHARE CAPITAL

Note 31 gives details of the Company's issued share capital and any movements in the issued share capital during the year.

The Directors may only issue shares to the extent authorised by the shareholders in general meeting. The current power to allot shares was granted by shareholder resolution at the 2021 AGM and a new authority is being sought at the 2022 AGM, within the limits set out in the notice of meeting, that is up to a nominal value of £4,384,973.50 (representing two-thirds of the Company's current issued share capital).

The Company has one class of ordinary share, with the rights set out in the Articles of Association. All issued shares are fully paid and each share has the right to one vote at the Company's general meetings. There are no specific restrictions either on the size of a holding or on the transfer of shares, which are both governed by our Articles of Association and prevailing legislation. No person has any special rights of control over the Company's share capital.

Details of the Company's employee share schemes are set out in note 30. In connection with these schemes, the Genus plc Employee Benefit Trust holds shares in the Company from time to time and abstains from voting in respect of any such shares.

For additional information on capital risk management including financial instruments, see note 26.

AUTHORITY TO ACQUIRE THE COMPANY'S OWN SHARES

The Directors may only buy back shares to the extent authorised by the shareholders in general meeting. The current power to buy back shares was granted by shareholder resolution at the 2021 AGM and a new authority is being sought at the 2022 AGM within the limits set out in the notice of meeting, that is up to a nominal value of £657,746.00 (representing 10% of the Company's current issued share capital).

The Company did not buy back any shares under the authority granted at the 2021 AGM, from the date of that AGM up to the date of this report.

SUBSTANTIAL SHAREHOLDINGS

As at 1 September 2022, we were aware of the following material interests in the Company's ordinary shares:

Fund Manager	Shareholding	%
Baillie Gifford & Co	5,915,632	8.99
abrdn	4,470,751	6.80
Capital Group	4,451,838	6.77
Wellington Management	3,898,269	5.93
BlackRock	3,840,516	5.84
Columbia Threadneedle Investments	3,840,516	5.06
Vanguard Group	2,944,736	4.48
Devon Equity Management	2,650,507	4.03

There have been no material changes in shareholding since 30 June 2022. No other person has notified an interest in the Company's ordinary shares, which is required to be disclosed to us.

PROVISION OF INFORMATION TO THE COMPANY'S AUDITOR

Each of the Directors at the date of approval of this Annual Report confirms that:

- so far as the Director is aware, there is no relevant audit information of which the Company's auditor is unaware; and
- the Director has taken all the steps that he or she ought to have taken as a Director in order to make himself or herself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

This confirmation is given and should be interpreted in accordance with the provisions of section 418 Companies Act 2006.

APPOINTMENT OF AUDITOR

Deloitte LLP has expressed its willingness to continue in office as auditor and a resolution to reappoint it will be proposed at the forthcoming AGM.

DIRECTORS' INDEMNITIES

The Company has made qualifying third-party indemnity provisions for the benefit of its Directors which were made during the year and remain in force at the date of this report.

CONFLICTS OF INTEREST

The Company has procedures for managing conflicts of interest. If a Director becomes aware that they or any of their connected parties have an interest in an existing or proposed transaction with Genus, they should notify the Chairman and the Company Secretary in writing or at the next Board meeting. Controls are in place to ensure that any related-party transactions involving Directors, or their connected parties, are conducted on an arm's length basis. Directors have an ongoing duty to update the Board on any changes to these conflicts.

Approved by the Board and signed on its behalf by:

Dan Hartley
Group General Counsel and
Company Secretary
7 September 2022

DIRECTORS' RESPONSIBILITIES

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

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors are required to prepare the Group Financial Statements in accordance with the international accounting standards in conformity with the requirements of the Companies Act 2006. The Directors have chosen to prepare the Parent Company Financial Statements in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework'. 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 Parent Company Financial Statements, the Directors are required to:
> select suitable accounting policies and then apply them consistently;
> make judgements and accounting estimates that are reasonable and prudent;
> state whether Financial Reporting Standard 101 'Reduced Disclosure Framework' has been followed, subject to any material departures disclosed and explained in the Financial Statements; and
> prepare the Financial Statements on the going concern basis, unless it is inappropriate to presume that the Company will continue in business.

In preparing the Group Financial Statements, International Reporting Standard 1 requires that Directors:
> properly select and apply accounting policies;
> present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
> provide additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and
> make an assessment of the Company's ability to continue as a going concern.

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. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of Financial Statements may differ from legislation in other jurisdictions.

DIRECTORS' RESPONSIBILITY STATEMENT

We confirm that to the best of our knowledge:
> the Financial Statements, prepared in accordance with the relevant financial reporting framework, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole;
> the Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face; and
> the Annual Report and Financial Statements, taken as a whole, are fair, balanced and understandable, and provide the information necessary for shareholders to assess the Company's position, performance, business model and strategy.

Approved by the Board and signed on its behalf by:

Stephen Wilson
Chief Executive
7 September 2022

Alison Henriksen
Chief Financial Officer
7 September 2022

INDEPENDENT AUDITOR'S REPORT
TO THE MEMBERS OF GENUS PLC

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

1. Opinion

In our opinion:

> **the financial statements of Genus plc (the 'Parent Company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 30 June 2022 and of the Group's profit for the year then ended;**

> **the Group financial statements have been properly prepared in accordance with United Kingdom adopted International Accounting Standards and International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB);**

> **the Parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and**

> **the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.**

We have audited the financial statements which comprise:

> the Group Income Statement;

> the Group Statement of Comprehensive Income;

> the Group and Parent Company Statements of Changes in Equity;

> the Group and Parent Company Balance Sheets;

> the Group Statement of Cash Flows; and

> the related notes 1 to 41 and C1 to C20.

The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law, United Kingdom adopted International Accounting Standards and IFRSs as issued by the IASB. The financial reporting framework that has been applied in the preparation of the Parent Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

2. Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and the Parent Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group and Parent Company for the year are disclosed in note 8 to the financial statements. We confirm that we have not provided any non-audit services prohibited by the FRC's Ethical Standard to the Group or the Parent Company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. Summary of our audit approach

Key audit matters	The key audit matter that we identified in the current year was the valuation of Biological Assets under IAS 41 'Agriculture'. Within this report, key audit matters are identified as follows: Newly identified Increased level of risk Similar level of risk Decreased level of risk
Materiality	The materiality that we used for the Group financial statements was £3.1m. Our determined materiality represented 6.4% of profit before tax and 5.6% of profit before tax excluding the impact of exceptional items and the net IAS 41 valuation movement on biological assets.
Scoping	Our audit scope covered 13 components. Of these, 8 were subject to a full scope audit, and 5 were subject to specified procedures. Our testing achieved coverage of 73% of Group revenue, 84% of Group net assets and 84% of Group profit before tax.
Significant changes in our approach	The key audit matter identified is consistent with the prior year. No significant changes are noted in the scope of our group audit with reference to number of components identified and audit procedures performed.

INDEPENDENT AUDITOR'S REPORT CONTINUED TO THE MEMBERS OF GENUS PLC

4. Conclusions relating to going concern
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.

Our evaluation of the directors' assessment of the Group's and Parent Company's ability to continue to adopt the going concern basis of accounting included:

- Obtaining an understanding the Group's process for assessing the going concern assumption including the relevant management review controls underpinning this assessment;
- Gaining an understanding as to the relevant assumptions used in the going concern models, including the Strategic Plan, and challenging these assumptions through comparison with our own understanding of the business, external information, and evidence gathered over the course of our audit, including:
  - Reading analyst reports, industry data and other external information and inspecting them for both corroborative and contradictory evidence in relation to these assumptions;
  - Challenging forecasted profit by comparison to recent historical financial information;
  - Challenging the key underlying data used in forecast scenarios by assessing it for consistency with our understanding of the business model and risks; and
  - Performing additional analysis to determine the level of sensitivity in forecast headroom in relation to cash and covenants.
- Assessing the mechanical accuracy of the Group's models;
- Reviewing the terms of the Group's financing arrangements as at the balance sheet date, comprising a £150m multi-currency RCF, a US$125m RCF and a US$20m bond and guarantee facility; reperforming debt covenant computations over the going concern period; and evaluating the associated disclosures;
- Reviewing the terms of the extended financing arrangements, requested on 22 July and approved on 26 August 2022, as disclosed in note 27 to the financial statements; and
- Evaluating the Group's disclosures against the requirements of IAS 1 'Presentation of Financial Statements'.

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 Group's and Parent 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 relation to the reporting on how the group has applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting.

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

5. Key audit matters
Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of Biological Assets under IAS 41 'Agriculture'

Key audit matter description	The Group carries biological assets at fair value in line with the requirements of IAS 41 'Agriculture'. Discounted cash flow analyses are performed in determining the valuation. As at 30 June 2022, the Group held total biological assets (excluding those recognised in inventory) of £366.8m (2021: £319.5m). Certain of the assumptions included within the valuation models are subject to estimation uncertainty, and accordingly, require the exercise of a significant degree of judgement. In planning our audit, we identified the following assumptions as being the most significant in the determination of the valuation of each species: **Bovine:** the future growth rates of proven and genomic semen sales, and the discount rate applied. **Porcine:** the discount rates applied to the forecast cash flows in respect of the Pureline herd. Details of the key sources of estimation uncertainty identified, the Group's accounting policy, and the biological assets held are disclosed in notes 4 and 16 to the financial statements. The Audit & Risk Committee set out within their areas of focus on page 67 how they have considered the Group's judgements.

How the scope of our audit responded to the key audit matter	In responding to the identified key audit matter, we completed the following audit procedures: > Obtained an understanding of controls relevant to the review and approval of the valuation of biological assets; > Assessed the appropriateness of the logic and mechanical accuracy of the valuation models prepared and the methodology applied by the Group for compliance with the requirements of IAS 41 'Agriculture'; > Made enquiries of management to understand the rationale applied in the determination of key assumptions and any changes year on year; > Challenged the appropriateness of key assumptions applied within the underlying forecasts, with consideration given to historical forecasting accuracy and availability of third-party benchmarking data (where appropriate), historical transactional data or other comparable sources (where available), and an assessment as to the appropriateness of the directors' retrospective review of key assumptions applied; > Involved our valuation specialists in our consideration as to the appropriateness of the discount rates applied by the directors in determining the fair value of biological assets; > Performed independent 'stand-back' analysis to assess whether the valuation determined by the directors was consistent with expectation and that any variations on prior year were supportable; and > Assessed the completeness and accuracy of disclosures made within the financial statements in accordance with IAS 41 'Agriculture', and IAS 1 'Presentation of Financial Statements'.
Key observations	We are satisfied that the valuation of biological assets and the related disclosures are appropriate.

6. Our application of materiality
6.1. Materiality
We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Parent company financial statements
Materiality	£3.1m (2021: £3.3m)	£2.6m (2021: £2.6m)
Basis for determining materiality	We determined materiality on the basis of 5% of forecast profit before tax excluding exceptional items (as defined in note 7) and changes in net IAS 41 valuation movement on biological assets. Our determined materiality equates to 5.6% of this measure at year end and 6.4% of statutory profit before tax.	1% (2021: 1%) of Net Assets
Rationale for the benchmark applied	We selected this adjusted profit before tax measure so as to avoid distortion that could otherwise arise from non-recurring items, highly volatile items or IAS 41 fair value movements. Additionally, following updates to forecast and actual results, we considered revenue and net asset metrics in our determination not to revise materiality.	Net Assets were selected as an appropriate benchmark for determining materiality, as the Parent Company acts primarily as a holding company.

6.2. Performance materiality
We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole.

	Group financial statements	Parent company financial statements
Performance materiality	70% (2021: 70%) of Group materiality	70% (2021: 70%) of Parent Company materiality
Basis and rationale for determining performance materiality	In determining performance materiality, we considered the following factors: > Our cumulative knowledge of the Group and its control environment; > The low turnover in key management personnel; > The high degree of centralisation in the Group's financial reporting controls and processes; and > The low number of corrected and uncorrected misstatements identified in prior periods.	

INDEPENDENT AUDITOR'S REPORT CONTINUED TO THE MEMBERS OF GENUS PLC

6.3. Error reporting threshold
We agreed with the Audit & Risk Committee that we would report to the Committee all audit differences in excess of £155k (2021: £165k), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit & Risk Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

7. An overview of the scope of our audit
7.1. Identification and scoping of components
Our audit was scoped by obtaining an understanding of the Group and its environment, including Group-wide controls, and assessing the risks of material misstatement at the Group level.

The Group operates globally with PIC and ABS segments operating under different reporting lines in each country, and aggregated into regions. We determined that each segment within a country represents a component to our audit; for example ABS in the United Kingdom is an audit component.

Components were selected to provide an appropriate basis for undertaking audit work to address the risks of material misstatement identified. Based on that assessment, we identified 13 components of interest for the purposes of the group audit (2021: 13). Of these components, 8 were designated as subject to full scope audit procedures (2021: 8), with the remaining 5 subject to specified procedures (2021: 5). Excluding the Parent Company, our component audits were performed using materiality between £1.1m and £1.4m (2021: £1.1m and £1.4m). These components represent the principal business units and account for 73% of the Group's revenue (2021: 79%), 84% of the Group's net assets (2021: 83%) and 84% of the Group's profit before tax, excluding the impact of exceptional items and the net IAS 41 valuation movement on biological assets (2021: 88%).

At the Group level, we tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement within the aggregated financial information of the remaining components not subject to full scope audit or specified procedures.

7.2. Our consideration of the control environment
The Group is currently undergoing continued significant investment in its IT and core business processes, with the ongoing roll out of its global standardisation template, utilising Microsoft D365 technology. That investment, together with the comparative diverse infrastructure that remains across certain components of the Group led us to an audit strategy that is principally driven by substantive audit procedures.

With the involvement of our IT specialists, we have in the current year, assessed the design and implementation of general IT controls over Microsoft Dynamics 365 (for those components where the system is now live).

For all components we obtained an understanding of the relevant controls associated with the financial reporting process, areas of significant risk, and in relation to significant accounting estimates.

7.3. Our consideration of climate-related risks
As discussed on page 39, the Group has assessed the risks and opportunities associated with various future climate-related scenarios and its own commitment to transition to an operating model that has a reduced level of GHG emissions. We have considered the Group's assessment of the impact of these risks and opportunities on the financial statements and their conclusion that there is no material impact on the Group's carrying value of assets and liabilities at the balance sheet date. We assessed the related disclosures made in notes 1 to 41, and read the related narrative in the Sustainability report to consider whether it is materially consistent with our knowledge obtained in the audit.

7.4. Working with other auditors
Where appropriate, the group audit team engaged component audit teams to perform the audit procedures as set out in section 7.1. We engaged component audit teams in the UK, the US, China, Brazil, and Mexico; the group audit team performed specified audit procedures directly on components in Chile, Canada, and Russia.

The group audit team held regular communication with the component auditors in planning for, and throughout, the year-end audit process. Oversight of the component auditors included attending internal planning and status meetings, attending close meetings held with local management, and reviewing relevant audit documentation.

In light of the continued travel restrictions resulting from the COVID-19 pandemic we were not able to complete our normal programme of planned visits. In response to these restrictions, we enhanced our remote oversight through a number of measures (as appropriate to each component), including more frequent dialogue and use of video conferencing and screen-sharing facilities.

8. Other information
The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the annual report.

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

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 course of the audit, or otherwise appears to be materially misstated.

If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

9. Responsibilities of directors
As explained more fully in the directors' responsibilities statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine 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 group's and the parent 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 group or the parent company or to cease operations, or have no realistic alternative but to do so.

10. Auditor's 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 auditor's 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.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. Extent to which the audit was considered capable of detecting irregularities, including fraud
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.

11.1. Identifying and assessing potential risks related to irregularities
In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:
> the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
> the Group's own assessment of the risks that irregularities may occur either as a result of fraud or error;
> results of our enquiries of management, internal audit, and the Audit & Risk Committee about their own identification and assessment of the risks of irregularities;
> any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance, including in relation to Russian Sanctions (described in the Audit & Risk Committee report on page 65 and in note 4 to the Financial Statements), and separately in relation to the IT security incident (also referred to in the Audit & Risk Committee report on page 65);
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud;
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations;
> the matters discussed among the audit engagement team including significant component audit teams and relevant internal specialists, including tax, valuations, pensions, financial instruments and IT specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

INDEPENDENT AUDITOR'S REPORT CONTINUED
TO THE MEMBERS OF GENUS PLC

As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the area of unusual adjustments to revenue. In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included the UK Companies Act, Listing Rules, pensions legislation, and global tax legislation.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the Group's compliance with health and safety regulations, environmental regulations, global data privacy regulations, and the Russian Sanctions.

11.2. Audit response to risks identified
As a result of performing the above, we did not identify any key audit matters related to the potential risk of fraud or non-compliance with laws and regulations.

Our procedures to respond to risks identified included the following:
- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Audit & Risk Committee and in-house and external legal counsel concerning actual and potential litigation and claims;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports;
- in addressing the risk of non-compliance with laws and regulations in relation to the IT security incident, working with our IT specialists to understand the scope of the incident, evaluating reports from management's experts, and assessing correspondence with external parties;
- in addressing the risk of non-compliance with the Russian Sanctions, enquiring of internal legal counsel and evaluating correspondence with external legal counsel;
- in addressing the risk of fraud through unusual adjustments to revenue, leveraging bespoke analytics to identify revenue entries with characteristics that appeared unusual, and testing the appropriateness of these entries by tracing to supporting documentation and evaluating the business rationale; and
- in addressing the risk of fraud through unusual adjustments to revenue and management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

FINANCIAL STATEMENTS

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

12. Opinions on other matters prescribed by the Companies Act 2006
In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:
- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the group and the parent company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the directors' report.

13. Corporate Governance Statement
The Listing Rules require us to review the directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the Group's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements and our knowledge obtained during the audit:
- the directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 47;
- the directors' explanation as to its assessment of the group's prospects, the period this assessment covers and why the period is appropriate set out on page 47;
- the directors' statement on fair, balanced and understandable set out on page 106;
- the board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on pages 43 to 46;
- the section of the annual report that describes the review of effectiveness of risk management and internal control systems set out on page 68; and
- the section describing the work of the Audit & Risk Committee set out on page 66.

14. Matters on which we are required to report by exception
14.1. Adequacy of explanations received and accounting records
Under the Companies Act 2006 we are required to report to you if, in our opinion:
> we have not received all the information and explanations we require for our audit; or
> adequate accounting records have not been kept by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
> the parent company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14.2. Directors' remuneration
Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the Directors' Remuneration Report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

15. Other matters which we are required to address
15.1. Auditor tenure
Following the recommendation of the Audit & Risk Committee, we were appointed by the Board of Directors on 8 June 2006 to audit the financial statements for the year ending 30 June 2006 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is 17 years, covering the years ending 30 June 2006 to 30 June 2022.

15.2. Consistency of the audit report with the additional report to the Audit & Risk Committee
Our audit opinion is consistent with the additional report to the Audit & Risk Committee we are required to provide in accordance with ISAs (UK).

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

As required by the Financial Conduct Authority (FCA) Disclosure Guidance and Transparency Rule (DTR) 4.1.14R, these financial statements form part of the European Single Electronic Format (ESEF) prepared Annual Financial Report filed on the National Storage Mechanism of the UK FCA in accordance with the ESEF Regulatory Technical Standard ('ESEF RTS'). This auditor's report provides no assurance over whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS.

Mark Tolley FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
Reading, United Kingdom
7 September 2022

GROUP INCOME STATEMENT
FOR THE YEAR ENDED 30 JUNE 2022

	Note	2022 £m	2021 £m
REVENUE	5, 6	**593.4**	574.3
Adjusted operating profit	5	**68.8**	76.9
Adjusting items:			
– Net IAS 41 valuation movement on biological assets	16	**(5.4)**	(10.8)
– Amortisation of acquired intangible assets	15	**(8.3)**	(7.4)
– Share-based payment expense	30	**(3.7)**	(7.7)
		(17.4)	(25.9)
Exceptional items (net)	7	**(2.0)**	(3.3)
Total adjusting items		**(19.4)**	(29.2)
OPERATING PROFIT	8	**49.4**	47.7
Share of post-tax profit of joint ventures and associates retained	18	**5.2**	13.1
Finance costs	10	**(6.6)**	(5.4)
Finance income	10	**0.4**	0.4
PROFIT BEFORE TAX		**48.4**	55.8
Taxation	11	**(11.7)**	(9.0)
PROFIT FOR THE YEAR		**36.7**	46.8
ATTRIBUTABLE TO:			
Owners of the Company		**40.9**	47.3
Non-controlling interest		**(4.2)**	(0.5)
		36.7	46.8
EARNINGS PER SHARE			
Basic earnings per share	12	**62.5p**	72.6p
Diluted earnings per share	12	**62.2p**	72.0p

	Note	2022 £m	2021 £m
Alternative Performance Measures			
Adjusted operating profit		**68.8**	76.9
Adjusted operating profit attributable to non-controlling interest		**(0.3)**	(0.1)
Pre-tax share of profits from joint ventures and associates excluding net IAS 41 valuation movement		**9.2**	13.0
Gene editing costs		**7.9**	7.6
Adjusted operating profit including joint ventures and associates, excluding gene editing costs		**85.6**	97.4
Gene editing costs		**(7.9)**	(7.6)
Adjusted operating profit including joint ventures and associates		**77.7**	89.8
Net finance costs	10	**(6.2)**	(5.0)
Adjusted profit before tax		**71.5**	84.8
Adjusted earnings per share			
Basic adjusted earnings per share	12	**82.7p**	100.9p
Diluted adjusted earnings per share	12	**82.3p**	100.1p

Adjusted results are the Alternative Performance Measures ('APMs') used by the Board to monitor underlying performance at a Group and operating segment level, which are applied consistently throughout. These APMs should be considered in addition to statutory measures, and not as a substitute for or as superior to them. For more information on APMs, see APM Glossary.

GROUP STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 30 JUNE 2022

	Note	2022 £m	2022 £m	2021 £m	2021 £m
PROFIT FOR THE YEAR			**36.7**		46.8
Items that may be reclassified subsequently to profit or loss					
Foreign exchange translation differences		**66.6**		(45.2)	
Fair value movement on net investment hedges	26	**(0.7)**		0.4	
Fair value movement on cash flow hedges		**1.9**		0.2	
Tax relating to components of other comprehensive expense	11	**(8.2)**		7.6	
			59.6		(37.0)
Items that may not be reclassified subsequently to profit or loss					
Actuarial gains on retirement benefit obligations	29	**27.3**		22.3	
Movement on pension asset recognition restriction	29	**(69.8)**		(0.1)	
Release/(recognition) of additional pension liability	29	**43.7**		(19.9)	
(Loss)/gain on equity instruments measured at fair value		**(6.1)**		6.7	
Tax relating to components of other comprehensive income/(expense)	11	**1.1**		(2.0)	
			(3.8)		7.0
OTHER COMPREHENSIVE INCOME/(EXPENSE) FOR THE YEAR			**55.8**		(30.0)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR			**92.5**		16.8
ATTRIBUTABLE TO:					
Owners of the Company		**97.3**		17.1	
Non-controlling interest		**(4.8)**		(0.3)	
			92.5		16.8

GROUP STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 30 JUNE 2022

	Note	Called up share capital £m	Share premium account £m	Own shares £m	Translation reserve £m	Hedging reserve £m	Retained earnings £m	Total £m	Non-controlling interest £m	Total equity £m
BALANCE AT 30 JUNE 2020		6.5	179.1	(0.1)	29.5	(0.2)	280.7	495.5	(1.0)	494.5
Foreign exchange translation differences, net of tax		–	–	–	(37.7)	–	–	(37.7)	0.2	(37.5)
Fair value movement on net investment hedges, net of tax		–	–	–	0.3	–	–	0.3	–	0.3
Fair value movement on cash flow hedges, net of tax		–	–	–	–	0.2	–	0.2	–	0.2
Gain on equity instruments measured at fair value, net of tax		–	–	–	–	–	5.0	5.0	–	5.0
Actuarial gains on retirement benefit obligations, net of tax		–	–	–	–	–	19.8	19.8	–	19.8
Movement on pension asset recognition restriction, net of tax		–	–	–	–	–	(0.1)	(0.1)	–	(0.1)
Recognition of additional pension liability, net of tax		–	–	–	–	–	(17.7)	(17.7)	–	(17.7)
Other comprehensive (expense)/income for the year		–	–	–	(37.4)	0.2	7.0	(30.2)	0.2	(30.0)
Profit/(loss) for the year		–	–	–	–	–	47.3	47.3	(0.5)	46.8
Total comprehensive (expense)/income for the year		–	–	–	(37.4)	0.2	54.3	17.1	(0.3)	16.8
Recognition of share-based payments, net of tax		–	–	–	–	–	4.9	4.9	–	4.9
Dividends	13	–	–	–	–	–	(19.5)	(19.5)	–	(19.5)
Adjustment arising from change in non-controlling interest and written put option		–	–	–	–	–	–	–	(0.2)	(0.2)
Issue of ordinary shares		0.1	–	–	–	–	–	0.1	–	0.1
BALANCE AT 30 JUNE 2021		6.6	179.1	(0.1)	(7.9)	–	320.4	498.1	(1.5)	496.6
Foreign exchange translation differences, net of tax		–	–	–	**59.4**	–	–	**59.4**	**(0.6)**	**58.8**
Fair value movement on net investment hedges, net of tax		–	–	–	**(0.6)**	–	–	**(0.6)**	–	**(0.6)**
Fair value movement on cash flow hedges, net of tax		–	–	–	–	**1.4**	–	**1.4**	–	**1.4**
Loss on equity instruments measured at fair value, net of tax		–	–	–	–	–	**(4.6)**	**(4.6)**	–	**(4.6)**
Actuarial gains on retirement benefit obligations, net of tax		–	–	–	–	–	**19.5**	**19.5**	–	**19.5**
Movement on pension asset recognition restriction, net of tax		–	–	–	–	–	**(49.7)**	**(49.7)**	–	**(49.7)**
Recognition of additional pension liability, net of tax		–	–	–	–	–	**31.0**	**31.0**	–	**31.0**
Other comprehensive (expense)/income for the year		–	–	–	**58.8**	**1.4**	**(3.8)**	**56.4**	**(0.6)**	**55.8**
Profit/(loss) for the year		–	–	–	–	–	**40.9**	**40.9**	**(4.2)**	**36.7**
Total comprehensive (expense)/income for the year		–	–	–	**58.8**	**1.4**	**37.1**	**97.3**	**(4.8)**	**92.5**
Recognition of share-based payments, net of tax		–	–	–	–	–	**4.0**	**4.0**	–	**4.0**
Dividends	13	–	–	–	–	–	**(20.9)**	**(20.9)**	–	**(20.9)**
Adjustment arising from change in non-controlling interest and written put option		–	–	–	–	–	–	–	**(0.1)**	**(0.1)**
BALANCE AT 30 JUNE 2022		**6.6**	**179.1**	**(0.1)**	**50.9**	**1.4**	**340.6**	**578.5**	**(6.4)**	**572.1**

GROUP BALANCE SHEET
AS AT 30 JUNE 2022

	Note	2022 £m	2021 £m
ASSETS			
Goodwill	14	**111.0**	101.5
Other intangible assets	15	**72.0**	56.3
Biological assets	16	**333.7**	279.9
Property, plant and equipment	17	**171.4**	123.0
Interests in joint ventures and associates	18	**41.2**	34.1
Other investments	19	**10.2**	14.7
Derivative financial assets	26	**2.2**	–
Other receivables	21	**8.6**	1.8
Deferred tax assets	11	**10.1**	8.0
TOTAL NON-CURRENT ASSETS		**760.4**	619.3
Inventories	20	**50.9**	37.0
Biological assets	16	**33.1**	39.6
Trade and other receivables	21	**129.5**	106.2
Cash and cash equivalents	22	**38.8**	46.0
Income tax receivable		**4.0**	2.6
Derivative financial assets	26	**1.0**	0.1
Asset held for sale		**0.2**	0.2
TOTAL CURRENT ASSETS		**257.5**	231.7
TOTAL ASSETS		**1,017.9**	851.0
LIABILITIES			
Trade and other payables	23	**(124.7)**	(110.3)
Interest-bearing loans and borrowings	27	**(7.1)**	(13.9)
Provisions	25	**(1.9)**	(1.3)
Deferred consideration	38	**(0.8)**	(1.6)
Obligations under leases	28	**(10.1)**	(9.0)
Tax liabilities		**(4.9)**	(6.4)
Derivative financial liabilities	26	**(1.8)**	–
TOTAL CURRENT LIABILITIES		**(151.3)**	(142.5)
Trade and other payables	23	**(0.2)**	(1.4)
Interest-bearing loans and borrowings	27	**(182.1)**	(109.4)
Retirement benefit obligations	29	**(8.3)**	(11.1)
Provisions	25	**(12.0)**	(11.1)
Deferred consideration	38	**(0.7)**	(0.5)
Deferred tax liabilities	11	**(60.3)**	(53.0)
Derivative financial liabilities	26	**(6.4)**	(6.1)
Obligations under leases	28	**(24.5)**	(19.3)
TOTAL NON-CURRENT LIABILITIES		**(294.5)**	(211.9)
TOTAL LIABILITIES		**(445.8)**	(354.4)
NET ASSETS		**572.1**	496.6
EQUITY			
Called up share capital	31	**6.6**	6.6
Share premium account		**179.1**	179.1
Own shares	31	**(0.1)**	(0.1)
Translation reserve	31	**50.9**	(7.9)
Hedging reserve	31	**1.4**	–
Retained earnings		**340.6**	320.4
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY		**578.5**	498.1
Non-controlling interest	39	**(0.7)**	3.6
Put option over non-controlling interest	39	**(5.7)**	(5.1)
TOTAL NON-CONTROLLING INTEREST		**(6.4)**	(1.5)
TOTAL EQUITY		**572.1**	496.6

The Financial Statements were approved and authorised for issue by the Board of Directors on 7 September 2022.

Signed on behalf of the Board of Directors

Stephen Wilson
Chief Executive

Alison Henriksen
Chief Financial Officer

FINANCIAL STATEMENTS

GROUP STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 30 JUNE 2022

	Note	2022 £m	2021 £m
NET CASH FLOW FROM OPERATING ACTIVITIES	32	**34.3**	67.5
CASH FLOWS FROM INVESTING ACTIVITIES			
Dividends received from joint ventures and associates	18	**3.2**	4.1
Joint venture and associate loan payment	18	**–**	(0.4)
Acquisition of joint venture and associate	18	**(2.2)**	(2.4)
Acquisition of trade and assets		**(0.8)**	(6.9)
Acquisition of Olymel AlphaGene assets		**(14.5)**	–
Acquisition of investments		**(1.0)**	(0.9)
Payment of deferred consideration	38	**(1.0)**	(6.7)
Purchase of property, plant and equipment		**(42.1)**	(28.7)
Purchase of intangible assets		**(8.8)**	(5.1)
Proceeds from sale of property, plant and equipment		**–**	0.3
NET CASH OUTFLOW FROM INVESTING ACTIVITIES		**(67.2)**	(46.7)
CASH FLOWS FROM FINANCING ACTIVITIES			
Drawdown of borrowings		**138.7**	195.1
Repayment of borrowings		**(83.9)**	(176.1)
Payment of lease liabilities		**(11.3)**	(11.7)
Equity dividends paid		**(20.9)**	(19.5)
Dividend to non-controlling interest		**(0.1)**	(0.2)
Debt issue costs		**(0.6)**	(1.9)
Issue of ordinary shares		**–**	0.1
NET CASH INFLOW/(OUTFLOW) FROM FINANCING ACTIVITIES		**21.9**	(14.2)
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS		**(11.0)**	6.6
Cash and cash equivalents at start of the year		**46.0**	41.3
Net (decrease)/increase in cash and cash equivalents		**(11.0)**	6.6
Effect of exchange rate fluctuations on cash and cash equivalents		**3.8**	(1.9)
TOTAL CASH AND CASH EQUIVALENTS AT 30 JUNE	22	**38.8**	46.0

NOTES TO THE GROUP FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

1. REPORTING ENTITY

Genus plc (the 'Company') is a public company limited by shares and incorporated in England, United Kingdom under the Companies Act 2006. Its company number is 02972325 and its registered office is Matrix House, Basing View, Basingstoke, Hampshire RG21 4DZ. The Group Financial Statements for the year ended 30 June 2022 comprise the Company and its subsidiaries (together referred to as the 'Group'). We have used the equity method to account for the Group's interests in joint ventures and associates. Our business model on pages 12 to 13 explains the Group's operations and principal activities.

2. BASIS OF PREPARATION

We have prepared the Group Financial Statements in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006. The Group Financial Statements have also been prepared in accordance with International Financial Reporting Standards ('IFRS') as issued by the International Accounting Standards Board ('IASB').

Unless otherwise stated, we have consistently applied the significant accounting policies set out below to all periods presented in these Group Financial Statements.

The going concern statement has been included in the Strategic Report on page 47 and forms part of these statements.

Functional and presentational currency

We present the Group Financial Statements in Sterling, which is the Company's functional and presentational currency. All financial information presented in Sterling has been rounded to the nearest £0.1m.

Use of estimates

Preparing financial statements requires management to make judgements, estimates and assumptions that affect our application of accounting policies and our reported assets, liabilities, income and expenses. Our actual results may differ from these estimates. We review our estimates and underlying assumptions on an ongoing basis, and recognise revisions to accounting estimates in the period in which we revise the estimate and in any future periods affected.

Note 4 provides information about significant areas of estimation uncertainty and the critical judgements we made in applying accounting policies that have the most effect on the amounts recognised in the Financial Statements.

Alternative Performance Measures ('APMs')

In reporting financial information, the Group presents APMs, which are not defined or specified under the requirements of IFRS and which are not considered to be a substitute for, or superior to, IFRS measures.

The Group believes that these APMs provide stakeholders with additional helpful information on the performance of the business. The APMs are consistent with how we plan our business performance and report on it in our internal management reporting to the Board and GELT. Some of these measures are also used for the purpose of setting remuneration targets.

For a full list of all APMs please see the Alternative Performance Measures section of the Annual Report on pages 190 to 197.

3. SIGNIFICANT ACCOUNTING POLICIES APPLIED IN THE CURRENT REPORTING PERIOD THAT RELATE TO THE FINANCIAL STATEMENTS AS A WHOLE

This section sets out our significant accounting policies that relate to the Financial Statements as a whole. Where an accounting policy is generally applicable to a specific note to the Financial Statements, the policy has been described in that note. We have also detailed below the new accounting pronouncements that we will adopt in future years and our current view of the impact they will have on our financial reporting.

Accounting convention

We prepare the Group Financial Statements under the historical cost convention, except for our biological assets, share-based payment expense, pension liabilities and derivative financial instruments. In accordance with IFRS, we measure biological assets at fair value less point-of-sale costs, which represent distribution costs and selling expenses, and share-based payment expense, pension liabilities, and certain financial instruments at fair value.

Basis of consolidation

Subsidiaries are entities the Group controls. We have control of an entity when we are exposed, or have the rights, to variable returns from the entity and have the ability to affect the returns through power over the entity. In assessing control, we take into account potential voting rights that we can currently exercise or convert. We fully consolidate the results of subsidiaries we acquire from the date that control transfers to the Group. We cease consolidating the results of subsidiaries that we cease to control from the date that control passes.

