
Pioneering animal genetic improvement

**TO HELP
NOURISH
THE WORLD.**

WHAT WE DO

We help farmers produce meat
and milk more efficiently and sustainably

INCREASING AVAILABILITY OF HIGH- QUALITY, AFFORDABLE ANIMAL PROTEIN.



Visit our corporate website
for further information.

GENUSPLC.COM



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08–09

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2019 HIGHLIGHTS

Financial
Highlights¹

Genus achieved continued strategic progress and delivered good operational and financial performance in 2019, despite the challenging environment in China caused by the rapid spread of African Swine Fever ('ASF').

GROUP REVENUE

£488.5m

2018: £470.3m 2017: £459.1m 2016: £388.3m 2015: £398.5m

Revenue of £488.5m increased by 4% (3% in constant currency) with strong bovine revenue, up 7% in constant currency, primarily driven by sexed semen sales growth of 40%. Porcine revenue was stable despite fewer animal shipments in China as a result of ASF, however strategically important porcine royalty revenue increased by 7% in constant currency.

ADJUSTED PROFIT BEFORE TAX

£61.0m

2018: £58.5m 2017: £56.4m 2016: £49.7m 2015: £46.6m

Adjusted operating profit including joint ventures and excluding gene editing increased by 6% in both constant and actual currency, led by strong growth in ABS, up 15% in constant currency, while R&D investment was increased as planned. Adjusted profit before tax increased 4% to £61.0m (5% in constant currency).

FREE CASH FLOW

£10.0m

2018: £24.3m 2017: £25.4m 2016: £15.7m 2015: £22.6m

Free cash flow of £10.0m (2018: £24.3m) included a planned increased investment in capital expenditure and genetic inventory to meet growth objectives over the short and medium term. Cash conversion was as expected at 84% (2018: 101%), while cash inflows from joint ventures were higher at £3.4m (2018: £2.8m).

Net debt to EBITDA of 1.0x (2018: 1.4x), with net debt at 30 June 2019 of £79.6m (2018: £108.5m) following an equity placement of £66.5m and acquisitions and investments of £22.7m (2018: £1.8m).

1 For definitions of adjusted profit, free cash flow and cash conversion, see the Financial Review on pages 30 to 33. For more information on Alternative Performance Measures see Note 2 to the Financial Statements on page 109. Results discussed throughout the Annual Report are on an adjusted basis unless otherwise stated.

2 For the definition of adjusted basic earnings per share, see note 12 to the Financial Statements on page 123.

3 Based on adjusted results including joint venture income, less non-controlling interest in constant currency.

STATUTORY PROFIT BEFORE TAX

£9.9m

2018: £7.8m 2017: £40.7m 2016: £60.9m 2015: £57.8m

Statutory profit before tax of £9.9m (2018: £7.8m) was impacted by non-cash fair value movements in biological assets and a one-off Guaranteed Minimum Pension ('GMP') equalisation charge in respect of legacy pension schemes.

ADJUSTED BASIC EARNINGS PER SHARE

73.2p

2018: 75.9p 2017: 69.4p 2016: 60.7p 2015: 56.8p

Adjusted basic earnings per share² decreased 4% to 73.2p (down 3% in constant currency) primarily as a result of a £2.4m tax credit in the prior year following US tax reforms. Statutory basic earnings per share decreased 82% to 12.4p, reflecting significant prior year non-cash deferred tax credits relating to biological asset value arising from the US tax reforms.

DIVIDEND PER SHARE

27.7p

2018: 26.0p 2017: 23.6p 2016: 21.4p 2015: 19.5p

Reflecting the Board's continuing confidence in the Group's prospects, it is recommending a final dividend of 18.8p per share, to give a total dividend of 27.7p per share, up 7% and well covered by adjusted earnings at 2.6 times (2018: 2.9 times).

Operational Highlights³

ABS ACHIEVED ANOTHER STRONG PERFORMANCE, WITH OPERATING PROFIT UP 15%, CONTINUED HIGH GROWTH IN SEXCEL®, GENUS' HIGH-FERTILITY SEXED GENETICS PRODUCT PRODUCED WITH INTELLIGEN® TECHNOLOGY, AND RAPID GROWTH IN THE GROUP'S NUERA® DIFFERENTIATED BEEF GENETICS

- > Volume growth of 6%, with sexed genetics up 42% and beef up 22%
- > Operating profit growth was achieved in all regions, particularly in North America, up 40%, as more customers choose Genus' high-fertility Sexcel offering and beef genetics, supported by NuEra beef genetics
- > IntelliGen production extended to three new sites around the world, and a number of new customers were secured

ROBUST OPERATING PROFIT GROWTH OF 4% IN PIC, DESPITE THE IMPACT OF ASF ACROSS CHINA. OPERATING PROFIT GROWTH OF 10% EXCLUDING CHINA

- > Royalty revenue up 7%, with growth in all regions
- > Stable overall volumes, with growth of 5% excluding China, driven by North America, Latin America and Spain. 82% (2018: 76%) of volumes now under royalty
- > Strong operating profit growth in Latin America of 23% and Europe of 30%, with encouraging customer wins from our strategic collaboration with Møllevang

RESEARCH AND DEVELOPMENT ('R&D') INVESTMENT INCREASED BY 13% AS PLANNED, PRIMARILY FROM CONTINUED INVESTMENT IN GENE EDITING AND THE INTELLIGEN PLATFORM

- > Continued progress with the Porcine Reproductive and Respiratory Syndrome virus ('PRRSv') development programme, with increased numbers of edited pigs produced and constructive engagement with the US Food and Drug Administration ('FDA')
- > Strategic relationship initiated with Beijing Capital Agribusiness ('BCA') to fund and develop the PRRSv programme in China
- > Further strengthened our porcine genetic product portfolio by integrating Møllevang's genetics
- > Continued leadership in the dairy Holstein breed with 42 of the top 100 genomic bulls in the US\$ Net Merit rankings, driven by the success of the De Novo breeding programme

CHANGES TO THE GENUS EXECUTIVE LEADERSHIP TEAM ('GELT')


- > Appointment of Stephen Wilson, currently Group Finance Director, as Chief Executive with effect from the close of business on 13 September 2019, following the resignation of Karim Bitar
- > Initiation of an external search for a new Group Finance Director and appointment of Janet Duane, currently Group Financial Controller, on an interim basis
- > Dr Elena Rice appointed as Chief Scientific Officer and Head of R&D, following Dr Jonathan Lightner's retirement

Year in review

2018
JULY


Spanish distribution enhanced

Acquisition of Spanish bovine genetics distributor Progenex, S.L.

 See p.023

PIC offering


Strategic collaboration with Møllevang Genetics commences, including distribution and multiplication in Europe, and integration of genetic programmes

 See p.020

AUGUST

ASF outbreak begins


First case of ASF, a devastating and highly contagious porcine disease, reported in China

 See p.019

SEPTEMBER

Progress with PRRSv resistance


First progeny born from our gene edited pigs in our PRRSv resistance programme

 See p.026

OCTOBER

New European IntelliGen facility


New IntelliGen semen sexing facility launched in Europe

 See p.026

NOVEMBER

Sexed semen capacity expanded

Second IntelliGen facility goes live in Gujarat, India

 See p.026

DECEMBER

Funds raised to support growth

5% equity placement raises a net £66.5m

See p.033

IntelliGen capacity growth

New IntelliGen semen sexing facility launched in Latin America

See p.026

2019
MARCH

CEO steps down

CEO Karim Bitar announces he will step down in September after successfully leading Genus for eight years

See p.009

MAY

Strategic collaboration in China

Genus announces strategic porcine collaboration in China with BCA to research, develop, register and market PRRSv-resistant pigs

See p.017

JULY¹

Facility upgrade begins

Works commence on new bovine facility in Wisconsin

See p.040

AUGUST¹

CEO succession completed

Stephen Wilson, currently Group Finance Director, appointed as Chief Executive with effect from September 2019

See p.009

New CSO appointed

Dr Elena Rice, a leading world expert in agricultural biotechnology, joins Genus as Chief Scientific Officer and Head of R&D from Bayer

See p.017

GENUS AT A GLANCE

Producing genetically superior breeding animals

What we do

Genus is a world-leading animal genetics company.

We breed better pigs and cattle for farmers, so that they can produce high quality meat and milk more efficiently and sustainably. We do this by accurately selecting animals with desirable characteristics and using them to breed subsequent generations.

Examples of desirable characteristics include feed efficiency, disease resistance, animal health, protein and fat content, and fertility.

How we do it

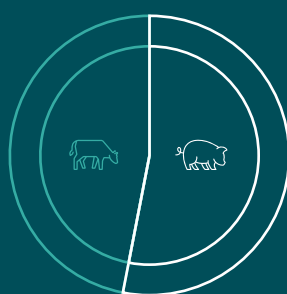
We analyse animals' DNA and look for markers that we know are linked to desirable characteristics.

We then select animals with the strongest genetic profile and breed them to produce even better offspring, in a continuous cycle. We distribute these genetically superior animals to our customers in the form of breeding animals, semen or embryos.

We also own technology that enables us to screen and process semen for desirable traits, such as gender, and license-in technology to make precise, desirable gene edits to animals' DNA, which we are employing in our product development programmes.

See p.010

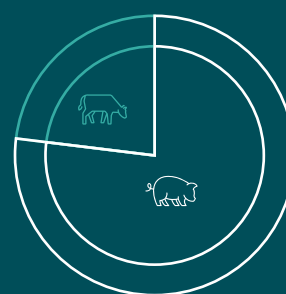
REVENUE¹



£253.7m

£222.6m

OPERATING PROFIT INCLUDING JOINT VENTURES¹



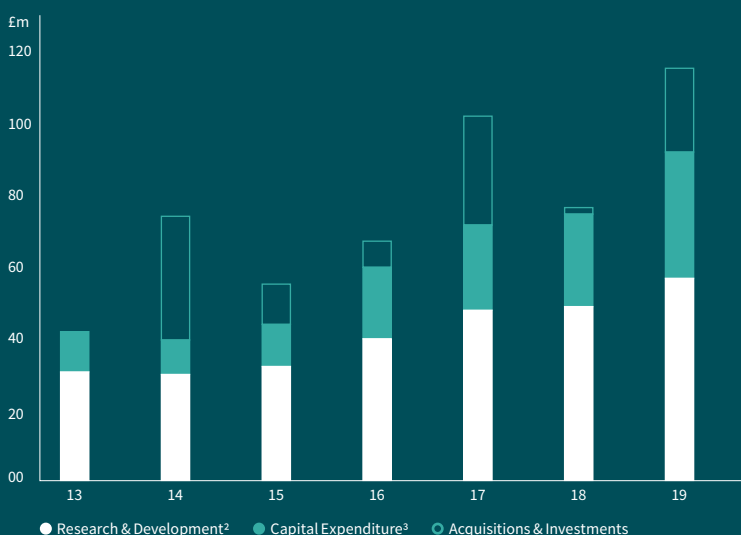
£100.6m

£29.9m

INVESTING TO STRENGTHEN OUR POSITION

£110m+

in FY19



● Research & Development² ● Capital Expenditure³ ● Acquisitions & Investments

¹ Revenue and Operating Profit excludes R&D revenues and costs.

² Includes IntelliGen capitalised development expenses.

³ Includes biological asset cash movements and finance lease payments.

Serving pork, dairy and beef farmers globally



PORK

PIC, our porcine genetics business, sells genetically superior sows, boars and semen, to breed pigs with desirable characteristics for pork production. PIC also provides technical services and advice to farmers, to maximise the performance of our breeding animals in their farms.

PIC owns over 10 pure-bred pig lines housed in strategically located 'nucleus' facilities around the world. These herds are bred out into much larger breeding herds in over 450 predominantly sub-contracted 'multiplication' units around the world. PIC boars are also housed in about 400 boar studs globally, where semen is collected for distribution to customers and multiplication herds.

PIC genetics are sold under the PIC brand through direct sales channels and strategic partners.

 See p.019

40+

Countries with sales presence¹

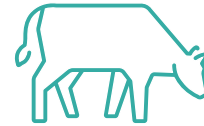
150m+

MPEs²

2,500+

Customers

- 1 Including through franchises, distributors and joint ventures.
- 2 MPEs refers to market pig equivalents, a standardised measure of our customers' production of slaughter animals that contain our genetics.
- 3 Including through distributors.



DAIRY AND BEEF

ABS, our bovine genetics business, sells bull semen and embryos to breed calves with desirable characteristics for milk and beef production. ABS also provides semen sexing, IVF, reproductive and other technical services to farmers, to maximise the performance of their animals.

ABS produces genetically elite bulls in the US, Europe and Latin America. The most elite bulls 'graduate' to one of ABS's six production studs, where their semen is collected for distribution as a frozen 'straw' of semen or used to create embryos for sale.

ABS genetics are sold globally both directly and through partners under the ABS brand. In the UK and France they are sold under the long-established Genus and Bovec brands, respectively.

 See p.023

75+

Countries with sales presence³

19m+

Cattle inseminations and embryo transfers

50,000+

Customers

CHAIRMAN'S STATEMENT

Continued progress

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.

> 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.

> PIONEERING

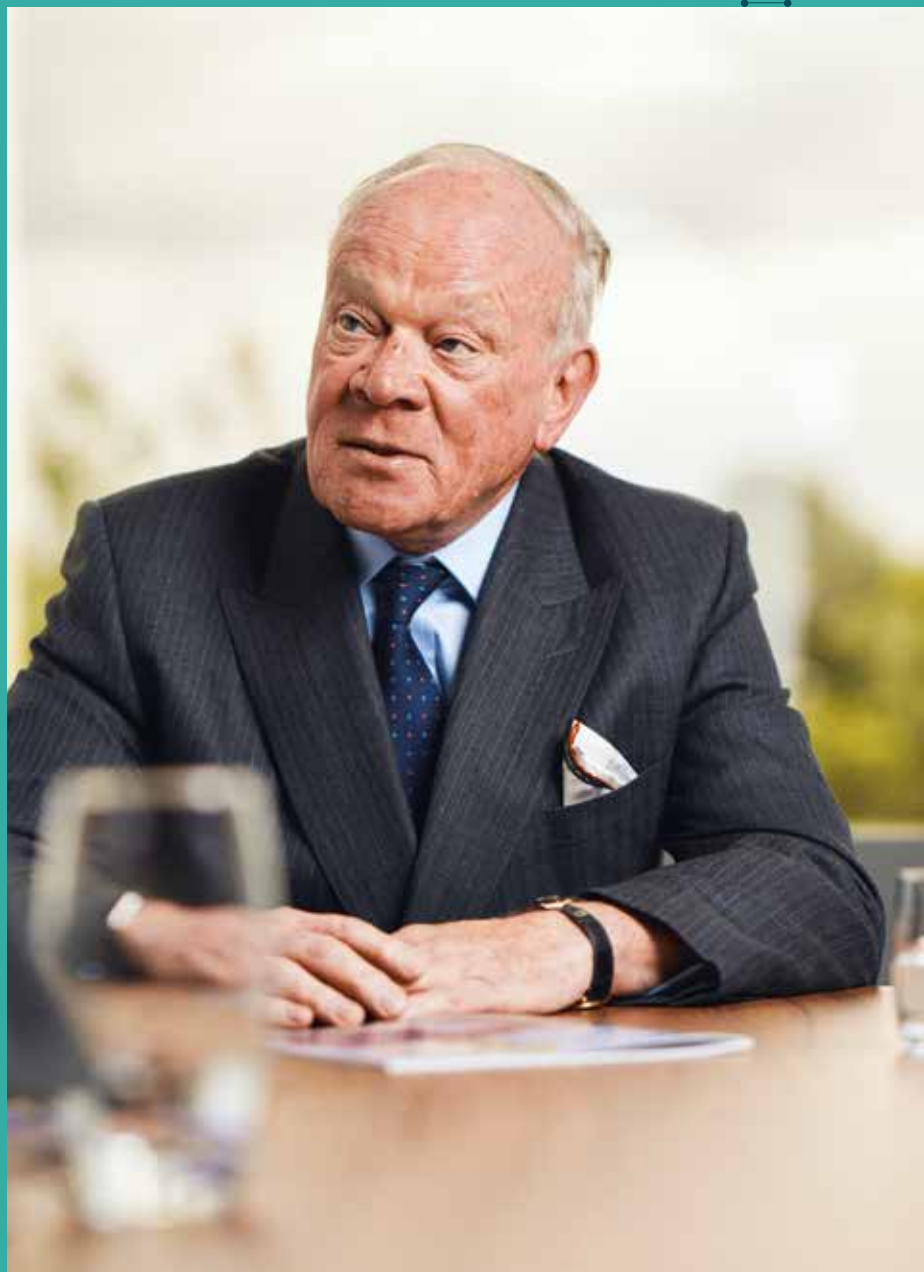
We are an innovative, forward-thinking company. We have the courage and confidence to explore new ideas and the energy and enthusiasm to deliver them. We are creative, tenacious and resourceful in every area of our work.

> 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.

> 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.



Bob Lawson
Chair of the Board
4 September 2019

“The Board is pleased with the Company’s progress over the last year. The implementation of the strategy has continued to plan as have the investments in R&D together with the essential expansion of our infrastructure to assist in our anticipated future growth.