In preparing the Group Financial Statements, we eliminate intra-Group balances and any unrealised income and expenses arising from intra-Group transactions. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment, to the extent of our interest in the investee. We eliminate unrealised losses in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

Foreign currencies

We record foreign currency transactions in the relevant Group entity's functional currency, at the exchange rate on the transaction date. At each balance sheet date, we retranslate monetary assets and liabilities denominated in foreign currencies at the exchange rate on the balance sheet date. We recognise the foreign exchange differences arising on retranslation in the Group Income Statement.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

3. SIGNIFICANT ACCOUNTING POLICIES APPLIED IN THE CURRENT REPORTING PERIOD THAT RELATE TO THE FINANCIAL STATEMENTS AS A WHOLE CONTINUED

When non-monetary assets and liabilities are measured at historical cost in a foreign currency, we translate them at the exchange rate at the transaction date. When non-monetary assets and liabilities are stated at fair value in a foreign currency, we translate them at the prevailing exchange rate on the date we determined the fair value. We recognise the foreign exchange differences arising on retranslation in the Group Statement of Comprehensive Income.

The assets and liabilities of foreign operations, including goodwill arising on consolidation, are translated into Sterling at the prevailing exchange rates at the balance sheet date. The resulting exchange differences are booked into foreign currency translation reserves and reported in the Group Statement of Comprehensive Income. We translate these operations' revenues and expenses using an average rate for the period.

When exchange differences arise from the fair value movement of related effective hedges, we take them to the foreign currency translation reserve. When we dispose of a foreign operation, we release these differences to the Income Statement. Exchange movements on inter-company loans considered to be permanent equity are recognised in the Group Statement of Comprehensive Income, together with any related taxation.

The principal exchange rates were as follows:

	Average			Closing		
	2022	2021	2020	**2022**	2021	2020
US Dollar/£	**1.32**	1.36	1.26	**1.22**	1.38	1.24
Euro/£	**1.18**	1.13	1.14	**1.16**	1.17	1.10
Brazilian Real/£	**6.94**	7.33	5.74	**6.39**	6.87	6.77
Mexican Peso/£	**26.97**	28.15	26.08	**24.45**	27.57	28.52
Chinese Yuan/£	**8.55**	8.94	8.89	**8.15**	8.93	8.75
Russian Rouble/£	**98.75**	102.04	85.17	**66.73**	101.10	88.19

Research and development

We undertake research with the aim of gaining new scientific or technical knowledge, and recognise this expenditure in the Income Statement as it is incurred.

The Group constantly monitors its research activities. When research projects achieve technical feasibility and are commercially viable, our policy is to capitalise further development costs within intangible assets, in accordance with IAS 38.

Our development activities include developing and maintaining our porcine genetic nucleus herd and our bovine pre-stud herds. We do not capitalise development expenditure separately for these herds, as their fair value is included in the fair value of the Group's biological assets, in accordance with IAS 41.

We disclose the costs of research and development activities, as required by IAS 38 (see note 8).

Other income and deferred income

During the year ended 30 June 2019, the Company entered into a strategic collaboration with Beijing Capital Agribusiness ('BCA') under which BCA will establish and fund a collaboration specific entity ('BCA Future Bio-Tech') which will use Genus's intellectual property and know-how to pursue the PRRSv resistance regulatory and development work in China. Genus will receive consideration after meeting certain milestones in the development programme.

Each milestone is considered to be either a separate performance obligation, or a set of groups of separate performance obligations, under this agreement and are unbundled in the contractual arrangement as if they are distinct from one another.

We assess each separate performance obligation relating to the milestone payments, and upon completion of those performance obligations recognise the fair value of amounts earned in other income. Some performance obligations, such as the transfer of know-how, are recognised at a point in time whereas others, such as the provision of technical services, are recognised over time. We recognise any received but unearned consideration as deferred income.

We will apply the same accounting policy to any other comparable agreements.

Reversals of impairment

We reverse an impairment loss in respect of assets other than goodwill when the impairment loss may no longer exist and we have changed the estimates we used to determine the recoverable amount.

We only reverse an impairment loss to the extent that the asset's carrying amount does not exceed the carrying amount it would have had, net of depreciation or amortisation, if we had not recognised the impairment loss.

Climate change

In preparing these consolidated financial statements we have considered the impact of both physical and transition climate change risks on the current valuation of our assets and liabilities. We do not believe that there is a material impact on the financial reporting judgements and estimates arising from our considerations and as a result the valuations of our assets or liabilities have not been significantly impacted by these risks as at 30 June 2022. In concluding, we specifically considered the impact of climate change on the growth rates and projected cash flows as part of our goodwill impairment testing (see note 14). As government policies evolve as a result of commitments to limit global warming to 1.5°C, we will continue to monitor implications on the valuations of our assets and liabilities that could arise in future years.

3. SIGNIFICANT ACCOUNTING POLICIES APPLIED IN THE CURRENT REPORTING PERIOD THAT RELATE TO THE FINANCIAL STATEMENTS AS A WHOLE CONTINUED

New standards and interpretations
In the current year, the Group has applied a number of amendments to IFRS issued by the International Accounting Standards Board that are mandatorily effective for an accounting period that begins after 1 January 2021 and have been implemented with effect from 1 July 2021. These are:
> Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 – 'Interest Rate Benchmark Reform – Phase 2'; and
> Amendment to IFRS 16 – 'COVID-19-Related Rent Concessions beyond 30 June 2021'.

Their addition has not had any material impact on the disclosures, or amounts reported in the Group Financial Statements.

New standards and interpretations not yet adopted
At the date of the Annual Report, the following standards and interpretations which have not been applied in the report were in issue but not yet effective (and in some cases had not yet been adopted by the UK). The Group will continue to assess the impact of these amendments prior to their adoption. These are:
> Amendments to IAS 1 – 'Classification of Liabilities as Current or Non-Current';
> Amendments to IAS 16 – 'Property, Plant and Equipment – Proceeds before Intended Use';
> Annual Improvements 2018-2020 Cycle;
> Amendments to IAS 37 – 'Onerous Contracts – Cost of Fulfilling a Contract';
> Amendments to IAS 1 and IFRS Practice Statement 2 – 'Disclosure of Accounting Policies';
> Amendments to IAS 12 – 'Deferred Tax related to Assets and Liabilities arising from a Single Transaction'; and
> Amendments to IAS 8 – 'Definition of Accounting Estimates'.

4. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY
The preparation of Consolidated Financial Statements requires the Group to make estimates and judgements that affect the application of policies and reported amounts.

Critical judgements represent key decisions made by management in the application of the Group's accounting policies, where a significant risk of materially different outcomes exists due to management assumptions or sources of estimation uncertainty. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results may differ from these estimates.

The estimates which have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities within the next 12 months are discussed below.

Critical accounting judgements
Adjusting items
The Directors believe that the adjusted profit and earnings per share measures provide additional information to shareholders on the performance of the business. These measures are consistent with how business performance is measured internally by the Board and GELT.

The profit before tax and adjusting items measures are not recognised profit measures under IFRS and may not be directly comparable with adjusted profit measures used by other companies. The classification of adjusting items requires significant judgement, after considering the nature and intentions of a transaction. The Group's definitions of adjusting items are outlined within the Group accounting policies and have been applied consistently year-on-year.

Key sources of estimation uncertainty
Determination of the fair value of biological assets (note 16)
Determining the fair values of our bovine and porcine biological assets requires the application of a number of estimates and assumptions.

Below is a list of these estimates and assumptions, showing whether we consider them to be observable or unobservable inputs to the fair value determination. In addition, we identify those inputs that are 'readily obtainable' transactional data or 'open market prices'. Sensitivities of the estimates and assumptions given below are disclosed in note 16.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

4. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY CONTINUED

	Estimates and assumptions	Observable/unobservable	Source
Bovine	Long-term dairy volume growth rate	Unobservable	n/a
	Short-term dairy volume growth rate	Unobservable	n/a
	Value at point of production[1]	Unobservable	n/a
	Unit prices	Unobservable	n/a
	Animals' useful lifespan	Observable	Readily obtainable
	Percentage of new dairy bulls to be produced internally each year[1]	Unobservable	n/a
	Age profile of bulls[1]	Unobservable	n/a
	Risk-adjusted discount rate[1]	Unobservable	n/a
Porcine (non pure line herds)	Animals' useful lifespan	Observable	Readily obtainable
	The proportion of animals that go to slaughter	Observable	Readily obtainable
	The mix of boars and gilts	Observable	Readily obtainable
	Risk-adjusted discount rate	Unobservable	n/a
Porcine (pure line herds)	Number of future generations attributable to the current herds	Observable	Readily obtainable
	Fair value prices achieved on sales	Observable	Open market prices
	Animals' expected useful lifespan and productivity	Observable	Readily obtainable
	The proportion of animals that go to breeding sales[1]	Observable	Readily obtainable
	Risk-adjusted discount rate[1]	Unobservable	n/a

1 Key sources of estimation uncertainty

For sale unit prices in bovine IAS 41 valuation model, in high inflationary environments, historical prices are not deemed to be the best estimate of future performance, so expected Board-approved budget unit prices have been used in the calculation.

Impact of Russian Sanctions
The Group has two group operating companies that are incorporated in Russia – Limited Liability Co. Genus ABS Russia and PIC Genetics LLC ('Russian-based subsidiaries/entities'). Following the sanctions that have been put in place by the UK and other governments the Group implemented a comprehensive screening process with external counsel to ensure that its Russian entities do not trade with sanctioned individuals or entities controlled by them. The main impact of the sanctions regime has been to categorise the banks in Russia into sanctioned and non-sanctioned banks. Where we receive money from sanctioned banks we are unable to use the cash without a licence from Her Majesty's Treasury ('HMT'). For cash receipts from non-sanctioned banks into the entities' non-sanctioned banks we are able to use the cash in Russia for day-to-day operations.

The Group applied for a licence to HMT on 25 April 2022 to allow the use of payments from sanctioned banks by non-sanctioned Russian customers for the delivery of porcine and bovine genetics; use money in a non-sanctioned Russian bank account in the name of Genus Russia to pay Russian suppliers who continue to use sanctioned Russian bank accounts; and to remit any excess money in Genus Russia's non-sanctioned Russian bank account (regardless of whether it was received from a sanctioned or non-sanctioned Russian bank account) to other Genus Group company UK bank accounts. As at 7 September 2022, we are awaiting a response from HMT.

Under the requirements of IAS 7, where there is cash that is not available to be used by the rest of the Group this needs to be disclosed. As at 30 June 2022, we had a cash balance of £4.5m in the Russian entities of which £3.9m is not currently available to be used by the Group due to being received from or held in sanctioned banks. If the Group were to obtain the licence from HMT referred to above the £3.9m would be available to be used by the Group.

Management have performed an assessment of the operations and cash flow over a period of 18 months from 30 June 2022 to 31 December 2023 based upon the 2023 operating plans to determine whether the Russian entities have sufficient non-sanctioned cash flow to enable them to continue day-to-day operations and to meet liabilities as they fall due. The analysis indicates they do have sufficient non-sanctioned cash flow to enable them to meet day-to-day operational needs.

Critical accounting judgement – exercise of control
Management has assessed whether the actions of the UK and Russian Governments have caused the Group to lose control of these Russian-based subsidiaries. We have concluded that we do have control for the year ended 30 June 2022, as defined under IFRS 10 'Consolidated financial statements' over the Russian-based subsidiaries and are still able to consolidate despite short-term restrictions on extracting cash. We have assessed each of the asset balances for impairment. The material areas that could give rise to impairment are:
> PIC Russia farm (£3.7m) – the value of the farm is predicated on the future economic benefit of the animals that are being reared there. We would need to assess if the open market price (less cost to sell) the property would support the carrying value.
> Trade receivables (£6.0m) – the ongoing financial sanctions may affect the ability of our customers to pay us for their goods. If it is determined that our customers are unlikely to repay these amounts then they should be provided for.
> IAS 41 valuation (£2.9m) – the ongoing impacts of both the local economic outlook and our customers' ability to pay us could result in a reversal of the fair value of the Russian biological assets in the June valuation.

The impairment analysis performed by management indicates that under the current business environment and based on the plans for the Financial Year 2023 no impairment is required as at 30 June 2022.

4. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY CONTINUED

Management will continue to monitor the situation closely to see if any further changes require additional analysis that may result in a different conclusion.

In the event of changes in legislation, such as more restrictive sanctions imposed by the UK Government or actions taken by the Russian Government, we may determine that we do not exercise control, as defined under IFRS 10 'Consolidated financial statements', over the assets and operations of the Russian entities and we would not be able to consolidate these companies into the financial statements of the Group. The deconsolidation would mean that we would reclassify the Russian entities as investments and we would need to assess for impairment. A charge of up to £16.6m may need to be recognised in the Income Statement representing the total net assets of the two Russian entities. Dependent on the nature of the events leading to the decision to deconsolidate the entities there may be additional expenses incurred which we are unable to estimate at this time. In addition, revenues would not be consolidated into the financial statements of the Genus Group from the date of any deconsolidation. Revenues from the Russian entities were £14.6m in the financial year 2022.

5. SEGMENTAL INFORMATION

IFRS 8 'Operating Segments' requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the Chief Executive and the Board, to allocate resources to the segments and to assess their performance. The Group's operating and reporting structure comprises three operating segments: Genus PIC, Genus ABS and Genus Research and Development. These segments are the basis on which the Group reports its segmental information. The principal activities of each segment are as follows:

> Genus PIC – our global porcine sales business;
> Genus ABS – our global bovine sales business; and
> Genus Research and Development – our global spend on research and development.

A segmental analysis of revenue, operating profit, depreciation, amortisation, non-current asset additions, segment assets and liabilities and geographical information is provided below. We do not include our adjusting items in the segments, as we believe these do not reflect the underlying performance of the segments. The accounting policies of the reportable segments are the same as the Group's accounting policies, as described in the Financial Statements.

Revenue	2022 £m	2021 £m
Genus PIC	**306.6**	315.6
Genus ABS	**272.0**	250.1
Genus Research and Development		
Porcine product development	**12.4**	7.3
Bovine product development	**1.7**	1.3
Gene editing	**0.7**	–
Other research and development	**–**	–
	14.8	8.6
	593.4	574.3

Adjusted operating profit by segment is set out below and reconciled to the Group's adjusted operating profit. A reconciliation of adjusted operating profit to profit for the year is shown on the face of the Group Income Statement.

Adjusted operating profit	2022 £m	2021 £m
Genus PIC	**112.3**	122.9
Genus ABS	**40.5**	36.4
Genus Research and Development		
Porcine product development	**(22.4)**	(21.9)
Bovine product development	**(22.8)**	(19.6)
Gene editing	**(7.9)**	(7.6)
Other research and development	**(14.0)**	(13.3)
	(67.1)	(62.4)
Adjusted segment operating profit	**85.7**	96.9
Central	**(16.9)**	(20.0)
Adjusted operating profit	**68.8**	76.9

Our business is not highly seasonal and our customer base is diversified, with no individual customer generating more than 2% of revenue.

Exceptional items of £2.0m expense (2021: £3.3m expense) relate to Genus ABS (£4.2m expense) (2021: 2.5m expense), Genus PIC (£0.6m expense) (2021: £0.3m expense) and our central segment (£2.8m credit) (2021: £0.5m expense). Note 7 provides details of these exceptional items.

We consider share-based payment expenses on a Group-wide basis and do not allocate them to reportable segments.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

5. SEGMENTAL INFORMATION CONTINUED

Other segment information

	Depreciation		Amortisation		Additions to non-current assets (excluding deferred taxation and financial instruments)	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Genus PIC	**4.5**	3.0	**7.4**	6.5	**45.2**	10.0
Genus ABS	**14.3**	13.3	**3.4**	2.8	**25.4**	26.8
Genus Research and Development						
Research	**1.0**	0.7	**–**	–	**3.3**	1.7
Porcine product development	**2.2**	1.9	**–**	–	**1.3**	7.1
Bovine product development	**2.0**	1.8	**0.2**	0.2	**2.7**	2.7
	5.2	4.4	**0.2**	0.2	**7.3**	11.5
Segment total	**24.0**	20.7	**11.0**	9.5	**77.9**	48.3
Central	**2.4**	3.3	**1.6**	1.6	**5.8**	3.9
Total	**26.4**	24.0	**12.6**	11.1	**83.7**	52.2

	Segment assets		Segment liabilities	
	2022 £m	2021 £m	2022 £m	2021 £m
Genus PIC	**305.4**	261.5	**(73.4)**	(57.4)
Genus ABS	**261.4**	203.1	**(78.9)**	(56.0)
Genus Research and Development				
Research	**14.7**	17.8	**(4.4)**	(6.1)
Porcine product development	**275.0**	213.6	**(57.7)**	(55.0)
Bovine product development	**119.6**	125.0	**(16.7)**	(25.5)
	409.3	356.4	**(78.8)**	(86.6)
Segment total	**976.1**	821.0	**(231.1)**	(200.0)
Central	**41.8**	30.0	**(214.7)**	(154.4)
Total	**1,017.9**	851.0	**(445.8)**	(354.4)

Geographical information

The Group's revenue by geographical segment is analysed below. This analysis is stated on the basis of where the customer is located.

Revenue

	2022 £m	2021 £m
North America	**238.5**	214.7
Latin America	**94.6**	83.8
UK	**88.7**	92.2
Rest of Europe, Middle East, Russia and Africa	**88.3**	82.1
Asia	**83.3**	101.5
	593.4	574.3

Non-current assets (excluding deferred taxation and financial instruments)

The Group's non-current assets by geographical segment are analysed below and are stated on the basis of where the assets are located.

	2022 £m	2021 £m
North America	**529.6**	419.5
Latin America	**56.7**	46.1
UK	**69.8**	73.3
Rest of Europe, Middle East, Russia and Africa	**45.7**	44.6
Asia	**46.3**	27.8
	748.1	611.3

6. REVENUE

Accounting policy

The Group recognises revenue from the following sources:

> sale of bovine and porcine semen, porcine breeding animals, embryos and ancillary products;
> royalties;
> consulting;
> technical services and advice revenues;
> installation and maintenance of IntelliGen technology;
> licensing of IntelliGen technology;
> slaughter animal sales; and
> bovine partnership contracts.

Revenue is measured based on the consideration the Group expects to be entitled to under a contract with a customer and excludes amounts collected on behalf of third parties. The Group recognises revenue when it transfers control of a product or service to a customer.

The sale of bovine and porcine semen, porcine breeding animals, embryos and ancillary products

Revenue from the sale of bovine and porcine semen, porcine breeding animals, embryos and ancillary products is recognised when the control of the goods has transferred to the customer or distributor. This is either when we ship to customers or on delivery, depending on the terms of sale. Payment of the transaction price is due immediately, or within a short period of time, from the point the customer or distributor controls the goods.

Royalties

Royalties are recognised when the performance obligation is met. We receive royalty payments from certain porcine customers based on key performance variables, such as the number of pigs born per litter, the number of litters born per sow and the average slaughter weight of the animals born. This amount is confirmed directly to Genus by the customer. Payment of the transaction price is due immediately from the customer, or within a short period of time, once the performance obligation is satisfied.

Consulting

Revenue from consulting represents the amounts we charged for services we provided during the year, including recoverable expenses. We recognise consulting services provided but not yet billed as revenue, based on a fair value assessment of the work we have delivered and our contractual right to receive payment. Where unbilled revenue is contingent on a future event, we do not recognise any revenue until the event occurs.

Technical services and advice revenues

Revenue from technical services and advice revenues represents the amounts we charged for services we provided during the year, including recoverable expenses. We recognise technical services and advice revenues provided but not yet billed as revenue, based on a fair value assessment of the work we have delivered and our contractual right to receive payment. Where unbilled revenue is contingent on a future event, we do not recognise any revenue until the event occurs. Technical services and advice revenues are presented in ancillary services in the table on the following page.

Installation and maintenance of IntelliGen technology

Revenue from the installation of IntelliGen technology is recognised by reference to the stage of completion of the installation and is based on milestones being met. Maintenance is provided as a distinct service to customers and is recognised over the period of the service agreement. These revenues are presented in ancillary services in the following table.

Licensing of IntelliGen technology

Revenue from the licensing of IntelliGen technology is recognised at a point in time when the licence is granted. In determining the transaction price, any minimum royalties due under the contracts are included in the value apportioned to the grant of the licence, excluding any royalties that arise on units produced in excess of the guaranteed minimums. These additional royalties have been determined to be a usage-based royalty and are recognised as revenue at the point in time that the units are produced. These revenues are presented in ancillary services in the table on the table on the following page.

Slaughter of animals

Revenue from the slaughter of animals is recognised when control of the goods has transferred to the slaughterhouse, which is generally on the delivery of animals to the slaughterhouse. Payment of the transaction price is due immediately, or within a short period of time, from the point the slaughterhouse controls the goods.

Bovine partnership contracts

Partnership contracts include the provision of multiple bovine products and services for a single price. The contract price is allocated to the individual performance obligations based on their standalone selling prices. The expected revenue is recognised for the products and services once the individual performance obligation has been satisfied. Revenues from partnership contracts are presented in sale of animals, semen, embryos and ancillary products and services.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

6. REVENUE CONTINUED

	2022 £m	2021 £m
Genus PIC	**158.4**	172.6
Genus ABS	**262.5**	242.2
Genus Research and Development	**14.8**	8.6
Sale of animals, semen, embryos and ancillary products and services	**435.7**	423.4
Genus PIC	**148.2**	143.0
Genus ABS	**1.1**	0.6
Genus Research and Development	**–**	–
Royalties	**149.3**	143.6
Genus PIC	**–**	–
Genus ABS	**8.4**	7.3
Genus Research and Development	**–**	–
Consulting services	**8.4**	7.3
Total revenue	**593.4**	574.3

Revenue from contracts with customers
The Group's revenue is analysed below by the timing at which it is recognised.

	2022 £m	2021 £m
Genus PIC	**303.2**	312.8
Genus ABS	**247.2**	229.1
Genus Research and Development	**14.1**	8.6
Recognised at a point in time	**564.5**	550.5
Genus PIC	**3.4**	2.8
Genus ABS	**24.8**	21.0
Genus Research and Development	**0.7**	–
Recognised over time	**28.9**	23.8
Total revenue	**593.4**	574.3

An analysis of contract assets and contract liabilities is provided in note 24.

7. EXCEPTIONAL ITEMS

Accounting policy
We present exceptional items separately, as we believe it helps to improve the understanding of the Group's underlying performance.

In determining whether an item should be presented as exceptional, we consider items which are material either because of their size or their nature, and those which are non-recurring. For an item to be considered as exceptional, it must initially meet at least one of the following criteria:
> it is a one-off material item;
> it has been directly incurred as the result of either an acquisition, integration or other major restructuring programme;
> it has been previously classified as an exceptional item, and as such consistent accounting treatment is being applied; or
> it is unusual in nature, e.g. outside the normal course of business.

If an item meets at least one of the criteria, we then exercise judgement as to whether the item should be classified as exceptional. For the tax and cash impact of exceptional items see notes 11 and 32, respectively.

Operating (expense)/credit	2022 £m	2021 £m
Litigation and damages	**(1.4)**	(2.5)
Acquisition and integration	**(0.3)**	(0.3)
Pension related	**(0.4)**	(2.3)
Legacy legal claim	**3.3**	–
ABS production restructuring	**(2.8)**	–
Other	**(0.4)**	1.8
	(2.0)	(3.3)

7. EXCEPTIONAL ITEMS CONTINUED

Litigation and damages
Litigation includes legal fees and related costs of £1.4m (2021: £2.5m) related to the actions between ABS Global, Inc. and certain affiliates ('ABS') and Inguran, LLC and certain affiliates (aka STgenetics ('ST')). For information on amounts provided for, see note 25.

Material litigation activities during the year ended 30 June 2022
In July 2014, ABS launched a legal action against ST in the US District Court for the Western District of Wisconsin and initiated anti-trust proceedings which ultimately enabled the launch of ABS's IntelliGen sexing technology in the US market ('ABS I'). In June 2017, ST filed proceedings against ABS in the same District Court, where ST alleged that ABS infringed seven patents and asserted trade secret and breach of contract claims ('ABS II'). The ABS I and ABS II proceedings in the periods before the year ended 30 June 2021 are more fully described in the Notes to the Financial Statements in previous Annual Reports. ABS sought judgments as a matter of law ('JMOL') in relation to the invalidity of all three of the patents considered in ABS II, JMOLs in relation to the non-infringement of two of those patents, and a reduction in damages awarded by the jury.

On 29 January 2020, ST filed a new US complaint against ABS ('ABS III'). ABS has prepared and filed a response to the ABS III complaint, including a motion to dismiss, on the basis that all these issues were fully resolved in either the ABS I or ABS II litigations.

On 10 March 2020, the USPTO issued patent 10,583,439 (the "439 patent'), and subsequently ST asked the court for permission to file a supplemental complaint in ABS III asserting infringement of the '439 patent. On 15 April 2020, ST filed a new complaint ('ABS IV'), asserting the same claim of infringement of the '439 patent alleged in its supplemental complaint and then moved to consolidate the ABS IV and ABS III litigation. ABS opposed this action and has filed a motion for summary dismissal. On 23 June 2020, the USPTO issued patent 10,689,210 (the "210 patent'), and on 6 July 2020, ST sought a second supplement of ABS III by adding a claim of '210 patent infringement. ABS opposed this action.

On 26 October 2020 and 10 December 2020, ABS filed Inter Partes Reviews ('IPR') against the '439 and '210 patents with the USPTO. On 4 May 2021, the Patent Trial and Appeal Board ('PTAB') instituted the '439 patent IPR, and the hearing was completed on 2 February 2022. On 7 June 2021, PTAB declined to institute the '210 patent IPR and on 28 April 2022, PTAB issued its decision and declined to invalidate the claims of the '439 patent.

On 20 December 2021, the Wisconsin Federal Court reached a decision on the ABS III and IV motions, granting ABS's motion to dismiss all claims relating to US patent 8,206,987 (the "987 patent'), and denying ST's motion to amend ABS III to add the '439 and '210 patents. The court dismissed ABS III in its entirety and entered judgment in favour of ABS. ST has appealed this decision.

On 1 July 2022, the court reached a decision on the ABS II post-judgment motions as well as the pending motions in ABS IV. The court deferred to the jury's verdict in ABS II confirming the validity and infringement of US patents 7,311,476, 7,611,309 (the "476 and '309 patents' respectively) and the '987 patent, and further confirmed the award of costs to ABS of ~$5.3m in connection with ABS I. In relation to ABS IV, the Court denied ABS' motion to dismiss the '439 and '210 patent claims on the basis that the challenges were too fact-based to be resolved at this stage. A court scheduling conference confirmed a hearing date of 15 July 2024 for ABS IV hearing. Appeals have been filed by ABS on the validity and infringement of the '987, the '476 and the '309 patents and ST has appealed the award of the $5.3m costs.

Indian Litigation: In September 2019, ST also filed parallel patent infringement proceedings against ABS in India, alleging infringement of the Indian patent 240790 ("790 patent'). The '790 patent is the equivalent of the US patent 7,311,476 asserted in ABS II. ABS had already sought the revocation of the '790 patent in April 2017 before the Indian Patent Office and has now consolidated the revocation petition as a counterclaim in the Indian court proceedings. Progress of these proceedings has been delayed on multiple occasions and is next before the court for consideration on 15 September 2022.

Acquisitions and integration
During the year, £0.3m (2021: £0.3m) of expenses were incurred in relation to acquisitions during the year, with £0.2m relating the Olymel transaction.

Legacy legal claim
A one-off credit of £3.3m resulted from a non-refundable receipt of cash for the assignment of rights to a legacy legal claim against the Instituto Brasileiro de Café ('IBC') in Brazil. The claim was for reimbursement of unpaid amounts plus interest in respect of coffee shipments made by a Group subsidiary to the IBC in the 1990s, when the subsidiary was part of the Dalgety Group. Under the assignment agreement, the subsidiary has assigned any future receipt from the legal claim to an investment fund in Brazil, in exchange for an immediate cash amount and a sliding scale earn out payment which decreases over the duration of the period to the eventual receipt of proceeds by the assignee. No amount has been recognised in respect of the earn out payment, as the duration to the eventual settlement of the legal claim cannot be estimated with any certainty.

ABS production restructuring
A one-off charge of £2.8m was incurred primarily relating to the closure of our Canadian ABS facilities and disposals of bulls held in North America as part of a production restructuring.

Pension related
A pensions benefits audit on the National Pig Development pension fund concluded during the year lead to an aggregate past service charge of £0.4m, resulted from the recognition of these additional liabilities. In the prior year, an aggregate past service charge of £2.3m, resulted from recognition of additional liabilities, relating to Guaranteed Minimum Pension ('GMP') on historic transfer values.

Other
Included in Other is an expense of £0.5m relating to legal advice, IT consultancy fees and one-time costs incurred as the direct result of an IT security incident in June 2022. In the prior year, a £2.0m credit resulting from a share forfeiture exercise.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

8. OPERATING PROFIT

Operating costs comprise:

	2022 £m	2021 £m
Cost of sales excluding net IAS 41 valuation movement on biological assets and amortisation of multiplier contract intangible assets	**(252.7)**	(237.0)
Net IAS 41 valuation movement on biological assets	**(5.4)**	(10.8)
Amortisation of multiplier contract intangible assets	**(0.6)**	(0.2)
Cost of goods sold	**(258.7)**	(248.0)
Other cost of sales (excluding amortisation of acquired intangibles)	**(114.7)**	(105.1)
Amortisation of customer relationship intangible assets	**(4.8)**	(4.4)
Other cost of sales	**(119.5)**	(109.5)
Research and Development expenditure	**(67.3)**	(62.9)
Amortisation and impairment of technology, software and licences and patents	**(5.6)**	(5.2)
Research and Development costs	**(72.9)**	(68.1)
Administrative expenses (excluding exceptional items)	**(85.5)**	(88.7)
Share-based payment expense	**(3.7)**	(7.7)
Amortisation of software, licences and patents	**(1.7)**	(1.3)
Net exceptional items within administrative expenses	**(2.0)**	(3.3)
Total administrative expenses	**(92.9)**	(101.0)
Total operating costs	**(544.0)**	(526.6)

Profit for the year is stated after charging/(crediting):

	2022 £m	2021 £m
Net foreign exchange losses	**0.8**	0.5
Depreciation of owned fixed assets (see note 17)	**14.8**	13.0
Depreciation of right-of-use assets (see note 17)	**11.6**	11.0
Loss on disposal of fixed assets and right-of-use assets	**0.4**	0.4
Impairment of owned fixed assets	**0.9**	–
Loss on disposal of intangible fixed assets	**–**	0.5
Rental expense for short-term leases	**0.1**	0.1
Employee costs (see note 9)	**196.8**	193.3
Net (decrease)/increase in expected credit losses (see note 21)	**(0.9)**	1.7
(Release)/increase of inventory impairment	**(0.2)**	1.3
Cost of inventories recognised as an expense	**105.7**	98.7

Auditor's remuneration is as follows:

	2022 £m	2021 £m
Fees payable to the Company's auditor and its associates for the audit of the Company's Annual Report and Financial Statements	**0.4**	0.4
Fees payable to the Company's auditor and its associates for the audit of the Company's subsidiaries	**0.6**	0.6
Total audit fees	**1.0**	1.0
Total fees to the Group's auditor	**1.0**	1.0
Fees payable to other auditors of Group companies	**–**	–

Non-audit services principally comprise of agreed upon procedures in relation to half-year reporting. These services fall within the non-audit services policy approved by the Company's Audit & Risk Committee at the time of engagement.

9. EMPLOYEE COSTS

This note shows the total employment costs and the average number of people employed by segment during the year.

Employee costs, including Directors' remuneration, amounted to:

	2022 £m	2021 £m
Wages and salaries (including bonuses and sales commission)	**170.9**	166.3
Social security costs	**16.5**	16.0
Contributions to defined contribution pension plans	**6.2**	4.9
Share-based payment expense (excluding National Insurance)	**3.6**	6.5
	197.2	193.7

The employee costs above include £0.4m (2021: £0.4m) which has been capitalised into intangible assets as part of the development of GenusOne and other digital projects.

The average monthly number of employees and full-time equivalent employees, including Directors, was as follows:

	Number of employees		Full-time equivalent	
	2022 Number	2021 Number	2022 Number	2021 Number
Genus PIC	**602**	590	**580**	567
Genus ABS	**2,362**	2,210	**2,255**	2,102
Research and Development	**446**	401	**422**	370
Central	**80**	64	**68**	57
	3,490	3,265	**3,325**	3,096
Included in the totals above:				
UK	**909**	863	**818**	776

The Directors' Remuneration Report sets out details of the Directors' remuneration, pensions and share options.

10. NET FINANCE COSTS

Net finance costs mainly arise from interest due on bank loans, pension scheme liabilities, amortisation of debt issue costs, unwinding of discount on put options and the results of hedging transactions used to manage foreign exchange and interest rate movements.

Accounting policy
We recognise interest income and interest expense in the Income Statement, as they accrue, based on the effective interest rate method.

Interest income includes income on cash and cash equivalents, and income on other financial assets. Finance costs include interest costs in relation to financial liabilities. This includes interest on lease liabilities, which represents the unwinding of the discount rate applied to lease liabilities.

	2022 £m	2021 £m
Interest payable on bank loans and overdrafts	**(4.1)**	(2.8)
Amortisation of debt issue costs	**(0.9)**	(0.9)
Other interest payable	**(0.1)**	–
Unwinding of discount put options	**(0.2)**	(0.6)
Net interest cost in respect of pension scheme liabilities	**(0.2)**	(0.3)
Interest on lease liabilities	**(1.1)**	(0.8)
Total interest expense	**(6.6)**	(5.4)
Interest income on bank deposits	**0.4**	0.4
Total interest income	**0.4**	0.4
Net finance costs	**(6.2)**	(5.0)

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

11. TAXATION AND DEFERRED TAXATION

This note explains how our Group tax charge arises. The deferred tax section of the note also provides information on our expected future tax charges and sets out the tax assets and liabilities held across the Group, together with our view on whether or not we expect to be able to make use of them in the future.

Accounting policies

Tax on the profit or loss for the year comprises current and deferred tax. We recognise tax in the Income Statement, unless:

> it relates to items we have recognised directly in equity, in which case we recognise it in equity; or
> it arises as a fair value adjustment in a business combination.

We provide for current tax, including UK corporation tax and foreign tax, at the amounts we expect to pay (or recover), using the tax rates and the laws enacted or substantively enacted at the balance sheet date, together with any adjustments to tax payable in respect of previous years.

Deferred tax is tax we expect to pay or recover due to differences between the carrying amounts of our assets and liabilities in our Financial Statements and the corresponding tax bases used in calculating our taxable profit. We account for deferred tax using the balance sheet liability method.

We generally recognise deferred tax liabilities for all taxable temporary differences, and deferred tax assets to the extent that we will probably have taxable profits to utilise deductible temporary differences against. We do not recognise these assets and liabilities if the temporary difference arises from:

> our initial recognition of goodwill; or
> our initial recognition of other assets and liabilities in a transaction (other than a business combination) that affects neither our taxable profit nor our accounting profit.

We recognise deferred tax liabilities for taxable temporary differences arising on our investments in subsidiaries, and interests in joint ventures and associates, except where we can control the reversal of the temporary difference and it is probable that it will not reverse in the foreseeable future.

We calculate deferred tax at the tax rates we expect to apply in the period when we settle the liability or realise the asset. We charge or credit deferred tax in the Income Statement, except when it relates to items we have charged or credited directly to equity, in which case the deferred tax is also dealt with in equity.

Income tax expense

	2022 £m	2021 £m
Current tax expense		
Current period	**13.6**	18.3
Adjustment for prior periods	**1.8**	1.3
Total current tax expense in the Group Income Statement	**15.4**	19.6
Deferred tax expense		
Origination and reversal of temporary differences	**(0.5)**	(10.3)
Adjustment for prior periods	**(3.2)**	(0.3)
Total deferred tax credit in the Group Income Statement	**(3.7)**	(10.6)
Total income tax expense excluding share of income tax of equity accounted investees	**11.7**	9.0
Share of income tax of equity accounted investees (see note 18)	**2.6**	3.0
Total income tax expense in the Group Income Statement	**14.3**	12.0

Reconciliation of effective tax rate

	2022 %	**2022 £m**	2021 %	2021 £m
Profit before tax		**48.4**		55.8
Add back share of income tax of equity accounted investees		**2.6**		3.0
Profit before tax excluding share of income tax of equity accounted investees		**51.0**		58.8
Income tax at UK corporation tax of 19% (2021: 19.0%)	**19.0**	**9.7**	19.0	11.2
Effect of tax rates in foreign jurisdictions	**9.2**	**4.7**	10.5	6.2
Non-deductible expenses	**4.3**	**2.2**	2.0	1.2
Tax exempt income and incentives	**(1.8)**	**(0.9)**	(8.7)	(5.2)
Change in tax rate	**2.5**	**1.3**	(4.4)	(2.6)
Movements in recognition of tax losses	**0.2**	**0.1**	(1.2)	(0.7)
Change in unrecognised temporary differences	**(3.7)**	**(1.9)**	2.2	1.3
Tax (over)/under provided in prior periods	**(2.1)**	**(1.1)**	0.5	0.3
Change in provisions	**(0.2)**	**(0.1)**	1.2	0.7
Tax on undistributed reserves	**0.6**	**0.3**	(0.7)	(0.4)
Total income tax expense in the Group Income Statement	**28.0**	**14.3**	20.4	12.0

11. TAXATION AND DEFERRED TAXATION CONTINUED

The tax rate for the year depends on our mix of profits by country and our ability to recognise deferred tax assets in respect of losses in some of our smaller territories. Tax is calculated using prevailing tax legislation, reliefs and existing interpretations and practice.

The Group's future tax charge and effective tax rate could be affected by factors such as countries reforming their tax legislation to implement the OECD's BEPS recommendations and by European Commission initiatives including state aid investigations.

During the prior two periods, the Group provided £1.6m in total for its exposure to the challenge by the European Commission to the UK's Finance Company ('FinCo') exemption from its Controlled Foreign Companies taxing regime. As at 30 June 2022, Genus had been charged and paid £1.4m (30 June 2021: £1.2m) by HMRC under various charging notices in respect of their assessment of our liability under this judgment leaving a remaining provision balance at 30 June 2022 of £0.2m (30 June 2021: £0.4m).

The Group has appealed the amounts paid to HMRC on the following grounds:
> the amount charged is not state aid (i.e. the original EU Commission decision is unsound in law); and
> the amount charged is not wholly attributable to UK significant people functions (and therefore either partly or wholly outside the circumstances described by the EU Commission as state aid).

HMRC and several other large taxpayers have also appealed against the original EU Commission decision. On 8 June 2022, the EU General Court dismissed HMRC's application to annul the European Commission decision concerning the CFC Group financing exemption. We understand that HMRC have lodged an appeal against the judgment to the Court of Justice of the European Union. As there are many appeals to be considered it may be a number of years before the full court/appeal process is exhausted and this matter is finally resolved.

The tax credit attributable to exceptional items is a credit of £0.8m (2021: credit of £1.1m).

Income tax recognised directly in the Statement of Comprehensive Income and Statement of Changes in Equity

	2022 £m	2021 £m
Financial instruments	**(0.5)**	–
Foreign exchange differences on long-term intra-Group currency loans and balances	**0.1**	(0.1)
Gain on equity instruments measured at fair value	**1.5**	(1.7)
Actuarial movement on retirement benefit obligations	**(0.4)**	(0.3)
Foreign exchange differences on translation of biological assets, intangible assets and leases	**(7.8)**	7.7
	(7.1)	5.6
Income tax recognised directly to the Statement of Changes in Equity		
Share-based payment expense	**(0.4)**	1.5
	(0.4)	1.5

Unrecognised deferred tax assets and liabilities

At the balance sheet date, the Group had unused tax losses which were available for offset against future profits, with a potential tax benefit of £19.3m (2021: £15.2m). We have recognised a deferred tax asset in respect of £11.6m (2021: £7.3m) of these benefits, as we expect these losses to be offset against future profits of the relevant jurisdictions in the near term. We have not recognised a deferred tax asset in respect of the remaining £7.7m (2021: £7.9m), due to uncertainty about the availability of future taxable profits in the relevant jurisdictions.

At 30 June 2022, the expiry dates of deferred tax assets in respect of losses available for the carry forward were as follows:

	Expiring within			
	1–10 years £m	11–20 years £m	Unlimited £m	Total £m
Losses for which a deferred tax asset is recognised	**0.6**	**0.4**	**10.6**	**11.6**
Losses for which no deferred tax asset is recognised	**0.1**	**–**	**7.6**	**7.7**
	0.7	**0.4**	**18.2**	**19.3**

In addition, at the balance sheet date, the Group had an unrecognised deferred tax asset in respect of fixed asset timing differences of £2.4m (2021: £3.4m). These unrecognised fixed asset timing differences have an unlimited expiry date.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

11. TAXATION AND DEFERRED TAXATION CONTINUED

At 30 June 2021, the expiry dates of deferred tax assets in respect of losses available for the carry forward were as follows:

	Expiring within 1–10 years £m	Expiring within 11–20 years £m	Unlimited £m	Total £m
Losses for which a deferred tax asset is recognised	0.2	0.1	7.0	7.3
Losses for which no deferred tax asset is recognised	0.2	–	7.7	7.9
	0.4	0.1	14.7	15.2

The gross value of losses for which deferred tax assets are recognised is £45.2m (2021: £27.4m). The gross value of losses for which deferred tax assets are not recognised is £24.8m (2021: £25.6m).

We have not recognised deferred tax liabilities totalling £3.6m (2021: £2.9m) for the withholding tax and other taxes that would be payable on the unremitted earnings of certain overseas subsidiaries. This is because we can control the timing and reversal of these differences and it is probable that the differences will not reverse in the foreseeable future.

Recognised deferred tax assets and liabilities

We have offset deferred tax assets and liabilities, to the extent that they arise in the same tax jurisdiction.

The analysis of deferred tax balances is set out below:

	2022 £m	2021 £m
Deferred tax assets	**(10.1)**	(8.0)
Deferred tax liabilities	**60.3**	53.0
	50.2	45.0

The Finance Bill 2021, which was substantively enacted on 24 May 2021, introduced a new rate of UK corporation tax of 25% for large companies, with effect from 1 April 2023. UK deferred tax assets of £0.9m relating to short-term timing differences and pension liabilities that are expected to unwind in the period to 31 March 2023 have continued to be recognised at 19% and the remaining UK deferred tax assets of £12.4m relating to fixed assets, share-based payments and losses forward that will likely unwind post 31 March 2023 have been recognised at the new forward tax rate of 25%.

Movement in net deferred tax liabilities during the year

	As at 1 July 2021 £m	**Recognised in Income Statement £m**	**Changes in tax rate recognised in Income Statement £m**	**Prior year adjustments recognised in Income Statement £m**	**Recognised in equity £m**	**Transfers £m**	**Foreign exchange difference £m**	**As at 30 June 2022 £m**
Property, plant and equipment	**3.6**	**(1.9)**	**(0.3)**	**1.4**	**–**	**–**	**0.7**	**3.5**
Intangible assets	**8.2**	**(0.6)**	**(0.3)**	**(1.3)**	**0.4**	**–**	**0.3**	**6.7**
Biological assets	**63.7**	**0.1**	**2.2**	**(1.3)**	**7.9**	**–**	**0.4**	**73.0**
Retirement benefit obligations	**(2.1)**	**0.3**	**0.2**	**–**	**0.4**	**–**	**(0.1)**	**(1.3)**
Share-based payment expense	**(4.7)**	**(0.4)**	**0.9**	**–**	**1.9**	**–**	**(0.1)**	**(2.4)**
Short-term timing differences	**(16.4)**	**1.6**	**0.7**	**(0.9)**	**(1.5)**	**–**	**(1.2)**	**(17.7)**
Tax loss carry-forwards	**(7.3)**	**(2.4)**	**(0.6)**	**(1.1)**	**–**	**–**	**(0.2)**	**(11.6)**
	45.0	**(3.3)**	**2.8**	**(3.2)**	**9.1**	**–**	**(0.2)**	**50.2**

	As at 1 July 2020 £m	Recognised in Income Statement £m	Changes in tax rate recognised in Income Statement £m	Prior year adjustments recognised in Income Statement £m	Recognised in equity £m	Transfers £m	Foreign exchange difference £m	As at 30 June 2021 £m
Property, plant and equipment	5.2	(1.0)	(0.3)	0.1	0.1	–	(0.5)	3.6
Intangible assets	8.8	(0.9)	1.1	0.2	(0.3)	(0.4)	(0.3)	8.2
Biological assets	74.4	(3.5)	0.8	–	(7.9)	–	(0.1)	63.7
Retirement benefit obligations	(3.5)	1.0	(0.1)	–	0.3	–	0.2	(2.1)
Share-based payment expense	(3.7)	0.4	(0.9)	–	(0.5)	–	–	(4.7)
Short-term timing differences	(15.5)	(2.3)	(1.6)	(0.2)	2.1	–	1.1	(16.4)
Tax loss carry-forwards	(3.9)	(1.4)	(1.6)	(0.4)	–	–	–	(7.3)
	61.8	(7.7)	(2.6)	(0.3)	(6.2)	(0.4)	0.4	45.0

12. EARNINGS PER SHARE

Basic earnings per share is the profit generated for the financial year attributable to equity shareholders, divided by the weighted average number of shares in issue during the year.

Basic earnings per share from continuing operations

	2022 (pence)	2021 (pence)
Basic earnings per share	**62.5**	72.6

The calculation of basic earnings per share from continuing operations is based on the net profit attributable to owners of the Company from continuing operations of £40.9m (2021: £47.3m) and a weighted average number of ordinary shares outstanding of 65,395,000 (2021: 65,108,000), which is calculated as follows:

Weighted average number of ordinary shares (basic)

	2022 000s	2021 000s
Issued ordinary shares at the start of the year	**65,761**	65,092
Effect of own shares held	**(373)**	(180)
Shares issued on exercise of stock options	**7**	9
Shares issued in relation to Employee Benefit Trust	**–**	187
Weighted average number of ordinary shares in year	**65,395**	65,108

Diluted earnings per share from continuing operations

	2022 (pence)	2021 (pence)
Diluted earnings per share	**62.2**	72.0

The calculation of diluted earnings per share from continuing operations is based on the net profit attributable to owners of the Company from continuing operations of £40.9m (2021: £47.3m) and a weighted average number of ordinary shares outstanding, after adjusting for the effects of all potential dilutive ordinary shares, of 65,714,000 (2021: 65,662,000), which is calculated as follows:

Weighted average number of ordinary shares (diluted)

	2022 000s	2021 000s
Weighted average number of ordinary shares (basic)	**65,395**	65,108
Dilutive effect of share awards and options	**319**	554
Weighted average number of ordinary shares for the purposes of diluted earnings per share	**65,714**	65,662

Adjusted earnings per share from continuing operations

	2022 (pence)	2021 (pence)
Adjusted earnings per share	**82.7**	100.9
Diluted adjusted earnings per share	**82.3**	100.1

Adjusted earnings per share is calculated on profit before the net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items, after charging taxation associated with those profits, of £54.1m (2021: £65.7m), which is calculated as follows:

	2022 £m	2021 £m
Profit before tax from continuing operations	**48.4**	55.8
Add/(deduct):		
Net IAS 41 valuation movement on biological assets (see note 16)	**5.4**	10.8
Amortisation of acquired intangible assets (see note 15)	**8.3**	7.4
Share-based payment expense (see note 30)	**3.7**	7.7
Exceptional items (see note 7)	**2.0**	3.3
Net IAS 41 valuation movement on biological assets in joint ventures (see note 18)	**1.4**	(3.1)
Tax on joint ventures and associates (see note 18)	**2.6**	3.0
Attributable to non-controlling interest	**(0.3)**	(0.1)
Adjusted profit before tax	**71.5**	84.8
Adjusted tax charge	**(17.4)**	(19.1)
Adjusted profit after tax	**54.1**	65.7
Effective tax rate on adjusted profit	**24.3%**	22.5%

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

12. EARNINGS PER SHARE CONTINUED

Reconciliation of effective tax rate

	2022 Profit £m	2022 Tax £m	2022 %
Profit before tax excluding share of income tax of equity accounted investees	**51.0**	**14.3**	**28.0**
Net IAS 41 valuation movement on biological assets	**5.4**	**(1.5)**	**(27.8)**
Amortisation of acquired intangible assets	**8.3**	**3.3**	**39.8**
Share-based payment expense	**3.7**	**0.5**	**13.5**
Exceptional items (see note 7)	**2.0**	**0.8**	**40.0**
Net IAS 41 valuation movement on biological assets in joint ventures	**1.4**	**–**	**–**
Attributable to non-controlling interest	**(0.3)**	**–**	**–**
Adjusted profit before tax	**71.5**	**17.4**	**24.3**

	2021 Profit £m	2021 Tax £m	2021 %
Profit before tax excluding share of income tax of equity accounted investees	58.8	12.0	20.4
Net IAS 41 valuation movement on biological assets	10.8	2.9	26.9
Amortisation of acquired intangible assets	7.4	1.5	20.3
Share-based payment expense	7.7	1.6	20.8
Exceptional items (see note 7)	3.3	1.1	33.3
Net IAS 41 valuation movement on biological assets in joint ventures	(3.1)	–	–
Attributable to non-controlling interest	(0.1)	–	–
Adjusted profit before tax	84.8	19.1	22.5

13. DIVIDENDS

Dividends are one type of shareholder return, historically paid to our shareholders in late November/early December and late March.

Amounts recognised as distributions to equity holders in the year

	2022 £m	2021 £m
Final dividend		
Final dividend for the year ended 30 June 2021 of 21.7 pence per share	**14.2**	–
Final dividend for the year ended 30 June 2020 of 19.7 pence per share	**–**	12.8
Interim dividend		
Interim dividend for the year ended 30 June 2022 of 10.3 pence per share	**6.7**	–
Interim dividend for the year ended 30 June 2021 of 10.3 pence per share	**–**	6.7
	20.9	19.5

The Directors have proposed a final dividend of 21.7 pence per share for 2022. This is subject to shareholders' approval at the AGM and we have therefore not included it as a liability in these Financial Statements. The total proposed and paid dividend for year ended 30 June 2022 is 32.0 pence per share (2021: 32.0 pence per share).

14. GOODWILL

Accounting policies

When we acquire a subsidiary, associate or joint venture, the goodwill arising is the excess of the acquisition cost, excluding transaction costs, over our interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities. Identifiable assets include intangible assets which could be sold separately, or which arise from legal rights, regardless of whether those rights are separable.

We state goodwill at cost less any accumulated impairment losses. We allocate goodwill to cash-generating units ('CGUs'), which are the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets. We do not amortise goodwill but we do test it annually for impairment.

IAS 21 'The Effects of Changes in Foreign Exchange Rates' requires us to treat the following as assets and liabilities of the acquired entity, rather than of the acquiring entity:

> goodwill arising on acquisition of a foreign operation; and
> any fair value adjustments we make on acquisition to the carrying amounts of the acquiree's assets and liabilities.

We therefore express them in the foreign operation's functional currency and retranslate them at the balance sheet date.

14. GOODWILL CONTINUED

Impairment

We review the carrying amounts of our tangible and intangible assets at each balance sheet date, to determine whether there is any indication of impairment. If any indication exists, we estimate the asset's recoverable amount.

For goodwill, and tangible and intangible assets that are not yet available for use, we estimate the recoverable amount at each balance sheet date. The recoverable amount is the greater of their fair value less cost to sell and value in use. In assessing value in use, we discount the estimated future cash flows to their present value, using a pre-tax discount rate, which is derived from the Group's weighted average cost of capital ('WACC'). For some countries we add a premium to this rate, to reflect the risk attributable to that country. If the asset does not generate largely independent cash inflows, we determine the recoverable amount for the CGU that the asset belongs to.

We recognise an impairment loss in the Income Statement whenever the carrying amount of an asset or its CGU exceeds its recoverable amount.

When we recognise an impairment loss in respect of a CGU, we first allocate it to reduce the carrying amount of any goodwill allocated to the CGU, and then apply any remaining loss to reduce the carrying amount of the unit's other assets on a pro rata basis.

The aggregate carrying amounts of goodwill allocated to each operating segment are as follows:

	Genus PIC £m	Genus ABS £m	Total £m
Cost			
Balance at 1 July 2020	74.1	31.5	105.6
Business combinations	3.5	–	3.5
Effect of movements in exchange rates	(5.1)	(2.5)	(7.6)
Balance at 30 June 2021	72.5	29.0	101.5
Business combination	**–**	**0.3**	**0.3**
Effect of movements in exchange rates	**5.8**	**3.4**	**9.2**
Balance at 30 June 2022	**78.3**	**32.7**	**111.0**
Impairment losses			
Balance at 1 July 2020, 30 June 2021 and 30 June 2022	–	–	–
Carrying amounts			
At 30 June 2022	**78.3**	**32.7**	**111.0**
At 30 June 2021	72.5	29.0	101.5

To test impairment, we allocate goodwill to our CGUs, which are in line with our operating segments. These are the lowest level within the Group at which we monitor goodwill for internal management purposes.

We test goodwill annually for impairment, or more frequently if there are indications that goodwill might be impaired. We determine the recoverable amount of our CGUs by using value in use calculations. The key assumptions for these calculations relate to discount rates, long-term growth rates and short-term growth rates (which includes consideration of expected changes to selling prices, cost savings derived from the IntelliGen technologies, and changes in product mix).

We have estimated the pre-tax discount rate using the Group's WACC. We risk-adjusted the discount rate for risks specific to each market, adding between nil and 17% (2021: nil and 29%) to the WACC as appropriate. The pre-tax discount rate of 11.2% (2021: 10.9%) we applied to our cash flow projections equates to a post-tax rate of 9.3% (2021: 9.6%). Our estimates of changes in selling prices and direct costs are based on past experience and our expectations of future changes in the market.

The annual impairment test is performed on 31 March (2021: 31 March). There have been no additional indicators of impairment identified after this date that would require the impairment test to be reperformed. It is based on cash flows derived from our most recent financial and strategic plans approved by management, over the next five years taking into account the commitments made in the Task Force on Climate-related Financial Disclosures ('TCFD') included on page 39. A growth rate of 2.5% (2021: 2.5%) has been used to extrapolate cash flows beyond this period. Short-term profitability and growth rates are based on past experience, current trading conditions and our expectations of future changes in the market.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

14. GOODWILL CONTINUED

The Genus PIC and Genus ABS CGUs are deemed to be significant. The individual country assumptions used to determine value in use for these CGUs are:

	Risk premium used to adjust discount rate		Short-term growth rates (CAGR)		Long-term growth rates	
	2022	2021	**2022**	2021	**2022**	2021
Genus PIC	**nil–15%**	nil–11%	**nil–44%**	nil–43%	**2.5%**	2.5%
Genus ABS	**nil–17%**	nil–29%	**1%–42%**	3%–48%	**2.5%**	2.5%

	Weighted average risk adjusted discount rate		Weighted average short-term growth rates (CAGR)	
	2022	2021	**2022**	2021
Genus PIC	**9%**	10%	**12%**	13%
Genus ABS	**10%**	10%	**22%**	24%

The rates towards the higher end of the range above represent those which are applied to our smaller entities and those in emerging markets and hence appear high relative to others.

Sensitivity to changes in assumptions
Management has performed the following sensitivity analysis:
> changing the key assumptions, with other variables held constant;
> simultaneously changing the key assumptions; and
> incorporating the potential impact of the principal risks and uncertainties outlined on pages 43 to 46, in particular the impacts of biosecurity, market downturns, continuity of supply, increased competition and the impact of the global COVID-19 pandemic, taking into account the likely degree of available mitigating actions.

Management has concluded that there are no reasonably possible changes in any one of the key assumptions that would cause the carrying amounts of goodwill to exceed the value in use of PIC and ABS.

15. INTANGIBLE ASSETS

Our Group Balance Sheet contains significant intangible assets, including acquired technology, customer relationships, software and our IntelliGen development project.

Accounting policies
Identifiable intangible assets are recognised when the Group controls the asset, it is probable that future economic benefits attributed to the asset will flow to the Group and the cost of the asset can be reliably measured.

For 'Software as a Service' ('SaaS') arrangements, we do not capitalise costs relating to the configuration and customisation of SaaS arrangements as intangible assets except where control of the software exists.

Intangible assets that we have acquired in a business combination since 1 April 2005 are identified and recognised separately from goodwill, where they meet the definition of an intangible asset and we can reliably measure their fair values. Their cost is their fair value at the acquisition date.

After their initial recognition, we report these intangible assets at cost less accumulated amortisation and accumulated impairment losses. This is the same basis as for intangible assets acquired separately.

The estimated useful lives for intangible assets are as follows:

> Porcine and bovine genetics technology	20 years
> Multiplier contracts	15 years
> Brands	10 to 15 years
> Customer relationships	10 to 17 years
> IntelliGen	10 years
> Patents and licences	term of agreement (4 years)
> Software	2 to 10 years

15. INTANGIBLE ASSETS CONTINUED

Intangible assets acquired separately

We carry intangible assets acquired other than through a business combination at cost less accumulated amortisation and any impairment loss. We charge amortisation on a straight-line basis over their estimated useful lives and review the useful life and amortisation method at the end of each financial year, accounting for the effect of any changes in estimate on a prospective basis.

	Porcine and bovine genetics technology £m	Brands, multiplier contracts and customer relationships £m	Separately identified acquired intangible assets £m	Software £m	Assets under construction £m	IntelliGen £m	Patents, licences and other £m	Total £m
Cost								
Balance at 1 July 2020	52.0	85.9	137.9	18.4	2.0	25.4	4.4	188.1
Additions	–	–	–	0.4	3.8	0.9	–	5.1
Acquisition	–	3.7	3.7	–	–	–	–	3.7
Disposals	–	–	–	(1.1)	–	–	–	(1.1)
Transfers	–	–	–	3.1	(3.1)	–	–	–
Effect of movements in exchange rates	(0.3)	(8.0)	(8.3)	(0.8)	–	(2.7)	(0.1)	(11.9)
Balance at 30 June 2021	51.7	81.6	133.3	20.0	2.7	23.6	4.3	183.9
Additions	**4.2**	**10.3**	**14.5**	**0.2**	**8.6**	**–**	**–**	**23.3**
Acquisition	**–**	**0.4**	**0.4**	**–**	**–**	**–**	**–**	**0.4**
Transfers	**–**	**–**	**–**	**7.7**	**(7.7)**	**–**	**–**	**–**
Effect of movements in exchange rates	**0.6**	**10.6**	**11.2**	**1.0**	**0.1**	**3.2**	**0.1**	**15.6**
Balance at 30 June 2022	**56.5**	**102.9**	**159.4**	**28.9**	**3.7**	**26.8**	**4.4**	**223.2**
Amortisation and impairment losses								
Balance at 1 July 2020	33.2	68.2	101.4	13.0	–	6.9	3.9	125.2
Disposals	–	–	–	(0.6)	–	–	–	(0.6)
Amortisation for the year	2.8	4.6	7.4	1.4	–	2.2	0.1	11.1
Effect of movements in exchange rates	–	(6.6)	(6.6)	(0.8)	–	(0.7)	–	(8.1)
Balance at 30 June 2021	36.0	66.2	102.2	13.0	–	8.4	4.0	127.6
Amortisation for the year	**3.0**	**5.3**	**8.3**	**1.7**	**–**	**2.5**	**0.1**	**12.6**
Effect of movements in exchange rates	**0.1**	**8.6**	**8.7**	**0.8**	**–**	**1.4**	**0.1**	**11.0**
Balance at 30 June 2022	**39.1**	**80.1**	**119.2**	**15.5**	**–**	**12.3**	**4.2**	**151.2**
Carrying amounts								
At 30 June 2022	**17.4**	**22.8**	**40.2**	**13.4**	**3.7**	**14.5**	**0.2**	**72.0**
At 30 June 2021	15.7	15.4	31.1	7.0	2.7	15.2	0.3	56.3
At 30 June 2020	18.8	17.7	36.5	5.4	2.0	18.5	0.5	62.9

Included within brands, multiplier contracts and customer relationships are carrying amounts for brands of £0.5m (2021: £0.7m), multiplier contracts of £11.1m (2021: £0.3m) and customer relationships of £11.2m (2021: £14.4m).

On 22 February 2022, PIC acquired all the intellectual property in Olymel's AlphaGene elite porcine genetics for a total cash consideration of CAD$25.0m (£14.5m), being £4.2m for porcine genetic technology and £10.3m for multiplier contracts. The parties have also entered into an exclusive long-term genetics collaboration agreement, where PIC will supply elite germplasm and manage the ongoing genetic improvement of Olymel's AlphaGene genetics.

Included within the software class of assets is £6.9m (2021: £5.4m) and included in assets in the course of construction is £2.7m (2021: £1.1m) that relate to the ongoing development costs of GenusOne, our single global enterprise system.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

16. BIOLOGICAL ASSETS

The Group applies quantitative genetics and biotechnology to animal breeding. We use these techniques to identify and select animals with the genes responsible for superior milk and meat, high health and performance traits. We sell breeding animals, semen and embryos to customers, who use them to produce offspring which yield greater production efficiency and milk and meat quality, for the global dairy and meat supply chain. We recognise that accounting for biological assets is an area which includes key sources of estimation uncertainty. These are outlined in note 4 and sensitivities are provided below.

Accounting policies

Biological assets and inventories

In bovine, we use research and development to identify genetically superior bulls in a number of breeds, primarily the Holstein dairy breed. Each selected bull has its performance measured against its peers, by using genomic evaluations and progeny testing of its daughters' performance. We collect and freeze semen from the best bulls, to satisfy our customers' demand. Farmers use semen from dairy breeds to breed replacement milking stock. They use the semen we sell from beef breeds in either specialist beef breeding herds, for multiplying breeding bulls for use in natural service, or on dairy cows to produce animals to be reared for meat.

Our research and development also enables us to produce and select our own genetically superior females, from which we will breed future bulls.

We hold our bovine biological assets for long-term internal use and classify them as non-current assets. We transfer bull semen to inventory at its fair value at the point of harvest, which becomes its deemed cost under IAS 2. We state our inventories at the lower of this deemed cost and net realisable value.

Sorting semen is a production process rather than a biological process. As a result, we transfer semen inventory into sexed semen production at its fair value at the point of harvest, less the cost to sell, and it becomes a component of the production process. We carry sexed semen in finished goods at production cost.

In porcine, we maintain and develop a central breeding stock (the 'nucleus herd'), to provide genetically superior animals. These genetics help make farmers and food processors more profitable, by increasing their output of consistently high-quality products, which yield higher value. So we can capitalise on our intellectual property, we outsource the vast majority of our pig production to our global multiplier network. We also sell the offspring or semen we obtain from animals in the nucleus herd to customers, for use in commercial farming.

Pig sales generally occur in one of two ways: 'upfront' and 'royalty'. Under upfront sales, we receive the full fair value of the animal at the point we transfer it to the customer. Under royalty sales, the pig is regarded as comprising two separately identifiable components: its carcass and its genetic potential. We receive the initial consideration, which is approximately the animal's carcass value, at the point we transfer the pig to the customer. We retain our interest in the pig's genetic potential and receive royalties for the customer's use of this genetic potential.

The breeding animal biological assets we own, and our retained interest in the biological assets we have sold under royalty contracts, are recognised and measured at fair value at each balance sheet date. We recognise changes in fair value in the Income Statement, within operating profit for the period.

We classify the porcine biological assets we are using as breeding animals as non-current assets and carry them at fair value. The porcine biological assets we are holding for resale, which are the offspring of the breeding herd, are carried at fair value and classified as current assets.

Determination of fair values – biological assets

IAS 41 'Agriculture' requires us to show the carrying value of biological assets in the Group Balance Sheet. We determine this carrying value according to IAS 41's provisions and show the net valuation movement in the Income Statement. There are important differences in how we value our bovine and porcine assets, as explained below.

Bovine – we base the fair value of all bulls on the net cash flows we expect to receive from selling their semen, discounted at a current risk-adjusted market-determined rate. The significant assumptions determining the fair values are the expected future demand for semen, the estimated biological value and the marketable life of bulls. The biological value is the estimated value at the point of production. We adjust the fair value of the bovine herd and semen inventory where a third party earns a royalty from semen sales from a particular bull. Females are valued by reference to market prices and published independent genetic evaluations. The net cash flows include any expected impact of the COVID-19 pandemic.

Porcine – the fair value of porcine biological assets includes the animals we own entirely and our retained interest in the genetics of animals we have sold under royalty arrangements. The fair value of animals we own is calculated using the animals' average live weights, plus a premium where we believe that their genetics make them saleable. We base the live weight value and the genetic premium on recent transaction prices we have achieved. The significant assumptions in determining fair values are the breeding animals' expected life, the percentage of production animals that are saleable as breeding animals and the expected sales prices. For our retained interest in the genetics of animals sold under royalty contracts, we base the initial fair value on the fair values we achieved in recent direct sales of similar animals, less the amount we received upfront for the carcass element. We then remeasure the fair value of our retained interest at each reporting date. The significant assumption in determining the fair value of the retained interest is the animals' expected life. The assumptions used include any expected impact of the COVID-19 pandemic.

We value the pigs in our pure line herds, which are the repository of our proprietary genetics, as a single unit of account. We do this using a discounted cash flow model, applied to the herds' future outputs at current prices. The significant assumptions we make are the number of future generations attributable to the current herds, the fair value prices we achieve on sales, the animals' expected useful lifespan and productivity, and the risk-adjusted discount rate.

16. BIOLOGICAL ASSETS CONTINUED

Non-recognition of porcine multiplier contracts where the Group does not retain a contractual interest
To manage commercial risk, a very large part of our porcine business model involves selling pigs to farmers ('multipliers') who produce piglets on farms we neither manage nor control. We have the option, but not the obligation, to buy the offspring at slaughter market value plus a premium. Because the offspring have superior genetics, we can then sell them to other farmers at a premium.

We do not recognise the right to purchase offspring on the Group Balance Sheet, as we enter into the contracts and continue to hold them for the purpose of receiving non-financial items (the offspring), in accordance with our expected purchase requirements. This means the option is outside the scope of IFRS 9. We do not recognise the offspring as biological assets under IAS 41, as we do not own or control them.

Fair value of biological assets	Bovine £m	Porcine £m	Total £m
Non-current biological assets	107.2	202.9	310.1
Current biological assets	–	39.8	39.8
Balance at 30 June 2020	107.2	242.7	349.9
Increases due to purchases	15.2	134.8	150.0
Decreases attributable to sales	–	(223.0)	(223.0)
Decrease due to harvest	(24.4)	(21.4)	(45.8)
Business combination	–	0.3	0.3
Changes in fair value less estimated sale costs	3.9	118.4	122.3
Effect of movements in exchange rates	(9.9)	(24.3)	(34.2)
Balance at 30 June 2021	92.0	227.5	319.5
Non-current biological assets	92.0	187.9	279.9
Current biological assets	–	39.6	39.6
Balance at 30 June 2021	92.0	227.5	319.5
Increases due to purchases	**23.3**	**225.8**	**249.1**
Decreases attributable to sales	**–**	**(234.8)**	**(234.8)**
Decrease due to harvest	**(17.7)**	**(26.3)**	**(44.0)**
Changes in fair value less estimated sale costs	**(19.6)**	**61.2**	**41.6**
Effect of movements in exchange rates	**10.0**	**25.4**	**35.4**
Balance at 30 June 2022	**88.0**	**278.8**	**366.8**
Non-current biological assets	**88.0**	**245.7**	**333.7**
Current biological assets	**–**	**33.1**	**33.1**
Balance at 30 June 2022	**88.0**	**278.8**	**366.8**

Bovine
Bovine biological assets include £6.9m (2021: £7.4m) representing the fair value of bulls owned by third parties but managed by the Group, net of expected future payments to such third parties, which are therefore treated as assets held under leases.

There were no movements in the carrying value of the bovine biological assets in respect of sales or other changes during the year.

A risk-adjusted rate of 12.5% (2021: 8.8%) has been used to discount future net cash flows from the sale of bull semen.

Decreases due to harvest represent the semen extracted from the biological assets. Inventories of such semen are shown as biological asset harvest in note 20.

Porcine
Included in increases due to purchases is the aggregate increase arising during the year on initial recognition of biological assets in respect of multiplier purchases, other than parent gilts, of £101.2m (2021: £47.5m).

Decreases attributable to sales during the year of £234.8m (2021: £223.0m) include £74.0m (2021: £67.4m) in respect of the reduction in fair value of the retained interest in the genetics of animals, other than parent gilts, transferred under royalty contracts.

Also included is £119.0m (2021: £97.9m) relating to the fair value of the retained interest in the genetics in respect of animals, other than parent gilts, sold to customers under royalty contracts in the year.

Total revenue in the year, including parent gilts, includes £231.4m (2021: £206.9m) in respect of these contracts, comprising £83.2m (2021: £63.9m) on initial transfer of animals and semen to customers and £148.2m (2021: £143.0m) in respect of royalties received.

A risk-adjusted rate of 10.3% (2021: 9.3%) has been used to discount future net cash flows from the expected output of the pure line porcine herds. The number of future generations which have been taken into account is seven (2021: seven) and their estimated useful lifespan is 1.4 years (2021: 1.4 years).

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

16. BIOLOGICAL ASSETS CONTINUED

Year ended 30 June 2022

	Bovine £m	Porcine £m	Total £m
Changes in fair value of biological assets	**(19.6)**	**61.2**	**41.6**
Inventory transferred to cost of sales at fair value	**(10.3)**	**(26.3)**	**(36.6)**
Biological assets transferred to cost of sales at fair value	**–**	**(10.3)**	**(10.3)**
	(29.9)	**24.6**	**(5.3)**
Fair value movement in related financial derivative	**–**	**(0.1)**	**(0.1)**
Net IAS 41 valuation movement on biological assets[1]	**(29.9)**	**24.5**	**(5.4)**

Year ended 30 June 2021

	Bovine £m	Porcine £m	Total £m
Changes in fair value of biological assets	3.9	118.4	122.3
Inventory transferred to cost of sales at fair value	(21.1)	(21.4)	(42.5)
Biological assets transferred to cost of sales at fair value	–	(90.0)	(90.0)
	(17.2)	7.0	(10.2)
Fair value movement in related financial derivative	–	(0.6)	(0.6)
Net IAS 41 valuation movement on biological assets[1]	(17.2)	6.4	(10.8)

1 This represents the difference between operating profit prepared under IAS 41 and operating profit prepared under historical cost accounting, which forms part of the reconciliation to adjusted operating profit (see APMs)

Fair value measurement

All of the biological assets inputs fall under Level 3 of the hierarchy defined in IFRS 13. Significant increases/(decreases) in any of these inputs in isolation would result in a significantly lower or higher fair value measurement.