ABS had a good year, driven by its strong performance in the United States, where profit was up 40% as customers used more of our elite genetics, high fertility Sexcel product, and NuEra beef genetics. PIC grew operating profit by 4%, despite the outbreak of ASF in China, with strong profit growth in Latin America and Europe, helped by customer wins arising from our strategic collaboration with Møllevang.

We were pleased that the quality of the business was endorsed by the strong support for the equity placing in December, which will enable the Group to seize future opportunities.

The annual strategic review with the executive leadership team took place in January and focused on market development opportunities in our core dairy, beef and pork businesses and on implementing emerging technologies in the animal genetics market. This annual strategic review forms the basis of the Board’s monitoring and review processes during the year.

The most important strategic development this year was the collaboration with BCA to develop and commercialise the PRSSv-resistant pigs for the Chinese market. A second important element of the collaboration was to expand the distribution infrastructure for elite PIC genetics within China. This is a long term and important collaboration for the Company, that will enable the supply and distribution of high quality, sustainable pork production in China.

For us all, whether based in the UK or elsewhere, Brexit has created uncertainty. However, it has not influenced our strategy or investment activity as, from our analysis, its impact is likely to be modest as far as Genus is concerned.

During the year significant change took place to the Board with Nigel Turner, who had been the Senior Independent Director, retiring at the AGM after nine years. Nigel had played a very significant role in the creation and formation of the modern Genus and his legacy lives on today. Lesley Knox joined the Board as our Senior Independent Director and also Chair of the Remuneration Committee. As previously announced, Professor Ian Charles took over the scientific mantle from Professor Duncan Maskell on his relocation to Australia. I have been delighted by the manner that the refreshed Board has meshed together and continues to deliver its responsibilities to you.

In March 2019, we announced Karim’s decision to resign from Genus. During his tenure as Chief Executive, Karim has developed the Group strategy and resourced the business to become a global leader in the provision of animal protein genetics. He leaves the Company with an outstanding leadership team, market leading genetics, innovative technology platforms and an exciting pipeline of R&D programmes.

Following Karim’s decision, we initiated a global search for his successor and after an exhaustive review, it was very clear that the ‘stand-out’ candidate was Stephen Wilson, our current Group Finance Director. Stephen has worked alongside Karim for over six years and has been intimately involved in all aspects of the business from strategy formulation to operational delivery. I am not only delighted but confident that Stephen will lead the business to new heights of achievement.

Our Chief Scientific Officer, Jonathan Lightner retired in April and I am pleased that we have recruited Dr Elena Rice to succeed him. Her background at Bayer has been in Agricultural science and she brings not only the science but deep experience of the regulatory issues facing agricultural companies and is the perfect leader for our R&D team.

Genus now employs nearly 3,000 people across 26 countries. I am fortunate in being able to visit many of these people during the year and I am always left with an enduring admiration for their commitment, professionalism and dedication to customers. On behalf of you, our shareholders, and the Board I offer to them our sincere thanks.

The Group aims to balance investment in the business with the discipline of generating attractive returns on capital and paying a growing dividend to shareholders. During the year we consulted shareholders on bringing more flexibility to our progressive dividend policy. The Board is therefore recommending a final dividend of 18.8 pence per share, resulting in a total dividend in respect of the year of 27.7 pence per share. This is an increase of 7% compared with last year’s total dividend of 26.0 pence per share. The final dividend will be paid on 29 November 2019, to shareholders on the register at the close of business on 8 November 2019.

The impact of the Chinese ASF outbreak has been significant on our results. However, the application and ingenuity of our people has minimised the long-term impact and enabled us to maintain our investment, R&D activities and dividend at the planned levels. This does give me great confidence in the future and the fundamental quality of the Group.

BOB LAWSON

Chair of the Board
4 September 2019

BUSINESS MODEL

Producing and delivering superior animals to farmers

DELIVER A DIFFERENTIATED PROPRIETARY GENETIC OFFERING



Produce genetically superior breeding animals



OUR STRENGTHS AND RESOURCES

GLOBAL POSITION

Genus is uniquely placed as a global player, with leading market positions and brands

ELITE ANIMALS

We own elite livestock, with traits farmers value

PROPRIETARY TECHNOLOGY

We own and license leading genomic and breeding technology, developed in-house and through strategic partnerships

CUSTOMER RELATIONSHIPS

We serve over 50,000 customers globally, including world-leading meat and milk producers

EXPERT PEOPLE

We have over 90 PhD qualified employees and relationships with leading research institutions

SUPPLY CHAIN AND DISTRIBUTION

We have production facilities in key locations worldwide, coupled with sales forces and agents in over 80 countries

FINANCIAL STRENGTH

Our cash generative businesses and strong financial position allow us to invest for the future

SHARED PROPRIETARY TECHNOLOGY PLATFORM

GENOME SCIENCE

We understand the links between DNA and animals' observable characteristics, and how we can influence them

GENOMIC SELECTION

We breed successive generations of animals by scientifically selecting superior parents through DNA analysis

BIOSYSTEMS ENGINEERING

We use technology to interrogate and select cells, such as in our semen sexing technology

GENE EDITING

We are developing more sustainable, disease-resistant breeding animals by making precise changes to their genes

IN VITRO BIOLOGY

We perform IVF matings, which enables selection of both female and male parents to increase the quality of offspring

LINK TO STRATEGY



Deliver a differentiated proprietary genetic offering



Focus on progressive protein producers globally



Share in the value delivered

See p.014

FOCUS ON PROGRESSIVE PROTEIN PRODUCERS GLOBALLY



Deliver improved breeding animals to farmers

>



Price according to the value delivered

GENETICS PRIMARILY SOLD ON MULTI-YEAR ROYALTY AGREEMENTS

Superior pigs with traits farmers value



BOARS IN STUD

35,000+

boars producing semen

EXPANSION HERDS

450,000+

GGP/GP animals with our genetics under genetic management¹

GENETICS PRICED ACCORDING TO INDICES OF GENETIC MERIT



STUDS AND LABS

19m+

straws of semen sold and embryos produced

600+

superior dairy and beef bulls with traits farmers value

SHARE IN THE VALUE DELIVERED

CUSTOMER

150m+

MPEs produced

CUSTOMER

c.7m

dairy and beef calves born

DELIVERING FOR OUR STAKEHOLDERS

CUSTOMERS

We help our customers to produce better meat and milk, more efficiently and sustainably

CONSUMERS

We increase consumers' access to safe, healthy, affordable and nutritious animal protein

COMMUNITIES & ENVIRONMENT

We make farming more sustainable by reducing the use of feed, water and other resources and use fewer animals to produce the same amount of meat and milk, reducing greenhouse gas emissions over time

PEOPLE

We employ nearly 3,000 people globally, who all help to deliver our vision of nourishing the world

INVESTORS

By sharing in the value we deliver to customers, we generate returns for our investors

¹ GGP/GP refers to great grandparent/grandparent of a commercial slaughter pig.

MARKET OVERVIEW

Feeding the world more sustainably

Drivers

CONSUMPTION OF ANIMAL PROTEIN

continues to grow as the global population expands and urbanises, and seeks a more varied and nutritious diet. Pork, milk and beef consumption are forecast to grow by 1%, 2% and 1% respectively in the next decade.

INCREASING COMPETITION FOR RESOURCES

such as land and water puts pressure on farmers to become more efficient, including through the use of genetically superior animals and new technologies.

GROWING CONSUMER AWARENESS

is driving demand for high-quality, healthier and more sustainable products, which are produced with fewer drugs. This increases farmers' demand for genetically superior breeding animals, which are more efficient and resilient. In the future gene editing and other breakthrough technology may provide farmers with breeding animals that are fully resistant to some of the most devastating diseases globally.

FARMS ARE BECOMING LARGER AND MORE TECHNIFIED

Technified producers typically measure performance in more detail and better understand the efficiency benefits of genetically superior breeding animals and optimised breeding strategies, such as combining the use of sexed dairy and beef semen on dairy herds to maximise profit.

Trends

CONSOLIDATION OF ELITE BREEDING HERDS

High-ranking dairy breeding bulls are bred from genetically elite breeding herds. The increasing use of costly technology and scale required to keep pace with industry leaders is driving consolidation. As genetics consolidate, some breeders are choosing to form strategic alliances with competitors, so they can offer their customers superior genetics.

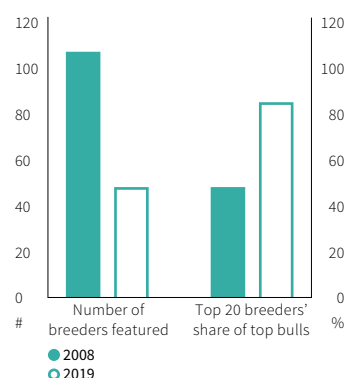
ADOPTION OF TECHNOLOGY

Adoption of semen sexing technology is growing fast across dairy herds, as they enable farmers to breed a stronger next generation of cows with fewer breedings (given the higher likelihood of obtaining a female pregnancy with sexed semen). This means the rest of the herd can be bred with beef semen, to maximise the meat quality of the resulting calf. Access to sexing technology is fundamental to competing in bovine genetic improvement.

BREAKTHROUGH TECHNOLOGY AND DATA

The animal genetics industry is pursuing innovative solutions in the fight against animal disease and suffering. These include using data and health-focused breeding indices and exploring breakthrough technologies, including gene editing, which could have a significant impact on farming and animal well-being.

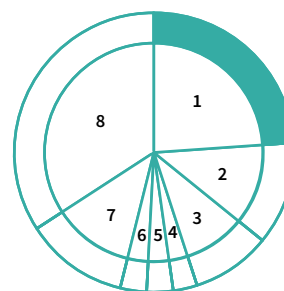
BREEDERS FEATURED IN TOP 200 HOLSTEIN BULL RANKINGS¹



Position

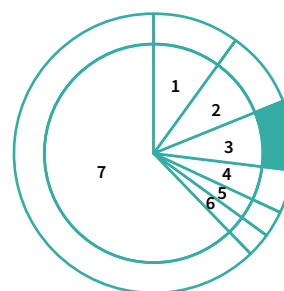
Genus is a world leader in animal genetic improvement. We have a global commercial platform with critical mass. We are also the only listed porcine and bovine genetics company globally, giving us strategic access to finance. Our competitors are largely private companies and farmer-owned cooperatives, many of which are regionally focused.

MARKET SHARE > PIC²



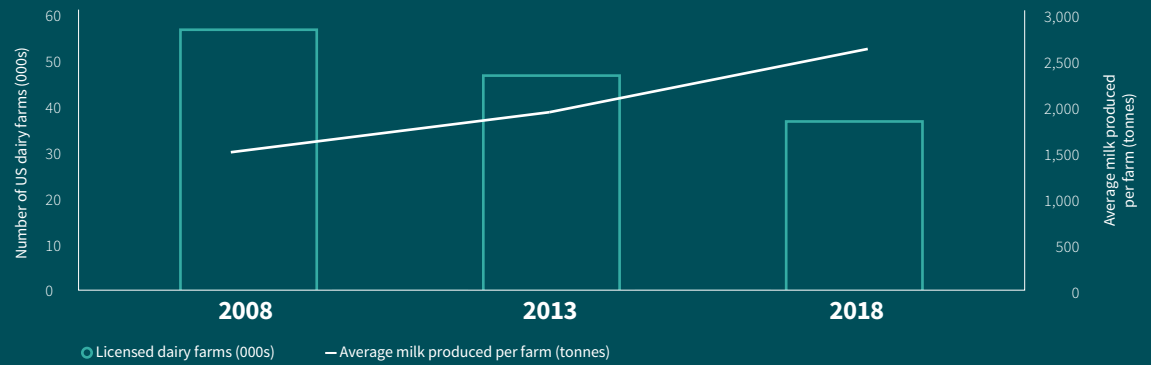
1 PIC	24%
2 Competitor 1	12%
3 Competitor 2	9%
4 Competitor 3	3%
5 Competitor 4	3%
6 Competitor 5	3%
7 Internal programmes	12%
8 Other	34%

MARKET SHARE > ABS³

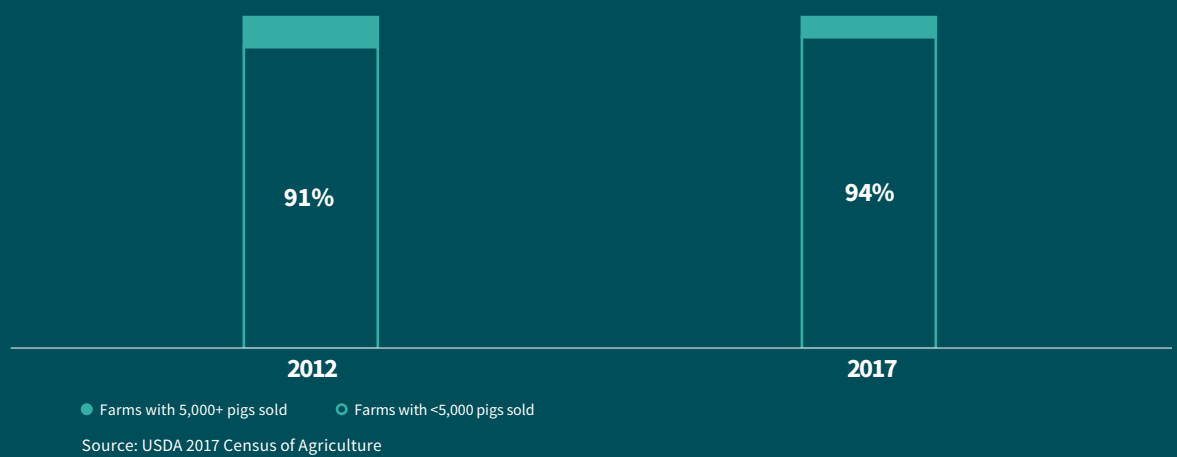


1 Competitor 1	10%
2 Competitor 2	9%
3 ABS	8%
4 Competitor 3	5%
5 Competitor 4	3%
6 Competitor 5	3%
7 Other	62%

AVERAGE US DAIRY FARM SIZE



% OF PIGS SOLD BY LARGE US FARMS (5,000+ PIGS)



ABS GENETICS SALES VOLUMES TO US DAIRY FARMERS (%)



Data represents proportion of total genetic units sold to dairy farmers in the US; excludes beef x beef units

- 1 Source: Genus analysis; US Holstein breeders represented in the Top 200 NM\$ rankings by birth year; 2019 data based on Top 200 Holsteins active using April 2019 data from the Council on Dairy Cattle Breeding.
- 2 Source: Governmental agencies, local independent pork organisations, Genus estimates. Market shares represent the estimated share of technified/commercial production in top pig production markets.
- 3 Source: Governmental agencies, local bovine genetics and agriculture organisations, Genus estimates. Market shares represent the estimated share of combined dairy and beef volumes in ABS's Top 30 target markets for dairy and Top 8 target markets for beef.

STRATEGIC FRAMEWORK AND KEY PERFORMANCE INDICATORS

Capturing significant growth opportunities

Genus helps farmers to produce high-quality meat and milk more efficiently and sustainably. We do this by continuously producing superior breeding animals through genetic improvement, with desirable characteristics tailored for different markets.

KEY TO RISKS

- 1 Developing products with competitive advantage
- 2 Continuing to successfully develop IntelliGen technology
- 3 Developing and commercialising gene editing technologies
- 4 Capturing value through acquisitions
- 5 Growing in emerging markets
- 6 Protecting IP
- 7 Ensuring biosecurity and continuity of supply
- 8 Hiring and retaining talented people
- 9 Managing agricultural market and commodity prices volatility
- 10 Funding pensions

Strategic priorities



DELIVER A DIFFERENTIATED PROPRIETARY GENETIC OFFERING

We invest in the latest technology to continuously improve our own herds and product offering, and we protect our unique position by choosing how to deploy our genes and technology in the marketplace.

What does success look like?

GENETIC GAIN

Creating better breeding animals for farmers, measured against proprietary and public indices which are weighted towards economic traits that help farmers operate more efficiently and sustainably.

See p.020



FOCUS ON SERVING PROGRESSIVE PROTEIN PRODUCERS GLOBALLY

We focus our offering on leading integrated pork producers and progressive cattle farmers worldwide. We offer them our superior breeding animals, semen and embryos, together with technical services, tailored to their needs.

VOLUME GROWTH

Growing volumes, particularly with progressive dairy and beef farmers and integrated pork producers, who focus heavily on the efficiency and sustainability of their production systems.

See p.024



SHARE IN THE VALUE DELIVERED

We aim to capture an appropriate share of the value we deliver to customers, aligning our interests with theirs. We demonstrate the value of our genetics on farm through validation trials and data, and link our pricing to genetic indices and our customers' productivity.

PROFITABILITY

Generating profit resulting from the performance of our products in customers' systems.

See p.028

Risks



Key performance indicators

PORCINE GENETIC IMPROVEMENT INDEX (US\$)

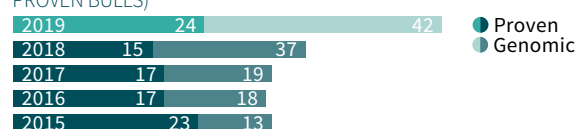


Measures the genetic improvement we achieve in our porcine nucleus herds, which ultimately filters down to our customers' farms.