16. BIOLOGICAL ASSETS CONTINUED

Unobservable inputs and key sources of estimation uncertainty

	2022	2021	Sensitivity
Bovine			
Risk-adjusted discount rate[1]	**12.5%**	8.8%	1 percentage point increase in the discount rate would result in approximately a £2.3m (2021: £2.7m) reduction in value.
Value at point of production[1]	**32.1%**	32.7%	1 percentage point decrease in the rate would result in approximately a £5.1m (2021: £4.6m) reduction in value.
Percentage of new dairy bulls to be produced internally in future years[1]	**FY23 71%** **FY24 81%** **FY25 86%** **FY26 and thereafter 87%**	FY22 67% FY23 78% FY24 80% FY25 and thereafter 82%	If percentage remained at FY22 level of 61% (2021: 66%) there would be a decrease in value of approximately £3.6m (2021: £2.2m).
Age profile of Holstein bulls generating future sales[1]	**FY23 – avg age 4.0 yrs** **FY24 – avg age 4.0 yrs** **FY25 – avg age 4.0 yrs** **FY26 and thereafter – avg age 4.0 yrs**	FY22 – avg age 3.9 yrs FY23 – avg age 3.9 yrs FY24 – avg age 3.9 yrs FY25 and thereafter – avg age 3.8 yrs	If age profile remains at FY22 average age of 4.2 years (2021: 4.1 years), there would be an increase in value of approximately £1.4m (2021: £2.1m).
Age profile of US beef-on-dairy bulls generating future sales[1]	**FY23 – avg age 5.1 yrs** **FY24 – avg age 4.8 yrs** **FY25 – avg age 4.8 yrs** **FY26 and thereafter – avg age 4.8 yrs**	FY22 – avg age 4.9 yrs FY23 – avg age 4.8 yrs FY24 – avg age 4.8 yrs FY25 and thereafter – avg age 4.8 yrs	If age profile remains at FY22 average age of 5.7 years (2021: 5.4 years), there would be a decrease in value of approximately £3.0m (2021: £2.9m).
Long-term dairy volume growth rate	**2.4%**	1.2%	1 percentage point decrease in the growth rate would result in approximately a £0.2m (2021: £0.2m) reduction in value.
Short-term dairy volume growth rate	**3.7%**	3.2%	1 percentage point decrease in the growth rate would result in approximately a £1.2m (2021: £1.3m) reduction in value.
Porcine			
Risk-adjusted discount rate – pure line herd[1]	**10.3%**	9.3%	1 percentage point increase in the discount rate would result in approximately a £3.5m (2021: £2.6m) reduction in value. Any additional increase in the percentage would lead to a linear impact.
Proportion of animals that go to breeding sales[1]	**Gilts – 7.9%**	Gilts – 7.6%	1 percentage point increase in the go to breeding sales would result in approximately £10.5m (2021: £8.0m) increase in value.
	Boars – 8.2%	Boars – 8.5%	1 percentage point increase in the go to breeding sales would result in approximately £12.0m (2021: £8.4m) increase in value.

1 Key sources of estimation uncertainty

For sale unit prices in bovine IAS 41 valuation model, in high inflationary environments, historical prices are not deemed to be the best estimate of future performance, so expected Board-approved budget unit prices have been used in the calculation. A 5 percentage point increase in the forecasted sales unit price would result in approximately £6.8m increase in value (2021: £7.1m).

Additional information	2022	2021
Bovine		
Quantities at period end		
Number of bulls in production	**1,015**	921
Number of bulls under development (including calves)	**696**	775
Total number of bulls	**1,711**	1,696
Number of doses of semen valued in inventory	**17.2m**	15.1m
Amounts during the year		
Fair value of agricultural produce – semen harvested during the period	**£17.7m**	£24.4m
Porcine		
Quantities at period end		
Number of pigs (own farms)	**95,050**	98,677
Number of pigs, excluding parent gilts, despatched on a royalty basis and valued at fair value	**91,591**	84,386
Amounts during the year		
Fair value of agricultural produce – semen harvested during the period	**£26.3m**	£21.4m

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

17. PROPERTY, PLANT AND EQUIPMENT

We make significant investments in our property, plant and equipment. All assets are depreciated over their useful economic lives.

Accounting policies

We state property, plant and equipment at cost, together with any directly attributable acquisition expenses, or at their latest valuation, less depreciation and any impairment losses. Where parts of an item of property, plant and equipment have different useful lives, we account for them separately.

We charge depreciation to the Income Statement on a straight-line basis, over the estimated useful lives of each part of an asset. The estimated useful lives are as follows:

> Freehold buildings 10 to 40 years
> Leasehold buildings over the term of the lease
> Plant and equipment 3 to 20 years
> Motor vehicles 3 to 5 years

We do not depreciate land or assets under construction.

Right-of-use assets

Right-of-use assets are measured initially at cost, based on the value of the associated lease liability, adjusted for any payments made before inception, initial direct costs and an estimate of the dismantling, removal and restoration costs required in the terms of the lease. Subsequent to initial recognition, we record an interest charge in respect of the lease liability. The related right-of-use asset is depreciated over the term of the lease or, if shorter, the useful economic life of the leased asset. The lease term shall include the period of an extension option where it is reasonably certain that the option will be exercised. Where the lease contains a purchase option, the asset is written off over the useful life of the asset when it is reasonably certain that the purchase option will be exercised.

	Land and buildings £m	Plant, motor vehicles and equipment £m	Assets under construction £m	Total owned assets £m	Land and buildings £m	Plant, motor vehicles and equipment £m	Total right-of-use assets £m	Total £m
Cost or deemed cost								
Balance at 1 July 2020	67.9	87.8	8.2	163.9	21.9	24.0	45.9	209.8
Additions	1.1	5.9	22.3	29.3	2.3	8.1	10.4	39.7
Business combination	–	0.2	–	0.2	–	–	–	0.2
Transfers	4.3	3.5	(7.8)	–	–	–	–	–
Disposals	(0.3)	(2.1)	–	(2.4)	(1.9)	(4.7)	(6.6)	(9.0)
Effect of movements in exchange rates	(6.4)	(7.3)	(0.6)	(14.3)	(1.6)	(1.4)	(3.0)	(17.3)
Balance at 30 June 2021	66.6	88.0	22.1	176.7	20.7	26.0	46.7	223.4
Additions	**0.2**	**3.9**	**40.3**	**44.4**	**9.2**	**6.1**	**15.3**	**59.7**
Transfers	**23.5**	**12.8**	**(36.3)**	**–**	**–**	**–**	**–**	**–**
Disposals	**(1.4)**	**(2.0)**	**–**	**(3.4)**	**(0.5)**	**(6.0)**	**(6.5)**	**(9.9)**
Effect of movements in exchange rates	**11.3**	**10.9**	**3.5**	**25.7**	**2.1**	**2.3**	**4.4**	**30.1**
Balance at 30 June 2022	**100.2**	**113.6**	**29.6**	**243.4**	**31.5**	**28.4**	**59.9**	**303.3**
Depreciation and impairment losses								
Balance at 1 July 2020	24.3	53.1	–	77.4	4.4	10.1	14.5	91.9
Depreciation for the year	3.2	9.8	–	13.0	3.7	7.3	11.0	24.0
Disposals	(0.3)	(1.5)	–	(1.8)	(1.3)	(4.2)	(5.5)	(7.3)
Effect of movements in exchange rates	(2.7)	(4.5)	–	(7.2)	(0.3)	(0.7)	(1.0)	(8.2)
Balance at 30 June 2021	24.5	56.9	–	81.4	6.5	12.5	19.0	100.4
Depreciation for the year	**3.8**	**11.0**	**–**	**14.8**	**4.8**	**6.8**	**11.6**	**26.4**
Disposals	**(1.3)**	**(1.8)**	**–**	**(3.1)**	**(0.5)**	**(5.9)**	**(6.4)**	**(9.5)**
Impairment	**0.8**	**0.1**	**–**	**0.9**	**–**	**–**	**–**	**0.9**
Effect of movements in exchange rates	**4.4**	**7.1**	**–**	**11.5**	**0.6**	**1.6**	**2.2**	**13.7**
Balance at 30 June 2022	**32.2**	**73.3**	**–**	**105.5**	**11.4**	**15.0**	**26.4**	**131.9**
Carrying amounts								
At 30 June 2022	**68.0**	**40.3**	**29.6**	**137.9**	**20.1**	**13.4**	**33.5**	**171.4**
At 30 June 2021	42.1	31.1	22.1	95.3	14.2	13.5	27.7	123.0

18. EQUITY ACCOUNTED INVESTEES

We hold interests in several joint ventures and associates where we have significant influence.

Accounting policies
Joint ventures are entities over whose activities we have joint control, under a contractual agreement. The Group Financial Statements include the Group's share of profit or loss arising from joint ventures.

Associates are entities in which the Group has significant influence, but not control, over the financial and operating policies. The Group Financial Statements include the Group's share of the total recognised income and expense of associates on an equity accounted basis, from the date that significant influence commences until the date it ceases. When our share of losses exceeds our interest in an associate, we reduce the carrying amount to nil and stop recognising further losses, except to the extent that the Group has incurred legal or constructive obligations or made payments on an associate's behalf.

Under the equity method, investments in joint ventures or associates are initially recognised in the Group Balance Sheet at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the joint ventures and associates. Related-party transactions with the Group's joint ventures and associates primarily comprise the sale of products and services. As each arrangement is a separate legal entity and control rights are substantially equal with the other parties, no significant judgements are required.

The Group's share of profit after tax in its equity accounted investees for the year was £5.2m (2021: £13.1m).

The carrying value of the investments is reconciled as follows:

	2022 £m	2021 £m
Balance at 1 July	**34.1**	22.7
Share of post-tax retained profits of joint ventures and associates	**5.2**	13.1
Additions	**2.2**	2.4
Dividends received from Agroceres – PIC Genética de Suínos Ltda (Brazil)	**(3.1)**	(2.5)
Dividends received from Società Agricola GENEETIC S.r.l (Italy)	**(0.1)**	–
Dividends received from Inner Mongolia Haoxiang Pig Breeding Co. Ltd. (China)	**–**	(1.6)
Loan investment	**–**	0.4
Effect of other movements including exchange rates	**2.9**	(0.4)
Balance at 30 June	**41.2**	34.1

The additions in the year solely relate to cash injections made to Inner Mongolia Haoxiang Pig Breeding Co. Ltd. to fund their operation. HY-CO Hybridschweine-Cooperations GmbH was struck off the register during the year.

During the prior year, we purchased a 39% shareholding for £2.4m in Xelect Limited, an aquaculture genetic services company, and retain a call option to purchase the remaining shares in Xelect Limited in 2023. We also made an investment of £0.4m in Società Agricola GENEETIC S.r.l., primarily through a shareholder's loan.

There are no significant restrictions on the ability of the joint ventures and associates to transfer funds to the Parent, other than those imposed by the Companies Act 2006 or equivalent government rules within the joint venture's jurisdiction:

Related-party transactions with joint ventures and associates

	Transaction value		**Balance outstanding**	
	2022 £m	2021 £m	**2022 £m**	2021 £m
Sale of goods and services to joint ventures and associates	**–**	(1.8)	**0.3**	0.4
Purchase of goods and services from joint ventures and associates	**6.5**	5.0	**–**	(0.4)

All outstanding balances with joint ventures and associates are priced on an arm's length basis and are to be settled in cash within six months of the reporting date. None of the balances are secured.

Summary financial information for equity accounted investees, adjusted for the Group's percentage ownership, is shown on the following page.

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FOR THE YEAR ENDED 30 JUNE 2022

18. EQUITY ACCOUNTED INVESTEES CONTINUED

Joint ventures and associates – year ended 30 June 2022

Net assets	Ownership	Cash and cash equivalent £m	Other current assets £m	Non-current assets £m	Biological assets £m	Total assets £m	Current liabilities £m	Total liabilities £m	Net assets £m
Agroceres – PIC Genética de Suínos Ltda (Brazil)	49%	0.2	17.6	23.6	6.9	48.3	(15.2)	(15.2)	33.1
Inner Mongolia Haoxiang Pig Breeding Co. Ltd. (China)[1]	49%	–	0.4	1.4	(1.2)	0.6	(0.8)	(0.8)	(0.2)
Chitale Genus ABS (India) Private Limited (India)	50%	0.3	0.3	1.1	–	1.7	(0.1)	(0.4)	1.3
Avlscenter Møllevang A/S[1]	49%	–	–	–	–	–	–	–	–
Yan'an Xinyongxiang Technology Co., Ltd (China)[1]	49%	2.7	1.3	0.8	(0.5)	4.3	(0.3)	(0.3)	4.0
Xelect Limited (United Kingdom)[1]	39%	0.1	0.2	2.2	–	2.5	(0.1)	(0.1)	2.4
Società Agricola GENEETIC S.r.l. (Italy)[1]	33%	–	0.6	0.4	–	1.0	(0.4)	(0.4)	0.6
Società Agricola GENEETIC Service S.r.l. (Italy)[1]	33%	–	–	–	–	–	–	–	–
		3.3	20.4	29.5	5.2	58.4	(16.9)	(17.2)	41.2

1 Classified as an associate. All other investments are classified as joint ventures

Income Statement	Ownership	Revenue £m	Net IAS 41 valuation movement on biological assets £m	Expenses £m	Operating profit £m	Taxation £m	Profit after tax £m
Agroceres – PIC Genética de Suínos Ltda (Brazil)	49%	31.6	(0.7)	(21.7)	9.2	(2.6)	6.6
Inner Mongolia Haoxiang Pig Breeding Co. Ltd. (China)[1]	49%	–	(1.2)	(1.0)	(2.2)	–	(2.2)
Yan'an Xinyongxiang Technology Co., Ltd (China)[1]	49%	5.5	0.5	(5.6)	0.4	–	0.4
Chitale Genus ABS (India) Private Limited (India)	50%	0.3	–	(0.2)	0.1	–	0.1
Avlscenter Møllevang A/S[1]	49%	–	–	–	–	–	–
Xelect Limited (United Kingdom)[1]	39%	0.6	–	(0.5)	0.1	–	0.1
Società Agricola GENEETIC S.r.l. (Italy)[1]	33%	1.9	–	(1.7)	0.2	–	0.2
Società Agricola GENEETIC Service S.r.l. (Italy)[1]	33%	–	–	–	–	–	–
		39.9	(1.4)	(30.7)	7.8	(2.6)	5.2

1 Classified as an associate. All other investments are classified as joint ventures

Joint ventures and associates have a December year end, except Chitale Genus ABS (India) Private Limited, which has a March year end, and Xelect Limited, which has a June year end. Where the year end differs from the year of the Group this is due to local regulatory requirements.

18. EQUITY ACCOUNTED INVESTEES CONTINUED

Joint ventures and associates – year ended 30 June 2021

Net assets	Ownership	Cash and cash equivalent £m	Other current assets £m	Non-current assets £m	Biological assets £m	Total assets £m	Current liabilities £m	Total liabilities £m	Net assets £m
Agroceres – PIC Genética de Suínos Ltda (Brazil)	49%	4.8	9.3	10.6	6.9	31.6	(5.1)	(5.1)	26.5
HY-CO Hybridschweine-Cooperations GmbH (Germany)	50%	–	0.1	–	–	0.1	–	–	0.1
Yan'an Xinyongxiang Technology Co., Ltd (China)[1]	49%	3.0	0.9	0.8	(0.9)	3.8	(0.4)	(0.4)	3.4
Chitale Genus ABS (India) Private Limited (India)	50%	–	0.3	1.4	–	1.7	(0.1)	(0.5)	1.2
Avlscenter Møllevang A/S[1]	49%	–	–	–	–	–	–	–	–
Xelect Limited (United Kingdom)[1]	39%	0.1	0.1	2.4	–	2.6	(0.2)	(0.2)	2.4
Società Agricola GENEETIC S.r.l. (Italy)[1]	33%	–	0.2	0.4	–	0.6	(0.1)	(0.1)	0.5
Società Agricola GENEETIC Service S.r.l. (Italy)[1]	33%	–	–	–	–	–	–	–	–
		7.9	10.9	15.6	6.0	40.4	(5.9)	(6.3)	34.1

1 Classified as an associate. All other investments are classified as joint ventures

Income Statement	Ownership	Revenue £m	Net IAS 41 valuation movement on biological assets £m	Expenses £m	Operating profit £m	Taxation £m	Profit after tax £m
Agroceres – PIC Genética de Suínos Ltda (Brazil)	49%	31.5	3.9	(21.2)	14.2	(3.0)	11.2
HY-CO Hybridschweine-Cooperations GmbH (Germany)	50%	–	–	–	–	–	–
Yan'an Xinyongxiang Technology Co., Ltd (China)[1]	49%	6.0	(0.8)	(3.3)	1.9	–	1.9
Chitale Genus ABS (India) Private Limited (India)	50%	0.4	–	(0.3)	0.1	–	0.1
Avlscenter Møllevang A/S[1]	49%	–	–	(0.2)	(0.2)	–	(0.2)
Xelect Limited (United Kingdom)[1]	39%	0.2	–	(0.2)	–	–	–
Società Agricola GENEETIC S.r.l. (Italy)[1]	33%	0.8	–	(0.7)	0.1	–	0.1
Società Agricola GENEETIC Service S.r.l. (Italy)[1]	33%	–	–	–	–	–	–
		38.9	3.1	(25.9)	16.1	(3.0)	13.1

1 Classified as an associate. All other investments are classified as joint ventures

Joint ventures and associates have a December year end, except Chitale Genus ABS (India) Private Limited, which has a March year end, and Xelect Limited, which has a June year end. Where the year end differs from the year of the Group this is due to local regulatory requirements.

19. OTHER INVESTMENTS

We hold a number of unlisted and listed investments, mainly comprising our strategic investment in Caribou Biosciences, Inc. ('Caribou') and shares in listed entity National Milk Records plc ('NMR').

Accounting policies

Financial assets at fair value through other comprehensive income ('FVOCI') comprise equity securities which are not held for trading, and which the Group has irrevocably elected at initial recognition to recognise as FVOCI. The Group considers this classification relevant as these are strategic investments.

Financial assets at FVOCI are adjusted to the fair value of the asset at the balance sheet date, with any gain or loss being recognised in other comprehensive income and held as part of other reserves. On disposal any gain or loss is recognised in other comprehensive income and the cumulative gains or losses are transferred from other reserves to retained earnings.

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through income statement, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through income statement are expensed in the Income Statement.

FINANCIAL STATEMENTS

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

19. OTHER INVESTMENTS CONTINUED

Other investments may include equity investments (where the Group does not have control, joint control or significant influence in the investee), short-term deposits with banks and other investments with original maturities of more than three months. Any dividends received are recognised in the Income Statement.

Investments carried at fair value	2022 £m	2021 £m
Listed equity shares – Caribou Biosciences, Inc.	**4.4**	10.4
Unlisted equity shares – Dairy LLC ('BoviSync')	**2.2**	1.2
Listed equity shares – NMR	**2.1**	2.0
Unlisted equity shares – Other	**1.5**	1.1
	10.2	14.7

We hold a strategic non-controlling interest in Caribou, which is measured at fair value using the valuation basis of a Level 1 classification. Caribou shares are publicly traded on the NASDAQ.

We hold a strategic non-controlling interest in BoviSync, a herd management software company. In January 2022, we increased our shareholding by a further £1.0m. The investment is measured at fair value and the valuation basis of a Level 3 classification. The fair value has been determined with reference to the equity purchase during the fiscal year.

NMR ordinary shares were acquired as part of the NMR pension agreement, and are measured at fair value. The valuation basis is Level 1 classification, where fair value techniques are quoted (unadjusted) prices in active markets for identical assets and liabilities.

Other unlisted equity investments primarily consist of strategic non-controlling interests in bovine technology companies, which are measured at fair value and the valuation basis is Level 3 classification, where fair value techniques use inputs which have a significant effect on the recorded fair value and are not based on observable market data.

20. INVENTORIES

Our inventory primarily consists of bovine semen, raw materials and ancillary products.

Accounting policies
Inventory (excluding biological assets' harvest) is stated at the lower of cost and net realisable value. Cost is determined on the basis of weighted average costs and comprises direct materials and, where appropriate, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition.

For our biological assets accounting policies, see note 16.

	2022 £m	2021 £m
Biological assets' harvest classed as inventories	**20.9**	17.8
Raw materials and consumables	**3.6**	2.9
Goods held for resale	**26.4**	16.3
	50.9	37.0

21. TRADE AND OTHER RECEIVABLES

Our trade and other receivables mainly consist of amounts owed to us by customers and amounts we pay to our suppliers in advance.

Accounting policies
We state trade and other receivables at their amortised cost less any impairment losses.

	2022 £m	2021 £m
Trade receivables	**105.3**	87.2
Less expected credit loss allowance	**(4.3)**	(5.0)
Trade receivables net of impairment	**101.0**	82.2
Other debtors	**10.7**	6.4
Prepayments	**8.5**	6.6
Contract assets (note 24)	**7.7**	7.7
Other taxes and social security	**1.6**	3.3
Current trade and other receivables	**129.5**	106.2
Other debtors	**3.7**	1.8
Contract assets (note 24)	**4.9**	–
Non-current other receivables	**8.6**	1.8
	138.1	108.0

21. TRADE AND OTHER RECEIVABLES CONTINUED

Trade receivables
The average credit period our customers take on the sales of goods is 62 days (2021: 53 days). We do not charge interest on receivables for the first 30 days from the date of the invoice.

The Group always measures the loss allowance for trade receivables at an amount equal to lifetime expected credit losses ('ECLs'). The ECLs on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the general economic conditions of the industry and country in which the debtor operates and an assessment of both the current and the forecast direction of conditions at the reporting date. The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, such as when the debtor has been placed under liquidation or has entered into bankruptcy proceedings.

The Group recognises ECLs with reference to the following matrix, in accordance with the simplified approach permitted in IFRS 9. There has been no change in the estimation techniques during the current reporting period. A component of the calculation is the risk premium of the countries in which our customers operate. The risk premiums are updated on each reporting date, to reflect changes in the global economy.

		North America	Latin America	EMEA	Asia
2022	**Risk premium (%)**	**1.0%**	**5.1%**	**3.5%**	**3.7%**
	Trade receivables (£m)	**31.1**	**22.3**	**39.3**	**12.6**
2021	Risk premium (%)	1.6%	4.6%	3.1%	12.9%
	Trade receivables (£m)	26.0	18.9	32.2	10.1

The following table shows the movement in lifetime ECLs that has been recognised for trade receivables, in accordance with the simplified approach set out in IFRS 9.

	2022 £m	2021 £m
Balance at the start of the year	**5.0**	3.4
Change in loss allowance due to new trade and other receivables originated net of those derecognised due to settlement	**2.3**	3.4
Amounts written off as uncollectable	**–**	(0.3)
Impairment losses reversed	**(3.2)**	(1.4)
Effect of movements in exchange rates	**0.2**	(0.1)
Balance at the end of the year	**4.3**	5.0

The aging of trade receivables is presented below:

	Trade receivables		Trade receivables net of impairment	
Days past due	**2022 £m**	2021 £m	**2022 £m**	2021 £m
Not yet due	**81.7**	67.8	**79.3**	65.3
0–30 days	**11.7**	9.6	**11.4**	9.1
31–90 days	**7.4**	6.5	**7.2**	5.1
91–180 days	**3.0**	1.8	**2.5**	1.7
Over 180 days	**1.5**	1.5	**0.6**	1.0
	105.3	87.2	**101.0**	82.2

No customer represents more than 5% of the total balance of trade receivables (2021: no more than 5%).

The Directors consider that the carrying amount of trade and other receivables approximates their fair value.

Trade and other receivables denominated in currencies other than Sterling comprise £44.1m denominated in US Dollars (2021: £35.7m), £13.3m denominated in Euros (2021: £11.8m) and £49.7m denominated in other currencies (2021: £37.9m).

Other debtors
Included in other debtors is an amount of £3.5m (2021: £1.6) which comprises of security deposits held over farms being constructed.

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FOR THE YEAR ENDED 30 JUNE 2022

22. CASH AND CASH EQUIVALENTS

We hold cash and bank deposits which have a maturity of three months or less, to enable us to meet our short-term liquidity requirements.

Accounting policies
Cash and cash equivalents comprise cash balances. Bank overdrafts that are repayable on demand form an integral part of our cash management and are included in interest-bearing loans and borrowings less than one year.

	2022 £m	2021 £m
Cash at bank and in hand	**38.8**	46.0

The carrying amount of these assets approximates to their fair value.

The credit quality of cash and cash equivalents can be assessed by reference to external credit ratings of the counterparty where the account or deposit is placed.

Counterparties with external credit ratings	2022 £m	2021 £m
A to AA-	**24.1**	34.2
BBB- to BBB	**8.0**	6.4
B- to BB+	**1.9**	5.0
CCC to CCC-	**0.3**	0.4
No ratings	**4.5**	–
	38.8	46.0

Within our cash and cash equivalents there is a cash balance of £4.5m in our Russian entities of which £3.9m is not currently available to be used by the Group due to being received from, or held in, sanctioned banks.

23. TRADE AND OTHER PAYABLES

Our trade and other payables mainly consist of amounts we owe to our suppliers that have been invoiced or are accrued. They also include taxes and social security amounts due in relation to our role as an employer.

Accounting policies
Trade payables are not interest bearing and are stated at their nominal value.

	2022 £m	2021 £m
Trade payables	**36.0**	23.7
Other payables	**8.2**	7.6
Accrued expenses	**61.4**	60.2
Contract liabilities (note 24)	**10.1**	10.6
Other taxes and social security	**9.0**	8.2
Current trade and other payables	**124.7**	110.3
Contract liabilities (note 24)	**0.2**	1.4
Non-current trade and other payables	**0.2**	1.4

The average credit period taken for trade purchases is 39 days (2021: 27 days).

Other payables include an amount of £5.1m (2021: £3.0m) being repayable on demand with a third-party business partner.

Payables denominated in currencies other than Sterling comprise £55.9m denominated in US Dollars (2021: £43.8m), £11.8m denominated in Euros (2021: £10.5m) and £33.7m denominated in other currencies (2021: £32.6m).

The carrying values of these liabilities are a reasonable approximation of their fair values.

24. CONTRACT BALANCES

Accounting policy
A contract asset is recognised when the Group's right to consideration is conditional on something other than the passage of time, for example the completion of future performance obligations under the terms of the contract with the customer. In some instances, the Group receives payments from customers based on a billing schedule, as established in the contract, which may not match with the pattern of performance under the contract.

Where payment is received ahead of performance a contract liability will be created, and where performance obligations are satisfied ahead of billing, then a contract asset will be recognised.

24. CONTRACT BALANCES CONTINUED

	2022 £m	2021 £m
Current contract assets	**7.7**	7.7
Non-current contract assets	**4.9**	–
Contract assets (note 21)	**12.6**	7.7
Current contract liabilities	**(10.1)**	(10.6)
Non-current contract liabilities	**(0.2)**	(1.4)
Contract liabilities (note 23)	**(10.3)**	(12.0)

	Contract assets £m	Contract liabilities £m
Balance at 1 July 2020	5.1	(11.5)
Increases as a result of performance in advance of billing	35.8	–
Transfers to receivables during the year	(32.7)	–
Increases as a result of billing ahead of performance	–	(109.3)
Decreases as a result of revenue recognised in the year	–	108.1
Effect of movements in exchange rates	(0.5)	0.7
Balance at 30 June 2021	7.7	(12.0)
Increases as a result of performance in advance of billing	**72.0**	**–**
Transfers to receivables during the year	**(67.3)**	**–**
Increases as a result of billing ahead of performance	**–**	**(80.8)**
Decreases as a result of revenue recognised in the year	**–**	**83.4**
Effect of movements in exchange rates	**0.2**	**(0.9)**
Balance at 30 June 2022	**12.6**	**(10.3)**

In some cases, the Group receives payments from customers based on a billing schedule, as established in our contracts. The contract assets relate to revenue recognised for performance in advance of scheduled billing and have increased as the Group has provided more services ahead of the agreed payment schedules for certain contracts. The contract liability relates to payments received in advance of performance under contract and varies based on performance under these contracts.

The transaction price allocated to partially unsatisfied performance obligations at 30 June 2022 is £12.1m (2021: £3.6m). It is expected that the Group will recognise this revenue over the next four years.

25. PROVISIONS

A provision is a liability recorded in the Group Balance Sheet, where there is uncertainty over the timing or amount that will be paid, and is therefore estimated. The main provisions we hold relate to litigation damages, legal provisions, customer claims and share forfeiture.

Accounting policies

We recognise a provision in the Balance Sheet when an event results in the Group having a current legal or constructive obligation, and it is probable that we will have to settle the obligation through an outflow of economic benefits. If the effect is material, we discount provisions to their present value.

	ST litigation £m	Share forfeiture £m	Other provisions £m	Total £m
Balance at 1 July 2020	10.5	2.3	3.0	15.8
Additional provision in the year	0.2	–	2.7	2.9
Utilisation of provision	(0.2)	–	(2.3)	(2.5)
Release of provision	–	(2.0)	(0.4)	(2.4)
Effect of movement in exchange rates	(1.1)	–	(0.3)	(1.4)
Balance at 30 June 2021	9.4	0.3	2.7	12.4
Additional provision in the year	**–**	**0.2**	**0.5**	**0.7**
Utilisation of provision	**(0.4)**	**–**	**(0.1)**	**(0.5)**
Release of provision	**(0.1)**	**–**	**(0.1)**	**(0.2)**
Effect of movement in exchange rates	**1.2**	**–**	**0.3**	**1.5**
Balance at 30 June 2022	**10.1**	**0.5**	**3.3**	**13.9**

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

25. PROVISIONS CONTINUED

	2022 £m	2021 £m
Current	**1.9**	1.3
Non-current	**12.0**	11.1
	13.9	12.4

ST litigation relates specifically to our litigation only with Sexing Technologies, as described in note 7.

The share forfeiture provision of £0.5m relates to potential claims that could be made by untraced members over the next three years, relating to the resale proceeds of shares that were identified during the prior year as being forfeited.

Other provisions mainly relate to legal provisions (excluding ST litigation) and customers' claims. The timing and cash flows associated with the majority of legal claims are expected to be less than one year. However, for some legal claims the timing of cash flows may be long term in nature and are disclosed as such.

26. FINANCIAL INSTRUMENTS

This note details our treasury management and financial risk management objectives and policies, as well as the Group's exposure and sensitivity to credit, liquidity, interest and foreign exchange rate risk, and the policies in place to monitor and manage these risks.

Financial risk management objectives

The Group's corporate treasury function provides services to the business, coordinates our access to domestic and international financial markets, and monitors and manages the financial risks relating to the Group's operations, through internal risk reports that analyse exposures by degree and magnitude of risks. These risks include market risk (including currency risk, fair value interest rate risk and price risk), credit risk, liquidity risk and cash flow interest rate risk.

We seek to minimise the effects of these risks by hedging them using derivative financial instruments. Our use of financial derivatives is governed by policies approved by the Board of Directors, which provide written principles on foreign exchange risk, interest rate risk, credit risk, the use of financial derivatives and non-derivative financial instruments, and the investment of excess liquidity. The Board of Directors regularly reviews our compliance with policies and exposure limits. The Group does not enter into or trade financial instruments, including derivative financial instruments, for speculative purposes.

Key financial risks and exposures are monitored through a monthly report to the Board of Directors, together with an annual Board review of corporate treasury matters.

Financial risk

The principal financial risks our activities expose us to are the risks of changes in foreign currency exchange rates, interest rates and commodity prices. We use derivative financial instruments to manage our exposure to interest rate, foreign currency and commodity price risks, including:

> forward foreign exchange contracts, to hedge the exchange rate risk arising on the sale of goods and purchase of supplies in foreign currencies;
> interest rate swaps, to mitigate the risk of rising interest rates; and
> forward commodity contracts, to hedge commodity price risk.

Accounting policies

Financial instruments

Financial assets and liabilities in respect of financial instruments are recognised on the Group Balance Sheet when the Group becomes a party to the instrument's contractual provisions.

Financial liabilities and equity instruments

Financial liabilities and equity instruments issued by the Group are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument. An equity instrument is any contract that provides a residual interest in the Group's assets after deducting all of its liabilities and includes no obligation to deliver cash or other financial assets. The accounting policies adopted for specific financial liabilities and equity instruments are set out below.

Put option arrangements over non-controlling interest

The potential cash payments related to put options issued by the Group over the equity of subsidiary companies are accounted for as financial liabilities.

The amount that may become payable under the option on exercise is initially recognised at present value within financial liabilities, with a corresponding charge directly to equity. The charge to equity is recognised separately as written put options over non-controlling interest, adjacent to non-controlling interest in the net assets of consolidated subsidiaries.

Such options are subsequently measured at amortised cost, using the effective interest rate method, in order to accrete the liability up to the amount payable under the option at the date at which it first becomes exercisable. The charge arising is recorded as a financing cost. If the option expires unexercised, the liability is derecognised, with a corresponding adjustment to equity.

Derivative financial instruments

Derivatives are recognised initially at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each reporting date. The resulting gain or loss is recognised in the Income Statement immediately, unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in the Income Statement depends on the nature of the hedge relationship.

26. FINANCIAL INSTRUMENTS CONTINUED

A derivative with a positive fair value is recognised as a financial asset whereas a derivative with a negative fair value is recognised as a financial liability. Derivatives are not offset in the financial statements, unless the Group has both a legally enforceable right and intention to offset. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not due to be realised or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

The fair value of interest rate swaps is the estimated amount that we would receive or pay to terminate the swap at the balance sheet date, taking into account current interest rates and the creditworthiness of the swap counterparties.

The fair values of forward exchange contracts and forward commodity contracts are their quoted market price at the balance sheet date, which is the present value of the quoted forward price.

Hedging activities

The Group designates certain derivatives as hedging instruments in respect of foreign exchange risk, interest rate risk and commodity risk in fair value hedges, cash flow hedges, or hedges of net investments in foreign operations.

At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationship meets all of the following hedge effectiveness requirements:

> there is an economic relationship between the hedged item and the hedging instrument;
> the effect of credit risk does not dominate the value changes that result from that economic relationship; and
> the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.

The Group designates the full change in the fair value of a forward contract (i.e. including the forward elements) as the hedging instrument for all of its hedging relationships involving forward contracts.

The Group designates only the intrinsic value of option contracts as a hedged item, i.e. excluding the time value of the option. The changes in the fair value of the aligned time value of the option are recognised in Other Comprehensive Income and accumulated in the cost of hedging reserve. If the hedged item is transaction related, the time value is reclassified to the Income Statement when the hedged item affects the Income Statement. If the hedged item is time-period related, then the amount accumulated in the cost of hedging reserve is reclassified to the Income Statement on a rational basis, applying straight-line amortisation. Those reclassified amounts are recognised in the Income Statement in the same line as the hedged item. If the hedged item is a non-financial item, then the amount accumulated in the cost of hedging reserve is removed directly from equity and included in the initial carrying amount of the recognised non-financial item. Furthermore, if the Group expects that some or all of the loss accumulated in cost of hedging reserve will not be recovered in the future, that amount is immediately reclassified to the Income Statement.

Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognised in Other Comprehensive Income and accumulated under the heading of cash flow hedging reserve, and limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in the Income Statement and is included in the 'other gains and losses' line item.

Amounts previously recognised in Other Comprehensive Income and accumulated in equity are reclassified to the Income Statement in the periods when the hedged item affects the Income Statement, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in other comprehensive income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect Other Comprehensive Income. Furthermore, if the Group expects that some or all of the loss accumulated in the cash flow hedging reserve will not be recovered in the future, that amount is immediately reclassified to the Income Statement.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognised in Other Comprehensive Income and accumulated in cash flow hedge reserve at that time remains in equity and is reclassified to the Income Statement when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in the cash flow hedge reserve is reclassified immediately to the Income Statement.

Under interest rate swap contracts, the Group agrees to exchange the difference between fixed and floating rate interest amounts calculated on agreed notional principal amounts. Such contracts enable the Group to mitigate the risk of changing interest rates on the fair value of issued fixed-rate debt held and the cash flow exposures on the issued variable-rate debt held. The fair value of interest rate swaps at the reporting date is determined by discounting the future cash flows using the yield curves at the reporting date and the credit risk inherent in the contract. The average interest rate is based on the outstanding balances at the end of the financial year.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
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26. FINANCIAL INSTRUMENTS CONTINUED

As the critical terms of the interest rate swap contracts and their corresponding hedged items are the same, the Group performs a qualitative assessment of effectiveness and it is expected that the value of the interest rate swap contracts and the value of the corresponding hedged items will systematically change in opposite directions, in response to movements in the underlying interest rates. The main source of hedge ineffectiveness in these hedge relationships is the effect of the counterparty and the Group's own credit risk on the fair value of the interest rate swap contracts, which is not reflected in the fair value of the hedged item attributable to the change in interest rates. No other sources of ineffectiveness emerged from these hedging relationships.

Net investment hedges
Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges. Any gain or loss on the foreign currency forward contracts relating to the effective portion of the hedge is recognised in Other Comprehensive Income and accumulated in the foreign currency translation reserve. The gain or loss relating to the ineffective portion is recognised immediately in the Income Statement, and is included in the 'other gains and losses' line item.

Gains and losses on the hedging instrument accumulated in the foreign currency translation reserve are reclassified to the Income Statement on the disposal or partial disposal of the foreign operation.

We only apply net investment hedge accounting in the Group Financial Statements.

Capital risk management
The Group manages its capital to ensure that Group entities can continue as going concerns, while maximising the return to shareholders by optimising our debt and equity balance. The Group's capital structure consists of debt, which includes the borrowings disclosed in note 27, cash and cash equivalents, and equity attributable to equity holders of the Parent, comprising issued capital, reserves and retained earnings, as disclosed in note 31.

Gearing ratio
The Group keeps its capital structure under review and monitors it monthly to ensure the gearing ratio remains below 60%. The Group is not subject to externally imposed capital requirements. The gearing ratio at the year end was as follows:

	2022 £m	2021 £m
Debt (see note 27)	**223.8**	151.6
Cash and cash equivalents (see note 22)	**(38.8)**	(46.0)
Net debt (see note 32)	**185.0**	105.6
Equity	**572.1**	496.6
Net debt to equity ratio	**32%**	21%

Debt is defined as long and short-term borrowings, including lease obligations as detailed in note 27.

Equity includes all capital and reserves of the Group attributable to equity holders of the Parent.

26. FINANCIAL INSTRUMENTS CONTINUED

Categories of financial instruments

We have categorised financial instruments held at valuation into a three-level fair value hierarchy, based on the priority of the inputs to the valuation technique in accordance with IFRS 13. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure fair value fall within different levels of the hierarchy, we base the category level on the lowest priority level input that is significant to the fair value measurement of the instrument in its entirety. We have estimated the fair values of the Group's outstanding interest rate swaps by calculating the present value of future cash flows, using appropriate market discount rates, representing Level 2 fair value measurements as defined by IFRS 13.

	2022 Carrying value				2021 Carrying value			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Financial assets								
Other investments	**6.5**	**–**	**3.7**	**10.2**	2.0	10.4	2.3	14.7
Trade receivables and other debtors, excluding prepayments and contract assets (see note 21)	**–**	**117.0**	**–**	**117.0**	–	91.9	–	91.9
Cash and cash equivalents	**–**	**38.8**	**–**	**38.8**	–	46.0	–	46.0
Derivative instruments in non-designated hedge accounting relationships	**–**	**1.0**	**–**	**1.0**	–	0.1	–	0.1
Derivative instruments in designated hedge accounting relationships	**–**	**2.2**	**–**	**2.2**	–	–	–	–
	6.5	**159.0**	**3.7**	**169.2**	2.0	148.4	2.3	152.7
Financial liabilities								
Trade and other payables, excluding other taxes and social security (see note 23)	**–**	**(115.9)**	**–**	**(115.9)**	–	(102.1)	–	(102.1)
Loans and overdrafts (see note 27)	**–**	**(189.2)**	**–**	**(189.2)**	–	(123.3)	–	(123.3)
Leasing obligations (see note 28)	**–**	**(34.6)**	**–**	**(34.6)**	–	(28.3)	–	(28.3)
Derivative instruments in non-designated hedge accounting relationships	**–**	**(0.9)**	**–**	**(0.9)**	–	–	–	–
Derivative instruments in designated hedge accounting relationships	**–**	**(0.3)**	**–**	**(0.3)**	–	–	–	–
Put option over non-controlling interest	**–**	**(7.0)**	**–**	**(7.0)**	–	(6.1)	–	(6.1)
Deferred consideration (see note 38)	**–**	**–**	**(1.5)**	**(1.5)**	–	(0.4)	(1.7)	(2.1)
	–	**(347.9)**	**(1.5)**	**(349.4)**	–	(260.2)	(1.7)	(261.9)

We hold a strategic non-controlling interest in Caribou Biosciences, Inc ('Caribou'), presented above within Other Investments (note 19). In July 2021, Caribou shares started publicly trading on the NASDAQ, and was reclassified from a Level 2 instrument to Level 1. There have been no transfers between levels during the year.

Foreign currency risk management

We undertake transactions denominated in foreign currencies.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities (excluding short-term amounts related to our ongoing trade, recognised as trade receivables and trade payables) at the reporting date were as follows:

	Liabilities		Assets	
	2022 £m	2021 £m	2022 £m	2021 £m
US Dollar	**(88.0)**	(67.7)	**2.2**	2.1
Euro	**(11.3)**	(12.1)	**0.5**	0.5
Canadian Dollar	**(0.4)**	–	**–**	–

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

26. FINANCIAL INSTRUMENTS CONTINUED

Foreign currency Income Statement sensitivity analysis
The Group is mainly exposed to movements in the US Dollar, Euro, Brazilian Real, Mexican Peso, Chinese Yuan and Russian Rouble exchange rates.

The following table details the Group's sensitivity to a 10% and 20% increase and decrease in Sterling against these currencies. 10% is the sensitivity rate used when reporting foreign currency risk internally to key management and represents our assessment of a significant change in foreign exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the period end for a 10% or 20% change in foreign currency rates. It includes external loans, as well as loans to foreign operations within the Group where the loan is denominated in a currency other than the lender or borrower's currency. A positive number below indicates an increase in profit when Sterling weakens against the relevant currency. A strengthening of Sterling against the relevant currency would produce an equal but opposite reduction in profit, and the balances below would be negative.

	20% currency movement		10% currency movement	
	2022 £m	2021 £m	**2022 £m**	2021 £m
Euro	**2.8**	2.4	**1.4**	1.2
US Dollar	**1.2**	1.2	**0.6**	0.6
Brazilian Real	**2.7**	2.8	**1.3**	1.4
Mexican Peso	**3.1**	2.8	**1.5**	1.4
Chinese Yuan	**2.3**	7.0	**1.2**	3.5
Russian Rouble	**1.5**	1.3	**0.7**	0.6

Forward foreign exchange contracts
The Group's policy is to enter into forward foreign exchange contracts, to cover specific foreign currency payments and receipts. The following table details the forward foreign currency contracts outstanding as at the year end:

	Average exchange rate			Contract value		Fair value	
	2022	2021	**Foreign currency**	**2022 £m**	2021 £m	**2022 £m**	2021 £m
Outstanding contracts							
Buy CHF	**1.18**	–	CHF	**0.9**	–	**–**	–
Sell CNY	**8.2**	9.03	CNY	**1.2**	2.0	**–**	–
Buy AUD	**1.76**	1.85	AUD	**1.8**	1.0	**–**	–
Buy PHP	**67.01**	–	PHP	**0.3**	–	**–**	–
Sell PHP	**–**	67.78	PHP	**–**	0.1	**–**	–
Sell RUB	**–**	101.95	RUB	**–**	0.1	**–**	–
Buy EUR	**0.86**	0.86	EUR	**7.2**	8.8	**–**	–
Sell PLN	**–**	5.30	PLN	**–**	0.9	**–**	–
Buy MXN	**24.74**	28.03	MXN	**2.9**	5.6	**0.1**	0.1
Buy USD	**1.23**	–	USD	**1.1**	–	**(0.1)**	–
Sell USD	**–**	1.40	USD	**–**	4.7	**–**	(0.1)
Buy CHF/Sell EUR	**1.01**	–	CHF	**3.4**	–	**–**	–
Buy EUR/Sell CHF	**–**	1.09	CHF	**–**	0.3	**–**	–
Buy USD/Sell UAH	**33.06**	–	UAH	**0.3**	–	**–**	–
Buy USD/Sell BRL	**4.90**	5.05	BRL	**1.8**	1.8	**0.1**	–
Buy USD/Sell CLP	**–**	720.03	CLP	**–**	0.3	**–**	–
Buy USD/Sell CNY	**6.69**	6.43	CNY	**3.7**	1.7	**–**	–
Buy PHP/Sell USD	**53.53**	48.82	PHP	**7.4**	5.0	**(0.2)**	–
Buy CAD/Sell USD	**1.29**	–	CAD	**0.4**	–	**–**	–
Buy USD/Sell CAD	**–**	1.23	CAD	**–**	2.3	**–**	–
Buy USD/Sell EUR	**1.06**	1.19	EUR	**0.3**	2.3	**–**	–
Buy USD/Sell RUB	**56.85**	72.58	RUB	**1.2**	1.5	**(0.1)**	–
Buy USD/Sell INR	**78.76**	73.06	INR	**1.3**	2.8	**–**	–
Buy USD/Sell ZAR	**16.09**	14.41	ZAR	**3.4**	0.2	**–**	–
Buy USD/Sell ARS	**129.69**	97.85	ARS	**0.3**	0.2	**–**	–
						(0.2)	–

26. FINANCIAL INSTRUMENTS CONTINUED

Interest rate risk management

The Group is exposed to interest rate risk, as Group entities borrow funds at both fixed and floating interest rates. We manage this risk centrally, by maintaining an appropriate mix between fixed and floating rate borrowings, using interest rate swaps. We regularly review our hedging activities, to align with our interest rate views and defined risk appetite, thereby ensuring we apply optimal hedging strategies to minimise the adverse impact of fluctuations in interest expense through different interest rate cycles.

The Group's exposures to interest rates on financial assets and financial liabilities are detailed in the liquidity risk management section of this note.

Interest rate sensitivity analysis

We have determined the sensitivity analyses below, based on the Group's exposure to interest rates for both derivatives and non-derivative instruments, at the balance sheet date. For floating rate liabilities, we prepared the analysis assuming the liability outstanding at the balance sheet date was outstanding for the whole year. A 1.0 percentage point increase or decrease is used when reporting interest rate risk internally to key management and is our assessment of a significant change in interest rates.

If interest rates had been 1.0 percentage point higher or lower and all other variables were held constant, the Group's profit would have decreased or increased by £1.8m (2021: decrease/increase by £1.2m). This impact is smaller than would otherwise be the case, due to our fixed-rate hedging.

Interest rate swap contracts

Under interest rate swap contracts, the Group agrees to exchange the difference between fixed and floating rate interest amounts, calculated on agreed notional principal amounts. These contracts enable us to mitigate the risk of changing interest rates on the cash flow exposures on the variable-rate debt we hold. We determine the fair value of interest rate swaps at the reporting date by discounting the future cash flows, using the yield curves at the reporting date and the credit risk inherent in the contract. This fair value is disclosed on the following page. The average interest rate is based on the outstanding balances at the end of the financial year.

Cash flow hedges

The following table details the notional principal amounts and remaining terms of interest rate swap contracts outstanding, as at the reporting date:

	Average contract fixed interest rate		Notional principal amount		Fair value	
Outstanding receive floating pay fixed contracts	**2022 %**	2021 %	**2022 £m**	2021 £m	**2022 £m**	2021 £m
USD interest rate swaps						
One to five years	**3.32**	–	**37.0**	–	**(0.3)**	–
EUR interest rate swaps						
One to five years	**0.36**	–	**21.5**	–	**0.6**	–
GBP interest rate swaps						
One to five years	**–**	1.13	**–**	5.0	**–**	–

The interest rate swaps settle on a quarterly basis. The corresponding floating rate on the interest rate swaps is three months. We settle the difference between the fixed and floating interest rate on a net basis.

Interest rate swap contracts that exchange floating-rate interest amounts for fixed-rate interest amounts are designated as cash flow hedges, to reduce our cash flow exposure resulting from variable interest rates on borrowings. The interest rate swaps and the interest payments on the loan occur simultaneously and we recognise the amount deferred in equity in the Income Statement, over the period that the floating rate interest payments on debt affect the Income Statement.

Commodity hedges

The Group hedges both feed and slaughter exposures using Chicago Mercantile Exchange lean hog, corn and soybean meal commodity futures contracts.

	Average price		Notional principal amount		Fair value	
Commodity hedge	**2022 US$**	2021 US$	**2022 £m**	2021 £m	**2022 £m**	2021 £m
Open commodity contracts as at June						
Lean hog	**0.92**	0.79	**10.2**	7.6	**(0.1)**	(0.8)
Corn	**6.87**	4.78	**(4.9)**	(4.3)	**0.1**	1.0
Soybean meal	**390**	382	**(3.0)**	(3.5)	**0.1**	(0.1)
			2.3	(0.2)	**0.1**	0.1

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

26. FINANCIAL INSTRUMENTS CONTINUED

Net investment hedges
The Group's Net Investment Policy is to hedge up to 70% of the Net Investment Value of its wholly owned subsidiaries. The Group has a pre-existing EUR12.5m Net Investment Hedge originally entered into on 25 November 2019 as a EUR 5 million hedge and subsequently increased to EUR 12.5 million on 28 June 2021 where the Group designated the first EUR 12.5 million of the net assets of Pig Improvement Company España S.A. and Bovec S.A. as a hedged item using EUR 12.5 million of borrowings as a net investment hedge. In February 2022, the Group entered into an additional Net Investment Hedge designating the first EUR 25 million Net Assets of its subsidiary Fyfield Holland BV net as the hedged item in a Net Investment Hedge using USD28m of borrowings converted to a EUR25m liability using a cross currency swap as the related hedging instrument. The Company entered into the EUR25m Cross Currency Swap on 28 February 2022 generating a synthetic EUR25m liability to match the equivalent portion of its investment in this subsidiary.

The table below shows a reconciliation of the gains or loss deferred in equity:

	2022 £m	2021 £m
Loss at the start of the year	**(0.1)**	(0.5)
Effective (losses)/gains recognised in equity in period	**(0.7)**	0.4
Balance carried forward in equity as effective losses	**(0.8)**	(0.1)

Credit risk management
Credit risk is the risk that a counterparty will default on its contractual obligations, resulting in financial loss to the Group. We have a policy of only dealing with creditworthy counterparties. We regularly monitor our exposure and the credit ratings of our counterparties, and the aggregate value of transactions concluded is spread amongst approved counterparties. Credit exposure on financial instruments is controlled by counterparty limits that the Board reviews and approves annually.

Trade receivables consist of a large number of customers, spread across diverse industries and geographical areas. We carry out ongoing credit evaluation of the financial condition of accounts receivable.

Liquidity risk management
The Board of Directors has ultimate responsibility for managing liquidity risk. We manage this risk by maintaining adequate reserves and banking facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities.

Liquidity and interest risk tables
For non-derivative financial liabilities, see notes 27, 28 and 38.

The following table details the Group's remaining contractual maturity for its non-derivative financial liabilities, excluding trade payables and other creditors which are short term and, as disclosed in note 23, have an average credit period of 39 days (2021: 27 days). We have drawn up the table based on the undiscounted cash flows of financial liabilities, using the earliest date on which we can be required to pay. The table includes both interest and principal cash flows.

	Weighted average effective interest rate %	Less than 1 month £m	1–3 months £m	3 months–1 year £m	1–5 years £m	5+ years £m	Total £m
2022							
Loans and borrowings	**2.31**	**8.4**	**1.2**	**4.6**	**183.0**	**–**	**197.2**
Lease liabilities	**2.91**	**1.0**	**3.0**	**6.8**	**20.7**	**6.1**	**37.6**
Deferred consideration	**–**	**–**	**–**	**–**	**0.5**	**–**	**0.5**
Variable interest rate instruments	**2.41**	**9.4**	**4.2**	**11.4**	**204.2**	**6.1**	**235.3**
2021							
Loans and borrowings	1.13	6.9	0.4	9.9	111.5	–	128.7
Lease liabilities	2.81	–	2.4	7.1	21.3	2.8	33.6
Deferred consideration	–	–	0.1	1.2	0.4	–	1.7
Variable interest rate instruments	1.66	6.9	2.9	18.2	133.2	2.8	164.0

The following table details the Group's expected maturity for other non-derivative financial assets, excluding trade receivables and other debtors. We have drawn up this table based on the undiscounted contractual maturities of the assets, including interest we will earn on them, except where we expect the cash flow to occur in a different period.

	Weighted average effective interest rate %	Less than 1 month £m	1–3 months £m	3 months–1 year £m	1–5 years £m	5+ years £m	Total £m
2022							
Variable interest rate instruments	**1.12**	**38.8**	**–**	**–**	**–**	**–**	**38.8**
2021							
Variable interest rate instruments	1.03	38.2	–	7.8	–	–	46.0

FINANCIAL STATEMENTS

26. FINANCIAL INSTRUMENTS CONTINUED

The Group has financing facilities with a total unused amount of £77.8m (2021: £129.3m) at the balance sheet date. We expect to meet our other obligations from operating cash flows and the proceeds of maturing financial assets. We expect to reduce the debt to equity ratio, as borrowings decrease through repayment from operating cash flows.

The following table details the Group's liquidity analysis for its derivative financial instruments. We have drawn up the table based on the undiscounted net cash outflows on derivative instruments that settle on a net basis and the undiscounted gross outflows on derivatives that require gross settlement. When the amount payable or receivable is not fixed, we have determined the amount disclosed by reference to the projected interest and foreign currency rates, as illustrated by the yield curves at the reporting date.

	Less than 1 month £m	1–3 months £m	3 months–1 year £m	1–5 years £m	5+ years £m	Total £m
2022						
Foreign exchange contracts	**(0.2)**	**–**	**–**	**–**	**–**	**(0.2)**
Commodity swaps	**–**	**–**	**0.1**	**–**	**–**	**0.1**
Interest rate swaps	**–**	**0.1**	**0.2**	**0.1**	**–**	**0.4**
2021						
Foreign exchange contracts	–	–	–	–	–	–
Commodity swaps	0.3	(0.1)	(0.1)	–	–	0.1
Interest rate swaps	–	–	–	–	–	–

Commodity swaps and interest rate swaps are always settled on a net basis. Foreign exchange contracts can be settled on a net or gross basis; the net cash flows presented in the table above reflect an inflow of £73.7m and outflow of £73.9m (2021: inflow of £88.4m and outflow of £88.4m).

27. LOANS AND BORROWINGS

The Group's borrowing for funding and liquidity purposes comes from a range of committed bank facilities.

Interest-bearing loans and borrowings

We initially recognise interest-bearing loans and borrowings at their fair value, less attributable transaction costs. After this initial recognition, we state them at amortised cost and recognise any difference between the cost and redemption value in the Income Statement over the borrowings' expected life, on an effective interest rate basis. The carrying values of these liabilities are a reasonable approximation of their fair values.

	2022 £m	2021 £m
Non-current liabilities		
Unsecured bank loans	**182.1**	109.4
Obligations under leases	**24.5**	19.3
	206.6	128.7
Current liabilities		
Unsecured bank loans and overdrafts	**7.1**	13.9
Obligations under leases	**10.1**	9.0
	17.2	22.9
Total interest-bearing liabilities	**223.8**	151.6

Terms and debt repayment schedule

Terms and conditions of outstanding loans and overdrafts were as follows:

	Currency	2022 Interest rate	2022 £m	2021 £m
Revolving credit facility and overdraft	GBP	2.6%	**95.9**	43.2
Revolving credit facility, term loan and overdraft	USD	3.0%	**77.3**	59.7
Revolving credit facility and overdraft	EUR	1.4%	**10.8**	10.7
Obligations under leases	USD	2.0%	**34.6**	28.3
Other unsecured bank borrowings	Other	2.2%	**5.2**	9.7
Total interest-bearing liabilities			**223.8**	151.6

The above revolving credit facilities are unsecured. Information about the Group's exposure to interest rate and foreign currency risks is shown in note 26.

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27. LOANS AND BORROWINGS CONTINUED

Loans and borrowings (excluding leases) comprise amounts falling due:	2022 £m	2021 £m
In one year or less or on demand	**8.0**	14.7
In more than one year but not more than two years	**–**	–
In more than two years but not more than five years	**182.3**	109.9
	190.3	124.6
Less: unamortised issue costs	**(1.1)**	(1.3)
	189.2	123.3
Current liabilities	**(7.1)**	(13.9)
Non-current liabilities	**182.1**	109.4

At the balance sheet date, the Group's credit facilities comprised a £150m multi-currency revolving credit facility ('RCF'), a USD125 million RCF and a USD20 million bond and guarantee facility. The original term of the facility was for three years to 24 August 2023 with the option to extend the maturity date by a further year before each of the first and second anniversaries of the signing date. The Company's credit facility also includes an uncommitted £100m accordion option, which can be requested on a maximum of three occasions over the lifetime of the facility to fund the Group's business development plans. On 24 August 2021, the Group and its lenders extended the facility by a further year to 24 August 2024.

With effect from 26 August 2022, the Group and its lenders increased the Company's multi-currency RCF by £40m to £190m and the USD RCF by USD25m to USD150m, and extended the maturity date of the total facilities to 24 August 2025.

As part of its interest rate hedging strategy, the Group has entered into interest rate swaps to hedge variable interest rates. At the balance sheet date, bank loan and overdrafts include borrowings of USD45m fixed at 3.3175%, and borrowings of USD28m, swapped via a cross currency swap into EUR25m, fixed at 0.3625%, excluding applicable bank margins.

28. OBLIGATIONS UNDER LEASES

A lease is a commitment to make a payment in the future, primarily in relation to property, plant and machinery and motor vehicles.

Accounting policies
In accordance with IFRS 16, we recognise as an expense any payments made in respect of short-term leases (those with a term of less than 12 months) and leases for low-value items on a straight-line basis over the life of the lease.

For all other leases we recognise a liability at the date at which the leased asset is made available for use, and a corresponding right-of-use asset is recognised and depreciated over the term of the lease (see note 17).

Lease liabilities are measured at the present value of the future lease payments, excluding any payments relating to non-lease components. Future lease payments include fixed payments, in-substance fixed payments, and variable lease payments that are based on an index or a rate, less any lease incentives receivable. Lease liabilities also take into account amounts payable under residual value guarantees and payments to exercise options, to the extent that it is reasonably certain that such payments will be made. The payments are discounted at the rate implicit in the lease or, where that cannot be measured, at an incremental borrowing rate.

We remeasure the lease liability (and make a corresponding adjustment to the related right-of-use asset) whenever:

> The lease term has changed or there is a change in the assessment of the exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.
> The lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used).
> A lease contract is modified, and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.

The Group did not make any such adjustments during the periods presented.

The changes in the lease liabilities are as follows:

	2022 £m	2021 £m
Balance at the start of the year	**28.3**	31.1
Leases entered into during the year	**15.7**	10.4
Leases terminated early	**(0.3)**	(1.0)
Payments made	**(12.4)**	(12.5)
Interest	**1.1**	0.8
Effect of movements in exchange rates	**2.2**	(0.5)
Balance at the end of the year	**34.6**	28.3
Current	**10.1**	9.0
Non-current	**24.5**	19.3
	34.6	28.3

At 30 June 2022, the Group is committed to £0.1m (2021: £0.1m) for short-term leases.

28. OBLIGATIONS UNDER LEASES CONTINUED

We have drawn up the table based on the undiscounted cash flows of the obligations under leases, using the earliest date on which we can be required to pay

	2022 £m	2021 £m
FY22	**–**	9.5
FY23	**10.8**	8.0
FY24	**8.2**	6.1
FY25	**5.7**	4.0
FY26	**4.1**	2.4
FY27	**2.7**	1.4
FY28	**2.0**	1.2
FY29	**1.8**	0.7
FY30	**1.2**	0.2
After FY30	**1.1**	0.1
	37.6	33.6
Presented as:		
Current	**10.8**	9.5
Non-current	**26.8**	24.1
	37.6	33.6

Lease obligations denominated in currencies other than Sterling comprise £16.0m denominated in US Dollars (2021: £15.9m), £4.0m denominated in Euros (2021: £2.7m) and £10.6m denominated in other currencies (2021: £3.0m).

29. RETIREMENT BENEFIT OBLIGATIONS

The Group operates a number of defined contribution and defined benefit pension schemes covering many of its employees. The principal funds are the Milk Pension Fund ('MPF') and the Dalgety Pension Fund ('DPF') in the UK, which are defined benefit schemes. The assets of these funds are held separately from the Group's assets, are administered by trustees and managed professionally.

Accounting policies

Defined contribution pension schemes

A number of our employees are members of defined contribution pension schemes. We charge contributions to the Income Statement as they become payable under the scheme rules. We show differences between the contributions payable and the amount we have paid as either accruals or prepayments in the Balance Sheet. The schemes' assets are held separately from the Group's assets.

Defined benefit pension schemes

The Group operates defined benefit pension schemes for some of its employees. These schemes are closed to new members and to further accrual. We calculate our net obligation separately for each scheme, by estimating the amount of future benefit that employees have earned, in return for their service to date. We discount that benefit to determine its present value and deduct the fair value of the plan's assets (at bid price). The liability discount rate we use is the market yield at the balance sheet date on high-quality corporate bonds, with terms to maturity approximating our pension liabilities. Qualified actuaries perform the calculations, using the projected unit method.

We recognise actuarial gains and losses in equity in the period in which they occur, through the Group Statement of Comprehensive Income. Actuarial gains and losses include the difference between the expected and actual return on scheme assets and experience gains and losses on scheme liabilities.

Genus and the other participating employers are jointly and severally liable for the MPF's obligations. We account for our section of the scheme and our share of any orphan assets and liabilities, and provide for any amounts we believe we will have to pay under our joint and several liability. The joint and several liability also means we have a contingent liability for the scheme's obligations that we have not accounted for.

Under the joint and several liability, we initially recognise any changes in our share of orphan assets and liabilities in the Income Statement. After this initial recognition, any actuarial gains and losses on the orphan assets and liabilities are recognised directly in equity through the Group Statement of Changes in Equity, in the period in which they occur.

During the year, the DPF defined benefit pension scheme purchased annuities in order to hedge longevity risk for pensioners within the scheme. As permitted by IAS 19, the Group has opted to recognise the difference between the fair value of the plan assets and the cost of the policy as an actuarial loss in Other Comprehensive Income.

We measure the fair value our qualifying insurance policy assets to be the deemed present value of the related obligation.

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29. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

Retirement benefit obligations

The financial positions of the defined benefit schemes, as recorded in accordance with IAS 19 and IFRIC 14, are aggregated for disclosure purposes. The liability split by principal scheme is set out below.

	2022 £m	2021 £m
The Milk Pension Fund – Genus's share	–	2.2
The Dalgety Pension Fund	–	–
National Pig Development Pension Fund	**0.1**	0.3
Post-retirement healthcare	**0.6**	0.6
Other unfunded schemes	**7.6**	8.0
Overall net pension liability	**8.3**	11.1

Overall, we expect to pay £1.0m (2021: £4.1m) in contributions to defined benefit plans in the 2023 financial year.

The defined benefit plans are administered by trustee boards that are legally separated from the Group. The trustee board of each pension fund consists of representatives who are employees, former employees or are independent from the Company. The boards of the pension funds are required by law to act in the best interest of the plan participants and are responsible for setting certain policies, such as investment and contribution policies, and for the governance of the fund.

The defined benefit pension schemes expose the Group to actuarial risks such as greater than expected longevity of members, lower than expected return on investments and higher than expected inflation, which may increase the plans' liabilities or reduce the value of their assets.

UK pensions are regulated by The Pensions Regulator, a non-departmental public body established under the Pensions Act 2004 and sponsored by the Department for Work and Pensions, operating within a legal regulatory framework set by the UK Parliament. The Pensions Regulator has statutory objectives set out in legislation, which include promoting and improving understanding of the good administration of work-based pensions, protecting member benefits and regulating occupational defined benefit and contribution schemes. The Pensions Regulator's statutory objectives and regulatory powers are described on its website at thepensionsregulator.gov.uk.

All defined benefit schemes are registered as an occupational pension plan with HMRC and are subject to UK legislation and oversight from The Pensions Regulator. UK legislation requires that pension schemes are funded prudently and valued at least every three years. Separate valuations are required for each scheme. Within 15 months of each valuation date, the plan trustees and the Group must agree any contributions required to ensure that the plan is fully funded over time, on a suitably prudent measure.

Funding plans are individually agreed with the respective trustees for each of the Group's defined benefit pension schemes, taking into account local regulatory requirements.

On 20 November 2020, the High Court ruled that individual transfer payments made since 17 May 1990 would need to be equalised for the effects of GMP. This judgment followed on from the previous judgment on 26 October 2018, where the High Court ruled that schemes had a legal obligation to pay benefits allowing for GMP equalisation, resulting in an additional liability being recognised. The previous judgment had not considered historic transfer values. Genus's pension schemes are also affected by this ruling, resulting in an aggregate past service charge of £2.3m in the period, being £0.9m for the DPF and £1.4m for the MPF.

The Milk Pension Fund ('MPF')

The MPF was previously operated by the Milk Marketing Board and was also open to staff working for Milk Marque Ltd (the principal employer, now known as Community Foods Group Limited), National Milk Records plc, First Milk Ltd, hauliers associated to First Milk Ltd, Dairy Farmers of Britain Ltd (which went into receivership in June 2009) and Milk Link Ltd.

We have accounted for our section of the scheme and our share of any orphan assets and liabilities, which together represent approximately 86% of the MPF (2021: 86%). Although the MPF is managed on a sectionalised basis, it is a 'last man standing scheme', which means that all participating employers are jointly and severally liable for all of the fund's liabilities. With effect from 30 June 2013, Genus's remaining active members ceased accruing benefits in the fund and became deferred pensioners.

The most recent actuarial triennial valuation of the MPF was at 31 March 2021 and was carried out by qualified actuaries. The valuation has been agreed by the trustees.

The principal actuarial assumptions adopted in the 2021 valuation were that:

> investment returns on existing assets would exceed fixed-interest gilt yields by 1.6% per annum until 31 March 2030, then by 0.5% per annum thereafter;
> Consumer Price Index ('CPI') price inflation is expected to be 0.7% per annum lower than Retail Price Index ('RPI') price inflation until 31 March 2030, then less 0.1% p.a. thereafter; and
> pensions in payment and pensions in deferment would increase in future in line with CPI price inflation, subject to various minimum and maximum increases.

At 31 March 2021, the market value of the fund's assets was £492m. This represented approximately 103% of the value of the uninsured liabilities, which were £480m at that date.

29. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

The surplus in the fund as a whole, by reference to the 31 March 2021 valuation, was £12m (of which Genus's notional share was £10m). Reflecting the improvement in the funding position and with effect from 1 September 2021, no deficit repair contributions are payable but funding the scheme's operating expenses of £1.1m per annum was agreed to be paid, rising thereafter by 3.4% per annum until 30 September 2026.

The disclosures required under IAS 19 have been calculated by an independent actuary, based on accurate calculations carried out as at 31 March 2021 and updated to 30 June 2022.

At 30 June 2022, the MPF was in an overall net pension asset position of £71.4m. However, the Company does not have the unilateral right to this surplus and therefore in line with IFRIC 14, the recognition of this asset is restricted.

Dalgety Pension Fund ('DPF')

The most recent actuarial valuation of the DPF was at 31 March 2021 and was carried out by qualified actuaries.

The principal actuarial assumptions adopted in the 2021 valuation were that:

> investment returns on existing assets is gilt yields less 0.35% per annum;
> CPI price inflation is expected to be 0.7% per annum lower than RPI price inflation until 2030, then RPI curve from 2030 onwards; and
> pensions in payment and pensions in deferment would increase in future in line with CPI price inflation, subject to various minimum and maximum increases.

The market value of the available assets at 31 March 2021 was £938m. The value of those assets represented approximately 100% of the value of the uninsured liabilities, which were £937m at 31 March 2021. Under the funding agreement, the Company will not have to make deficit repair contributions.

The disclosures required under IAS 19 have been calculated by an independent actuary, based on accurate calculations carried out as at 31 March 2021 and updated to 30 June 20221.

At 30 June 2022, the DPF, which includes a £20.5m separate reserve held against future unknown liabilities materialising, was in an overall net pension asset position of £6.6m. However, the Company does not have the unilateral right to this surplus and therefore in line with IFRIC 14, the recognition of this asset is restricted.

The primary bulk annuity policy was secured with an insurance company in July 1999, which matched the benefit entitlement of almost all of the fund's current and deferred pension liabilities at that time. The value of the policy and related liabilities at 30 June 2022 was £528m (2021: £654m). We do not have any legal rights to any surplus relating to these bulk annuity policies.

National Pig Development Company Pension Fund ('NPD')

The Group operates a closed defined benefit scheme for a small number of former employees of the National Pig Development Company Limited. The total market value of scheme assets and liabilities at 30 June 2022, under the provisions of IAS 19, were £5.4m (2021: £6.3m) and £5.5m (2021: £6.6m), respectively.

The most recent actuarial triennial valuation of the NPD was at 30 June 2020 and was carried out by qualified actuaries. The valuation has been agreed by the trustees.

The principal actuarial assumptions adopted in the 2020 valuation were that:

> investment returns on existing assets is gilt yields less 0.35% per annum;
> CPI price inflation is expected to be 0.5% per annum lower than RPI price inflation; and
> pensions in payment and pensions in deferment would increase in future in line with CPI price inflation, subject to various minimum and maximum increases.

The market value of the available assets at 30 June 2020 was £6.1m. The value of those assets represented approximately 68% of the value of the uninsured liabilities, which were £9.0m at 30 June 2020. Under the trustee prepared schedule of contributions, Genus is required to make deficit repair contributions of £500,000 per annum commencing 1 July 2021.

The disclosures required under IAS 19 have been calculated by an independent actuary, based on accurate calculations carried out as at 30 June 2020 and updated to 30 June 2022.

Other unfunded schemes

When the Group acquired Sygen International plc in 2005, it also acquired three unfunded defined benefit schemes and an unfunded retirement health benefit plan, which it now operates for the benefit of the previous Group's senior employees and Executives.

Unfunded defined benefits schemes

The scheme liabilities for the three unfunded defined benefit schemes amounted to £6.1m (2021: £6.6m), based on IAS 19's methods and assumptions. This amount is included within pension liabilities in the Group Balance Sheet. It also operates several unfunded defined benefits which amounted to £1.6m (2021: £1.4m). Interest on pension scheme liabilities amounted to £0.2m (2021: £0.2m). The disclosures required under IAS 19 have been calculated by an independent actuary, using the principal assumptions used to calculate the scheme liabilities as for the defined benefit schemes.

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29. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

Post-retirement healthcare
The scheme liabilities for the unfunded retirement health benefit plan amounted to £0.5m (2021: £0.6m), based on IAS 19's methods and assumptions. This amount is included within retirement benefit obligations in the Group Balance Sheet. Interest on plan liabilities amounted to £nil (2021: £nil).

The principal assumptions used to calculate the plan liabilities were that the discount rate would be 3.9% (2021: 1.90%) and that the long-term rate of medical expense inflation would be 6.9% (2021: 6.9%).

Aggregated position of defined benefit schemes

	2022 £m	2021 £m
Present value of funded obligations (includes Genus's 86% share of MPF (2021: 86%))	**857.6**	1,097.7
Present value of unfunded obligations	**8.4**	8.9
Total present value of obligations	**866.0**	1,106.6
Fair value of plan assets (includes Genus's 86% share of MPF (2021: 86%))	**(936.3)**	(1,147.2)
Restricted recognition of asset (MPF and DPF)	**78.6**	8.8
Recognition of additional liability (MPF)	**–**	42.9
Recognised liability for defined benefit obligations	**8.3**	11.1

Each of the defined benefit schemes manages risks through a variety of methods and strategies, including equity protection, to limit the downside risk of falls in equity markets, as well as inflation and interest rate hedging. By funding its defined benefits schemes, the Group is exposed to the risk that the cost of meeting its obligations is higher than anticipated. This could occur for several reasons, for example:

- Investment returns on the schemes' assets may be lower than anticipated, especially if falls in asset values are not matched by similar falls in the value of the schemes' liabilities.
- The level of price inflation may be higher than that assumed, resulting in higher payments from the schemes.
- Scheme members may live longer than assumed, for example due to advances in healthcare. Members may also exercise (or not exercise) options in a way that leads to increases in the schemes' liabilities, for example through early retirement or commutation of pension for cash.
- Legislative changes could also lead to an increase in the schemes' liabilities.

Aggregated position of defined benefit schemes
The fair value of the total plan assets at the end of the reporting period for each category is as follows:

	Level 1 £m	Level 2 £m	Level 3 £m	2022 £m	Level 1 £m	Level 2 £m	Level 3 £m	2021 £m
Equities	**–**	**28.1**	**–**	**28.1**	–	58.5	–	58.5
Diversified growth funds	**–**	**59.5**	**–**	**59.5**	0.2	98.0	–	98.2
Liability driven investments	**–**	**122.3**	**–**	**122.3**	–	116.8	–	116.8
Gilts and corporate bonds	**–**	**100.5**	**–**	**100.5**	–	121.1	–	121.1
Cash	**4.3**	**4.3**	**–**	**8.6**	1.6	4.1	–	5.7
Property	**2.7**	**–**	**35.4**	**38.1**	3.9	–	34.4	38.3
Direct lending	**–**	**2.5**	**32.8**	**35.3**	–	3.7	27.4	31.1
Bulk annuity policy	**–**	**–**	**543.9**	**543.9**	–	–	677.5	677.5
Other	**–**	**–**	**–**	**–**	–	–	–	–
	7.0	**317.2**	**612.1**	**936.3**	5.7	402.2	739.3	1,147.2

Note:
Level 1: valued using unadjusted quoted prices in active markets for identical financial instruments.
Level 2: valued using techniques based on information that can be obtained from observable market data.
Level 3: valued using techniques incorporating information other than observable market data.

Movement in the liability for defined benefit obligations

	2022 £m	2021 £m
Liability for defined benefit obligations at the start of the year (including the bulk annuity policy (DPF))	**1,106.6**	1,169.3
Benefits paid by the plans	**(55.7)**	(57.8)
Current service costs and interest	**20.7**	18.8
Actuarial losses/(gains) recognised on fund liabilities arising from changes in demographic assumptions	**7.0**	(2.7)
Actuarial gains recognised on fund liabilities arising from changes in financial assumptions	**(220.0)**	(22.4)
Actuarial losses/(gains) recognised on fund liabilities arising from experience (other)	**6.1**	(0.9)
Reclassified from accruals	**–**	0.7
Past service cost	**0.4**	2.3
Exchange rate adjustment	**0.9**	(0.7)
Liability for defined benefit obligations at the end of year	**866.0**	1,106.6

29. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

Movement in plan assets

	2022 £m	2021 £m
Fair value of plan assets at the start of the year (including the bulk annuity policy (DPF))	**1,147.2**	1,182.5
Administration expenses	**(0.4)**	(0.4)
Reclassified from accruals	**–**	0.3
Contributions paid into the plans	**3.5**	7.4
Benefits paid by the plans	**(55.7)**	(57.8)
Interest income on plan assets	**21.3**	18.9
Actuarial losses recognised in equity	**(179.6)**	(3.7)
Fair value of plan assets at the end of the year	**936.3**	1,147.2

Aggregated position of defined benefit schemes
Summary of movements in Group deficit during the year

	2022 £m	2021 £m
Deficit in schemes at the start of the year	**(11.1)**	(18.1)
Administration expenses	**(0.4)**	(0.4)
Exceptional cost	**(0.4)**	(2.3)
Reclassified from accruals	**–**	(0.4)
Contributions paid into the plans	**3.5**	7.4
Net pension finance cost	**(0.2)**	(0.3)
Actuarial gains recognised during the year	**27.3**	22.3
Movement in restriction of assets	**(69.8)**	(0.1)
Release/(recognition) of additional liability	**43.7**	(19.9)
Exchange rate adjustment	**(0.9)**	0.7
Deficit in schemes at the end of the year	**(8.3)**	(11.1)

Amounts recognised in the Group Income Statement

	2022 £m	2021 £m
Administrative expenses	**0.4**	0.4
Interest obligation	**20.7**	18.8
Interest income on plan assets	**(21.3)**	(18.9)
Interest on additional liability	**0.8**	0.4
Exceptional cost	**0.4**	2.3
	1.0	3.0

The expense is recognised in the following line items in the Group Income Statement

	2022 £m	2021 £m
Administrative expenses	**0.4**	0.4
Exceptional cost	**0.4**	2.3
Net finance charge	**0.2**	0.3
	1.0	3.0

Actuarial losses/(gains) recognised in the Group Statement of Comprehensive Income

	2022 £m	2021 £m
Cumulative loss at the start of the year	**60.3**	63.3
Actuarial gains recognised during the year	**(27.3)**	(22.3)
Movement in restriction of assets	**69.8**	0.1
(Release)/recognition of additional liability	**(43.7)**	19.9
Exchange rate adjustment	**0.9**	(0.7)
Cumulative loss at the end of the year	**60.0**	60.3

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29. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

Actuarial assumptions and sensitivity analysis

Principal actuarial assumptions (expressed as weighted averages) are:

	2022	2021
Discount rate	**3.90%**	1.90%
Consumer Price Index	**2.40%**	2.10%
Retail Price Index	**2.90%**	2.85%

The mortality assumptions used are consistent with those recommended by the schemes' actuaries and reflect the latest available tables, adjusted for the experience of the scheme where appropriate. For 2022, the mortality tables used are 100% of the S3PMA (males)/ S3PFA_M (females) all lives tables, with birth year and 2021 CMI projections with a smoothing parameter of Sk = 7.0 and A = 0.5%, subject to a long-term rate of improvement of 1.5% for males and females and for 2021, the mortality tables used are 97% of the S2NA tables, with birth year and 2021 CMI projections with a smoothing parameter of Sk = 7.0 and A = 0%, subject to a long-term rate of improvement of 1.25% for males and females.

Aggregated position of defined benefit schemes

The following table shows the assumptions used for all schemes and illustrates the life expectancy of an average member retiring at age 65 at the balance sheet date and a member reaching age 65 in 20 years' time.

		2022 Years	2021 Years
Retiring at balance sheet date at age 65	Male	**22.6**	22.0
	Female	**24.4**	24.4
Retiring at age 65 in 20 years' time	Male	**24.2**	23.3
	Female	**26.2**	25.9

Duration of benefit obligations

	2022 Years	2021 Years
Weighted average duration of the defined benefit obligations	**11.4**	13.8
Weighted average duration of the defined benefit obligations, excluding defined benefit obligations backed by purchased annuities	**14.3**	17.1

Sensitivity analysis

Measurement of the Group's defined benefit obligation is sensitive to changes in certain key assumptions. The sensitivity analysis below shows how a reasonably possible increase or decrease in a particular assumption would, in isolation, result in an increase or decrease in the present value of the defined benefit obligation as at 30 June 2022. We have included additional sensitivity analysis, which excludes the value of our defined benefit obligations backed by purchased annuities, as the asset value is the deemed present value of obligations, with no movement to the overall scheme deficits. Given recent market volatility due to the impact of COVID-19 and the conflict in Ukraine, we continue to use a sensitivity analysis of 0.5%.

	Discount rate		Rate of inflation		Life expectancy	
	Decrease by 0.5% £m	Increase by 0.5% £m	Decrease by 0.5% £m	Increase by 0.5% £m	Decrease by 1 year £m	Increase by 1 year £m
Increase/(decrease) in present value of defined obligation	55.7	(54.0)	(40.0)	39.5	(37.7)	37.7
Excluding purchased annuity obligations increase/(decrease) in present value of defined obligation	20.7	(20.1)	(14.9)	14.7	(14.0)	14.0

The sensitivity analysis may not be representative of an actual change in the defined benefit obligation, as it is unlikely that changes in assumptions would occur in isolation from one another.

The sensitivities assume the funds' assets remain unchanged. However, in practice changes in interest rates and inflation will also affect the value of the funds' assets. The funds' investment strategy is to hold matching assets with values that move in line with the liabilities of the fund, to protect against changes in interest rates and inflation.

This sensitivity analysis has been prepared using the same method adopted when adjusting results of the latest funding valuation to the balance sheet date. This is the same approach adopted in previous periods.

The history of experience adjustment is as follows:

	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Present value of the defined benefit obligation	**866.0**	1,106.6	1,169.3	1,179.5	1,094.7
Fair value of plan assets	**(936.3)**	(1,147.2)	(1,182.5)	(1,201.1)	(1,129.3)
Restrict recognition of asset and recognition of additional liability	**78.6**	51.7	31.3	45.8	68.5
Deficit in the plans	**8.3**	11.1	18.1	24.2	33.9
Experience adjustments arising on plan liabilities (%)	**21.0**	2.1	1.8	4.8	2.7
Experience adjustments arising on plan assets (%)	**19.3**	2.4	1.6	2.5	1.0

30. SHARE-BASED PAYMENTS

We have a number of share plans used to award shares to Directors and senior management as part of their remuneration. To record the cost of these, a charge is recognised over the vesting period in the Group Income Statement, based on the fair value of the award on the date of grant.

Accounting policies
We recognise the fair value of share awards and options granted as an employee expense, with a corresponding increase in equity. We measure the fair value at the grant date and spread it over the vesting period of each option. We use a binomial valuation model to measure the fair value of options and a Black-Scholes valuation model to measure the fair value of share awards. We adjust the amount we recognise as an expense, to reflect the estimated performance against non-market related conditions and the number of share awards and options that actually vest at the end of the vesting period.

The Group recognised a total share-based payment expense of £3.7m (2021: £7.7m), including National Insurance contributions of £0.1m (2021: £1.2m).

Share awards

> There were 560,511 conditional share awards outstanding at 30 June 2022. These conditional shares were awarded to Executive Directors and senior management under the 2014 and 2019 Performance Share Plans. In accordance with the plan's terms, participants have received a conditional annual award of shares or nil cost option awards, which will normally vest after three years, with the proportion of the award vesting depending on growth in the Group's adjusted earnings per share. Further details of the plan's performance conditions are given in the Directors' Remuneration Report.

During the year ended 30 June 2022:

> 129,991 awards were granted on 15 September 2021, with an aggregate fair value of £7,213,000. The fair value of services received in return for share awards granted is based on the fair value of share awards granted, measured using a Black-Scholes valuation model. At the date of grant, the fair value of a share awarded was £55.49, based on an expected dividend yield of 0.61%.

> 7,827 awards in total were granted on 5 November 2021, 11 February 2022, 18 March 2022, 1 June 2022 and 10 June 2022, with an aggregate fair value of £231,000. The fair value of services received in return for share awards granted is based on the fair value of share awards granted, measured using a Black-Scholes valuation model. At the date of grant, the aggregate fair value of a share awarded was £29.48, based on an expected dividend yield of 1.05%.

	Number of awards 2022	Number of awards 2021
Outstanding at the start of year	**665,522**	770,690
Exercised during the year	**(205,010)**	(193,601)
Forfeited during the year	**(37,819)**	(103,172)
Granted during the year	**137,818**	191,605
Outstanding at 30 June	**560,511**	665,522
Exercisable at 30 June	**17,605**	9,108

Bonus and restricted stock share awards
In addition to the outstanding share awards above, there were 61,313 bonus and restricted stock share awards outstanding at 30 June 2022. The bonus shares were awarded to Executive Directors and senior management as part of the compulsory deferred bonus, and restricted stock share awards were granted to senior management in connection with recruitment. In accordance with the awards' terms, participants have received a conditional annual bonus award of shares or nil cost option awards, which will normally vest between one and three years after award, providing the participant is employed by the Group at that time.

In the year ended 30 June 2022, 18,192 bonus share awards were granted on 15 September 2021, with an aggregate fair value of £1,009,000.

	Number of awards 2022	Number of awards 2021
Outstanding at the start of year	**72,466**	84,061
Exercised during the year	**(29,345)**	(32,654)
Forfeited during the year	**–**	(1,324)
Granted during the year	**18,192**	22,383
Outstanding at 30 June	**61,313**	72,466
Exercisable at 30 June	**–**	–

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

30. SHARE-BASED PAYMENTS CONTINUED

Share options
On 12 August 2004, the Group established a share option programme that entitles key management and other senior employees to purchase shares in the Company. Further grants on similar terms were offered to these employee groups as set out below. The terms and conditions of the grants are as set out below. All options are to be settled by physical delivery of shares and meet the criteria for being treated as equity settled.

Employees entitled	Grant date	Number of instruments	Vesting conditions	Option exercise price	Contractual life of options
2004 Company share plan	7 September 2012	1,891	Exercisable	1,334.00p	10 years
2004 Company share plan	26 September 2013	9,539	Exercisable	1,413.00p	10 years
Total share options		11,430			

Share options
The number and weighted average exercise prices of share options are as follows:

	Weighted average exercise price 2022	**Number of options 2022**	Weighted average exercise price 2021	Number of options 2021
Outstanding at the start of year	**1,331p**	**32,633**	1,173p	67,131
Forfeited during the year	**1,374p**	**(2,755)**	915p	(9,489)
Share appreciation rights effected during the year	**1,312p**	**(6,328)**	1,059p	(5,134)
Exercised during the year	**1,265p**	**(12,120)**	981p	(19,875)
Outstanding at 30 June	**1,400p**	**11,430**	1,331p	32,633
Exercisable at 30 June	**1,400P**	**11,430**	1,331p	32,633

The options at 30 June 2022 had a weighted average remaining contractual life of 1.1 years (2021: 1.6 years). No share options were granted during the year (2021: nil). The weighted average share price at the date of exercise during the year was £44.18p (2021: £44.73p).

31. CAPITAL AND RESERVES

Called up share capital is the number of shares in issue at their par value. A number of shares were issued in the year, in relation the employee share schemes.

Accounting policies
Equity instruments issued by the Group are recorded at the amounts of the proceeds received, net of direct issuance costs.

Own shares
We include the transactions, assets and liabilities of the Group-sponsored Qualifying Employee Share Ownership Trust ('QUEST') in the Group Financial Statements. In particular, the trust's purchases of the Company's shares are deducted from shareholders' funds until they vest unconditionally with employees.

Share capital

	2022 Number	2021 Number	**2022 £m**	2021 £m
Issued and fully paid				
Ordinary shares of 10 pence	**65,773,620**	65,761,500	**6.6**	6.6

There is no authorised share capital limit.

The holders of ordinary shares are entitled to receive dividends, as declared from time to time.

The movement in share capital for the period was as follows:

	2022 Number	2021 Number	**2022 £m**	2021 £m
Issued under the Executive Share Option Plan	**12,120**	19,875	**–**	–
Issued to Employee Benefit Trust	**–**	650,000	**–**	0.1
	12,120	669,875	**–**	0.1

Shares issued under the Executive Share Option Plan were issued at option prices as follows:

	2022 Number	**2022 Price**	2021 Number	2021 Price
Executive Share Option Plan	**–**	**–**	6,599	729.83p
	2,837	**977.83p**	9,032	977.83p
	7,027	**1334.00p**	1,738	1334.00p
	2,256	**1413.00p**	2,506	1413.00p
	12,120		19,875	

31. CAPITAL AND RESERVES CONTINUED

Reserve for own shares

The Company's shares are held by a QUEST, which is an employee benefit trust established to facilitate the operation of our long-term incentive scheme for senior management. The reserve amount represents the deduction in arriving at shareholders' funds for the consideration the trust paid for the Company's shares, which had not vested unconditionally at the balance sheet date. The number and market value of the ordinary shares held by the Employee Benefit Trust and the QUEST were:

	2022 Number	2021 Number	2022 £m	2021 £m
Shares allocated but not vested	**280,803**	509,269	**7.1**	25.2
Unallocated shares	**92,334**	92,334	**2.3**	4.6
	373,137	601,603	**9.4**	29.8

The shares have a nominal value of £37,314 (2021: £60,160).

Translation reserve

The translation reserve comprises all foreign currency differences arising from translating the financial statements of our foreign operations.

The Group uses foreign currency denominated borrowings of £32.3m (2021: £10.7m) as a hedge against the translation exposure on the Group's net investment in overseas companies. Where the hedge is fully effective at hedging the variability in the net assets of such companies caused by changes in exchange rates, the changes in value of the borrowings are recognised in the Consolidated Statement of Comprehensive Income and accumulated in the hedging and translation reserves. The ineffective part of any change in value caused by changes in exchange rates is recognised in the Consolidated Income Statement.

Hedging reserve

The hedging reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments, net of taxation.

Hedging and translation reserves

	Hedging reserve £m	Translation reserve £m
Balance at 30 June 2020	(0.2)	29.5
Exchange differences on translation of overseas operations	–	(45.4)
Loss recognised on net investment hedges	–	0.4
Loss recognised on cash flow hedges – interest rate swaps	0.2	–
Income tax related to net losses recognised in other comprehensive income	–	7.6
Balance at 30 June 2021	–	(7.9)
Exchange differences on translation of overseas operations	**–**	**67.2**
Gain recognised on net investment hedges	**–**	**(0.7)**
Loss recognised on cash flow hedges – interest rate swaps and cross currency swaps	**1.9**	**–**
Income tax related to net losses recognised in other comprehensive income	**(0.5)**	**(7.7)**
Balance at 30 June 2022	**1.4**	**50.9**

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

32. NOTES TO THE CASH FLOW STATEMENT

	2022 £m	2021 £m
Profit for the year	**36.7**	46.8
Adjustment for:		
Net IAS 41 valuation movement on biological assets	**5.4**	10.8
Amortisation of acquired intangible assets	**8.3**	7.4
Share-based payment expense	**3.7**	7.7
Share of profit of joint ventures and associates	**(5.2)**	(13.1)
Finance costs (net)	**6.2**	5.0
Income tax expense	**11.7**	9.0
Exceptional items	**2.0**	3.3
Adjusted operating profit from continuing operations	**68.8**	76.9
Depreciation of property, plant and equipment	**26.4**	24.0
Loss on disposal of plant and equipment	**0.4**	0.4
Loss on disposal of intangible assets	**–**	0.5
Amortisation and impairment of intangible assets	**4.3**	3.7
Adjusted earnings before interest, tax, depreciation and amortisation	**99.9**	105.5
Cash impact of exceptional items	**1.1**	(3.0)
Other movements in biological assets and harvested produce	**(19.1)**	(12.8)
Decrease in provisions and release in deferred consideration	**–**	(0.4)
Additional pension contributions in excess of pension charge	**(3.1)**	(7.0)
Other	**0.2**	(1.3)
Operating cash flows before movement in working capital	**79.0**	81.0
Increase in inventories	**(6.1)**	(1.3)
Increase in receivables	**(18.5)**	(11.0)
Increase in payables	**2.2**	17.9
Cash generated by operations	**56.6**	86.6
Interest received	**0.4**	0.4
Interest and other finance costs paid	**(4.0)**	(2.8)
Interest on leased assets	**(1.1)**	(0.8)
Cash flow from derivative financial instruments	**(0.1)**	0.2
Income taxes paid	**(17.5)**	(16.1)
Net cash from operating activities	**34.3**	67.5

Analysis of net debt
Total changes in liabilities due to financing activities are as follows:

	At 1 July 2021 £m	Net cash flows £m	Foreign exchange £m	Other non-cash movements £m	At 30 June 2022 £m
Cash and cash equivalents (see note 22)	46.0	**(11.0)**	**3.8**	**–**	**38.8**
Interest-bearing loans – current (see note 27)	(13.9)	**8.9**	**(1.2)**	**(0.9)**	**(7.1)**
Lease liabilities – current (see note 28)	(9.0)	**11.3**	**(0.7)**	**(11.7)**	**(10.1)**
	(22.9)	**20.2**	**(1.9)**	**(12.6)**	**(17.2)**
Interest-bearing loans – non-current (see note 27)	(109.4)	**(63.1)**	**(9.6)**	**–**	**(182.1)**
Lease liabilities – non-current (see note 28)	(19.3)	**–**	**(1.6)**	**(3.6)**	**(24.5)**
	(128.7)	**(63.1)**	**(11.2)**	**(3.6)**	**(206.6)**
Total debt financing	(151.6)	**(42.9)**	**(13.1)**	**(16.2)**	**(223.8)**
Net debt	(105.6)	**(53.9)**	**(9.3)**	**(16.2)**	**(185.0)**

Included within non-cash movements is £15.3m in relation to net new leases and £0.9m in the unwinding of debt issue costs.

32. NOTES TO THE CASH FLOW STATEMENT CONTINUED

	At 1 July 2020 £m	Net cash flows £m	Foreign exchange £m	Other non-cash movements £m	At 30 June 2021 £m
Cash and cash equivalents (see note 22)	41.3	6.6	(1.9)	–	46.0
Interest-bearing loans – current (see note 27)	(9.2)	(4.4)	0.6	(0.9)	(13.9)
Lease liabilities – current (see note 28)	(10.0)	11.7	0.2	(10.9)	(9.0)
	(19.2)	7.3	0.8	(11.8)	(22.9)
Interest-bearing loans – non-current (see note 27)	(103.6)	(12.7)	6.9	–	(109.4)
Lease liabilities – non-current (see note 28)	(21.1)	–	0.3	1.5	(19.3)
	(124.7)	(12.7)	7.2	1.5	(128.7)
Total debt financing	(143.9)	(5.4)	8.0	(10.3)	(151.6)
Net debt	(102.6)	1.2	6.1	(10.3)	(105.6)

Included within non-cash movements is £9.4m in relation to net new leases and £0.9m in the unwinding of debt issue costs.

33. OPERATING LEASES

Accounting policies

For short-term leases (those with a term of less than 12 months) and low-value items, we charge the rentals payable to the Income Statement on a straight-line basis over the lease term.

The Company has elected not to apply IFRS 16 to contracts where the right-of-use asset would be recognised as an intangible asset (e.g. software licences).

Total of future minimum lease payments under non-cancellable operating leases which expire:

	2022 £m	2021 £m
In less than one year	–	0.8
Between one and five years	–	–
In more than five years	–	–
	–	0.8

34. CAPITAL AND OTHER COMMITMENTS

At 30 June 2022, outstanding contracted capital expenditure amounted to £nil (2021: £1.2m related to the purchase of property, plant and equipment).

35. CONTINGENCIES AND BANK GUARANTEES

Contingent liabilities are potential future cash outflows, where the likelihood of payments is considered more than remote but is not considered probable or cannot be measured reliably. Assessing the amount of liabilities that are not probable is highly judgemental.

The retirement benefit obligations referred to in note 29 include obligations relating to the MPF defined benefit scheme. Genus, together with other participating employers, is joint and severally liable for the scheme's obligations. Genus has accounted for its section and its share of any orphan assets and liabilities, collectively representing approximately 86% (2021: 86%) of the MPF. As a result of the joint and several liability, Genus has a contingent liability for the scheme's obligations that it has not accounted for. The total deficit of the MPF from the most recent triennial valuation can be found in note 29.

The Group has widespread global operations and is consequently a defendant in many legal, tax and customs proceedings incidental to those operations. In addition, there are contingent liabilities arising in the normal course of business in respect of indemnities, warranties and guarantees. These contingent liabilities are not considered to be unusual in the context of the normal operating activities of the Group. Provisions have been recognised in accordance with the Group accounting policies where required. None of these claims are expected to result in a material gain or loss to the Group.

As described in note 7, the Group is involved in ongoing litigation proceedings and investigations with ST that are at various legal stages. The Group makes a provision for amounts to the extent where an outflow of economic benefit is probable and can be reliably estimated. However, there are specific claims identified in the litigation which the Group considers the outcome of the claim is not probable and will not result in the outflow of economic benefit.

The Group's future tax charge and effective tax rate could be affected by factors such as countries reforming their tax legislation to implement the OECD's BEPS recommendations and by European Commission initiatives including state aid investigations. Further information can be found in note 11.

At 30 June 2022, we had entered into bank guarantees totalling £20.2m (2021: £19.1m).

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

36. DIRECTORS AND KEY MANAGEMENT COMPENSATION

In accordance with IAS 24 'Related Party Disclosures', key management personnel are those having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly. Key management personnel comprise the Directors and the other members of GELT.

	2022 £m	2021 £m
Salaries and short-term employee benefits	**4.9**	8.0
Post-employment benefits	**0.2**	0.2
Share-based payment expense	**1.2**	4.1
	6.3	12.3

Directors
Further details of Directors' compensation are included in the Directors' Remuneration Report.

Other transactions with key management personnel
Other than remuneration, there were no transactions with key management personnel.

37. GROUP ENTITIES

In accordance with section 409 of the Companies Act 2006, a list of subsidiaries and joint ventures and associates as at 30 June 2022 is set out below. All subsidiary undertakings are subsidiary undertakings of their immediate parent undertaking(s), unless otherwise indicated.

Nature of business
Bovine

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/ voting rights held by Group companies
ABS (Beijing) International Trade Co., Ltd.	B1608, Lucky Tower, East5 3rd Ring Road, Chaoyang District, Beijing, 100027, China	China	Indirect	No Par Value Common Stock	100%
ABS Argentina S.A.	A. Castellanos 1169, (3080) Esperanza, Sante Fe, Argentina	Argentina	Direct	ARS1 Ordinary	100%
ABS Chile Limitada	Avenida del Parque #4161 office #601, Huechuraba, Santiago, Chile	Chile	Direct	CLP1 Common Stock	100%
ABS Genetics South Africa (Pty) Ltd	Prestige Park Block B, Unit No. 5B, Pastorale Street, Durbanville Industrial Park, Durbanville, 7550, South Africa	South Africa	Indirect	ZAR1 Ordinary	100%
ABS Global (Canada) Inc.	1525 Floradale Road, Elmira ON N3B 2Z1, Canada	Canada	Indirect	CAD1 Ordinary	100%
ABS Global, Inc.	1525 River Road, De Forest WI 53532, United States	United States	Indirect	USD0.01 Common	100%
ABS Italia S.r.l.	Via Bastida nr. 6, loc. Cavatigozzi, 26020, Cremona, Italy	Italy	Indirect	€1 Quota	100%
ABS México, S.A. de C.V.	Kansas No. 2028, Quintas Campestre, 31214, Chihuahua, Chih., Mexico	Mexico	Direct	MXN10 Class 1 MXN10 Class 2	100%
ABS Polska Sp. z o.o.	Szafirowa 22A, 82-300 Gronowo Górne, Poland	Poland	Indirect	PLN1,000 Ordinary	100%
Bovec SASU	69 Chemin des Molières, PA du Charpenay, 69210, Lentilly, France	France	Indirect	€10 Ordinary	100%
Chitale Genus ABS (India) Private Limited	Amar Neptune, Office No.406, off Baner Road, S. No.6/1/1, Village Baner, Tal. Haveli, Pune, Maharashtra, India	India	Indirect	INR100 Ordinary	50%[1]
De Novo Genetics LLC	1286 Oriole Drive, New Albin IA 52160, United States	United States	Indirect	No Par Value LLC Units	51%
Genus ABS (NZ) Limited	Generate Accounting Group Limited, Level 2, 22 Dundonald Street, Eden Terrace, Auckland, 1021, New Zealand	New Zealand	Indirect	NZD1 Ordinary	100%
Genus ABS Colombia SAS	Avenida Carrera 70, No. 105 – 51, Bogota, Colombia	Colombia	Indirect	COP10,000 Ordinary	100%

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37. GROUP ENTITIES CONTINUED

Nature of business
Bovine

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/ voting rights held by Group companies
Genus Australia Pty Ltd	15 Scholar drive, Bundoora VIC 3063, Australia	Australia	Indirect	AUD1.388 Ordinary	100%
Genus Breeding India Private Limited	4th Floor, 406, Amar Neptune, Baner, Pune, 411045, India	India	Indirect	INR1 Ordinary	100%
Genus Breeding Limited (01192037)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%
'Genus Ukraine' LLC	Pidlisna str., 1, KYIV 03164, Ukraine	Ukraine	Indirect	No Par Value Common Stock	100%
In Vitro Brasil México, S.A. de C.V.	Plaza Comercial Punto Colorines, Boulevard Independencia #746, Interior 6, CP. 27140, Cidade Torreon – Estado, Coahuila, Mexico	Mexico	Indirect	MXN1 Ordinary	99%
JBI Genetics LLC	130 North Kelsey Street, Visalia CA 93291, United States	United States	Indirect	No Par Value Common Stock	100%
LLC Genus ABS Rus	Zheleznodorozhnaya Street, House 51, Letter Zh, Premises 2, 300062, Tula, Russian Federation	Russia	Indirect	RUB1 Ordinary	100%
Millwood Products Ltd (08662101)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	United Kingdom	Indirect	£1 Ordinary	100%
Pecplan ABS Imp. e Exp. Ltda.	Rod. BR 050 Km 196 + 150metros, Zona Rural, Delta, MG – 38108-000, Brazil	Brazil	Indirect	BRL1 Ordinary	100%
St Jacobs Animal Breeding Corp.	1525 River Road, De Forest WI 53532, United States	United States	Indirect	No Par Value Common	100%
Zitery S.A.	Maximo Tajes 7189, Uruguay	Uruguay	Indirect	No Par Value Common	100%

Nature of business
Porcine

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/voting rights held by Group companies
Agroceres PIC Genética de Suínos Ltda	Rua 1 JN, nº 1411, Sala 16 – Jardim Novo, Rio Claro/SP – CEP, 13.502-741, Brazil	Brazil	Indirect	BRL1 Ordinary	49%[1]
Agroceres PIC Suinos Ltda	Rua 1 JN, nº 1411, Sala 17 – Jardim Novo, Rio Claro/SP – CEP, 13.502-741, Brazil	Brazil	Indirect	BRL1 Ordinary	49%[1]
Avlscenter Møllevang A/S	Mollevej 3, 6670 Holsted, Denmark	Denmark	Indirect	DKK 1 Ordinary	49%[1]
GENEETIC Service S.R.L.	Viale Europa 71, 32100, Belluno, Italy	Italy	Indirect	€1 Ordinary	33%[1]
Inner Mongolia Haoxiang Pig Breeding Co. Ltd	Jintang Village, Jinding Town, Zhidan County, Yan An Municipality, Shaanxi Province, China	China	Indirect	No Par Value Common	49%[1]
Liao Ning PIC Agriculture Science and Technology Co., Ltd	Gunzigou Village, Gao Guan Town, Benxi County, Benxi City, Liaoning Province, China	China	Indirect	CNY1 Ordinary	100%
PIC (Shanghai) Agriculture Science and Technology Company Limited	Room 702-5, No. 719 Shen Gui Road, Min Hang District, Shangha, China	China	Indirect	No Par Value Common	100%
PIC (Zhangjiagang) Pig Improvement Co., Ltd.	Office 1210, International Finance Tower, 20 Jingang Road, Zhangjiagang Bonded Zone, Zhangjiagang City, Jiangsu Province, China	China	Indirect	USD1 Ordinary	100%
PIC Andina SpA	Avenida del Parque #4161 office #601, Huechuraba, Santiago, Chile	Chile	Indirect	CLP1 Ordinary	100%
PIC Canada Ltd.	Borden Ladner Gervais LLP, 1900-520, 3rd Avenue, S.W., Calgary, Alberta T2P OR3, Canada	Canada	Indirect	CAD1 Ordinary	100%

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

37. GROUP ENTITIES CONTINUED

Nature of business
Porcine

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/voting rights held by Group companies
PIC France SA	69 Chemin des Molières, 69210, Lentilly, France	France	Indirect	€17 Ordinary	100%
PIC Genetics Designated Activity Company	Riverside One, Sir John Rogerson's Quay, Dublin 2, Ireland	Ireland	Indirect	€1.27 Ordinary €1.27 Redeemable preference shares	100%
PIC Genetics LLC	79 Narodnyy Boulevard, 308000, Belgorod, Russian Federation	Russia	Indirect	RUB1 Ordinary	100%
Pig Improvement Company de México, S. de R.L. de C.V.	Wenceslao de la Barquera No.7, Col. Villas del Sur, 76040 Queretaro, Queretaro, Mexico	Mexico	Indirect	No Par Value Common Stock	100%
PIG Improvement Company Deutschland GmbH	Jathostraße 11a, D-30163 Hannover, Germany	Germany	Indirect	No Par Value Common Stock	100%
Pig Improvement Company España, S.A.	C/Pau Vila, 22 2º puerta 6, 08174 Sant Cugat del Valles, Barcelona, Spain	Spain	Indirect	€25 Ordinary	100%
Pig Improvement Company UK Limited (00716304)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£0.10 Ordinary	100%
PIC Italia S.r.l.	Strada dei Loggi 22, 06135, Ponte San Giovanni, Perugia, Italy	Italy	Indirect	€1 Ordinary	85%
PIC Philippines, Inc.	Unit 2101-2103 and 2203, Jollibee Plaza, F. Ortigas, Jr. Rd., Ortigas Center, Pasig City, 1605, Philippines	Philippines	Indirect	PHP100 Ordinary	100%
PIC USA, Inc.	100 BlueGrass Commons Blvd, Suite 2200, Hendersonville, TN 37075, United States	United States	Indirect	USD1 Ordinary	100%
RenOVAte Biosciences, Inc.	6874 Caravan Ct, Columbia MD 21044, United States	United States	Direct	USD0.001 Series Seed Preferred	33%[1]
Reprodutores PIC, Lda	Av. Eng. Duarte Pacheo, Amoreiras, Torre 2 – 14ºA, 1070-102 Lisboa, Portugal	Portugal	Indirect	No Par Value Common Stock	100%
Società Agricola GENEETIC S.R.L.	Via Marche n. 2, 42122, Reggion Emilia, Italy	Italy	Indirect	€1 Ordinary	33%[1]
Shaanxi PIC Pig Improvement Co., Ltd.	12105, 21st floor, Yun tian Building, 12 Feng Cheng Second Street, Xian Economic Development District, Xian City, Shaanxi Province, China	China	Indirect	No Par Value Common Stock	100%
Yan'an Xinyongxiang Agriculture Technology Co., Ltd.	Jintang Village, Jianjun Town Zhidan County, Yan An Municipality, in Shaanxi Province, China	China	Indirect	No Par Value Common Stock	49%[1]