DEFINITION: The index measures the marginal improvement in customers' US\$ profitability, per commercial pig per year, on a rolling three-year average. Prior years' index ratings have been updated, to reflect the latest results from genomic selection and the economic values of pork production.

PERFORMANCE: Implementing genomic selection technology in 2013 led to a step change in genetic gain value improvement in the following years and has delivered a further improvement of US\$3.46 per pig, per year, in 2019.

NET MERIT RANKINGS (GENOMIC AND DAUGHTER PROVEN BULLS)



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 and the top 100 Net Merit rankings for daughter proven sires.

PERFORMANCE: Genus has established and maintained a leadership position with its strength in genomic bulls, which over time will become daughter proven bulls. This is mainly driven by the growing proportion of high-quality bulls sourced from our proprietary breeding programme, De Novo¹.

1 De Novo Genetics LLC is 51% owned by Genus.



PORCINE VOLUME GROWTH (%)



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: Volumes were stable at 150 million MPEs. Excluding China, where volumes declined 50% as a result of ASF, all regions contributed to a growth of 5%. Royalty contract volumes increased 7%, fuelled particularly by double digit growth in Latin America and Asia.

DAIRY AND BEEF VOLUME GROWTH (%)



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 6% to 19.7 million units, primarily from growth in North America and Latin America. Sexed volumes were up 42%, reflecting strong growth in

Sexcel, which also influenced the use of beef-on-dairy genetics, supporting a 22% increase in global beef volumes. Embryo volumes were marginally up as growth was impacted by phasing of production in key accounts.



OPERATING PROFIT PER MARKET PIG EQUIVALENT (£)

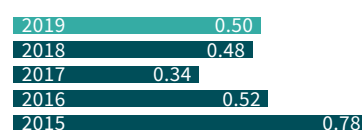


Monitors porcine profitability by unit.

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

PERFORMANCE: Operating profit per MPE was £0.60, up £0.04 (up £0.03 in constant currency). This was primarily due to strong royalty contract revenue growth more than offsetting lower profits in China.

BOVINE OPERATING PROFIT PER DOSE (£)



Monitors bovine profitability by dose.

DEFINITION: Bovine adjusted operating profit globally, expressed per dose of semen or embryo delivered or produced for customers. Prior years have been restated to include India which had previously been excluded.

PERFORMANCE: Operating profit per dose was £0.50, up £0.02. This was due to the strong sales growth of our premium Sexcel product, which has lower production costs than its predecessor technology, partially offset by increased investment in bovine product development.

CHIEF EXECUTIVE'S REVIEW

Positioned for growth

The strength of the leadership team is one reason I have such confidence in Genus's prospects.

5%

Adjusted profit before tax
increase in constant currency

6%

Adjusted operating profit growth
in constant currency excluding
gene-editing costs



Karim Bitar
Chief Executive
4 September 2019

“
As the Chairman has explained in his statement on page 09, sadly this is my final report to you as Chief Executive.

During my eight years at Genus, we have taken significant strides towards transforming the Group into a truly global agricultural biotechnology pioneer, focused on animal genetic improvement. I am pleased to be handing over a business that is in good shape and is in a strong position to achieve continued growth.

GROUP PERFORMANCE

The Group achieved a good performance in FY19, which was in line with expectations. In constant currency terms revenue increased by 3%, adjusted profit before tax was 5% higher and adjusted operating profit rose by 6%, excluding gene editing costs. This was the result of challenging conditions in China caused by the rapid spread of ASF. Excluding the impact of ASF, our results for the year would have been ahead of our double-digit medium term growth objective. In actual currency terms, revenue was up 4% and adjusted profit before tax increased by 4%.

Genus PIC increased its adjusted operating profit including joint ventures by 4% in constant currency. The business was affected by the outbreak of ASF across China, causing volumes in the country to fall by 50% resulting in a £5m operating profit reduction in China, compared with FY18. This impact was more than offset by strong growth in both Latin America and Europe. Royalty revenue and royalty volumes continued to grow at 7%, with royalties now representing 82% (2018: 76%) of total volumes.

ABS continued its turnaround, with the plans we implemented to revitalise the business delivering the anticipated results. Volume growth was 6% and operating profit was up 15% in constant currency. Sexcel continued to be strongly adopted by customers, with sexed genetics volumes being 42% higher in FY19 while maintaining price levels. We also achieved rapid growth in NuEra, our differentiated beef genetics, with volumes rising by 22%.

Research and development investment increased by 13% as planned, as we continued to invest in gene editing and IntelliGen. We made further progress with the PRRSv programme and signed a strategically important collaboration in China. We are also delivering strong results in our dairy, beef and porcine genomic selection breeding programmes.

STRATEGIC PROGRESS

The most significant strategic development in the year was our porcine strategic collaboration in China, which we announced in May 2019 and expect to close in the second half of the calendar year, following customary Chinese regulatory approvals. This is a very important step in our PRRSv resistance commercialisation programme, validating our technology and providing us with a very capable partner to work on PRRSv resistance in China.

Our partner in the collaboration is BCA, which owns a leading Chinese animal protein genetics business and has a deep understanding of the country's porcine sector. CITIC Agriculture, a very reputable and influential state-owned investor in China, is a key shareholder and adviser to BCA.

BCA will establish and fund a collaboration-specific entity ('BCA Future Bio-Tech') which will use Genus' intellectual property and know how to pursue the PRRSv resistance regulatory and development work in China. In return, we will receive US\$20m, after meeting certain milestones in the development programme. BCA will fund the development work in China, which is expected to cost several tens of millions of US dollars. Once regulatory approval is received, Genus and BCA will form a joint venture which will include PIC's existing operations in China. Genus will own 49% of this business and will receive between US\$120m and US\$160m in consideration for our existing operations. We will also receive royalties on the sales of PRRSv-resistant pigs in China.

Genus and BCA also plan to accelerate the use of PIC genetics in China, through the phased integration of PIC genetics into BCA's breeding facilities and their planned major expansion, in response to the opportunities we have due to the breeding stock shortage in China caused by ASF.

At the very start of the year, we formed a strategic partnership with Møllevang, one of Denmark's leading pig-breeding companies. We are pleased with the traction we are seeing, with market share gains and customer wins from new products in line with our expectations.

Sexed genetics are a key part of the growth strategy in ABS. In addition to the rapid uptake of Sexcel by our customers, we successfully grew the IntelliGen business during the year, winning new customers and starting production in three new locations around the world.

PEOPLE

Genus has an outstanding group of talented and committed people and leading them has been one of the privileges of my career. I want to thank all of my colleagues for their important contribution to making Genus the world-leading business it is today.

The strength of the leadership team is one reason I have such confidence in Genus' prospects over the coming years. I am delighted that Stephen Wilson has been appointed to succeed me as Chief Executive to continue executing the strategy we have jointly developed.

There was one change to GELT in FY19, with Dr Jonathan Lightner retiring as Chief Scientific Officer and Head of R&D, after a distinguished career which included six years at Genus. I am delighted that Dr Elena Rice joined us in July 2019 to take up this critical role. Elena was previously at Bayer and has deep expertise in running R&D programmes, regulatory science and portfolio management in crop genetics. She has led the development and introduction of new genetic improvement technologies including gene editing projects. She will help us continue to enhance genetic improvement in our chosen species.

OUTLOOK

Genus is a strong business, with a proven strategy and business model, which positions us for ongoing growth in both ABS and PIC. ASF will continue to affect PIC volumes in China in the short term and while we foresee some improvement in FY20, fuller restocking is likely in FY21. Notwithstanding this, and in line with the Board's expectations, Genus expects to deliver further strategic and financial progress in FY20.

KARIM BITAR

Chief Executive
4 September 2019

DIVISIONAL REVIEW / GENUS PIC

A strategic milestone



“
Helping producers increase profitability through our growing range of proprietary genetics and world-class support services.

Business priorities

SHORT TERM

Increase supply of animals to China, to aid its recovery from ASF.

>

MEDIUM TERM

Capture increased market share in North America and Europe with Møllevang influenced genetics.

>

LONG TERM

Continue responsible development of PRRSv-resistant pigs, while engaging with stakeholders regarding the benefits.

Strategic Progress in 2018/19



DELIVERING A DIFFERENTIATED PROPRIETARY GENETIC OFFERING

- > Agreeing a strategic collaboration with BCA to research, develop and commercialise PRRSv-resistant pigs in China.
- > Increasing pig numbers in our elite genetic facilities by over 20%, enabling us to enhance selection intensity.
- > Conducting genomic testing on animals from Møllevang Genetics and integrating these genes into our product development programme.



FOCUSING ON LARGE AND PROGRESSIVE PROTEIN PRODUCERS GLOBALLY

- > Growing revenue in Europe by 21%, through a blend of direct service for large customers and indirect relationships with smaller producers.
- > Establishing a new European nucleus via Møllevang, to expand our commercial product portfolio for customers in the region.
- > Continuing our growth in Latin America, where we are the market leader: growing genetic improvement faster and capturing more genetic value per pig than our competitors, working with over 80% of large producers.
- > Developing a new agreement with BCA to expand our supply and distribution network in China.



SHARING IN THE VALUE DELIVERED

- > Continuing to expand the use of royalty contracts, so that 82% of our global business is now conducted on this basis.
- > Conducting a further 28 product trials, involving nearly 44,000 pigs, to show customers the benefit of using our elite genetics in their production system.

	ACTUAL CURRENCY			CONSTANT CURRENCY
	2019 £m	2018 £m	Movement %	Movement %
Revenue	253.7	247.7	2	–
Adjusted operating profit exc JVs	93.1	88.7	5	2
Adjusted operating profit inc JVs	100.6	94.8	6	4
Adjusted operating margin exc JVs	36.7%	35.8%	0.9pts	0.7pts



DR BILL CHRISTIANSON
CHIEF OPERATING OFFICER
Genus PIC

MARKET

The pork market saw dramatic volatility in FY19 and this is expected to continue. Analysts are projecting a 40% to 50% reduction in China's pig herd due to ASF, equating to up to 15 million tonnes of lost pork production in 2019, much more than the entire global pork trade in 2018. This massive production gap presents a unique opportunity for all animal protein sectors and will impact global pork, beef and poultry prices for years. The ASF epidemic will permanently reshape the Chinese pork industry. Chinese officials indicate that up to 80% of producers, primarily smaller ones, will ultimately not repopulate their herds, driving the industry toward larger scale and more vertically integrated production, providing a significant opportunity for Genus PIC.

The EU, Brazil, Canada and the US are all preparing to supply China, leading to an expected 8% increase in global pork exports in 2019. The US would be uniquely positioned to supply China, but tariffs on US pork to China limit the short term potential. Canada has also been facing pork import barriers from China.

Pig prices have increased around the world in response to these dynamics. Pig prices have risen sharply in China in recent months. Average pig carcass prices in the EU through August 2019 were up approximately 20%, on strong sales to China. However, prices in the US have been volatile, given the competing dynamics of increased export potential and continued tariffs.

The porcine genetics market also saw significant changes in FY19. The breakup of one of PIC's main global competitors, DanAvl, into three companies has reshaped the European market. DanAvl continues to operate as a smaller rebranded company called Danbred. A new competitor, Danish Genetics, has been created by former DanAvl nucleus breeders and multipliers. Lastly, Møllevang Genetics partnered with PIC, starting from July 2018.

PERFORMANCE

Genus PIC grew operating profits despite the ASF outbreak in China. Operating profit including joint ventures was £100.6m, up 4% in constant currency. Global volumes were unchanged, with a decline in Asia offset by growth in all other regions. Strategically important royalty revenues rose by 7%.

In North America, volumes were up by 4% and royalty revenue grew 3% in constant currency. Operating profits were down by 3%, driven by short term higher customer credits arising from animals from a few contract farm locations. Actions were taken to resolve the source of this issue. We saw improving business momentum as the second half progressed and we launched the new Møllevang-influenced PIC800 Duroc sireline.

Latin American operating profits including joint ventures improved by 23% and revenues were up 22% in constant currency. All key markets in the region generated double-digit operating profit growth. Revenues were also up in key trading countries and market conditions continued to improve in the second half of our fiscal year. Breeding stock revenue increased by 36% and royalty revenue grew by 14% in constant currency.

In Europe, strong operating profit growth of 30% in constant currency was driven by successful execution of strategic initiatives, leading to 11% royalty revenue growth. The integration of PIC's strategic collaboration with Møllevang Genetics saw positive impacts on customer trials and demand and the outlook for Europe remains strong.

Asia's operating profits including joint ventures were below prior year by 37% in constant currency. This was wholly due to the ASF outbreak in August 2018, which reduced PIC's profit in China by around £5m. This reduction was only partially offset by operating profit growth in the Philippines, Vietnam and Japan.

Despite market volatility, PIC's global business remains strong and it is well positioned to meet changing market needs. PIC continued to focus on its long term strategy, with investments to enhance product supply and differentiation. The collaboration in China with BCA is a strategic milestone that will allow us to further expand our business in China.



Delivering a Differentiated Proprietary Genetic Offering

EFFICIENT + SUSTAINABLE

Partnering with Russia's
Leading Pork Producer
to Deliver a Sustainable
Production System.

In January 2019, we sealed one of the largest deals in Genus PIC's history by becoming the exclusive damline partner for Miratorg, Russia's leading pig producer. Following a similar sireline agreement in 2016, we are now Miratorg's sole genetic partner.

PIC's relationship with Miratorg began in the early 2000s, when Miratorg started pig production. As Miratorg grew, it worked with several genetic suppliers, before deciding to move to a single partnership to support its planned expansion.

PIC was determined to become Miratorg's sole partner. By drawing on global expertise in areas such as genomics, technical services and meat quality, PIC provided insights to Miratorg that no other company could match. As the relationship grew stronger, Miratorg asked PIC to redesign its whole approach to pig production. Over six months, PIC brought a series of recommendations to Miratorg which aligned with Miratorg's goal of having a sustainable genetic production system. PIC advised Miratorg on restructuring the nucleus and multiplication farms, to bring greater health, production and economic benefits, proving its ability to support Miratorg's commercial goals.

Over the course of the agreement, PIC will replace all of Miratorg's nucleus animals and stock the new multiplication network. At the full run rate, Miratorg will be a top five European customer for PIC.

“

Our work with Miratorg is a tremendous example of what sets us apart for our customers. We look forward to helping Miratorg achieve even more over the next few years.

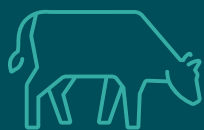
JACK KEANE, GENERAL MANAGER,
PIC RUSSIA





DIVISIONAL REVIEW / GENUS ABS

Positive momentum



“
Becoming the partner of choice for customers: helping them to achieve their goals and maximise profitability.

Business priorities

SHORT TERM

Drive growth through Sexcel and Beef InFocus, while continuing to strengthen our proprietary genetics, technology and support services.

>

MEDIUM TERM

Increase the number of customers with 100% ABS relationships and secure further pull-through agreements for the beef supply chain.

>

LONG TERM

Transition to a performance-based pricing model for dairy accounts.

Strategic Progress in 2018/19



DELIVERING A DIFFERENTIATED PROPRIETARY GENETIC OFFERING

- > Continuing to enhance and expand our range of proprietary dairy and beef genetics to help customers achieve their goals.
- > Growing global volume sales of sexed genetics – including Sexcel, our proprietary product – by 42%.
- > Expanding our range of dairy Icon Sires™ – genetic leaders, bred in-house – on which we retain an option to buy progeny at a pre-defined price and breeding rights to any bulls.
- > Strengthening NuEra Genetics, our proprietary beef range, and launching Beef InFocus as our global beef-on-dairy brand, leading to 22% growth in global beef growth of volumes.



FOCUSING ON LARGE AND PROGRESSIVE PROTEIN PRODUCERS GLOBALLY

- > Building business with new and existing US customers by developing and implementing whole-herd genetic strategies, growing sales of sexed genetics by 52% and Beef InFocus by 176%.
- > Growing sales of sexed genetics in India, the world's largest dairy market, with signed contracts with regional states now exceeding 500,000 units of sexed genetics per annum.
- > Signing our latest beef pull-through agreement with AkTep in Kazakhstan, through which we will develop and supply profitable genetics for its supply chains.



SHARING IN THE VALUE DELIVERED

- > Progressing seven validation trials to demonstrate the difference that our beef genetics make in customer production systems and strengthen our pricing-to-value strategy.
- > Continuing our transition to performance-based pricing within dairy, as we help progressive dairy farmers achieve their goals.

	ACTUAL CURRENCY			CONSTANT CURRENCY
	2019 £m	2018 £m	Movement %	Movement %
Revenue	222.6	210.6	6	7
Adjusted operating profit ¹	29.9	26.1	15	15
Adjusted operating margin	13.4%	12.4%	1.0pts	1.0pts

1 Less non-controlling interest.



JERRY THOMPSON
CHIEF OPERATING OFFICER
Genus ABS Beef



DR NATE ZWALD
CHIEF OPERATING OFFICER
Genus ABS Dairy

MARKET

Milk and beef producers continued to consolidate, with growth of large-scale farming in Russia, the Middle East and the US. Customers are using more sexed dairy genetics and, in the US, margin pressure continues to lead to a trend of more beef on dairy genetics to generate a more valuable by-product from older animals.

From late 2018 into 2019, the global milk supply showed little growth. Increased demand in markets such as China, sustaining above average levels of imports, meant prices for dairy commodities increased through the first half of 2019 and this appears to be sustainable as stocks of dairy products reduce.

Despite better milk prices, margins have been eroded in markets such as Europe, following the extended drought in mid-2018, which required additional feed purchases and kept feed prices high. More recent droughts in Australia have also reduced cow numbers. Milk yield per cow continues to grow in the US and other global markets as genetics improve, but growth in US output has been held back by a 1% decline in cow numbers.

The outbreak of ASF and growth in fast food restaurants has led to a 53% increase in beef imports in China, in the first half of 2019, helping to fuel global demand. Much of this demand was met by countries such as Argentina, Australia and Brazil, where exports grew by 20% in the first half of 2019. Damaging winter weather conditions in the US led to a downturn in exports of 3% for the first half of 2019.

Overall, beef prices trended positively, with countries such as Australia up as much as 14% to the end of July 2019 and China up 7%.

The dairy and beef genetics market continued to consolidate. The merger of Koepon Holdings (Alta) and CRI (Genex) was completed in late 2018, to form Urus, which is now the largest bovine genetics supplier by volume.

PERFORMANCE

ABS performed strongly with operating profit increasing 15% in constant currency. Volume and revenue rose 6% and 7% respectively. Sexed volumes grew 42%, reflecting Sexcel's continued success. Increased use of beef genetics in dairy herds supported 22% growth in global beef volumes. IVB is now fully integrated into the geographic regions and reported within their results.

In Europe, operating profit was up 7% in constant currency, with stable volumes. The trend of dairy customers using sexed genetics, coupled with beef genetics for a portion of the herd, increased beef volumes by 10%. European sexed semen volumes grew 24%.

In North America, revenues grew by 4% and operating profit by 40% in constant currency, fuelled by previous investments in key account management and high growth in Sexcel. Semen and embryo volumes were up by 9%, with sexed volumes up 48% and beef volumes up 60%, supported by proprietary NuEra genetics selected for cross-bred beef on dairy performance. North American embryo profits increased substantially, as operational efficiency improved in key customer sites.

In Latin America, operating profit increased by 15% in constant currency. High growth in Sexcel was partially offset by a strong prior year embryo performance, influenced by the phasing of a key account embryo services contract. Volumes increased by 10%, driven by sexed volumes up 30% and beef volumes up 14%, utilising NuEra genetics, selected for cross-bred performance of North American sires with tropical cows.

In Asia, operating profit was up 7% and revenue increased by 10%, with a steady performance across most key markets. Sexcel sales in India continued to ramp up, with several large orders to be fulfilled from the Genus India Brahma facility. Production began at the Mehsana cooperative bull stud in Gujarat towards the end of the period and commissioning of the production facility for the State of Uttar Pradesh is in progress.

Overall, the increasing customer adoption of Sexcel, combined with our proprietary beef offering and leading dairy genetics portfolio, mean we anticipate continued progress in the next fiscal year.



Focusing on Progressive Protein Producers Globally

SUPERIOR BREEDS

Partnering with progressive dairy farmers to maximise the impact of every pregnancy.

In 2014 Donovan Coetzee moved from South Africa to South Dakota to manage the 3,300 cow Golden Dakota Dairy. Since taking on the dairy, Donovan has focused on improving the performance and sustainability of his herd by utilising high-quality genetics and technical support.

Donovan decided to partner with ABS given its leading bull line-up, sexing technology and partner-led attitude. With support from ABS's technical services team, Donovan decided to utilise ABS's sexed semen product, Sexcel, which combines ABS's leading genetics sexed with the latest technology, to breed the next generation of high-quality heifers for Golden Dakota Dairy.

By employing Sexcel, which results in a much higher probability of obtaining a female calf than conventional semen, Donovan was also able to breed a large portion of the remaining herd with ABS's leading 'beef on dairy' product, InFocus. InFocus genetics are beef genetics (in the form of semen) that are specifically selected to maximise the quality and profitability of calves for beef production.

“

By switching to ABS we've managed to improve the quality of our herd whilst also maximizing the value of our milking pregnancies through the use of Sexcel and ABS's leading beef genetics.

DONOVAN COETZEE,
GOLDEN DAKOTA DAIRY





DIVISIONAL REVIEW / GENUS R&D

Accelerating genetic improvement



“Accelerating genetic improvement and using pioneering technologies to enhance animal well-being, customer productivity and the sustainability of protein production.”

Business priorities

SHORT TERM

Continue to harness developments in genomic science to accelerate genetic improvement across our chosen species.

>

MEDIUM TERM

Demonstrate resilience in a disease challenge for our 'proof of concept' project targeting Bovine Respiratory Disease.

>

LONG TERM

Successfully bring PRRSv-resistant animals to market.

Strategic Progress in 2018/19

DIFFERENTIATED PRODUCTS FROM GENOMIC SELECTION

- > Expanding our line-up of elite dairy genetics through De Novo Genetics, our joint venture with De-Su Holsteins, by producing industry-leading animals of high genetic merit.
- > Strengthening our proprietary selection indices for beef genetics and demonstrating the financial benefits that high-ranking sires deliver for customers in target markets and segments.
- > Continuing to collaborate with colleagues in PIC and The Roslin Institute on the DNA sequencing of elite PIC animals, through which we are seeking to harness billions of data points for animal selection.

GENE EDITING

- > Increasing the number of gene-edited pigs in our PRRSv-resistance programme, from multiple elite lines born in our facilities, while continuing to make good progress on preparations for seeking regulatory approval to market such animals.
- > Achieving pregnancies from beef embryos edited in-house, as we continue to explore whether a single change to the CD18 gene can improve resilience to Bovine Respiratory Disease.

GENDER SKEW

- > Enhancing production capabilities and capacity to help Genus ABS meet global demand for Sexcel, its bovine sexed genetics product.
- > Continuing to license our proprietary sexing technology to third parties through IntelliGen Technologies, establishing a global network currently comprising seven owned and licensed labs across three continents.

	ACTUAL CURRENCY			CONSTANT CURRENCY
	2019 £m	2018 £m	Movement %	Movement %
Porcine product development	18.4	17.0	8	5
Bovine product development	20.0	17.2	16	13
Gene editing	7.3	5.0	46	42
Other research and development	9.0	7.6	18	14
Net expenditure in R&D¹	54.7	46.8	17	13

1 Less non-controlling interest.



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

PERFORMANCE

Net R&D investment increased as planned by 13% in constant currency, as Genus pursued key strategic initiatives to further strengthen its proprietary differentiated offerings, including increasing investment in gene editing, primarily under the PRRSv programme.

Accelerated genetic gain in our porcine populations continues to be driven by our single-step genomic evaluation process. Investments increased to expand genetic testing to additional elite genetic production sites and populations, following the Møllevang strategic collaboration. Early results from incorporating these genetics into PIC's product development programme are encouraging and we launched the Duroc-based PIC800 sireline towards the end of the period. We also applied research to develop new genetic traits of commercial relevance, such as tenderness, and are now already selecting for these traits. The investment in these initiatives was partially offset by lower operating costs in PIC's nucleus herds.

Bovine product development expenditure increased by 13%, as Genus continued to produce an industry leading Holstein dairy bull portfolio, with over 50% coming from the De Novo joint venture. This joint venture is also delivering a strong pipeline of young bulls and is helping to drive volume increases within ABS. The beef genetic nucleus programme also produced strong results and the pipeline of proprietary NuEra beef bulls coming into the stud is set to double during the next year.

In addition, we continued with our investment in IntelliGen, while amortising historical capitalised development costs. During the period, we expanded Sexcel manufacturing to meet significantly increasing demand and to provide unique genetic offerings globally. We also successfully brought into production our first external customer site in India, added capacity in other sites and further expanded the IntelliGen footprint globally through new customers for technology transfer and external customer service.

Gene editing expenditure increased by 42%, primarily due to investment in the PRRSv resistance programme. We continued our engagement with the FDA and the relationship remains constructive and positive. As planned, we increased the number of gene edited pigs, working with RenOVate to continue producing founder gene edited pigs and multiplying up animal numbers by breeding initial founders with pure-line animals. There are now hundreds of edited animals and we have taken on additional dedicated facilities to house them, as we continue to grow the population.

Other R&D expenditure included work on our bioinformatics platform, genome science and external collaborations in a variety of discovery areas, including seeking new gene edit targets and exploring the benefits of full genome sequencing.



Genus Research and Development

HEALTHIER ANIMALS

Developing PRRSv-Resistant Pigs for a More Sustainable Pork Industry.

PRRSv is a devastating and incurable porcine disease, causing reproductive failure, reduced growth and early death. Genus is using ground-breaking gene editing technology to develop PRRSv-resistant pigs, helping to produce healthier animals and a more sustainable food system.

We made continued progress with our PRRSv programme in FY19. We continue to produce gene edited pigs and to validate the technology and gather data for regulatory submissions.

The US is a key pork market and a trailblazer for adopting new technology. We are building on our constructive and collaborative relationship with the US Food and Drug Administration ('FDA') and plan to make an initial submission in 2020. In addition, we are starting to assess how regulators in other key markets will treat gene edited technologies, including Japan, South Korea and China.

We know that customer acceptance of PRRSv resistant pigs will be important. Our focus is on understanding how food industry decision makers and consumers view gene editing and helping them to appreciate the benefits. We have also engaged in coalitions looking at the ethical use of this technology and set guidelines for its use. Furthermore, we regularly meet non-governmental organisations to discuss the benefits to animal wellbeing, the environment, and the potential to reduce antibiotic usage.

Our strategic collaboration with BCA in China also has a key role. Developing the technology, seeking regulatory approval and achieving customer acceptance in China will help develop a more sustainable pork production supply chain that can meet the needs of Chinese families and consumers.

“

We are making continued progress with our PRRSv-resistance programme and are reducing the technological, regulatory approval and customer acceptance risk.

DR MATT CULBERTSON, GLOBAL PRODUCT DEVELOPMENT DIRECTOR





FINANCIAL REVIEW

Good financial results

In the year ended 30 June 2019, Genus achieved good financial results despite challenging conditions in China caused by the rapid spread of ASF in the pig industry.

Revenue growth was 3% in constant currency (4% in actual currency) and adjusted operating profit growth including joint ventures was 3% in both constant and actual currencies, after our planned increase in investment in R&D. Excluding gene editing costs, adjusted operating profit increased by 6% in both constant and actual currencies. Adjusted profit before tax was up 4% (5% in actual currency) despite profits in the Chinese porcine business being £5m lower as a result of ASF.

On a statutory basis, profit before tax was £9.9m (2018: £7.8m). The difference between statutory and adjusted profit before tax was primarily due to non-cash items, including a charge of £16.1m in respect of legacy pension schemes due to the recent High Court decision on the Lloyd's Bank case related to GMP equalisation (see below for further details) and a reduction of £14.7m (2018: £28.7m) in the net IAS 41 biological asset fair value. This was primarily a result of lower bovine biological asset fair values, consistent with trends over the last few years. Statutory earnings per share were 82% lower, with the prior year benefiting from a £32.5m non-cash reduction in Genus's deferred tax liabilities as a result of tax reforms in the US. Genus continues to use adjusted results as its primary measures of financial performance as they better reflect the Group's underlying progress.

The effect of exchange rate movements on the translation of our overseas profits was to reduce the Group's adjusted profit before tax for the year by £0.3m compared with 2018, with the stronger Dollar against Sterling more than offset by weakness in the Brazilian Real. Unless stated otherwise, the financial and operating reviews quote constant currency adjusted growth rates.



Stephen Wilson
Group Finance Director
4 September 2019

REVENUE

Revenue increased by 3% in constant currency (4% in actual currency) to £488.5m (2018: £470.3m). In PIC, revenue was stable in constant currency (up 2% in actual currency), with our strategically important royalty revenue up 7%, with growth in all regions. This was offset by significantly lower breeding stock sales in China, as ASF caused customer stocking delays and cancellations. In ABS, revenues grew 7% in constant currency (6% in actual currency), with all regions making a positive contribution. Sexed genetics revenue growth of 40% was ahead of our expectations due to continued strong uptake of Sexcel, our high-fertility sexed genetics product.

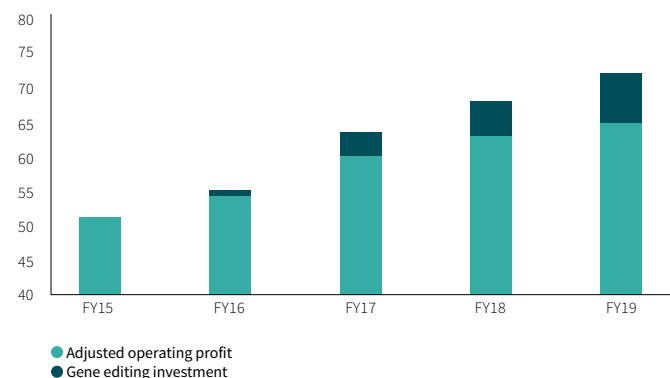
ADJUSTED OPERATING PROFIT INCLUDING JOINT VENTURES

	ACTUAL CURRENCY			CONSTANT CURRENCY
	2019 £m	2018 £m	Movement %	Movement %
Adjusted Profit Before Tax¹				
Genus PIC	100.6	94.8	6	4
Genus ABS	29.9	26.1	15	15
R&D	(54.7)	(46.8)	(17)	(13)
Central costs	(10.9)	(11.0)	1	4
Adjusted operating profit incl. JVs	64.9	63.1	3	3
Net finance costs	(3.9)	(4.6)	15	15
Adjusted profit before tax	61.0	58.5	4	5

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 £64.9m (2018: £63.1m), up 3% in both actual and constant currencies. Within this, Genus's share of adjusted joint venture operating profits was higher at £7.6m (2018: £6.2m), primarily due to strong results in the PIC Agrocere JV in Brazil and amounts attributable to non-controlling interests reduced to £0.4m (2018: £0.8m). Our gene editing investment, which is primarily focused on creating resistance in pigs against the devastating PRRSV disease, increased to £7.3m (2018: £5.0m) as we increased the number of edited animals produced. Excluding this investment, adjusted operating profit increased by 6% in constant currency to £72.2m (2018: £68.1m).

ADJUSTED OPERATING PROFIT INCLUDING JVS EXCLUDING GENE EDITING INVESTMENT (£m)



Year ended 30 June Adjusted results ¹	ACTUAL CURRENCY			CONSTANT CURRENCY ²
	2019 £m	2018 £m	Movement %	Movement %
Revenue	488.5	470.3	4	3
Operating profit incl. JVs excl. gene editing	72.2	68.1	6	6
Operating profit incl. JVs	64.9	63.1	3	3
Profit before tax	61.0	58.5	4	5
Basic earnings per share (pence)	73.2	75.9	(4)	(3)

Statutory results				
Revenue	488.5	470.3	4	
Operating profit	8.7	8.2	6	
Profit before tax	9.9	7.8	27	
Profit after tax	6.7	41.6	(84)	
Basic earnings per share (pence)	12.4	69.7	(82)	
Dividend per share (pence)	27.7	26.0	7	

- Adjusted results are before net IAS 41 valuation movement on biological assets, amortisation of acquired intangible assets, share-based payment expense and exceptional items. Adjusted results are the alternative performance measures used by the Board to monitor underlying performance at a Group and operating segment level. They are consistently applied throughout.
- Constant currency percentage movements are calculated by restating the results for the year ended 30 June 2019 at the average exchange rates applied to adjusted operating profit for the year ended 30 June 2018.

Exchange rates	AVERAGE		CLOSING	
	2019	2018	2019	2018
US Dollar/£	1.29	1.35	1.27	1.32
Euro/£	1.13	1.13	1.12	1.13
Brazilian Real/£	4.99	4.51	4.89	5.12
Mexican Peso/£	25.04	25.37	24.40	26.30

PIC had a robust year with adjusted operating profit including joint ventures up 4%, despite a profit decline in China of approximately £5m caused by ASF. Volumes were stable, with continued growth in royalty contract volumes, particularly in Latin America, offset by a significant decline in breeding stock volumes in China. The European business transformation continues to drive strong results, with another high double-digit operating profit growth of 30%, with the integrations of Møllevang and Hermitage continuing to create supply chain synergies and superior genetic offerings for our customers.

ABS performed strongly with adjusted operating profit less non-controlling interest increasing 15%, with volume growth of 6%. Sexcel continued to demonstrate that it is the sexed product of choice for progressive dairy farmers, driving overall sexed volume growth of 42% and with lower production costs than its predecessor. Strong operating profit growth was achieved across all regions with growth strongest in North America, up 40%, where there was a pronounced shift in the industry to using sexed genetics and beef on dairy genetics, which aligns to our market-leading offerings.