Nature of business
Other

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/voting rights held by Group companies
Accounting & Managerial Services S. de R.L. de C.V.	Kansas No. 2028, Quintas Campestre, 31214, Chihuahua,Chih., Mexico	Mexico	Indirect	MXN1 Class 1	96%
ABS International, Inc.	1525 River Road, De Forest WI 53532, United States	United States	Indirect	USD1 Ordinary	100%
ABS Pecplan Ltda.	Rod. BR 050 Km 196 + 150metros, Zona Rural, Delta, MG – 38108-000, Brazil	Brazil	Direct	BRL1 Ordinary	100%
Agence Spillers N.V.	Place Saint-Lambert 14, 1200 Woluwe-Saint-Lambert, Belgium	Belgium	Indirect	No Par Value Common Stock	100%

37. GROUP ENTITIES CONTINUED

Nature of business
Other

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/voting rights held by Group companies
Brazilian Holdings Limited (00479048)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Brazilian Properties Limited	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%
Busby Participações Ltda.	Av. Leopoldino de Oliveira, 4.113, Sala 303, Centro, CEP: 38010-000, UBERABA-MG	Brazil	Indirect	BRL1 Ordinary	100%
Cannavarro Participações Ltda.	Av. Leopoldino de Oliveira, 4.113, Sala 303, Centro, CEP: 38010-000, UBERABA-MG	Brazil	Indirect	BRL1 Ordinary	100%
Dalco Exportadora Ltda.	Av. Leopoldino de Oliveira, 4113 – Sala 303, Uberaba, Minas Gerais, CEP 38010-000, Brazil	Brazil	Indirect	BRL1 Ordinary	100%
Dalgety Pension Trust Limited	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Fyfield (SM) Limited (01026475)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Fyfield Dormant	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Fyfield Holland B.V.	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	Netherlands	Indirect	NLG100 Ordinary	100%
Fyfield Ireland Limited	Riverside One, Sir John Rogerson's Quay, Dublin 2, Ireland	Ireland	Indirect	€1.25 'A' Ordinary €1.25 'B' Ordinary	100%
Genus Investments Limited (02028517)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%
Genus Quest Trustees Limited	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%
Genus R&D, Inc.	1525 River Road, De Forest WI 53532, United States	United States	Indirect	US$0.01 Common	100%
Genus Trustees Limited	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%
GIL Finance S.à.r.l.	121 Avenue de la Faiencerie, L – 1511, Luxembourg	Luxembourg	Indirect	USD1 Ordinary	100%
PIC Do Brasil Empreendimentos e Participações Ltda.	Rua 1 JN, no. 1411, Sala 13, Jardim Novo, Rio Claro, Estado De.São Paulo, CEP 13.502.741, Brazil	Brazil	Indirect	BRL0.01 Ordinary	100%
PIC Fyfield Limited (00019739)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Pig Improvement Company Overseas Limited (00716304)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Pigtales Limited (00723762)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Promar International Limited (03004562)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%
Skogluno Participações Ltda.	Av. Leopoldino de Oliveira, 4.113, Sala 303, Centro, CEP: 38010-000, UBERABA-MG	Brazil	Indirect	BRL1 Ordinary	100%
Spillers Limited (00024021)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£0.25 Ordinary	100%
Spillers Overseas Limited (00069723)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£0.25 Ordinary	100%
Sygen, Inc.	100 BlueGrass Commons Blvd, Suite 2200, Hendersonville, TN 37075 United States	United States	Indirect	USD1 Common	100%
Sygen International Limited (03215874)[2]	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£0.10 Ordinary	100%

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

37. GROUP ENTITIES CONTINUED

Nature of business
Other

Name of undertaking	Registered address	Country of incorporation	Direct/ indirect Group interest	Share class	% of share capital/voting rights held by Group companies
Sygen Investimentos Ltda.	Av. Leopoldino de Oliveira, 4113 – Sala 303, Uberaba, Minas Gerais, CEP 38010-000, Brazil	Brazil	Indirect	BRL0.63 Ordinary	100%
Usicafé SA	c/o Cabinet Mayor, avocats, Rue Jean-Gabriel Eynard 6, 1205 Genève	Switzerland	Indirect	CHF1,000 Ordinary	100%
Xelect Limited	Horizon House, Abbey Walk, St Andrews, Fife, Scotland, KY16 9LB	UK	Indirect	£0.001 Ordinary	39%[1]

1 Associated undertakings including joint venture interests
2 UK subsidiaries taking advantage of the audit exemption within section 479A of the Companies Act 2006

38. DEFERRED CONSIDERATION

Accounting policies
We recognise deferred consideration on the Balance Sheet when a business combination contains a contractual clause that defers a portion of the purchase price. When the consideration transferred by the Group in a business combination includes a contingent consideration arrangement, the contingent consideration is measured at its acquisition date fair value and included as part of the consideration transferred in a business combination. Changes in fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the 'measurement period' (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

Subsequent contingent consideration fair value remeasurements that do not qualify as measurement period adjustments are recognised in the Income Statement.

Contingent deferred consideration is measured at fair value and the valuation basis is Level 3 classification, where fair value techniques use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

	Contingent deferred consideration £m	Deferred consideration £m	Total £m
Balance at 1 July 2020	3.6	5.1	8.7
Business combination	0.8	–	0.8
Payment of consideration	(2.0)	(4.7)	(6.7)
Release of unutilised contingent consideration	(0.4)	–	(0.4)
Effect of movement in exchange rates	(0.3)	–	(0.3)
Balance at 30 June 2021	1.7	0.4	2.1
Business combination	**0.1**	**0.2**	**0.3**
Payment of consideration	**(0.6)**	**(0.4)**	**(1.0)**
Transfer	**(0.8)**	**0.8**	**–**
Effect of movement in exchange rates	**0.1**	**–**	**0.1**
Balance at 30 June 2022	**0.5**	**1.0**	**1.5**
Current	**–**	**0.8**	**0.8**
Non-current	**0.5**	**0.2**	**0.7**
Balance at 30 June 2022	**0.5**	**1.0**	**1.5**
Current	1.2	0.4	1.6
Non-current	0.5	–	0.5
Balance at 30 June 2021	1.7	0.4	2.1

38. DEFERRED CONSIDERATION CONTINUED

The balance at 30 June 2022 relates to the following transactions:

	Fiscal year of transaction	Contingent deferred consideration £m	Deferred consideration £m	Total £m
Dairy LLC (n/a BoviSync)	**2019**	**0.4**	**–**	**0.4**
Sergal Gestió Ramadera, S.L.	**2021**	**–**	**0.8**	**0.8**
T.A.C. – Laboratório de Reprodução Animal Ltda.	**2022**	**–**	**0.2**	**0.2**
Millwood Products Ltd	**2022**	**0.1**	**–**	**0.1**
Balance at 30 June 2022		**0.5**	**1.0**	**1.5**

Sergal Gestió Ramadera, S.L.

The deferred consideration is based on sales to existing customers during the period 28 June 2021 to 28 June 2022.

39. NON-CONTROLLING INTEREST

	2022 £m	2021 £m
Non-controlling interest	**(0.7)**	3.6
Put option over non-controlling interest at inception	**(5.7)**	(5.1)
Total non-controlling interest	**(6.4)**	(1.5)

Summarised financial information in respect of each of the Group's subsidiaries that has a material non-controlling interest is set out below before intra-Group eliminations.

	De Novo Genetics LLC £m	PIC Italia S.r.l. £m	2022 £m
Revenue	**3.7**	**3.4**	**7.1**
Expenses	**(12.6)**	**(2.6)**	**(15.2)**
Total comprehensive (expense)/income for the year	**(8.9)**	**0.8**	**(8.1)**
Total comprehensive (expense)/income attributable to owners of the Company	**(4.5)**	**0.6**	**(3.9)**
Total comprehensive (expense)/income attributable to the non-controlling interest	**(4.4)**	**0.2**	**(4.2)**
Biological assets	**15.2**	**–**	**15.2**
Current assets	**0.9**	**1.0**	**1.9**
Other non-current assets	**0.8**	**2.3**	**3.1**
Current liabilities	**(19.6)**	**(1.8)**	**(21.4)**
Net (liabilities)/assets	**(2.7)**	**1.5**	**(1.2)**
Equity attributable to owners of the Company	**1.8**	**(1.3)**	**0.5**
Non-controlling interest	**(0.9)**	**0.2**	**(0.7)**

Dividends of £0.1m were paid to non-controlling interests (2021: £0.2m).

	De Novo Genetics LLC £m	PIC Italia S.r.l. £m	2021 £m
Revenue	3.4	4.1	7.5
Expenses	(4.9)	(3.3)	(8.2)
Total comprehensive income for the year	(1.5)	0.8	(0.7)
Total comprehensive income attributable to owners of the Company	(0.8)	0.6	(0.2)
Total comprehensive income attributable to the non-controlling interest	(0.7)	0.2	(0.5)
Biological assets	15.8	–	15.8
Current assets	0.9	1.2	2.1
Other non-current assets	0.8	1.8	2.6
Current liabilities	(11.5)	(1.4)	(12.9)
Net assets	6.0	1.6	7.6
Equity attributable to owners of the Company	(2.6)	(1.4)	(4.0)
Non-controlling interest	3.4	0.2	3.6

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

40. RELATED-PARTY TRANSACTIONS

Bomaz, Inc. and Bogz Dairy, LLC, are well-recognised breeders in the industry, and are related parties to the Group as these entities are under the control of relatives of Nate Zwald, our ABS Dairy COO.

We transact with Bomaz, Inc. and Bogz Dairy, LLC as part of our bull product development effort, under a variety of contracts and agreements. Payments in 2022 amounted to £1.3m (2021: £0.5m). As at 30 June 2022, the balance owing to these entities was £nil (2021: £nil). All amounts were settled in cash.

These related-party transactions were made on terms equivalent to those that prevail in arm's length transactions.

During the year, as part of an international secondment agreement with a member of GELT, Genus agreed to fund an amount of £0.4m in respect of a personal taxation expense. A tax refund has been claimed and cash is expected to be received in early FY23, which will be used to settle the outstanding amount in full.

41. POST BALANCE SHEET EVENTS

With effect from 26 August 2022, the Group and its lenders increased the Company's multi-currency RCF by £40m to £190m and the USD RCF by USD25m to USD150m, and extended the maturity date of the total facilities to 24 August 2025.

PARENT COMPANY BALANCE SHEET
AS AT 30 JUNE 2022

	Note	2022 £m	2021 £m
Non-current assets			
Intangible assets	C3	**9.6**	6.5
Property, plant and equipment	C4	**0.9**	1.1
Investments in subsidiaries	C5	**345.5**	122.8
Other investments	C6	**2.1**	2.0
Other receivables	C7	**74.0**	65.1
Derivative financial asset	C15	**2.2**	–
Deferred tax asset	C8	**2.9**	2.1
		437.2	199.6
Current assets			
Other receivables	C7	**69.3**	379.2
Cash and cash equivalents		**1.9**	1.3
		71.2	380.5
Current liabilities			
Current payables	C9	**(65.0)**	(222.8)
Provisions	C11	**(0.4)**	(0.3)
		(65.4)	(223.1)
Net current assets		**5.8**	157.4
Total assets less current liabilities		**443.0**	357.0
Non-current liabilities			
Non-current payables	C10	**(183.3)**	(111.1)
Provisions	C11	**(0.3)**	(0.1)
		(183.6)	(111.2)
Net assets		**259.4**	245.8
Equity			
Called up share capital	C16	**6.6**	6.6
Share premium account		**179.1**	179.1
Own shares		**(0.1)**	(0.1)
Retained earnings		**73.5**	60.2
Hedging reserve		**0.3**	–
Total equity		**259.4**	245.8

The Company recognised profit for the year of £31.3m (2021: £19.6m profit).

The Financial Statements were approved and authorised for issue by the Board of Directors on 7 September 2022.

Signed on behalf of the Board of Directors.

Stephen Wilson
Chief Executive

Alison Henriksen
Chief Financial Officer

Company number: 02972325

FINANCIAL STATEMENTS

PARENT COMPANY STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 30 JUNE 2022

	Called up share capital £m	Share premium account £m	Own shares £m	Retained earnings £m	Hedging reserve £m	Total equity £m
Balance at 1 July 2020	6.5	179.1	(0.1)	53.5	(0.2)	238.8
Fair value of movement on cash flow hedges, net of tax	–	–	–	–	0.2	0.2
Actuarial gain on retirement benefits obligations	–	–	–	2.9	–	2.9
Movement on pension asset recognition restriction	–	–	–	(2.7)	–	(2.7)
Other comprehensive income for the year	–	–	–	0.2	0.2	0.4
Total profit for the financial year	–	–	–	19.6	–	19.6
Total comprehensive income for the financial year	–	–	–	19.8	0.2	20.0
Shares issued	0.1	–	–	–	–	0.1
Dividends	–	–	–	(19.5)	–	(19.5)
Share-based payment expense, net of tax	–	–	–	6.4	–	6.4
Balance at 30 June 2021	6.6	179.1	(0.1)	60.2	–	245.8
Fair value of movement on cash flow hedges, net of tax	**–**	**–**	**–**	**–**	**0.3**	**0.3**
Actuarial gain on retirement benefits obligations	**–**	**–**	**–**	**3.7**	**–**	**3.7**
Movement on pension asset recognition restriction	**–**	**–**	**–**	**(3.7)**	**–**	**(3.7)**
Other comprehensive income for the year	**–**	**–**	**–**	**–**	**0.3**	**0.3**
Total profit for the financial year	**–**	**–**	**–**	**31.3**	**–**	**31.3**
Total comprehensive income for the financial year	**–**	**–**	**–**	**31.3**	**0.3**	**31.6**
Dividends paid	**–**	**–**	**–**	**(20.9)**	**–**	**(20.9)**
Share-based payment expense, net of tax	**–**	**–**	**–**	**2.9**	**–**	**2.9**
Balance at 30 June 2022	**6.6**	**179.1**	**(0.1)**	**73.5**	**0.3**	**259.4**

For information on dividends see note 13, cash flow hedges see note 26 and share-based payment expense see note 30.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

C1. ACCOUNTING INFORMATION AND POLICIES

Basis of preparation
The Parent Company Financial Statements have been prepared in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' ('FRS 101') and the Companies Act 2006 (the 'Act'). FRS 101 sets out a reduced disclosure framework for a 'qualifying entity' as defined in the standard, which addresses the financial reporting requirements and disclosure exemptions in the individual financial statements of qualifying entities that otherwise apply the recognition, measurement and disclosure requirements of the Companies Act 2006. The Group Financial Statements have also been prepared in accordance with International Financial Reporting Standards as issued by the IASB.

The Company Financial Statements have been prepared using the historical cost convention, as modified by the revaluation of certain financial assets and financial liabilities and in accordance with the Act. The Financial Statements have been prepared on a going concern basis, as set out in note 2 of the Consolidated Financial Statements of Genus plc. The accounting policies set out below and stated in the relevant notes have been applied consistently to all periods presented in these Financial Statements.

The Company has taken advantage of the disclosure exemptions available under FRS 101 in relation to share-based payments, business combinations, financial instruments, presentation of comparative information in respect of certain assets, presentation of a cash flow statement, standards issued not yet effective, impairment of assets and related-party transactions. Where required, equivalent disclosures are given in the Consolidated Financial Statements of Genus plc.

As permitted by section 408 of the Act, the Company has not presented its own Income Statement in this Annual Report.

The functional currency of the Company is Sterling.

Critical accounting judgements and key sources of estimation uncertainty
Preparing company financial statements in conformity with FRS 101 requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the balance sheet date and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

Management has not identified any critical accounting judgements or key sources of estimation uncertainty.

Significant accounting policies applied in the current reporting period that relate to the Financial Statements as a whole
This section sets out our significant accounting policies that relate to the Financial Statements as a whole. Where an accounting policy is generally applicable to a specific note to the Financial Statements, the policy has been described in that note.

Other income and deferred income
The Company has entered into a strategic collaboration with Beijing Capital Agribusiness ('BCA') under which BCA will establish and fund a collaboration specific entity ('BCA Future Bio-Tech') which will use Genus's intellectual property and know-how to pursue the PRRSv resistance regulatory and development work in China. Genus will receive consideration after meeting certain milestones in the development programme.

Each milestone is considered to be either a separate performance obligation, or a set of groups of separate performance obligations, under this agreement and are unbundled in the contractual arrangement as if they are distinct from one another.

We assess each separate performance obligation relating to the milestone payments, and upon completion of those performance obligations recognise the fair value of amounts earned in other income. Some performance obligations, such as the transfer of know-how, are recognised at a point in time whereas others, such as the provision of technical services, are recognised over time. We recognise any received but unearned consideration as deferred income.

We will apply the same accounting policy to any other comparable agreements.

Pensions
A number of our employees are members of defined contribution pension schemes. We charge contributions to profit and loss as they become payable under the schemes' rules. We show differences between the contributions payable and the amounts actually paid as either accruals or prepayments in the Balance Sheet. The schemes' assets are held separately from those of the Company.

Certain former employees of the Company are members of one of the Group's defined benefit pension schemes, details of which are given in note 29 to the Group Financial Statements. The schemes are all multi-employer defined benefit schemes, whose assets and liabilities are held independently from the Group but within their sponsored Group company.

Taxation
We provide for current tax, including UK corporation tax and foreign tax, at the amounts we expect to pay or recover, using the tax rates and the laws enacted or substantively enacted at the balance sheet date.

Foreign currencies
We record transactions in foreign currencies at the rate ruling at the transaction date. We retranslate monetary assets and liabilities denominated in foreign currencies at the prevailing rate of exchange at the balance sheet date. All differences are taken to the Income Statement.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

C1. ACCOUNTING INFORMATION AND POLICIES CONTINUED

Own shares
The Company has adopted FRS 101, which requires us to recognise the assets and liabilities associated with the Company's investment in its own shares in the Company's Financial Statements, where there is de facto control of the assets and liabilities.

The Company's own shares held by a Qualifying Employee Share Ownership Trust remain deducted from shareholders' funds until they vest unconditionally with employees.

Employee share schemes
The Company's Executive Directors and Chief Operating Officers receive part of their remuneration in the form of share awards, which vest upon meeting performance criteria over a three-year period.

We measure the cost of these awards by reference to the shares' fair value at the award date. At the end of each financial reporting period, we estimate the extent to which the performance criteria will be met at the end of three years and record an appropriate charge in the profit and loss account, together with a corresponding credit to profit and loss reserves. Changes in estimates of the number of shares vesting may result in charges or credits to the profit and loss account in subsequent periods.

Share-based payments
We have implemented the generally accepted accounting principle for accounting for share-based payments with subsidiary undertakings under FRS 101, whereby the Company has granted rights to its shares to employees of its subsidiary undertakings under an equity-settled arrangement, and the subsidiaries have not reimbursed the Company for these rights. Under this arrangement, the Company treats the share-based payment recognised in the subsidiary's financial statements as a cost of investment in the subsidiary and credits equity with an equal amount.

Derivative financial instruments and hedging
Our activities expose us primarily to the financial risks of changes in foreign currency exchange rates and interest rates.

We use interest rate swaps to hedge interest rate risk. We also use forward foreign currency contracts, implemented through a medium-term US Dollar cross-currency borrowing and related interest rate swap, to hedge exposure to translation risk associated with US Dollar net assets of subsidiaries. Forward foreign currency contracts do not qualify for hedge accounting in the Parent Company Financial Statements, as the hedged item is not in its Balance Sheet.

Our use of financial derivative instruments is governed by the Group's policies, which are approved by the Board of Directors. The notes to the Group Financial Statements include information about the Group's financial risks and their management, and its use of financial instruments and their impact on the Group's risk profile, performance and financial condition.

The fair value of the US Dollar and interest rate swaps is the estimated amount that we would receive or pay to terminate the swap at the balance sheet date, taking into account current interest rates and the creditworthiness of the swap counterparties.

The fair value of forward exchange contracts is their quoted market price at the balance sheet date, which is the present value of the quoted forward price.

Cash flow hedges
The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognised in Other Comprehensive Income and accumulated under the heading of cash flow hedging reserve, and limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in the Income Statement, and is included in the 'other gains and losses' line item.

Amounts previously recognised in Other Comprehensive Income and accumulated in equity are reclassified to the Income Statement in the periods when the hedged item affects the Income Statement, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in Other Comprehensive Income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect Other Comprehensive Income. Furthermore, if the Company expects that some or all of the loss accumulated in the cash flow hedging reserve will not be recovered in the future, that amount is immediately reclassified to the Income Statement.

The Company discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognised in Other Comprehensive Income and accumulated in cash flow hedge reserve at that time remains in equity and is reclassified to the Income Statement when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in the cash flow hedge reserve is reclassified immediately to the Income Statement.

Under interest rate swap contracts, the Company agrees to exchange the difference between fixed and floating rate interest amounts calculated on agreed notional principal amounts. Such contracts enable the Company to mitigate the risk of changing interest rates on the fair value of issued fixed-rate debt held and the cash flow exposures on the issued variable-rate debt held. The fair value of interest rate swaps at the reporting date is determined by discounting the future cash flows using the yield curves at the reporting date and the credit risk inherent in the contract. The average interest rate is based on the outstanding balances at the end of the financial year.

C1. ACCOUNTING INFORMATION AND POLICIES CONTINUED

As the critical terms of the interest rate swap contracts and their corresponding hedged items are the same, the Company performs a qualitative assessment of effectiveness and it is expected that the value of the interest rate swap contracts and the value of the corresponding hedged items will systematically change in opposite directions, in response to movements in the underlying interest rates. The main source of hedge ineffectiveness in these hedge relationships is the effect of the counterparty and the Company's own credit risk on the fair value of the interest rate swap contracts, which is not reflected in the fair value of the hedged item attributable to the change in interest rates. No other sources of ineffectiveness emerged from these hedging relationships.

C2. EMPLOYEES

Staff costs including Directors' remuneration during the year amounted to:

	2022 £m	2021 £m
Wages and salaries	**9.0**	7.7
Social security costs	**1.1**	1.4
Pension costs	**0.2**	0.2
Share-based payment expense	**1.4**	2.8
	11.7	12.1

The Directors' Remuneration Report sets out details of the Directors' remuneration, pensions and share options.

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

	2022 Number	2021 Number
Administration	**44**	40

C3. INTANGIBLE ASSETS

Accounting policies

Patents, licences and software are stated at acquisition cost less accumulated amortisation. The amortisation period is determined by reference to expected useful life, which is reviewed at least annually. Amortisation is charged to the Income Statement on a straight-line basis over the estimated useful life. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortisation period or method, as appropriate, and are treated as changes in accounting estimates.

See note 15 for useful economic life. We do not amortise assets under construction.

	Software £m	Patents and licences £m	Assets under construction £m	Total £m
Cost				
Balance at 1 July 2020	4.6	3.7	1.7	10.0
Additions	–	–	2.3	2.3
Transfers	2.9	–	(2.9)	–
Disposals	(0.4)	–	–	(0.4)
Balance at 30 June 2021 and 1 July 2021	7.1	3.7	1.1	11.9
Additions	**–**	**–**	**3.9**	**3.9**
Transfers	**2.3**	**–**	**(2.3)**	**–**
Balance at 30 June 2022	**9.4**	**3.7**	**2.7**	**15.8**
Amortisation				
Balance at 1 July 2020	1.6	3.7	–	5.3
Amortisation for the year	0.5	–	–	0.5
Disposals	(0.4)	–	–	(0.4)
Balance at 30 June 2021 and 1 July 2021	1.7	3.7	–	5.4
Amortisation for the year	**0.8**	**–**	**–**	**0.8**
Balance at 30 June 2022	**2.5**	**3.7**	**–**	**6.2**
Carrying amounts				
At 30 June 2022	**6.9**	**–**	**2.7**	**9.6**
At 30 June 2021	5.4	–	1.1	6.5
At 30 June 2020	3.0	–	1.7	4.7

Included within the software class of assets is £6.9m (2021: £5.4m) and included in assets in the course of construction is £2.7m (2021: £1.1m) that relate to the ongoing development costs of GenusOne, our single global enterprise system.

FINANCIAL STATEMENTS

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

C4. PROPERTY, PLANT AND EQUIPMENT

Accounting policies

We state property, plant and equipment at cost, together with any incidental acquisition expenses, or at their latest valuation, less depreciation and any provision for impairment. We calculate depreciation on a straight-line basis, to write the assets down to their estimated residual values over their estimated useful lives. The rates of annual depreciation on tangible fixed assets are as follows:

> Leasehold improvements period of lease
> Leased buildings period of lease
> Equipment 3 to 10 years

We review the carrying value of fixed assets for impairment, if events or changes in circumstances indicate that the carrying value may not be recoverable.

Right-of-use assets

Right-of-use assets are measured initially at cost based on the value of the associated lease liability, adjusted for any payments made before inception, initial direct costs and an estimate of the dismantling, removal and restoration costs required in the terms of the lease. Subsequent to initial recognition, we record an interest charge in respect of the lease liability. The related right-of-use asset is depreciated over the term of the lease or, if shorter, the useful economic life ('UEL') of the leased asset. The lease term shall include the period of an extension option where it is reasonably certain that the option will be exercised. Where the lease contains a purchase option, the asset is written-off over the useful life of the asset when it is reasonably certain that the purchase option will be exercised.

	Leasehold improvements £m	Equipment £m	Owned assets £m	Right-of-use leased buildings £m	Total £m
Cost					
Balance at 1 July 2021	0.5	0.4	0.9	1.0	1.9
Disposals	–	**(0.1)**	**(0.1)**	–	**(0.1)**
Balance at 30 June 2022	**0.5**	**0.3**	**0.8**	**1.0**	**1.8**
Depreciation					
Balance at 1 July 2021	0.3	0.3	0.6	0.2	0.8
Depreciation for the year	–	–	–	**0.1**	**0.1**
Balance at 30 June 2022	**0.3**	**0.3**	**0.6**	**0.3**	**0.9**
Carrying amounts					
At 30 June 2022	**0.2**	–	**0.2**	**0.7**	**0.9**
At 30 June 2021	0.2	0.1	0.3	0.8	1.1

C5. INVESTMENTS IN SUBSIDIARIES

Accounting policies

Shares in subsidiary undertakings are stated at cost less any provision for impairment.

The Company assesses investments for impairment whenever events or changes in circumstances indicate that the carrying value of an investment may not be recoverable. If any such indication of impairment exists, then we estimate the recoverable amount. If the recoverable amount of the cash-generating unit is less than the value of the investment, it is considered to be impaired and we write it down to its recoverable amount. An impairment loss is recognised immediately in the profit and loss account.

	Shares in subsidiary undertakings £m
Cost	
Balance at 1 July 2021	316.0
Additions	**227.6**
Balance at 30 June 2022	**543.6**
Provision for impairment	
Balance at 1 July 2021	193.2
Provided during the year	**4.9**
Balance at 30 June 2022	**198.1**
Carrying amounts	
At 30 June 2022	**345.5**
At 30 June 2021	122.8

Additions relate to increasing our investment in ABS Pecplan Ltda, ABS Chile Limitada, ABS Argentina S.A. and Genus Investments Limited.

C5. INVESTMENTS IN SUBSIDIARIES CONTINUED

On 30 June 2022, Genus plc subscribed for 220,000,000 ordinary shares of £1.00 each in Genus Investments Limited. The total cash consideration of £220m owing from the subscription was offset against the loan payable by Genus Investments Limited to Genus plc under a deed of offset approved by the Board on 30 June 2022.

The Company considers the relationship between its market capitalisation and the carrying value of its investments, among other factors, when reviewing for indicators of impairment. As at 30 June 2022, the net investment in five of the Company's subsidiary undertakings exceeded the Company's share of the net assets. Each of these subsidiaries are denominated in Latin American currencies, all of which have seen significant weakening against Sterling during the year ended 30 June 2022. For each of these undertakings, the recoverable value has been estimated using the Board-approved Strategic Plan. There were no indicators of impairment for the Company's other subsidiary undertakings.

The key assumptions for the value in use calculation are those regarding the discount rate, growth rates and expected trading performance.

Management estimates discount rates that reflect current market assessments of the time value of money and the risks specific to the Group. The pre-tax discount rates are derived from the Group's post-tax weighted average cost of capital ('WACC'), which has been calculated using the capital asset pricing model, the inputs of which include a country risk-free rate, equity risk premium, Group size premium and a risk adjustment (beta), this equates to a pre-tax discount rate of 11% (2021: 11%). Cash flows beyond the five-year period are extrapolated using a long-term growth rate of 2.5% (2021: 2.5%).

During the year, £4.9m was provided against the investment held in Sygen International Ltd to reflect a reduction in the net assets of that company.

Principal subsidiary undertakings
The Company's principal subsidiaries and their main activities are given in note 37 to the Group Financial Statements.

C6. OTHER INVESTMENTS

Accounting policies
Listed equity investments are stated at fair value.

	2022 £m	2021 £m
Listed investment – NMR	**2.1**	2.0

NMR ordinary shares were acquired as part of the NMR pension agreement, and are measured at fair value. The valuation basis is Level 1 classification, where fair value techniques are quoted (unadjusted) prices in active markets for identical assets and liabilities.

C7. OTHER RECEIVABLES

Accounting policies
We state other receivables at their amortised cost less any impairment losses.

	Note	2022 £m	2021 £m
Amounts due within one year			
Amounts owed by Group undertakings		**61.8**	374.5
Corporation tax recoverable		**1.6**	0.9
Prepayments		**2.0**	1.6
Other receivables		**2.0**	–
Deferred taxation	C8	**0.9**	2.1
Derivative financial asset	C15	**1.0**	0.1
		69.3	379.2
Amounts due after one year			
Amounts owed by Group undertakings		**74.0**	65.1
		74.0	65.1

At the balance sheet date, the total amounts owed by Group undertakings were £135.8m (2021: £439.6m). The carrying amount of these assets approximates their fair value. Of the amounts owed by Group undertakings, £133.5m (2021: £329.1m) is interest-bearing and any interest charged is at current market rates. See note C5 for more detail on the decrease in amounts owed by Group undertakings.

FINANCIAL STATEMENTS

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

C8. DEFERRED TAXATION

Accounting policies
We recognise deferred taxation in respect of all timing differences that have originated but not reversed at the balance sheet date, where transactions or events that result in an obligation to pay more tax in future or a right to pay less tax in future have occurred at the balance sheet date.

We only recognise deferred taxation assets if we consider it more likely than not that we will have suitable profits from which we can deduct the future reversal of the underlying timing differences. Timing differences are differences arising between the Company's taxable profits and its results as stated in the Financial Statements, and which are capable of reversing in one or more subsequent periods.

We only recognise deferred taxation in respect of the future remittance of retained earnings of overseas subsidiaries to the extent that, at the balance sheet date, dividends have been accrued as receivable.

We measure deferred taxation on a non-discounted basis, at the tax rates we expect to apply in the periods in which we expect the timing differences to reverse, based on tax rates and laws enacted or substantively enacted at the balance sheet date.

	2022 £m	2021 £m
Deferred tax asset due within one year	**0.9**	2.1
Deferred tax asset due after more than one year	**2.9**	2.1
	3.8	4.2

The movements in deferred taxation are as follows:

	2022 £m	2021 £m
At the start of the year	**4.2**	2.0
Recognised in the Income Statement	**0.6**	2.1
Recognised in equity	**(1.0)**	0.1
At the end of the year	**3.8**	4.2

The amounts provided are as follows:

	2022 £m	2021 £m
Share-based payment expense	**1.1**	1.8
Other timing differences	**1.6**	2.0
Losses	**1.1**	0.4
	3.8	4.2

At the balance sheet date, the Company had unused tax losses available for offset against future profits, with a potential tax benefit of £1.1m (2021: £0.4m). We have recognised a deferred tax asset in respect of this benefit, as we expect these losses to be offset against future profits of the UK tax group in the near term.

C9. CURRENT PAYABLES

Accounting policies
Trade payables are not interest bearing and are stated at their nominal value.

	Note	2022 £m	2021 £m
Bank loans and overdrafts	C12	**7.1**	13.0
Trade payables		**1.7**	1.5
Other payables		**0.7**	0.1
Amounts owed to Group undertakings		**51.9**	204.2
Accruals		**2.5**	3.8
Deferred income		**0.1**	0.1
Obligations under leases	C13	**0.1**	0.1
Derivative financial liabilities	C15	**0.9**	–
		65.0	222.8

Included within amounts owed to Group undertakings are amounts of £26.2m (2021: £176.6m) which are unsecured, repayable on demand and any interest charged is at current market rates.

There are no outstanding contributions due to defined contribution pension schemes for the benefit of the employees (2021: £nil).

C10. NON-CURRENT PAYABLES

	Note	2022 £m	2021 £m
Bank loans and overdrafts	C12	**182.1**	109.4
Obligations under leases	C13	**0.5**	0.6
Derivative financial liabilities	C15	**0.3**	–
Deferred income		**0.4**	1.1
		183.3	111.1

C11. PROVISIONS

	2022 £m	2021 £m
Provisions due within one year	**0.4**	0.3
Provisions after more than one year	**0.3**	0.1
	0.7	0.4

The provisions primarily consist of a share forfeiture provision of £0.5m, which relates to potential claims that could be made by untraced members over a period of three years, relating to the resale proceeds of shares that were identified during prior years as being forfeited (see note 25).

C12. LOANS AND BORROWINGS

Accounting policies
We initially state debt at the amount of the net proceeds, after deducting issue costs. The carrying amount is increased by the finance cost in respect of the accounting period and reduced by payments made in the period.

We charge the finance costs of debt to the profit and loss account over the debt term, at a constant rate on the carrying value of the debt to which they relate.

	2022 £m	2021 £m
Loans and borrowings comprise amounts falling due:		
In one year or less or on demand	**8.0**	13.8
In more than one year but not more than two years	**–**	–
In more than two years but not more than five years	**182.3**	109.9
	190.3	123.7
Less: unamortised issue costs	**(1.1)**	(1.3)
	189.2	122.4
Amounts falling due within one year	**(7.1)**	(13.0)
Amounts falling due after more than one year	**182.1**	109.4

At the balance sheet date, the Company's credit facilities comprised a £150m multi-currency revolving credit facility ('RCF'), a USD125 million RCF and a USD20 million bond and guarantee facility. The original term of the facility was for three years to 24 August 2023 with the option to extend the maturity date by a further year before each of the first and second anniversaries of the signing date. The Company's credit facility also includes an uncommitted £100m accordion option, which can be requested on a maximum of three occasions over the lifetime of the facility to fund the Group's business development plans. On 24 August 2021, the Company and its lenders extended the facility by a further year to 24 August 2024.