As planned, R&D investment increased by 13%, primarily from a 42% increase in gene editing investment as we expanded the number of gene edited pigs produced and continued positive engagement with the FDA. To maintain leadership in genetics across both porcine and bovine, we increased investment in bovine product development, including in our IntelliGen technology, by 13% and porcine product development by 5%.

FINANCIAL REVIEW CONTINUED

STATUTORY PROFIT BEFORE TAX

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

	2019 £m	2018 £m
Adjusted Profit Before Tax	61.0	58.5
Operating profit attributable to non-controlling interest	0.4	0.8
Net IAS 41 valuation movement on biological assets in JVs and associates	(1.1)	(0.5)
Tax on JVs and associates	(1.4)	(1.5)
Adjusting items:		
Net IAS 41 valuation movement on biological assets	(14.7)	(28.7)
Amortisation of acquired intangible assets	(9.5)	(9.5)
Share-based payment expense	(3.0)	(5.4)
Exceptional items	(21.8)	(5.9)
Statutory Profit Before Tax	9.9	7.8

Our statutory profit before tax was £9.9m (2018: £7.8m), with the impact of the GMP equalisation of £16.1m (2018: £nil) in exceptional items largely offset by the reduction in the non-cash fair value net IAS 41 biological asset movement, which was £14.7m against £28.7m in the prior year. Within this, there was a £1.9m reduction (2018: £5.3m uplift) in porcine biological assets and a £12.8m reduction (2018: £34.0m reduction) in bovine biological assets, due to a variety of fair value model estimate changes. Share-based payment expense was £3.0m (2018: £5.4m). These items tend to be non-cash, can be volatile and do not correlate to the underlying trading performance in the period.

EXCEPTIONAL ITEMS

There was a £21.8m net exceptional expense in the year (2018: £5.9m expense), which included a charge of £16.1m in respect of legacy pension schemes due to the recent High Court decision on the Lloyd's Bank case related to GMP equalisation, offset by a settlement gain of £0.9m (net of fees). As noted below, this GMP equalisation accounting charge does not result in a cash outflow for Genus. Also included are charges of £5.0m for legal fees related to Genus ABS's litigation with STGenetics ('ST'), £0.7m for acquisition and integration related expenses, primarily relating to Møllevang and Progenex S.L., and other items which include £1.5m of fees relating to our strategic porcine collaboration in China with BCA and an insurance receipt from a legacy environmental claim.

NET FINANCE COSTS

Net finance costs reduced to £3.9m (2018: £4.6m), benefiting from both interest rate hedging gains and lower net debt, as a result of the £66.5m equity placement which more than offset the Møllevang investment during the period.

TAXATION

The effective rate of tax, based on adjusted profit before tax, was 24.3% (2018: 20.5%) with the prior year benefiting from a £2.4m credit from the net reduction of tax liabilities in the US following the enactment of US tax reforms. Excluding this one-off credit, the underlying tax rate on adjusted profits in the prior year would have been 24.6%. The effective rate remains higher than the UK corporate tax rate due to the mix of overseas profits and the impact of withholding taxes on the repatriation of funds to the UK. These effects are partly mitigated by the availability of R&D credits and agricultural reliefs in certain jurisdictions.

The tax rate on statutory profits was a charge of 40.7% (2018: 347% credit), with the prior year credit reflecting a large non-cash deferred tax credit of £32.5m as a result of US tax reform. This primarily arose on applying the new US tax rates to the deferred tax liabilities associated with the fair value uplift under IAS 41 on the Group's biological assets.

EARNINGS PER SHARE

Adjusted basic earnings per share decreased by 4% (3% in constant currency) to 73.2 pence (2018: 75.9 pence) as a result of the higher tax rate and increased share count. Basic earnings per share on a statutory basis were 12.4 pence (2018: 69.7 pence), down 82%, with the prior year boosted by non-cash deferred tax credits arising from the US tax reforms.

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 2019, the carrying value of biological assets was £366.7m (2018: £363.0m), as set out in the table below:

	2019 £m	2018 £m
Biological Assets		
Non-current assets	307.6	305.8
Current assets	40.1	37.0
Inventory	19.0	20.2
	366.7	363.0
Represented by:		
Porcine	249.0	238.8
Dairy and beef	117.7	124.2
	366.7	363.0

The movement in the overall balance sheet carrying value of biological assets, excluding the effect of exchange rate translation decreases of £13.0m, includes:

- > a £1.0m increase in the carrying value of porcine biological assets, due principally to an increase in the pure-line valuation (driven by an increase in the percentage of animals going for breeding sales), offset partially by a decrease in retained interest (mainly in the US); and
- > a £10.2m reduction in the bovine biological assets value, primarily due to current estimates, based on market data, of the semen sales price attributable to the biological asset value.

The historical cost of these assets, less depreciation, was £58.2m at 30 June 2019 (2018: £51.0m), which is the basis used for the adjusted results. The historical cost depreciation of these assets included in adjusted results was £9.4m (2018: £6.4m).

RETIREMENT BENEFIT OBLIGATIONS

The Group's retirement benefit obligations at 30 June 2019 were £24.2m (2018: £33.9m) before tax and £19.8m (2018: £27.9m) net of related deferred tax. The largest element of this liability relates to the multi-employer Milk Pension Fund, which we account for on the basis of Genus being responsible for 86% of the scheme (2018: 86%).

During the year, contributions payable in respect of the Group's defined benefit schemes amounted to £7.6m (2018: £7.3m).

In October 2018, the High Court handed down judgment in the Lloyds Bank pensions case, requiring pension schemes to equalise GMPs. Genus's legacy pension schemes are affected by this ruling, resulting in an aggregate past service charge of £16.1m in the period, offset by a settlement gain of £0.9m (net of fees).

The Dalgety Pension Fund ('DPF') has an IAS 19 surplus of £19.1m, which includes a £22.5m separate reserve held against future unknown liabilities, which has not been recognised in the Genus Financial Statements as the Group does not have a unilateral right to it. The cost of GMP equalisation is estimated to be £11.5m for the DPF, which will be fully met by the scheme reserve without a cash cost to Genus. However, IAS 19 requires us to record a charge in the Income Statement of £11.5m, which is offset by an equal and opposite credit in the Statement of Comprehensive Income.

The cost of GMP equalisation for Genus's share of the Milk Pension Fund ('MPF') is estimated to be £4.5m, which is also recorded as a charge to the Income Statement under IAS 19. Despite this charge, the MPF has a £8.6m surplus on an IAS 19 basis. However, under IFRIC 14 Genus accounts for its committed payments under the deficit recovery plan as a liability. In February 2019, as part of the 31 March 2018 scheme valuation, a new deficit recovery plan was agreed with the MPF Trustees, which now finishes approximately a year earlier in September 2021.

CASH FLOW

Cash generated by operations of £48.4m (2018: £58.3m) represented cash conversion of 84% (2018: 101%) of adjusted operating profit excluding joint ventures. The reduction was primarily due to the expansion of PIC genetic nucleuses, higher cash cost of exceptional items and a lower growth in creditor balances than the prior year.

Capital expenditure cash flows of £28.3m (2018: £22.5m) included investment growth in IntelliGen for new global locations and the investment in the new Genus One enterprise system, which is progressing well. Cash inflows from joint ventures were higher at £3.4m (2018: £2.8m). After interest and tax paid, total free cash flow was £10.0m (2018: £24.3m).

The cash outflow from investments was £22.7m (2018: £1.8m), primarily due to the acquisition of Møllevang to grow further our leadership in porcine genetics.

In December 2018, a 5% equity placement of 3.1m shares raised proceeds of £66.5m net of fees. Over the last five years the Company has invested over £180m in capital expenditure and acquisitions funded from cash flow and financing facilities. This included investments in gene editing technology, Møllevang, IVB, Hermitage, Génétiporc and De Novo, as well as increasing capital investment in IntelliGen and supply chain facilities to support growth. The equity placement provides flexibility to continue to proactively pursue future growth opportunities.

The total cash inflow for the year after this equity placement, investments and dividends was £37.0m (2018: £7.6m).

	2019 £m	2018 £m
Cash flow (before debt repayments)		
Cash generated by operations	48.4	58.3
Interest and tax paid	(15.0)	(15.1)
Capital expenditure	(28.3)	(22.5)
Cash received from JVs	3.4	2.8
Other	1.5	0.8
Free cash flow	10.0	24.3
Acquisitions and investments	(22.7)	(1.8)
Dividends	(16.8)	(14.9)
Share placement	66.5	–
Net cash flow	37.0	7.6

NET DEBT

Net debt decreased to £79.6m at 30 June 2019 (2018: £108.5m), with the £66.5m net equity placement proceeds being partially offset by the Møllevang acquisition and planned increased investments in capital and inventory within the business. At the end of June 2019 there was substantial headroom of £125.6m under the Group's credit facilities of £225m. Of the Group's facilities, £45m is due to expire in February 2021, with the remainder expiring in February 2022.

The Group will adopt the IFRS 16 'Leases' standard from 1 July 2019 using the modified retrospective approach. It will recognise the cumulative effect of applying IFRS 16 at the 1 July 2019 transitional date and the prior period will not be restated.

The impact on the opening balance sheet as at 1 July 2019 will be to recognise a right of use asset and corresponding lease liability in the region of £28.0m. Profit before tax is not expected to change materially, however operating profit in FY20 is expected to increase in the region of £1m (due to the depreciation expense being lower than the operating lease expense it replaces) offset by the increased finance charges on the higher liability. IFRS 16 also requires a reclassification of cash flow from operations to net cash used in financing activities, however the overall impact to the Group is cash flow neutral.

The Group's financial position and borrowing ratios remain strong, with interest cover increasing to 34 times (2018: 25 times). EBITDA, as calculated under our financing facilities includes cash received from joint ventures and historical cost depreciation of biological assets. The ratio of net debt to EBITDA on this basis improved to 1.0 times (2018: 1.4 times) with both lower net debt and an increased EBITDA.

RETURN ON INVESTED CAPITAL

We measure the Group's return on invested capital on the basis of adjusted operating profit including joint ventures after tax, divided by the operating net assets of the business, stated on the basis of historical cost, excluding net debt and pension liability. This removes the impact of IAS 41 fair value accounting, the related deferred tax and goodwill. The return on invested capital was lower at 18.9% after tax (2018: 23.9%), reflecting the higher tax rate, with the prior year benefiting from deferred tax liability reductions following US tax reforms, and the higher levels of capital and other investments in the current year, to support future growth.

DIVIDEND

During the year the Board consulted its largest shareholders on its dividend policy. Following this consultation, the Board intends to maintain a progressive dividend within a target adjusted earnings cover range of 2.5 – 3.0 times. The Board is recommending to shareholders a final dividend of 18.8 pence per ordinary share, an increase of 5% over the prior year final dividend. When combined with the interim dividend increase of 10%, this results in a total dividend for the year of 27.7 pence per ordinary share, an increase of 7% for the year. Dividend cover from adjusted earnings remains strong at 2.6 times (2018: 2.9 times).

STEPHEN WILSON

Group Finance Director
4 September 2019

PEOPLE AND CULTURE

Being a people magnet



ANGELLE ROSATA
GROUP HR DIRECTOR

“
We aim to be
a world-class
company recruiting,
developing and
retaining top talent.”

A TEAM OF MANY TALENTS

We employ nearly 3,000 people in 26 countries around the world. They perform a wide range of roles in many different settings, from working in laboratories to working with animals on customer farms.

We are an increasingly diverse team and are constantly exploring ways of further enhancing diversity in all its forms. Our latest initiative is the creation of a Women's Leadership Forum, which will bring together female leaders and a cross-section of other women to develop ideas for increasing diversity and improving working practices.

A VALUES-DRIVEN CULTURE

We foster a positive and inclusive culture, built on our five core values. They underpin all the policies and working practices summarised in the global Genus employee handbook, which we introduced during the year. This is shared with new employees and is also available to potential recruits through www.genusplc.com.

Recent steps to further embed the values have included refreshing our performance management process by establishing an even stronger focus on aligned behaviours. We have also introduced mandatory manager and employee training on preventing workplace harassment, to help ensure our employees continue to work in a safe environment that is free from discrimination of any kind.

A STRONG TALENT PIPELINE

We source and develop the people we need to pursue our business goals. We seek colleagues who demonstrate both the required technical capabilities and alignment with our core values.

During the year, we made a number of strategic hires, including a new Health Assurance Director for PIC in Asia, our Global Senior Director of Regulatory Science and Affairs and our new Chief Scientific Officer and Head of R&D.

We invest in people at all levels to help them fulfil their potential. This year, we introduced bespoke training modules for aspiring leaders and for supervisors, targeting the particular development needs at each stage. We also introduced a Genus CEO Scholarship, for a place on the Online MBA Program at the University of Michigan's Ross School of Business. The successful applicant began her course in September 2019.

We also use other methods to grow our people and build the skills needed to progress our business plans. These include identifying opportunities for expanding current roles with new responsibilities or assignments. This year, for example, we expanded the role of Global Product Development Director in PIC to take on responsibility for bringing PRRSv-resistant pigs to market. We also arranged several short-term assignments for members of our IntelliGen Technologies Global Deployment team, to help set up laboratories for our proprietary bovine sexing technology in Brazil, India and Europe.

A GLOBAL FRAMEWORK

We maintain and regularly review a comprehensive set of global policies for employees, ranging from our Anti-Harassment and Diversity and Inclusion policy to a range of health and safety policies (health & safety is covered in this report's 'Responsibility' section).

We publish all policies and support employees with periodic training where relevant. Our indicators (including employee survey feedback and health & safety statistics) show these are being implemented consistently. There are many routes through which employees can raise concerns, from informal feedback loops to our formal grievance procedure. Any concerns reported are immediately referred to the Group General Counsel and Company Secretary and are then investigated and discussed accordingly with Group HR Director, Head of Risk Management and Internal Audit and the company's Audit & Risk Committee. This process is regularly reviewed as part of our annual Audit & Risk Committee activity. There were no issues reported during the year.

HEALTH AND SAFETY

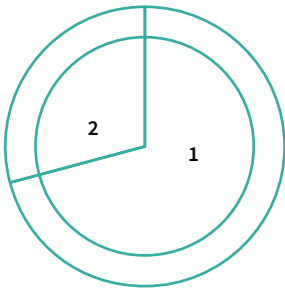
We prioritise the safety of employees and are committed to the prevention of injury, ill health and continual improvement in our occupational health and safety management systems. This year we reduced recordable injuries across the business by 7% although the proportion of animal-related injuries rose by 4%. We maintained 'near misses' reporting rates in line with prior year focussing on quality of hazard identification in some of our higher risk areas.

ANTI-BRIBERY AND CORRUPTION

Our Anti-Bribery and Corruption policy explains how we act professionally, fairly and with integrity in all our business dealings. All employees undertake mandatory annual training on this policy and must achieve 100% in a post-training test.

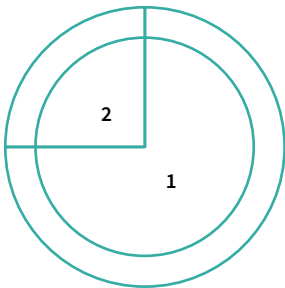
“We foster a positive and inclusive culture, built on our five core values.

BOARD GENDER BREAKDOWN



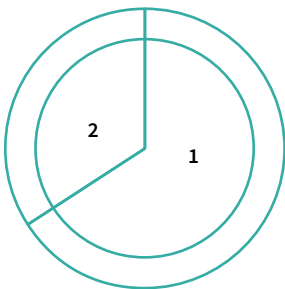
1 Male 71%
2 Female 29%

EXEC GENDER BREAKDOWN



1 Male 75%
2 Female 25%

WORKFORCE GENDER BREAKDOWN



1 Male 66%
2 Female 34%



The training is supported by our Whistleblowing policy, which allows employees to anonymously report any concerns about unethical behaviour and explains the process for doing so. Any concerns are immediately investigated through the same procedure outlined above. There were no issues reported during the year.

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.



Global Leadership Conference

INVESTING IN PEOPLE

We invest in people at all levels, including leaders. In October 2018, over 100 colleagues took part in our third Global Leadership Conference. This enabled leaders to discuss business progress, align future plans and collaborate on emerging opportunities.

The conference was held at the Wellcome Genome Campus in Cambridge (UK), with the theme *Leading Today, Transforming Tomorrow*. This theme summarised our aim to lead the field in every area of our work, while re-shaping what is possible for our customers and industry.

The event crystallised company priorities as we continue to pioneer animal genetic improvement to help nourish the world. Each member of the Genus Executive Leadership Team presented on plans for their area of the business and led discussions around the issues and opportunities involved.

Our keynote speaker was a global authority on leadership, whose sessions explored ways of building a sustainable pipeline of talent.

We ran collaborative workshops in which leaders worked together on ideas for addressing themes arising from these discussions. This input has subsequently informed the development of our People strategy.

Through this conference, we nurtured common purpose among leaders, developed their knowledge and skills and strengthened relationships between them.



Leading today,
Transforming tomorrow





CORPORATE RESPONSIBILITY

A responsible business

Pursuing our purpose

Our purpose is to pioneer animal genetic improvement to help nourish the world. We use leading-edge science and ground-breaking technology to discover, develop and deliver enhanced animal genetics that help customers increase the world's supply of safe, affordable and high-quality milk and meat.

We pursue our purpose with a deep sense of responsibility: one of the core values that shape our work in every part of the world, every day. We have a long-standing and long-term commitment to reducing the impact of our operations on the world around us, while making a positive contribution to society through our work with animals, colleagues, customers and local communities.

We fulfil this 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.

We translate our bold thinking into policies and practices that underpin our operations around the world. From core principles on protecting animal welfare to guidelines on supporting community causes, we articulate expectations, provide information and deliver training where needed to ingrain responsible business practices across our organisation and the people we work with.

We set and continually monitor progress using key performance indicators (see pages 14 to 15). 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.



VEHICLE TELEMATICS OPERATE SAFELY

Following successful trials, we recently introduced telematics to over 300 company vehicles in the UK. In-cab devices process data on engine performance and give drivers verbal and visual prompts, for example to slow down. Drivers also have access to a smartphone app, through which they receive instant feedback on each journey, plus competitions with rewards for elite drivers. In our trials, the technology helped reduce errant driver behaviour such as speeding and harsh braking by 91%. The devices are also helping to increase fuel efficiency and reduce vehicle emissions.



CHINA ASF ROADSHOW ANIMAL WELFARE

The spread of African Swine Fever in China was threatening herds and preventing customers from travelling to PIC's traditional roadshow. PIC therefore set up a 'virtual' roadshow, through which it live streamed a series of presentations from PIC and industry experts giving practical guidance on how to prevent the disease or eradicate it from facilities. Over 72,000 people viewed the live stream and over 96% of those who gave feedback rated it as 'good' or 'very good'.

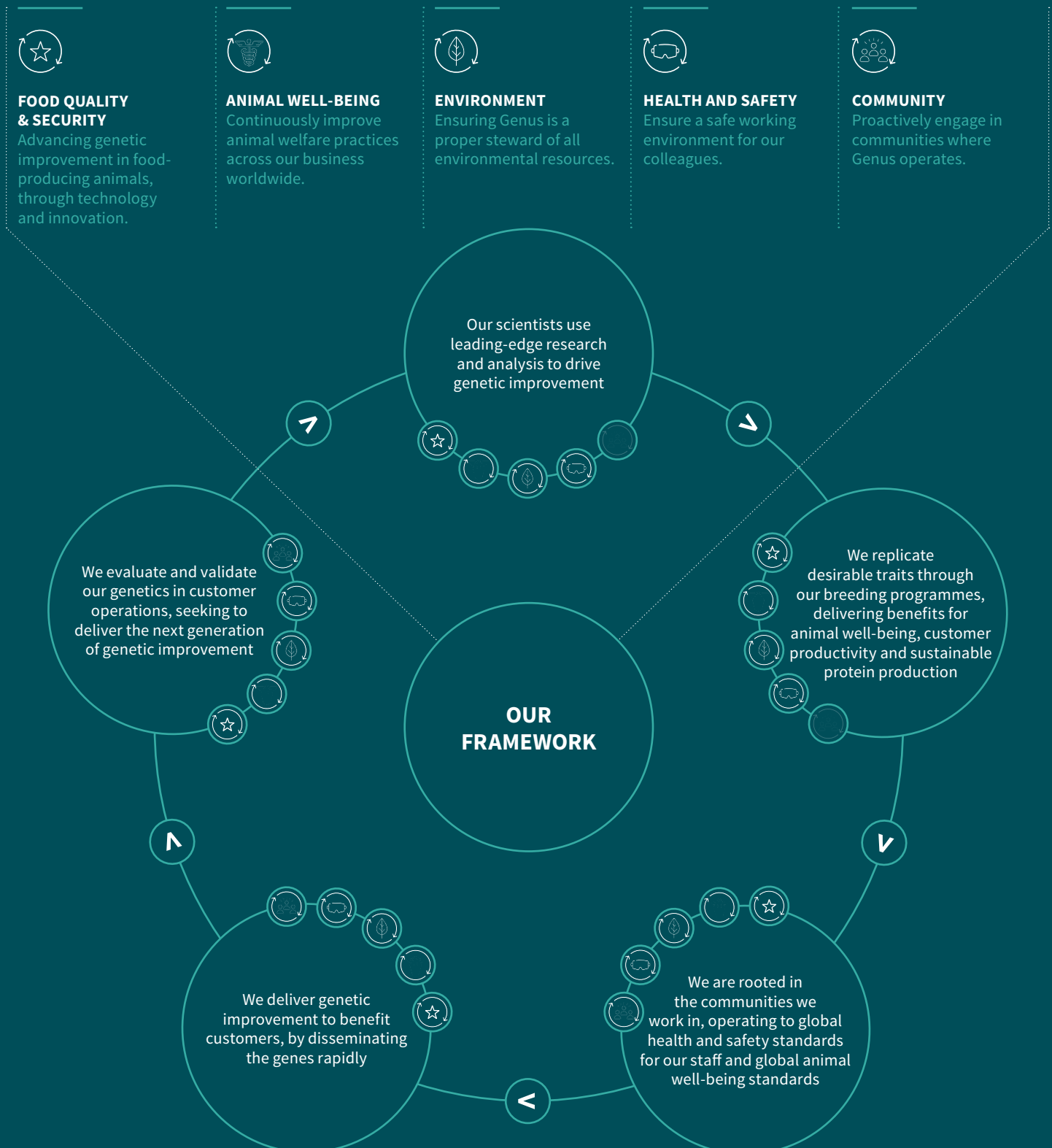


CHARITABLE DONATIONS POLICY COMMUNITY

We regularly donate money, time and resources to support community causes. Our global Charitable Donations Policy ensures that any such projects are aligned with our vision, strategy and CSR framework. It confirms that we aim to support registered charities, not-for-profit or non-governmental organisations based in local communities and/or with a connection to food security and agriculture. The policy has been published for employees on our intranet.

Our Corporate Social Responsibility ('CSR') framework

We have developed a bespoke framework that sets out our aims and approach in the five areas most relevant to our business and our impact on the world around us.



CORPORATE RESPONSIBILITY CONTINUED

Progressing our CSR strategy

Our CSR Committee contains experts from around our global company. The Committee sets our CSR strategy, articulates annual objectives and monitors progress.

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

For more information on our work, progress and CSR Committee, please visit our dedicated website: www.genusplc.com/responsibility.

Progress update

What we do	Highlights in the year	What we plan to do next
 FOOD QUALITY AND SECURITY Advancing genetic improvement in food-producing animals, through technology and innovation	<ul style="list-style-type: none"> > Drove further genetic improvement in both porcine and bovine species > Continued our work to combat PRRSV in pigs and signed a major collaboration agreement in China > Increased the availability of Sexcel in target markets around the world 	<ul style="list-style-type: none"> > Continue driving porcine and bovine genetic improvement and rapidly disseminate the genetics to customers globally > Continue responsible development of gene editing technology, to aid disease eradication and animal wellbeing
 ANIMAL WELL-BEING Continuously improve animal welfare practices across our business worldwide	<ul style="list-style-type: none"> > Continued to invest in PIC and ABS animal housing facilities > Continued aligning standard operating procedures across the PIC supply chain > Maintained our focus on reducing bovine stress, to improve maternal health 	<ul style="list-style-type: none"> > Ensure employees with animal care responsibilities are routinely trained on current animal care standards > Continue investment in animal housing facilities > Keep reviewing and updating animal care standards and operating procedures, to maintain alignment with best practice > Educate the industry on how Sexcel can significantly increase unassisted birthing of calves
 ENVIRONMENT Ensuring Genus is a proper steward of all environmental resources	<ul style="list-style-type: none"> > Audited 80.3% of PIC-owned production sites > Improved feed efficiency by 0.02 kg of feed per kg of pork > Completed roll-out of eco-friendly porcine semen packaging solution in Mexico 	<ul style="list-style-type: none"> > Maintain scope and measures of PIC audits on owned production, including 80% of owned sites > Improve feed efficiency by 0.02 kg of feed per kg of pork per annum > Continue to evolve beef genetics that improve feed efficiency and reduce greenhouse gas emissions > Explore opportunities for wider deployment of renewable energy solutions across ABS and PIC sites > Work to address nutrient management challenges by exploring technological innovations > Work to minimize packaging waste across genetic dissemination devices in global distribution channels
 HEALTH & SAFETY Ensure a safe working environment for our colleagues	<ul style="list-style-type: none"> > Vehicle incidents rose slightly by 2% > Recordable incidents dropped by 7%, although the proportion of animal-related injuries rose by 4% 	<ul style="list-style-type: none"> > Reduce occupational road risk year-on-year > Continue to reduce recordable injuries
 COMMUNITY Proactively engage in communities where Genus operates	<ul style="list-style-type: none"> > Recruited 146 staff into our PIC and ABS production sites > Enhanced our range of placement and employment opportunities for students and apprentices 	<ul style="list-style-type: none"> > 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

Climate Change Policy and Greenhouse Gas ('GHG') Reporting

In 2019 we agreed to introduce a Group Climate Change Policy which, among other things, will acknowledge the reality of climate change and recognise the lasting negative impact it will have on our business and our communities. We support the outcomes of the Paris Agreement and the long-term goal to limit the global average temperature rise to 1.5 °C. As we look to the future, Genus will 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; and
- > Reducing the carbon footprint of our own operations through developing a better understanding of how energy is used in our business. We are committed to the sustainable development of new facilities and are evaluating the use of renewable power solutions on a number of our farms.

We are still in the data collection and feasibility phase for these initiatives but will develop our approach in line with our broader climate targets.

Our GHG emissions are primarily methane produced by our animals, carbon dioxide from consuming fuel and other materials, and from transport. Our primary intensity ratio is based on animal weight, which is a key driver of our GHG emissions. Our secondary intensity ratio is based on turnover.

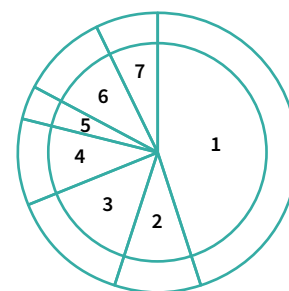
Our total emissions reduced by 3% due primarily to fewer pigs, which in turn resulted in a 6% reduction in animal weight. This is primarily the result of prior-year disease outbreaks in the US (scope 1) as well as reductions in emissions from air transport from fewer porcine imports to Asia due to ASF (scope 3). These reductions were partially offset by higher energy use in the increased production of Sexcel (scope 2) and construction of new porcine and IntelliGen facilities (scope 3).

Our primary intensity ratio did however increase by 4% as the savings in emissions in animal weight were offset by fixed emissions remaining constant and our increased energy use as outlined above. Our secondary intensity ratio has reduced by 7% due mainly to the reduction in emissions and the increase in turnover.

OUR REPORTING APPROACH

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. GHG data is therefore reported for some operations in rented or leased premises, that are not treated as assets referred to elsewhere in the financial statements. We omitted joint ventures and some livestock held at third-parties, due to our limited authority to introduce and implement operating policies.

GHG EMISSIONS FOR 2019 (%)



1 Scope 1 Livestock	45%
2 Scope 1 Fuel	10%
3 Scope 1 Own Transport	14%
4 Scope 2 Electricity and Heat	10%
5 Scope 3 Distribution	4%
6 Scope 3 Travel	10%
7 Scope 3 Other	7%

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'*

Emissions from	2019	2018
	Tonnes of CO ₂ e	Tonnes of CO ₂ e
Scope 1 – combustion of fuel, own transport and livestock emissions	65,517	67,650
Scope 2 – purchased electricity, steam, heat and cooling	9,164	8,398
Total scope 1 and 2	74,681	76,048
Scope 3 – material usage and waste, third party distribution and business travel	20,974	23,016
Total emissions	95,655	99,064
Primary intensity measure – animal weight (tonne)	9,077	9,608
Secondary intensity measure – Turnover (£m)	488.5	470.3
Primary intensity ratio – Scope 1 and 2 (tCO₂e/tonne animal weight)	8.2	7.9
Secondary intensity ratio – Scope 1,2 and 3 (tCO₂e/turnover)	196	211

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.



NON-FINANCIAL INFORMATION STATEMENT

In FY20 we will report on the new non-financial reporting requirements contained in Sections 414CA and 414CB of the Companies Act 2006.

The table opposite, and the information it refers to, is intended to help stakeholders understand our position on key non-financial matters.

Reporting requirement	Policies and standards which govern our approach	Risk management and additional information
ENVIRONMENTAL MATTERS	CSR Framework	See page 40
EMPLOYEES	Global Employee Handbook; Whistleblower Policy	See pages 34 to 35
HUMAN RIGHTS	Global Employee Handbook; Whistleblower Policy	See page 35
SOCIAL MATTERS	Charitable Donations Policy	See page 38
ANTI-CORRUPTION AND ANTI-BRIBERY	Anti Bribery and Corruption Policy	See page 34
POLICY EMBEDDING, DUE DILIGENCE AND OUTCOMES	Global Employee Handbook	See Strategic Report on pages 2 to 46
DESCRIPTION OF PRINCIPAL RISKS AND IMPACT OF BUSINESS ACTIVITY	N/A	See Principal Risks and Uncertainties on pages 44 to 45
DESCRIPTION OF THE BUSINESS MODEL	N/A	See Business Model on pages 10 to 11
NON-FINANCIAL KEY PERFORMANCE INDICATORS	CSR Framework	See page 40











PRINCIPAL RISKS AND UNCERTAINTIES

Genus is exposed to a wide range of risks and uncertainties as it provides farmers with superior genetics to fulfil its vision.

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 and Brexit. Additionally, we monitor emerging new risks such as changing consumption patterns and the emergence of alternative proteins such as lab-based meat. Out of this broad risk universe we have identified ten principal risks, which we periodically evaluate based on an assessment of the likelihood of occurrence and magnitude of potential impact, together with the effectiveness of our risk mitigation controls.

Our assessment is that Brexit is not a principal risk for Genus. The table below outlines these principal risks and uncertainties and how we manage them. We also identified those principal risks which are more likely to have a short to medium-term impact for the evaluation of our going concern and viability assessment. This is discussed in detail within our viability statement.

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

Risk	Risk description	How we manage risk	Risk change in 2019
Strategic risks			
DEVELOPING PRODUCTS WITH COMPETITIVE ADVANTAGE STRATEGIC LINK 	<ul style="list-style-type: none"> > 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.
CONTINUING TO SUCCESSFULLY DEVELOP INTELLIGEN TECHNOLOGY STRATEGIC LINK 	<ul style="list-style-type: none"> > 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. Further patent infringement proceedings initiated by ST in the US in 2017 are being vigorously defended.	 Reduced. We saw continued strong growth and customer acceptance of Sexcel. The IntelliGen team made further improvement to processing efficiency. We continued to increase IntelliGen's global deployment, securing new third-party customers.
DEVELOPING AND COMMERCIALISING GENE EDITING AND OTHER NEW TECHNOLOGIES STRATEGIC LINK 	<ul style="list-style-type: none"> > 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 R&D Portfolio Management Team ('R&D PMT') oversees our own 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.	 No change. 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. We entered into a strategic collaboration arrangement with BCA in China to research, develop and commercialise PRRSv-resistant pigs in China.
CAPTURING VALUE THROUGH ACQUISITIONS STRATEGIC LINK 	<ul style="list-style-type: none"> > 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.	 No change. The acquisition process continues to provide valuable and timely access to investment opportunities. Our experiences with post-acquisition integration provide a platform for integrating newly acquired businesses.
GROWING IN EMERGING MARKETS STRATEGIC LINK 	<ul style="list-style-type: none"> > Failure to appropriately develop our business in China and other emerging 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. We also establish local partnerships where appropriate to increase market access.	 Increased. In China, we have experienced the negative impact of the country-wide ASF outbreak, which is causing disruption to the pig industry. The trade disputes between the US and China increase uncertainty for global trade.

LINK TO STRATEGY/ VIABILITY ASSESSMENT



Increasing Genetic Control
and Product Differentiation



Targeting Key Markets
and Segments



Sharing in the
Value Delivered



Considered for Viability
Assessment

Risk	Risk description	How we manage risk	Risk change in 2019
Operational risks			
PROTECTING IP STRATEGIC LINK 	<ul style="list-style-type: none"> > Failure to protect our IP could mean Genus-developed genetic material, methods, systems and technology become freely available to third parties. 	<p>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 landscape watches and where necessary conduct robust 'freedom to operate' searches, to identify third-party rights to technology.</p>	No change.
ENSURING BIOSECURITY AND CONTINUITY OF SUPPLY STRATEGIC LINK 	<ul style="list-style-type: none"> > 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. 	<p>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.</p>	Increased. This is due to the ongoing escalation of trade wars. In addition, supply chain risks associated with disease outbreaks have increased around the world. We continue to strengthen our biosecurity measures to mitigate this inherent risk.
HIRING AND RETAINING TALENTED PEOPLE STRATEGIC LINK 	<ul style="list-style-type: none"> > Failure to attract, recruit, develop and retain the global talent needed to deliver our growth plans and R&D programmes. 	<p>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 a number of specialist recruitment agencies, to identify candidates with the skills we need.</p>	Increased. The Group's Finance Director is taking on the role of Chief Executive in September 2019. An external search is under way for a new Finance Director. To date, we have been largely successful in recruiting and retaining the appropriate skills to meet our business growth plans.
Financial risks			
MANAGING AGRICULTURAL MARKET AND COMMODITY PRICES VOLATILITY STRATEGIC LINK 	<ul style="list-style-type: none"> > 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. 	<p>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.</p>	No change.
FUNDING PENSIONS	<ul style="list-style-type: none"> > Exposure to costs associated with failure of third-party members of joint and several liabilities pension scheme. > Exposure to costs because of external factors (such as GMP equalisation, mortality rates, interest rates or investment values) affecting the size of the pension deficit. 	<p>We are the principal employer for the Milk Pension Fund and chair the group of participating employers. The fund is closed to future service and has an agreed deficit recovery plan, based on the 2018 actuarial valuation. We also monitor the strength of other employers in the fund and have retained external consultants to provide expert advice.</p>	Reduced. The outcome of the triennial 2018 fund valuation resulted in a lower deficit and reduced the length of the existing recovery plan to September 2021. The employers group signed a memorandum of understanding with the Trustee to formalise the investment de-risking strategy.