With effect from 26 August 2022, the Group and its lenders increased the Company's multi-currency RCF by £40m to £190m and the USD RCF by USD25m to USD150m, and extended the maturity date of the total facilities to 24 August 2025.

As part of its interest rate hedging strategy, the Company has entered into interest rate swaps to hedge variable interest rates. At the balance sheet date, bank loan and overdrafts include borrowings of USD45m fixed at 3.3175%, and borrowings of USD28m, swapped via a cross currency swap into EUR25m, fixed at 0.3625%, excluding applicable bank margins.

Terms and debt repayment schedule
The terms and conditions of outstanding loans and overdrafts were as follows:

	Currency	Interest rate	2022 £m	2021 £m
RCF and overdraft	GBP	2.6%	**95.9**	42.3
RCF, term loan and overdraft	USD	3.0%	**77.3**	59.7
RCF and overdraft	EUR	1.4%	**10.8**	10.7
Other unsecured bank borrowings	Other	2.2%	**5.2**	9.7
Total interest-bearing liabilities			**189.2**	122.4

The above RCFs are unsecured.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED FOR THE YEAR ENDED 30 JUNE 2022

C13. OBLIGATIONS UNDER LEASES

A lease is a commitment to make a payment in the future, primarily in relation to property, plant and machinery and motor vehicles.

Accounting policies

In accordance with IFRS 16, we recognise as an expense any payments made in respect of short-term leases (those with a term of less than 12 months) and for low-value items on a straight-line basis over the life of the lease.

For all other leases we recognise a liability at the date at which the leased asset is made available for use, and a corresponding right-of-use asset is recognised and depreciated over the term of the lease (see note C4).

Lease liabilities are measured at the present value of the future lease payments, excluding any payments relating to non-lease components. Future lease payments include fixed payments, in-substance fixed payments, and variable lease payments that are based on an index or a rate, less any lease incentives receivable. Lease liabilities also take into account amounts payable under residual value guarantees and payments to exercise options, to the extent that it is reasonably certain that such payments will be made. The payments are discounted at the rate implicit in the lease or, where that cannot be measured, at an incremental borrowing rate.

We remeasure the lease liability (and make a corresponding adjustment to the related right-of-use asset) whenever:

> The lease term has changed or there is a change in the assessment of the exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.

> The lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used).

> A lease contract is modified, and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.

The Company did not make any such adjustments during the periods presented.

The changes in the lease liabilities are as follows:

	2022 £m	2021 £m
Balance at the start of the year	**0.8**	0.9
Payments made	**(0.2)**	(0.1)
Balance at the end of the year	**0.6**	0.8

In accordance with the reduced disclosure exemptions included in FRS 101, a maturity analysis has not been presented. The maturity analysis of the Group's lease obligations is included in note 28 to the Group Financial Statements.

C14. OPERATING LEASES

Accounting policies

For short-term leases (those with a term of less than 12 months) and low-value items, we charge the rentals payable to the Income Statement on a straight-line basis over the lease term.

The Company has elected not to apply IFRS 16 to contracts where the right-of-use asset would be recognised as an intangible asset (e.g. software licences).

Total of future minimum lease payments under non-cancellable operating leases which expire:

	2022 £m	2021 £m
In less than one year	**–**	0.8
	–	0.8

Operating lease rentals charged in the year:

	2022 £m	2021 £m
Other	**0.8**	0.8

C15. DERIVATIVES AND OTHER FINANCIAL INSTRUMENTS

Additional disclosures on financial instruments can be found in note 26 to the Group Financial Statements.

C16. CAPITAL AND RESERVES

Share capital

	2022 Number	2021 Number	2022 £m	2021 £m
Issued and fully paid				
Ordinary shares of 10 pence	**65,773,620**	65,761,500	**6.6**	6.6

There is no authorised share capital limit.

The holders of ordinary shares are entitled to receive dividends, as declared from time to time.

The movement in share capital for the period was as follows:

	2022 Number	2021 Number	2022 £m	2021 £m
Issued under the Executive Share Option Plan	**12,120**	19,875	**–**	–
Issued to Employee Benefit Trust	**–**	650,000	**–**	0.1
	12,120	669,875	**–**	0.1

Shares issued under the Executive Share Option Plan were issued at option prices as follows:

	2022		2021	
	Number	Price	Number	Price
Executive Share Option Plan	**–**	**–**	6,599	729.83p
	2,837	**977.83p**	9,032	977.83p
	7,027	**1334.00p**	1,738	1334.00p
	2,256	**1413.00p**	2,506	1413.00p
	12,120		19,875	

Reserve for own shares

The Company's shares are held by a QUEST, which is an employee benefit trust established to facilitate the operation of our long-term incentive scheme for senior management. The reserve amount represents the deduction in arriving at shareholders' funds for the consideration the trust paid for the Company's shares, which had not vested unconditionally at the balance sheet date. The number and market value of the ordinary shares held by the Employee Benefit Trust and the QUEST were:

	2022 Number	2021 Number	2022 £m	2021 £m
Shares allocated but not vested	**280,803**	509,269	**7.1**	25.2
Unallocated shares	**92,334**	92,334	**2.3**	4.6
	373,137	601,603	**9.4**	29.8

The shares have a nominal value of £37,314 (2021: £60,160).

Hedging reserve

The hedging reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments net of taxation – see note 26.

C17. RELATED PARTY TRANSACTIONS

The Company is exempt under FRS 101 from disclosing transactions with other members of the Group.

C18. CAPITAL AND OTHER COMMITMENTS

At 30 June 2022, outstanding contracted capital expenditure amounted to £nil (2021: £nil).

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED
FOR THE YEAR ENDED 30 JUNE 2022

C19. PENSIONS, GUARANTEES AND CONTINGENCIES

The NMR pension assigned to Genus plc under the Flexible Apportionment Agreement, recorded an actuarial gain of £3.7m, which has increased the asset restriction made in previous years. As the Company does not have unilateral right to this surplus, as required in accordance with IFRIC 14 it is restricted to £nil. For additional information on the MPF pension scheme, of which NMR was one of the participating employers, please see note 29.

The retirement benefit obligations referred to in note 29 to the Group Financial Statements include obligations relating to the MPF defined benefit scheme. Genus, together with other participating employers, is joint and severally liable for the scheme's obligations. Genus has accounted for its section and its share of any orphan assets and liabilities, collectively representing approximately 86% (2021: 86%) of the MPF. As a result of the joint and several liability, Genus has a contingent liability for the scheme's obligations that it has not accounted for. The total deficit of the MPF scheme from the most recent triennial valuation can be found in note 29.

Certain UK subsidiaries, which are detailed in note 37 to the Group Financial Statements, will take advantage of the audit exemption set out within section 479A of the Companies Act 2006 for the year ended 30 June 2022. The Company has given a statutory guarantee over all of the liabilities held by those UK subsidiaries for the year ended 30 June 2022. The Company has assessed the probability of loss under the guarantee as remote.

At 30 June 2022, the Company had entered into bank guarantees totalling £15.8m (2021: £13.9m).

C20. POST BALANCE SHEET EVENTS

With effect from 26 August 2022, the Group and its lenders increased the Company's multi-currency RCF by £40m to £190m and the USD RCF by USD25m to USD150m, and extended the maturity date of the total facilities to 24 August 2025.

FIVE-YEAR RECORD – CONSOLIDATED RESULTS

The information included in the five-year record below is in accordance with IFRS as adopted for use under the Companies Act 2006.

Financial results	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Revenue from continuing operations	**593.4**	574.3	551.4	488.5	470.3
Adjusted operating profit from continuing operations[1]	**68.8**	76.9	60.1	51.8	55.5
Adjusted operating profit including joint ventures and associates[1]	**77.7**	89.8	70.8	59.0	60.9
Adjusted profit before tax[1]	**71.5**	84.8	65.8	55.1	56.3
Basic adjusted earnings per share[1]	**82.7p**	100.9p	77.3p	63.8p	72.3p
Diluted adjusted earnings per share[1]	**82.3p**	100.1p	76.7p	61.7p	71.3p
Operating profit from continuing operations	**49.4**	47.7	42.4	2.8	6.0
Profit before tax from continuing operations	**48.4**	55.8	46.3	4.0	5.6
Profit after tax from continuing operations	**36.7**	46.8	35.7	0.8	39.4
Net profit attributable to owners of the Company	**40.9**	47.3	35.3	1.9	40.5
Basic earnings per share	**62.5p**	72.6p	54.4p	3.0p	66.1p
Diluted earnings per share	**62.2p**	72.0p	54.0p	2.9p	65.2p
Net assets	**572.1**	496.6	494.5	479.0	401.7
Net debt	**185.0**	105.6	102.6	79.6	108.5

1 Adjusted operating profit, adjusted profit before tax and adjusted basic and diluted earnings per share are before net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense, exceptional items and other gains and losses

ALTERNATIVE PERFORMANCE MEASURES GLOSSARY

The Group tracks a number of APMs in managing its business, which are not defined or specified under the requirements of IFRS because they exclude amounts that are included in, or include amounts that are excluded from, the most directly comparable measure calculated and presented in accordance with IFRS, or are calculated using financial measures that are not calculated in accordance with IFRS.

The Group believes that these APMs, which are not considered to be a substitute for or superior to IFRS measures, provide stakeholders with additional helpful information on the performance of the business. These APMs are consistent with how the business performance is planned and reported within the internal management reporting to the Board and GELT. Some of these APMs are also used for the purpose of setting remuneration targets.

These APMs should be viewed as supplemental to, but not as a substitute for, measures presented in the consolidated financial information relating to the Group, which are prepared in accordance with IFRS. The Group believes that these APMs are useful indicators of its performance. However, they may not be comparable to similarly-titled measures reported by other companies, due to differences in the way they are calculated.

The key APMs that the Group uses include:

Alternative Performance Measures	Calculation methodology and closest equivalent IFRS measure (where applicable)	Reasons why we believe the APMs are useful
Adjusted operating profit exc JVs	Adjusted operating profit is operating profit with the net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items added back and excludes JV and associate results. *Closest equivalent IFRS measure: Operating profit*[1] See reconciliation on page 193.	Allows the comparison of underlying financial performance by excluding the impacts of exceptional items and is a performance indicator against which short-term and long-term incentive outcomes for our senior executives are measured: > net IAS 41 valuation movements on biological assets – these movements can be materially volatile and do not directly correlate to the underlying trading performance in the period. Furthermore, the movement is non-cash related and many assumptions used in the valuation model are based on projections rather than current trading; > amortisation of acquired intangible assets – excluding this improves the comparability between acquired and organically grown operations, as the latter cannot recognise internally generated intangible assets. Adjusting for amortisation provides a more consistent basis for comparison between the two; > share-based payments – this expense is considered to be relatively volatile and not fully reflective of the current period trading, as the performance criteria are based on EPS performance over a three-year period and include estimates of future performance; and > exceptional items – these are items which due to either their size or their nature are excluded, to improve the understanding of the Group's underlying performance.
Adjusted operating profit inc JVs	Including adjusted operating profit from JV and associate results. See reconciliation on page 193.	
Adjusted operating profit inc JVs exc gene editing costs	Including adjusted operating profit from JV and associate results but excluding gene editing costs. See reconciliation on page 193.	
Adjusted operating profit inc JVs after tax	Adjusted operating profit including JV less adjusted effective tax. See reconciliation on page 193.	
Adjusted profit inc JVs before tax	Adjusted operating profit including JVs less net finance costs. See reconciliation on page 193.	
Adjusted profit inc JVs after tax	Adjusted profit including JVs before tax less adjusted effective tax. See reconciliation on page 193.	
Adjusted effective tax rate	Total income tax charge for the Group excluding the tax impact of adjusting items, divided by the adjusted operating profit. *Closest equivalent IFRS measure: Effective tax rate* See reconciliation on page 194.	Provides an underlying tax rate to allow comparability of underlying financial performance, by excluding the impacts of net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items.

Alternative Performance Measures	Calculation methodology and closest equivalent IFRS measure (where applicable)	Reasons why we believe the APMs are useful
Adjusted basic earnings per share	Adjusted profit after tax profit divided by the weighted basic average number of shares. *Closest equivalent IFRS measure: Earnings per share* See calculation on page 194.	On a per share basis, this allows the comparability of underlying financial performance by excluding the impacts of adjusting items.
Adjusted diluted earnings per share	Underlying attributable profit divided by the diluted weighted basic average number of shares. *Closest equivalent IFRS measure: Diluted earnings per share* See calculation on page 194.	
Adjusted earnings cover	Adjusted earnings per share divided by the expected dividend for the year. See calculation on page 194.	The Board dividend policy targets the adjusted earning cover to be between 2.5–3 times.
Adjusted EBITDA – calculated in accordance with the definitions used in our financing facilities	This is adjusted operating profit, adding back cash received from our JVs, depreciation of property, plant and equipment, depreciation of the historical cost of biological assets, operational amortisation (i.e. excluding amortisation of acquired intangibles) and deducting the amount attributable to minority interest. *Closest equivalent IFRS measure: Operating profit*[1] See reconciliation on page 194.	This APM is presented because it is used in calculating our ratio of net debt to EBITDA and our interest cover, which we report to our banks to ensure compliance with our bank covenants.
Adjusted operating margin	Adjusted operating profit (including JVs) divided by revenue.	Allows for the comparability of underlying financial performance by excluding the impacts of exceptional items.
Adjusted operating margin (exc JVs)	Adjusted operating profit divided by revenue.	
Constant currency basis	The Group reports certain financial measures, on both a reported and constant currency basis and retranslates the current year's results at the average actual exchange rates used in the previous financial year.	The Group's business operates in multiple countries worldwide and its trading results are translated back into the Group's functional currency of Sterling. This measure eliminates the effects of exchange rate fluctuations when comparing year-on-year reported results.
Revenue excluding Genus PIC China	Revenue excluding revenue made by Genus PIC China. See reconciliation on page 195.	Allows for the comparison of the financial performance of Genus PIC by excluding the results of Genus PIC China, which has been impacted by volatile and challenging market conditions.
Adjusted operating profit inc JVs for Genus PIC excluding Genus PIC China	Adjusted operating profit including JVs for Genus PIC excluding adjusted operating profit including JVs made by Genus PIC China. See reconciliation on page 195.	
Adjusted profit before tax excluding Genus PIC China	Adjusted profit before tax excluding Genus PIC China. See reconciliation on page 195.	Allows for the comparison of underlying financial performance of Genus by excluding Genus PIC China.
[redacted]		
Net debt	Net debt is gross debt, made up of unsecured bank loans and overdrafts and obligations under finance leases, with a deduction for cash and cash equivalents. See reconciliation on page 195.	This allows the Group to monitor its levels of debt.

ALTERNATIVE PERFORMANCE MEASURES GLOSSARY CONTINUED

Alternative Performance Measures	Calculation methodology and closest equivalent IFRS measure (where applicable)	Reasons why we believe the APMs are useful
Net debt – calculated in accordance with the definitions used in our financing facilities	Net debt excluding the impact of adopting IFRS 16 and adding back guarantees and deferred purchase arrangements. See reconciliation on page 195.	This is a key metric that we report to our banks to ensure compliance with our bank covenants.
[redacted]		
Cash conversion	Cash generated by operations as a percentage of adjusted operating profit excluding JVs. See calculation on page 196.	This is used to measure how much operating cash flow we are generating and how efficient we are at converting our operating profit into cash.
Free cash flow	Cash generated by the Group before debt repayments, acquisitions and investments, dividends and proceeds from share issues. *Closest IFRS measure: Net cash flow from operating activities* See reconciliation on page 196	Shows the cash retained by the Group in the year.
[redacted]		
Interest cover	The ratio of adjusted net finance costs, calculated in accordance with the definitions used in our financing facilities, is net finance costs with a deduction for pension interest, interest from adopting IFRS 16, unwinding of discount on put options and amortisation of refinancing fees, to adjusted EBITDA. *Closest equivalent IFRS components for the ratio: The equivalent IFRS components are finance costs, finance income and operating profit* See calculation and reconciliation on page 196.	This APM is used to understand our ability to meet our interest payments and is also a key metric that we report to our banks to ensure compliance with our bank covenants.
Ratio of net debt to adjusted EBITDA	The ratio of net debt, calculated in accordance with the definitions used in our financing facilities, is gross debt, made up of unsecured bank loans and overdrafts and obligations under finance leases, with a deduction for cash and cash equivalents and adding back amounts related to guarantees and deferred purchase arrangements, to adjusted EBITDA. *Closest equivalent IFRS components for the ratio: The equivalent IFRS components are gross debt, cash and cash equivalents and operating profit* See calculation on page 196.	This APM is used as a measurement of our leverage and is also a key metric that we report to our banks to ensure compliance with our bank covenants.
Return on adjusted invested capital	The Group's return on adjusted invested capital is measured on the basis of adjusted operating profit including JVs after tax, which is operating profit with the pre-tax share of profits from JVs and associates, net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items added back, net of amounts attributable to non-controlling interest and tax. The adjusted operating profit including JVs after tax is divided by adjusted invested capital, which is the equity attributable to owners of the Company adding back net debt, pension liability net of related deferred tax and deducting biological assets (less historical cost) and goodwill, net of related deferred tax. *Closest equivalent IFRS components for the ratio: Return on invested capital* See calculation and reconciliation on page 197.	This APM is used to measure our ability to efficiently invest our capital and gives us a sense of how well we are using our resources to generate returns.

1 Operating profit is not defined per IFRS. It is presented in the Group Income Statement and is shown as profit before tax, finance income/costs and share of post-tax profit of JVs and associates retained

THE TABLES BELOW RECONCILE THE CLOSEST EQUIVALENT IFRS MEASURE TO THE APM OR OUTLINE THE CALCULATION OF THE APM

INCOME STATEMENT MEASURES

Adjusted operating profit exc JVs
Adjusted operating profit inc JVs
Adjusted operating profit inc JVs and exc gene editing costs

	2022		2021		
	£m	£m	£m	£m	Reference
Operating profit		**49.4**		**47.7**	Group Income Statement
Add back:					
Net IAS 41 valuation movement on biological assets	5.4		10.8		Group Income Statement
Amortisation of acquired intangible assets	8.3		7.4		Group Income Statement
Share-based payment expense	3.7		7.7		Group Income Statement
Exceptional items	2.0		3.3		Group Income Statement
Adjusted operating profit exc JVs		**68.8**		**76.9**	Group Income Statement
Less: amounts attributable to non-controlling interest		(0.3)		(0.1)	Group Income Statement
Operating profit from JVs and associates	5.2		13.1		Group Income Statement
Tax on JVs and associates	2.6		3.0		Note 11 – Income tax expense
Net IAS 41 valuation movement	1.4		(3.1)		Note 18 – Equity accounted investees
Adjusted operating profit from JVs		9.2		13.0	
Adjusted operating profit inc JVs		**77.7**		**89.8**	
Gene editing costs		7.9		7.6	Note 5 – Segmental information
Adjusted operating profit inc JVs and exc gene editing costs		**85.6**		**97.4**	

Adjusted operating profit inc JVs after tax

	2022		2021		
		£m		£m	Reference
Adjusted operating profit inc JVs		**77.7**		**89.8**	See APM
Effective Tax Rate	**24.3%**		22.5%		Note 12 – Earnings per share
Adjusted tax		(18.9)		(20.2)	No direct reference
Adjusted operating profit inc JVs after tax		**58.8**		**69.6**	

Adjusted profit inc JVs before tax
Adjusted profit inc JVs after tax

	2022	2021	
	£m	£m	Reference
Adjusted operating profit inc JVs	**77.7**	**89.8**	See APM
Less net finance costs	(6.2)	(5.0)	Note 10 – Net finance costs
Adjusted profit inc JVs before tax	**71.5**	**84.8**	
Adjusted tax	(17.4)	(19.1)	Note 12 – Earnings per share
Adjusted profit inc JVs after tax	**54.1**	**65.7**	

ALTERNATIVE PERFORMANCE MEASURES GLOSSARY CONTINUED

Adjusted effective tax £m/rate

	2022		2021		
	£m	%	£m	%	Reference
Adjusted effective tax £m/rate	**17.4**	**24.3**	**19.1**	**22.5**	Note 12 – Earnings per share
Exceptional items	(0.8)	(40.0)	(1.1)	(33.3)	Note 12 – Earnings per share
Share-based payment expense	(0.5)	(13.5)	(1.6)	(20.8)	Note 12 – Earnings per share
Amortisation of acquired intangible assets	(3.3)	(39.8)	(1.5)	(20.3)	Note 12 – Earnings per share
Net IAS 41 valuation movement on biological assets	1.5	27.8	(2.9)	(26.9)	Note 12 – Earnings per share
Effective tax £m/rate	**14.3**	**28.0**	**12.0**	**20.4**	Note 11 – Taxation and deferred taxation

Adjusted basic earnings per share

	2022	2021	Reference
Adjusted profit inc JVs after tax (£m)	**54.1**	**65.7**	See APM
Weighted average number of ordinary shares (000s)	65,395	65,108	Note 12 – Earnings per share
Adjusted basic earnings per share (pence)	**82.7**	**100.9**	

Adjusted diluted earnings per share

	2022	2021	Reference
Adjusted profit inc JVs after tax (£m)	**54.1**	**65.7**	See APM
Weighted average number of diluted ordinary shares (000s)	65,714	65,662	Note 12 – Earnings per share
Adjusted diluted earnings per share (pence)	**82.3**	**100.1**	

Adjusted earnings cover

	2022		2021		
	pence	times	pence	times	Reference
Adjusted earnings per share	**82.7**		**100.9**		See APM
Dividend for the year	**32.0**		**32.0**		Note 13 – Dividends
Adjusted earnings cover		**2.6**		**3.2**	

Adjusted EBITDA – as calculated under our financing facilities

	2022		2021		
	£m	£m	£m	£m	Reference
Operating profit		**49.4**		**47.7**	Group Income Statement
Add back:					
Net IAS 41 valuation movement on biological assets	5.4		10.8		Group Income Statement
Amortisation of acquired intangible assets	8.3		7.4		Group Income Statement
Share-based payment expense	3.7		7.7		Group Income Statement
Exceptional items	2.0		3.3		Group Income Statement
Adjusted operating profit exc JVs	68.8		76.9		Group Income Statement
Adjust for:					
Cash received from JVs (dividend and loan repayment)	3.2		4.1		Group Statement of Cash Flows
Depreciation: property, plant and equipment	26.4		24.0		Note 17 – Property, plant and equipment
Operational lease payments	(12.4)		(12.5)		Note 28 – Obligations under leases
Depreciation: historical cost of biological assets	10.7		10.0		See Financial Review
Amortisation and impairment (excluding separately identifiable acquired intangible assets)	4.3		3.7		Note 15 – Intangible assets
Less amounts attributable to non-controlling interest	(0.3)		(0.1)		Group Income Statement
Adjusted EBITDA – as calculated under our financing facilities		**100.7**		**106.1**	

Revenue excluding Genus PIC China

	30 June 2022		30 June 2021		
	£m	£m	£m	£m	Reference
Revenue in Genus	**593.4**		574.3		Note 5 – Segmental information
Less revenue in Genus PIC China	**(29.9)**		(55.0)		No direct reference
Revenue excluding Genus PIC China		**563.5**		519.3	

Adjusted operating profit excluding Genus PIC China

	30 June 2022		30 June 2021		
	£m	£m	£m	£m	Reference
Adjusted operating profit in Genus PIC	**112.3**		122.9		Group Income Statement
Adjusted operating profit from PIC JVs and associates	**9.1**		13.2		No direct reference
Less amounts attributable to non-controlling interest	**(0.2)**		(0.2)		No direct reference
		121.2		135.9	
Less adjusted operating profit in Genus PIC China		**(5.6)**		(33.4)	No direct reference
Adjusted operating profit excluding Genus PIC China		**115.6**		102.5	

Adjusted profit before tax excluding Genus PIC China

	30 June 2022		30 June 2021		
	£m	£m	£m	£m	Reference
Adjusted profit before tax		**71.5**		84.8	Group Income Statement
Less adjusted profit before tax in Genus PIC China		**(5.6)**		(33.4)	No direct reference
Adjusted profit before tax excluding Genus PIC China		**65.9**		51.4	

BALANCE SHEET MEASURES

Net debt

Net debt as calculated under our financing facilities

	2022		2021		
	£m	£m	£m	£m	Reference
Current unsecured bank loans and overdrafts	7.1		13.9		
Non-current unsecured bank loans and overdrafts	182.1		109.4		
Unsecured bank loans and overdrafts		189.2		123.3	Group Balance Sheet
Current obligations under finance leases	10.1		9.0		
Non-current obligations under finance leases	24.5		19.3		
Obligations under finance leases		34.6		28.3	Group Balance Sheet
Total debt financing		223.8		151.6	Note 32 – Notes to the cash flow statement
Deduct:					
Cash and cash equivalents		(38.8)		(46.0)	Group Balance Sheet
Net debt		**185.0**		**105.6**	
Deduct:					
Lower of obligations under finance leases or £30m		(30.0)		(28.3)	
Add back:					
Guarantees		20.2		19.1	Note 35 – Contingencies and bank guarantees
Deferred purchase arrangements		–		0.1	No direct reference
Net debt – as calculated under our financing facilities		**175.2**		**96.5**	

ADDITIONAL INFORMATION

ALTERNATIVE PERFORMANCE MEASURES GLOSSARY CONTINUED

CASH FLOW MEASURES

Cash conversion

	2022		2021		
	£m	£m	£m	£m	Reference
Cash generated by operations		**56.6**		**86.6**	Note 32 – Notes to the cash flow statement
Operating profit	49.4		47.7		Group Income Statement
Add back:					
Net IAS 41 valuation movement on biological assets	5.4		10.8		Group Income Statement
Amortisation of acquired intangible assets	8.3		7.4		Group Income Statement
Share-based payment expense	3.7		7.7		Group Income Statement
Exceptional items	2.0		3.3		Group Income Statement
Adjusted operating profit exc JVs		**68.8**		**76.9**	Group Income Statement
Cash conversion (%)		**82%**		**113%**	

Free cash flow

	2022		2021		
	£m	£m	£m	£m	Reference
Cash generated by operations		**56.6**		**86.6**	Note 32 – Notes to the cash flow statement
Net interest and tax paid		(22.3)		(19.1)	Note 32 – Notes to the cash flow statement
Capital expenditure		(50.9)		(33.8)	Group Statement of Cash Flows
Dividends received from JV and associates		3.2		4.1	Group Statement of Cash Flows
Joint venture and associate loan (payment)/repayment		–		(0.4)	Group Statement of Cash Flows
Proceeds from sale of property, plant and equipment		–		0.3	Group Statement of Cash Flows
Dividend to non-controlling interest		(0.1)		(0.2)	Group Statement of Cash Flows
Free cash flow		**(13.5)**		**37.5**	

OTHER MEASURES

Interest cover

	2022		2021		
	£m	Times	£m	Times	Reference
Finance costs	6.6		5.4		Group Income Statement
Finance income	(0.4)		(0.4)		Group Income Statement
Net finance costs	6.2		5.0		Note 10 – Net finance costs
Deduct:					
Pension interest	(0.2)		(0.3)		Note 10 – Net finance costs
Interest on lease liabilities	(1.1)		(0.8)		Note 10 – Net finance costs
Unwinding discount on put options	(0.2)		(0.6)		Note 10 – Net finance costs
Amortisation of refinancing fees	(0.9)		(0.9)		Note 10 – Net finance costs
Adjusted net finance costs	**3.8**		**2.4**		
Adjusted EBITDA – as calculated under our financing facilities	**100.7**		**106.1**		See APM
Interest cover		**27**		**45**	

Ratio of net debt to adjusted EBITDA

	2022		2021		
	£m	Times	£m	Times	Reference
Net debt – as calculated under our financing facilities	**175.2**		**96.5**		See APM
Adjusted EBITDA – as calculated under our financing facilities	**100.7**		**106.1**		See APM
Ratio of net debt to EBITDA		**1.7**		**0.9**	

Return on adjusted invested capital

	2022		2021		
	£m	%	£m	%	Reference
Adjusted operating profit inc JVs after tax	**58.8**		**69.6**		See APM
Equity attributable to owners of the Company	578.5		498.1		Group Balance Sheet
Add back:					
Net debt	185.0		105.6		Note 32 – Notes to the cash flow statement
Pension liability	8.3		11.1		Group Balance Sheet
Related deferred tax	(1.3)		(2.1)		Note 11 – Taxation and deferred taxation
Adjust for:					
Biological assets – carrying value	(366.8)		(319.5)		Note 16 – Biological assets
Biological assets' harvest classed as inventories	(20.9)		(17.8)		Note 20 – Inventories
Biological assets – historic cost	77.2		65.1		See Financial Review
Goodwill	(111.0)		(101.5)		Group Balance Sheet
Related deferred tax	73.0		63.7		Note 11 – Taxation and deferred taxation
Adjusted invested capital	**422.0**		**302.7**		
Return on adjusted invested capital		**13.9%**		**23.0%**	

Return on invested capital

	2022		2021		
	£m	%	£m	%	Reference
Return on adjusted invested capital		**13.9%**		**23.0%**	See APM
Adjusted operating profit inc JVs after tax	58.8		69.6		See APM
Tax rate	18.9	24.3%	20.2	22.5%	Note 12 – Earnings per share
Adjusted operating profit inc JVs	77.7		89.8		Group Income Statement
Adjusted operating profit attributable to non-controlling interest	0.3		0.1		Group Income Statement
Pre-tax share of profits from JVs exc net IAS 41 valuation movement	(9.2)		(13.0)		Group Income Statement
Adjusted operating profit exc JVs	68.8		76.9		Group Income Statement
Fair value movement on biological assets	(5.4)		(10.8)		Group Income Statement
Amortisation of acquired intangibles	(8.3)		(7.4)		Group Income Statement
Share-based payment expense	(3.7)		(7.7)		Group Income Statement
Exceptional items	(2.0)		(3.3)		Group Income Statement
Share of post-tax profit of JVs	5.2		13.1		Group Income Statement
Finance costs	(6.2)		(5.0)		Group Income Statement
Profit before tax	48.4		55.8		Group Income Statement
Tax	(11.7)		(9.0)		Group Income Statement
Profit	**36.7**		**46.8**		Group Income Statement
Equity attributable to owners of the Company	**578.5**		**498.1**		Group Balance Sheet
Return on invested capital		**6.3%**		**9.4%**	

GLOSSARY

AGM – Annual General Meeting.

Artificial insemination ('AI') – Using semen collected from a bull or boar to impregnate a cow or sow when in estrus. Artificial insemination allows a genetically superior male to be used to mate with many more females than would be possible with natural mating.

ASF – African Swine Fever.

Biosecurity – The precautions taken to reduce the chance of transmitting disease agents from one livestock operation to another.

Boar – A male pig.

BRD – Bovine Respiratory Disease, a complex, bacterial and viral infection that causes lung disease in cattle (particularly calves) and is often fatal.

CPI – Consumer Price Index.

CRISPR-Cas 9 – Technology which accurately targets and cuts DNA to produce precise and controllable changes to the genome.

CSR – Corporate Social Responsibility.

DSBP – Deferred Share Bonus Plan.

EPS – Earnings per share.

Farrow – When a sow gives birth to piglets.

GELT – Genus Executive Leadership Team.

Gender skew – The ability to influence the proportion of offspring being of a particular sex.

Genetic gain – The change of the genetic make up of a particular animal population in response to having selected parents that excelled genetically for important traits.

Genetic lag – The amount of time required to disseminate genetic gain from a nucleus herd to the commercial customer.

Genetic nucleus – A specialised pig herd, where Genus PIC keeps its pure lines. Pigs are genetically tested at the nucleus to select the best animals to produce the next generation.

Genomic bull – A bull which has been assessed through genomic testing. This typically refers to bulls which have not been progeny-tested.

Genomically tested – An animal that has been DNA profiled.

Genomics – The study of the genome, which is the DNA sequence of an animal's chromosomes.

Gilt – A young female pig, which has not yet given birth.

GMS – ABS's Genetic Management System, which creates a genetic solution tailored to each individual dairy producer to obtain improved herd genetics.

Grandparent – The relationship of a breeding pig to the generation of terminal market pigs. A grandparent produces parents, who in turn produce the commercial generation of terminal pigs.

Group – Genus plc and its subsidiary companies.

In vitro fertilisation ('IVF') – The fertilisation of an oocyte with semen (outside an animal) in a laboratory for transfer into a surrogate.

Index/Indices – A formula incorporating economically important traits for ranking the genetic potential of animals as parents of the next generation.

Integrated pork producer – Producers of pork typically involved in raising animals to slaughter weight all the way through to packaged and/or branded pork products.

IntelliGen – The technology platform used to process sexed bovine semen for ABS and third-party customers and commercialised by ABS globally as Sexcel.

IP – Intellectual property.

IPR – Inter Partes Review before the US Patent and Trademarks Office.

IVB – In Vitro Brasil S.A.

JV – Joint venture.

Line – Multiple animals that have been mated together in a closed breeding population. Pure lines can have their origins in one founding breed or in several breeds.

Market pig equivalents ('MPE') – Refers to a standardised measure of our customers' production of slaughter animals that contain our genetics with genes from each of the sow and boar counting for half of the animal.

Multiplier – A producer whose farm contains grandparent sows. The farm crosses together two lines of grandparents, multiplying the number of genetically improved parents that are available for sale.

NuEra – The ABS beef breeding programme and index designed to drive the customer's genetic improvement and deliver total system profitability for the beef supply chain.

PQA – Pork Quality Assurance.

Progeny tested – Elite animals whose genetic value as a parent has been tested and validated through the performance of their offspring.

PRRSv – Porcine Reproductive and Respiratory Syndrome Virus.

PSP – Performance Share Plan.

PTAB – Patent Trial and Appeal Board before the US Patent and Trademarks Office.

R&D – Research and development.

RMS – ABS's Reproductive Management System, which is a systematic approach to maximising pregnancy production and its contribution to herd profitability.

RPI – Retail Price Index.

RWD – ABS's Real World Data System of observed performance data from many dairy herds.

Russian Sanctions – legislation introduced by the UK, EU or US (as appropriate) which impose financial, trade, transport, immigration or other sanctions for the purposes of encouraging Russia to cease actions which destabilise Ukraine, or undermine or threaten the territorial integrity, sovereignty or independence of Ukraine.

Sexcel – The ABS brand of sexed bovine genetics produced using IntelliGen.

Sire – The male parent of an animal.

Sire line – The male line selected for traits desirable for the market.

Sow – A female pig which has given birth at least once.

Straw – A narrow tube used to package frozen bull semen.

Stud – Locations where bulls or boars are housed and their semen collected, evaluated, diluted into multiple doses/straws and packaged, ready for shipping to farms.

Terminal boars – The male pig that is used to mate with a parent female to produce a terminal pig.

Trait – A measurable characteristic that may be a target for genetic selection.

TransitionRight – Genus ABS's patent-pending genetic selection tool to help prevent multiple post calving metabolic disorders that occur during transition.

Unit – A straw of frozen bull semen or tube/bag of fresh boar semen sold to a customer.

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