GOING CONCERN AND VIABILITY STATEMENT

The Board assesses the Group's going concern and viability based on its cashflows and business plans, combined with downside scenarios of the principal risks described overleaf and other financial and performance factors that could threaten the Group's plans, performance and financial position. The outcome of this analysis and the appropriateness of the period over which the Board decided to provide its viability statement are described below.

ASSESSING OUR PROSPECTS

In order to reach a conclusion on both the appropriateness of adopting the going concern basis of accounting in preparing the Annual Report and on our viability, the Board carried out a robust assessment of the principal risks facing Genus, including those that would threaten its business model, future performance, solvency or liquidity. This assessment considered:

- > Genus's current strategic plan, financial position and its planned capital expenditure, as well as the financing facilities available to the Group. During the year Genus completed an equity placement of 3.1 million shares at £22 per share, which raised £66.5m of funds, net of fees. Total debt facilities of £225m are available to the Group until February 2021, when £45m of the facilities expire, with the remainder expiring in February 2022. In reaching our conclusion and based on discussions with the banks, we have a reasonable expectation of being able to extend our facilities for a further five-year period prior to the expiry of our current facilities.
- > At 30 June 2019, the Group had net debt of £79.6m (2018: £108.5m) and had substantial headroom of £125.6m (2018: £99.3m). The Group's financial position remains strong.
- > The potential impact on the Group's cashflow and net debt, in severe but plausible scenarios of selected principal risks, and in particular the impacts of biosecurity, agricultural markets down-turn, border closures, the continuing development of IntelliGen, continuity of supply and increased competition. This assessment takes into account the effectiveness of mitigating actions, and the position if each of the identified principal risks materialised individually and where multiple risks occur in parallel.

ASSESSMENT PERIOD

In their assessment of the Group's viability, the Directors have determined that a three-year time horizon, to June 2022, is an appropriate period to adopt. This was based on the Group's visibility of its product development pipeline, for example, as a result 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.

GOING CONCERN AND VIABILITY STATEMENT

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 June 2022.

The Strategic Report was approved by the Board of Directors on 4 September 2019 and signed on its behalf by:

KARIM BITAR

Chief Executive
4 September 2019

STEPHEN WILSON

Group Finance Director
4 September 2019

Corporate Governance

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052	Genus Executive Leadership Team (‘GELT’)
054	The Board
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065	Audit & Risk Committee Report
069	Directors' Remuneration Report
095	Directors' Report
096	Directors' Responsibilities

CHAIRMAN'S LETTER

Providing leadership and oversight

Dear Shareholder

This was another busy and challenging year for the Board. This report sets out how we have applied rigorous corporate governance practices, which show how we provide the leadership and oversight the Group requires to successfully implement its strategy and create long-term value for our shareholders and other stakeholders.

Genus complied in full with the 2016 edition of the UK Corporate Governance Code, which was the applicable standard for this year.



Bob Lawson
Chair of the Board
4 September 2019

“ We are refining our governance framework to reflect the new Code and this year’s Board evaluation.

As we move into 2020, we are refining our governance framework to reflect both the requirements of the 2018 edition of the Code and the feedback from this year’s Board evaluation. The new Code places a strong emphasis on the Company’s relationship with its shareholders and other stakeholders. It also highlights the importance of establishing a corporate culture aligned with the Company’s purpose and business strategy, and which promotes integrity and values diversity. The Board’s activities this year reflect the need to balance these priorities.

Whilst the latest Board evaluation showed that the Board is functioning well, we know we can always improve. As a result, the Board has reviewed its practices to identify where they are in line with the new Code and made changes where appropriate. We will report against the new requirements in next year’s Annual Report, to allow time to embed these new practices in our corporate governance framework and to monitor their operation and effectiveness.

However, I want to highlight some of the more significant steps which the Board has already taken, including designating Lykele Van Der Broek and Lesley Knox as our Workforce Engagement Directors. We have also strengthened our reporting on our stakeholder relationships by summarising our approach and the engagement mechanisms we have in place on page 60. To reflect the importance of effective risk management to the successful implementation of the Group’s strategy, the Audit Committee has been renamed the Audit & Risk Committee, and will build on our existing processes for managing strategic, operational and financial risks with an enhanced focus on the risks associated with new opportunities and innovations. Lastly, to reflect the Nomination Committee’s role in overseeing my own succession, it is appropriate that the chair of that committee has been given to Lesley Knox, our Senior Independent Director.

Last year’s evaluation identified the induction of new Directors as a priority for the Board in FY19. We made good progress in this area, with a comprehensive induction programme for Lesley Knox and Ian Charles. This comprised meetings with senior management to discuss strategy, financial performance, operations, risks and opportunities; site visits and meetings with employees to provide insight into our bovine, porcine and R&D business units; and corporate governance seminars. This induction has given them a thorough grounding in Genus and has allowed them to make an immediate impact at the Board.

In March this year we announced the resignation of our Chief Executive, Karim Bitar. His significant contribution during his eight years as Chief Executive are outlined in my report on page 9. The Nomination Committee conducted a thorough search for Karim’s successor, as described in its report on page 62, culminating in the appointment of Stephen Wilson as Chief Executive. Stephen has been with Genus since January 2013 and has a very strong and deep understanding of Genus and has been a leading part of the team in the successful strategic and operational development of the Group in recent years, as it has continued to grow and strengthen its position as a world leader in animal genetics. Stephen was by far the strongest candidate for the role following a review of both external and internal candidates managed by an external search agency. We have begun the search for a new Group Finance Director to replace Stephen, and hope that this position will be quickly filled, with our Financial Controller Janet Duane acting as the interim Group Finance Director. In addition, as I approach nine years as Chairman of the Board, the Nomination Committee will in due course consider my own succession, ensuring that it takes place at an appropriate time to allow for the successful transition of the new executive team.

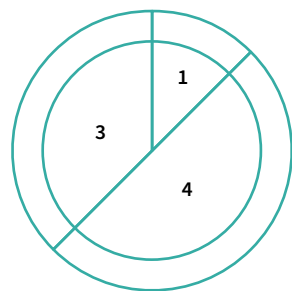
In April this year we said goodbye to Dr Jon Lightner, our Chief Scientific Officer and Head of Research and Development. As described in my statement on page 9, Jon leaves us in a strong position. We are delighted to welcome Dr Elena Rice, a world expert in agricultural biotechnology, to the role. Elena will help us to continue to enhance our development pipeline and explore new ways to improve animal health, customer productivity and the sustainability of protein production.

BOB LAWSON

Chair of the Board
4 September 2019

BOARD OF DIRECTORS AND COMPANY SECRETARY

TENURE



<1 year
1-5 years
5+ years

1
4
3



BOB LAWSON
Non-Executive Chairman



KARIM BITAR
Chief Executive



STEPHEN WILSON
Group Finance Director and
Chief Executive designate

COMMITTEE
MEMBERSHIPBOARD
APPOINTMENT

November 2010

September 2011

January 2013

SKILLS AND
EXPERIENCE

- > Significant experience of leading international businesses, including through operational and culture changes
- > Deep understanding of listed companies and corporate governance

- > Extensive experience of leading international, technology driven organisations
- > Led the strategic review of Genus in 2012, resulting in a new vision, strategy, structure and core values
- > BSc in Biochemistry from the University of Wisconsin and an MBA from the University of Michigan

- > Extensive strategic, financial and operational experience in technology businesses, including international experience in Europe and the US
- > Wide-ranging knowledge of mergers and acquisitions, financing, IT transformation and investor relations
- > Fellow of the Chartered Institute of Management Accountants
- > Degree in Mathematics from the University of Cambridge

CURRENT
APPOINTMENTS

Non-Executive Chairman of Eurocell plc.

Non-Executive Director on the board of Spectris plc and member of the University of Michigan Ross School of Business Advisory Board.

None

PAST
APPOINTMENTS

Chief Executive of Electrocomponents plc, Managing Director of Vitec Group plc, Chairman of the Federation of Groundwork Trusts, Chairman of Hays plc, and Non-Executive Chairman of Barratt Developments plc.

President of Lilly Europe, Canada and Australia; McKinsey and Company consultant; and management roles at Johnson and Johnson, and the Dow Chemical Company.

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.

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



April 2016

- > Significant experience of risk management, audit, business operations, acquisitions and disposals, and corporate governance, gained within the food sector
- > Chartered accountant

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.

**LYKELE VAN DER BROEK**Non-Executive Director;
Workforce Engagement
Director

July 2014

- > Vast experience of growing companies and working in agricultural businesses throughout the world, including in emerging markets

Chair of Eden Research plc.

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.

**LESLEY KNOX**Senior Independent
Non-Executive Director;
Workforce Engagement
Director

June 2018

- > 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

Non-Executive Director and Senior Independent Director of Thomas Cook plc; Non-Executive Director and Chair of the Remuneration Committee of Legal & General plc; and Chair of Legal & General Investment Management.

Chair of Grosvenor Group and member of the Remuneration committee; Founder director of British Linen Advisors; Governor of British Linen Bank Group; and numerous non-executive roles, including Centrica, SAB Miller, Alliance Trust, Hays, Scottish Provident and Bank of Scotland.

**PROFESSOR IAN CHARLES**

Non-Executive Director



July 2018

- > Entrepreneurial scientist, with deep scientific expertise
- > More than 30 years' experience in academic and commercial research institutions
- > Current research focus is infectious diseases, the microbiome and its impact on health and well-being

Co-founder and Board Director of Longas Technologies Pty Ltd.

Co-founder and Board Director of Auspherix; Director of the ithree institute, University of Technology, Sydney; co-founder and Chief Scientific Officer of Arrow Therapeutics; founder member of The Wolfson Institute for BioMedical Research at University College London; and various roles at Glaxo Wellcome and Sheffield, Cambridge and Leicester Universities.

**DAN HARTLEY**Group General Counsel
and Company Secretary

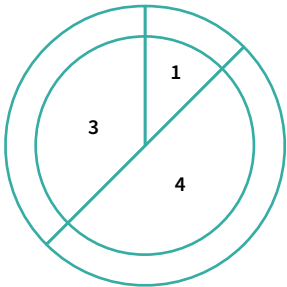
June 2014

- > Significant experience in multi-jurisdictional patent litigation, mergers and acquisitions, patent and technology licensing and managing product life cycles
- > Degrees in science and law

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’)

TENURE



<1 year	1
1-5 years	4
5+ years	3

SKILLS AND EXPERIENCE



KARIM BITAR
Chief Executive



STEPHEN WILSON
Group Finance Director and
Chief Executive designate



DAN HARTLEY
Group General Counsel
and Company Secretary

See pages 50 and 51 for Karim’s, Stephen’s and Dan’s biographies.



ANGELLE ROSATA
Group HR Director

- > 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

- > 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



DR BILL CHRISTIANSON
Chief Operating Officer,
Genus PIC

- > 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

- > 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



JERRY THOMPSON
Chief Operating Officer,
Genus ABS Beef

- > 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

- > 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 10 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 programs, regulatory science, and portfolio management.
- > At Bayer she was responsible for a pipeline spanning seeds, traits and biological products (among others) across all phases of development and all geographies.
- > Led the development and introduction of new genetic improvement technologies and also nurtured a portfolio of gene editing projects.
- > She is a strategic thinker and inspiring leader who works closely and collaboratively with commercial teams.
- > 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

CORPORATE GOVERNANCE STATEMENT

The Board

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; ensuring we have the right funding; approving material contracts, acquisitions and investments; and reporting to shareholders.

THE BOARD'S COMPOSITION

Professor Duncan Maskell and Nigel Turner retired as Non-Executive Directors ('NEDs') at the Annual General Meeting ('AGM') on 15 November 2018. At the date of this report, the Board therefore comprised five independent NEDs (including the Chairman), and two Executive Directors – the Chief Executive and the Group Finance Director. This gives a majority of independent Directors on the Board.

The Board comprises both well-established and newer NEDs, as we have broadened the Board's skills and experience through Non-Executive appointments over recent years. As a result, the Board has an appropriate blend of different areas of expertise, long-standing knowledge of the Group and its markets, and fresher perspectives. This 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.

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.

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. Following the performance evaluation described on page 58, the Board also confirms that all the Directors continue to be effective and to demonstrate commitment to their roles. Bob Lawson, who was appointed as Chairman of Genus plc in November 2010, will have served nine years at the date of the next AGM, at which he will seek re-election. He recognises the requirement to move on from the role of Chairman but the Board has postponed this change, to ensure a smooth transition to the new Chief Executive and Group Finance Director. Bob continues to make an outstanding contribution to the Board and the Board believes that a transition period is a necessary step to ensure ongoing continuity in the execution of Genus' strategic objectives, for the benefit of all of its stakeholders.

As required by the Code, all the Directors, with the exception of Karim Bitar who will step down from the Board on 13 September 2019, will offer themselves for election at the next AGM. Details can be found in the Notice of AGM at the end of this report.

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	Individual	Responsibilities
CHAIRMAN	BOB LAWSON	Bob'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. Bob also engages in the direct communication with shareholders.
CHIEF EXECUTIVE	KARIM BITAR	Karim 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.
GROUP FINANCE DIRECTOR	STEPHEN WILSON	Stephen 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	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, LYKELE VAN DER BROEK, IAN CHARLES	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.

Board and Committee structure

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



BOARD COMMITTEES

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

Director	Committee		
	Audit & Risk	Nomination	Remuneration
Bob Lawson	–	M	M
Karim Bitar	–	M	–
Stephen Wilson	–	–	–
Lysanne Gray	C	M	M
Lykele van der Broek	M	M	M
Lesley Knox	M	C	C
Ian Charles	M	M	M

M = Committee member C = Committee chair

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 94, and in their terms of reference on our website at www.genusplc.com.

ATTENDANCE AT BOARD AND COMMITTEE MEETINGS

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

Director	Board	Nomination	Audit & Risk	Remuneration
Non-Executive Chairman				
Bob Lawson	8	1	5 ¹	6
Executive Directors				
Karim Bitar (steps down 13 September 2019)	8	1	5 ¹	6 ¹
Stephen Wilson	8	1 ¹	5 ¹	6 ¹
Non-Executive Directors				
Nigel Turner (resigned 15 November 2018)	3	–	3	4
Lysanne Gray	8	1	5	6
Duncan Maskell (resigned 15 November 2018)	2	–	1	2
Lykele van der Broek	7	1	5	6
Lesley Knox	8	1	5	6
Ian Charles	6	1	3	4

Note: The maximum number of meetings that Directors could have attended during the year: Board 8, Nomination Committee 12, Audit & Risk Committee 5 and Remuneration Committee 6.

- 1 Attendance by invitation.
- 2 Immediately after the announcement of the Chief Executive's departure in March 2019, the Committee initiated an executive recruitment search. Since that time, the Committee has received numerous updates on the process and progress of the executive recruitment at Board meetings.

THE BOARD'S YEAR IN REVIEW




Board activities







The Board held 8 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 Group Finance Director; and
- > corporate governance and legal issues from the Group General Counsel and Company Secretary, and external advisers.

Each year the Board also holds a strategy session, focusing on the strategic direction and goals of the Group and its business units. In addition, each year one of the Board meetings is held outside the UK. This year the May Board meeting was held in the US, giving the Board members an opportunity to spend time with US employees from PIC, ABS and R&D.

The table below provides more detail of the Board's discussions and activities, and the outcomes from them:

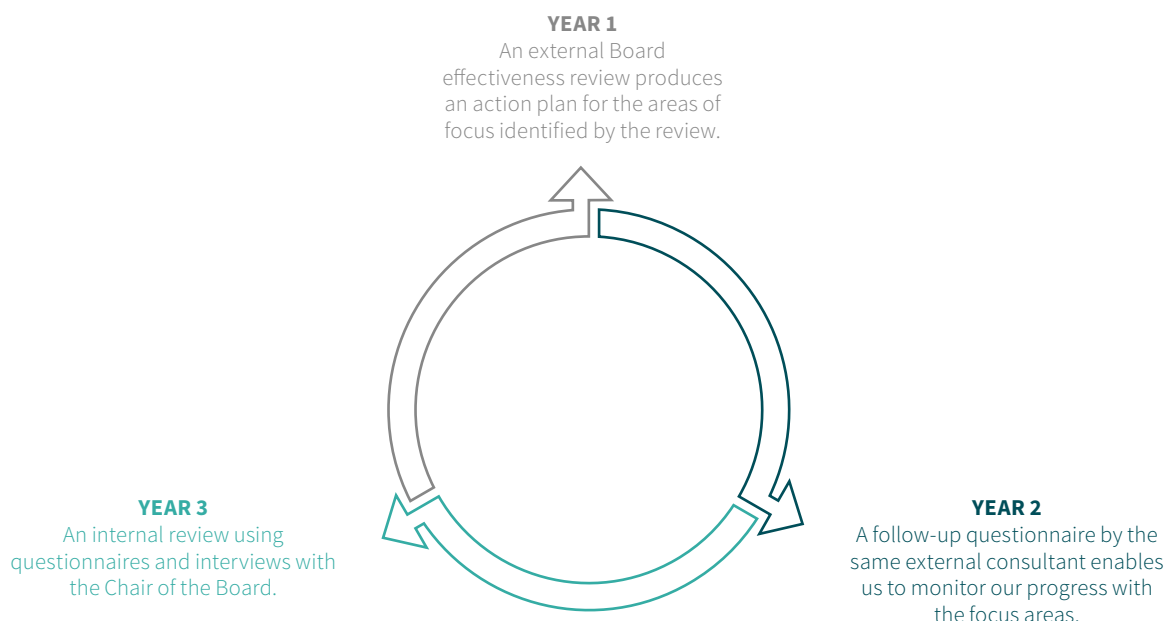
Topic and link to our strategy	Activity	Actions arising	Progress
LEADERSHIP AND EFFECTIVENESS	Monitor Board effectiveness	External evaluation undertaken during the year.	Focus areas identified (see page 59)
LINK TO OUR STRATEGY 	Monitor pipeline of senior talent	Updated on talent initiatives and management outcomes.	New Chief Scientific Officer and Head of Research & Development appointed Global Leadership Conference held in October. See page 36
BUSINESS DEVELOPMENT & STRATEGY	Monitor progress against our strategic objectives	Held strategy meeting with GELT and other business leaders.	See above
LINK TO OUR STRATEGY 	Review and approve business development activities	Approved: <ul style="list-style-type: none"> > Strategic relationship with BCA to develop and commercialise Genus' PRRSv resistance technology in China > Acquisition of Progenex, S.L., a bovine genetics business in Spain > Equity placement to raise £66.5 million (net of fees) > Agreement with Cedar Lane Genetics to provide facilities and labour for 1,600 additional Genetic Nucleus sow spaces > Addition of farrow-to-finish farm capacity in Minnesota to drive the PRRSv programme > Acquisition and development of land in Leeds, WI to relocate and upgrade Bull housing currently situated at the DeForest campus > Expansion of bovine stud facilities in Dekorra, US and Ruthin, UK 	See pages 22 to 23
	Monitor strategic developments	Received updates on: <ul style="list-style-type: none"> > ASF in China and its implications for the pork industry > US litigation relating to IntelliGen technology > Out-licence of IntelliGen technology to various third party customers > Implementation of GenusOne enterprise management system > Material business development opportunities, including summaries of due diligence > Competitor activities > Conducted reviews comparing the performance of acquisitions against anticipated financial model 	See pages 22 to 23
RESEARCH & DEVELOPMENT	Monitor R&D progress	Received updates on: <ul style="list-style-type: none"> > R&D programmes and material investments > The progress of material patent portfolio filings > The progress of the PRRSv development programme and IntelliGen improvements 	See pages 26 to 27
LINK TO OUR STRATEGY 			

Topic and link to our strategy	Activity	Actions arising	Progress
EMPLOYEES LINK TO OUR STRATEGY 	Review recruitment pipeline	<p>Received updates on key vacancies and hires, in particular in relation to the new Chief Scientific Officer and Head of Research & Development, and the scale up of the IntelliGen team and the PIC team in China.</p> <p>Discussed capability building and talent development in leadership below GELT level.</p> <p>Met key talent and business leads on Board site visits.</p>	
	Update on employee feedback	Held town hall meetings with employees and designated Non-Executive Directors.	<p>US Board visit enabled informal meetings with employees.</p> <p>Workforce Engagement Directors met with employees over breakfast at PIC and ABS sites.</p>
SHAREHOLDERS LINK TO OUR STRATEGY 	Monitor investor attitudes towards Genus	<p>Updated on meetings with shareholders, potential investors and analysts.</p> <p>Undertook comprehensive shareholder engagement in connection with the Company's 2018 AGM and 2019 Remuneration Policy.</p>	See pages 69 to 94
COMPANY PERFORMANCE AND FINANCE LINK TO OUR STRATEGY 	Monitor performance against plan	<p>Received updates on:</p> <ul style="list-style-type: none"> > The operational performance of the business > Market conditions for each division <p>Monitored the Group's performance against its strategy, budget and goals.</p>	See pages 30 to 33
	Review past and projected financial performance	<p>Approved the annual and interim results and dividends.</p> <p>Approved the FY20 budget.</p>	
	Monitor key financial issues	<p>Received tax and treasury updates.</p> <p>Received pension updates.</p> <p>Reviewed the Group's financing needs and considered fundraising options.</p>	£66.5m net share placing completed in December 2018.
EXECUTIVE / GELT UPDATES LINK TO OUR STRATEGY 	Monitor business unit performance and plans	<p>Received monthly financial and operational performance updates.</p> <p>Received regular presentations from each business unit.</p> <p>Conducted strategy session comparing performance of each business unit against previously presented strategic goals.</p>	
HEALTH & SAFETY LINK TO OUR STRATEGY 	Ensure strong culture of health and safety	<p>Reviewed FY19 targets for health and safety and reviewed progress throughout the year.</p> <p>Received monthly and quarterly updates from the Head of Health & Safety, including progress against relevant KPIs.</p>	See pages 34 to 41
RISK MANAGEMENT LINK TO OUR STRATEGY 	Monitor risk management and control	<p>Monitored the Group's risk register.</p> <p>Received updates on the whistleblowing hotline reports and investigations.</p>	See pages 44 to 45

THE BOARD'S YEAR IN REVIEW CONTINUED

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 the evaluation was therefore externally facilitated by Sharon Constançon of Genius Methods, an independent evaluator with no other connections to the Company. The evaluation

comprised the observation of Board and Board committee meetings 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 challenge constructively and effectively. The review highlighted the following key strengths:

- > The Board has been effective in the context of being creative, entrepreneurial and forward thinking. The Board has been risk balanced, courageous and has taken some key long-term strategic decisions. The Directors challenge the Executive well.
- > The Chairmanship is clear, meetings are well chaired and the Chairman has a sound relationship with the Chief Executive. The Chairman has provided strong leadership, clarity of direction and a strong ethical culture, and has created a safe environment in which the Directors can operate. The Chairman also has a demonstrable passion for the business.

- > The Board is engaged with the business, cares about the Company and shares a passion for its future direction.
- > The Chief Executive and Group Finance Director are open and transparent with the Board.
- > The Board supported and shared the Chief Executive's entrepreneurial spirit and has enabled the successful transformation of the business. As a result, the business is in a strong position, which encourages the employment and retention of talent.

Board Focus Areas for FY20

The evaluation identified the following priorities for the Board in FY20:

- > The Board will seek to nurture strategic over operational discussions through better management of Board agendas and presentation materials.
- > The Board will ensure greater focus on the Group's research and development pipeline and strategy during the year.
- > The Audit Committee has been renamed the Audit & Risk Committee, and its risk management focus will increase from oversight of operational and financial risks to include risks associated with innovation and future opportunities.
- > The Nomination Committee will focus on the transition to the new Chief Executive, and consider the skills on the Board, ensuring that the Board has the right balance of skills to service its future strategic direction, including with respect to future markets and seeking regulatory approval for, and consumer acceptance of, the commercialisation of gene-edited animals. Given the need to address the succession plan for the Chairman following the transition to the new Chief Executive, the chair of the Nomination Committee will change to the Senior Independent Director.
- > The Board will review its governance procedures to ensure a detailed after-action review is carried out after each Board meeting, and make sure Board papers are clear, calling out progress against key topics and alignment with strategy.

BOARD FOCUS AREAS FOR FY19

The outcomes of last year's internally facilitated review, and the Board's progress with addressing these focus areas, are set out below:

Focus Area	Progress
Reviewing the sequence and timing of Board succession	> Two new NEDs were appointed.
Ensuring appropriate induction of new Directors	> Comprehensive inductions for Lesley Knox and Ian Charles were successfully undertaken during the year
Obtaining greater insights into local and regional operating environments, markets and customer demands	> Regular updates from the Chief Executive > Board and GELT strategy meeting > May Board site visits, including customer visits
Obtaining greater insight into competitors' performance, strategies and weaknesses	> Regular updates from the Chief Executive and the Head of Strategy

THE BOARD’S YEAR IN REVIEW CONTINUED

Stakeholder Engagement

The Group has a wide range of stakeholders and looks to actively engage with them, to keep them updated about our business and our progress and to ensure we understand their priorities. Some of this engagement is carried out directly at Board level, while other engagement occurs during the course of running the business, which the Board keeps informed about through reports from management.

The table below describes our key stakeholders and examples of engagement during the year and any actions which arose from this engagement.

KEY STAKEHOLDER ENGAGEMENT

SHAREHOLDERS OVERVIEW

Genus looks to maintain strong relationships with shareholders, ensuring they understand our strategy, progress and performance and that we understand how they view our business.

EMPLOYEES OVERVIEW

Our people play a crucial role in helping us pursue our strategic goals and uphold the core values that underpin our organisation. We engage, equip and support them to achieve their full potential while building our business.

CUSTOMERS OVERVIEW

Our customers depend on our genetics to improve their businesses and their profitability. We look to understand their needs and to help them make the most of our products and services.

COMMUNITIES OVERVIEW

We look to be a responsible citizen within our communities, supporting local recruitment, responding to crises and supporting charities.

BOARD REPRESENTATIVE



LESLEY KNOX
REMUNERATION COMMITTEE CHAIR

“ We had constructive conversations on the way we seek to align our Remuneration Policy to our business strategy, and the importance of driving strategic evolution in our business in pursuit of long-term value creation for shareholders. Comments from shareholders indicated support for our strategy and recognition for the progress that had been made over the life of the current Policy in evolving Genus into a technology-led organisation.



LYKELE VAN DER BROEK
WORKFORCE ENGAGEMENT DIRECTOR

“ There were some searching questions from some clearly committed employees. We answered them and also asked for their views and ideas. That’s a key part of our role: we want to hear what employees themselves think, so we can share that feedback and discuss as a Board what the Company can do about it.



KARIM BITAR
CHIEF EXECUTIVE

“ Understanding our customers’ needs and taking their feedback is central to validating the performance of our genetics within their production systems, and allows us to share in the value created.



BOB LAWSON
CHAIRMAN

“ We recognise the realities of climate change, and are exploring the ways that Genus can take positive action for the future whilst continuing to fulfil our purpose.

In May 2019 the Board travelled to the US for a week.

The visit comprised Board and Committee meetings, along with updates on the North America PIC business at Hendersonville in Tennessee and the IntelliGen and ABS Beef and Dairy businesses at Deforest in Wisconsin. During these site visits, the Board also hosted lunches with PIC, ABS and R&D employees and local management,

and the Workforce Engagement Directors hosted breakfast meetings with employees without management present.

The Board was able to visit key customer facilities including the Tyson Foods meat packing plant in Sioux City, Iowa where the Board discussed collaboration opportunities for the Beef business.

ENGAGEMENT IN FY19

- > Results announcements, presentations and live webcasts
- > Investor roadshows, led by the Chief Executive and Group Finance Director
- > AGM and trading update in November 2018
- > Annual report

- > The Board has appointed Lesley Knox and Lykele van der Broek as its designated Employee Engagement Directors. During the year site visits were held, including employee town hall meetings with NEDs

- > Board visits to key customers
- > Regular Board updates on targeted customers and customer wins

- > Supported Women in Dairy
- > University internships

- > Regular news flow on key developments in the business
- > Investor discussions in relation to the proposed Remuneration Policy led by the Chair of the Remuneration Committee

- > Chief Executive video update, manager-led updates and updates via intranet following results announcements
- > Leadership calls and quarterly manager briefings
- > Regular intranet communications on business development transactions

- > US customer visits as part of the May Board meeting
- > Engagement with key customers on the communications around PRRSv-resistant pigs

- > Supported charities close to local businesses

ACTIONS ARISING

- > Changes to our proposed Remuneration Policy were made in response to shareholder feedback received
- > The Remuneration Committee considered cases where feedback was specific to one single shareholder or where shareholders held diverging views and determined the most appropriate way forward

- > The Board received updates from the Employee Engagement Directors following the employee town hall meetings and discussed the feedback received

- > The Board discussed customer feedback following US customer site visits and validated the Company's strategy in light of the discussions

- > The Board agreed to develop a Climate Change policy including long-term targets for overall emissions reduction within our operations

NOMINATION COMMITTEE REPORT

Focused on succession



LESLEY KNOX
CHAIR OF
THE NOMINATION COMMITTEE

“
The Board is committed to building recruitment and leadership development programmes that capture inclusivity in our succession planning and talent development.

Dear Shareholder

The Nomination Committee has a vital role in ensuring the Company has an effective and well-balanced Board. It reviews the Board’s structure, size and composition and manages appointments to the Board. The Committee, in consultation with the Board, has focused on succession planning for the Chief Executive, following Karim Bitar’s decision in March 2019 to step down from the Board.

LESLEY KNOX
Chair of the Nomination Committee
4 September 2019

COMMITTEE COMPOSITION

Chair	Members
Lesley Knox	Bob Lawson
	Karim Bitar
	Ian Charles
	Lysanne Gray
	Lykele van der Broek

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

COMMITTEE ROLES 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 FY19

During the year, the Committee continued to focus on the following priorities:

- > succession planning for the Directors and in particular the Chief Executive and Group Finance Director. Succession for the Chairman and the Senior Independent Director was also considered;
- > the evaluation of the Committee as part of the Board evaluation procedure, the results of which can be seen on page 58 of this report;
- > the ongoing review of the Board’s diversity; and
- > the ongoing review of the Board’s mix of skills, to identify any gaps that need to be filled.

THE COMMITTEE’S MAIN ACTIVITIES DURING THE YEAR

The Committee had one formal meeting during the year, primarily to discuss Board and executive succession planning, the Board’s current skills and experience and the recruitment of a new Chief Executive, following Karim Bitar’s decision to step down, which was announced in March 2019. Immediately after this announcement, the Committee initiated an executive recruitment search, through Egon Zehnder, using pre-existing job specifications. Since that time, the Committee has received numerous updates on the process and progress of the executive recruitment at Board and ad hoc Committee meetings.

SUCCESSION PLANNING

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

Assessment	Approach	Execution
<ul style="list-style-type: none"> > 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. 	<ul style="list-style-type: none"> > The Committee applies engagement rules for succession planning, including: <ul style="list-style-type: none"> > 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. 	<ul style="list-style-type: none"> > 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.

BOARD SKILLS MATRIX

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

General Experience and Skills	Majority of Directors with Medium to High Experience
Board and corporate governance	✓
Strategy	✓
Finance, banking and capital markets	✓
Risk, culture change and change management	✓
Politics and public affairs	✓
Stakeholder and Customer Communications	~ ✓
Human resources	✓
IT systems, transformation and data/cyber security	~ ✓
Specific Experience and Skills	
Science and biotechnology	~ ✓
Food sector	✓
FDA Regulated products	~ ✓
International business	✓
US market	✓
EMEA market	✓
Asian market	~ ✓
Latin American market	✓

NOMINATION COMMITTEE REPORT CONTINUED

APPOINTMENTS

The Committee appointed Egon Zehnder, an independent search consultancy with no other links to the Company, to lead the search for the new Chief Executive.

DIVERSITY POLICY

Genus shares the aspirations of the Davies Review and the Hampton-Alexander Review to promote greater representation of females and people from a minority ethnic background on company Boards. Genus makes all Board appointments on individual merit, while recognising the benefits of Board diversity. 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 different viewpoints represented on a diverse Board can help Genus to maintain its competitive advantage. The Board is 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 and minority ethnic candidates. Diversity also links to our values, by being people-focused and responsible, and by encouraging new ideas which deliver for our customers and ultimately drive our results.

The Board, with the support of the Nomination Committee:

- > considers all aspects of diversity when reviewing the Board's composition and conducting the annual Board effectiveness evaluation;
- > encourages the development of high-calibre employees, to create a pipeline of potential Executive Directors;
- > considers a wide pool of candidates for appointment as NEDs, including those with little company board experience;
- > ensures a significant portion of the long list for NED positions are women and candidates from a minority ethnic background;
- > considers candidates against objective criteria and with regard to the benefits of Board diversity; and
- > only engages executive search firms which 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. The Committee reviewed the policy during the year and concluded that it remained appropriate. More information about diversity across Genus can be found in the Strategic Report on pages 34 to 35.

BOARD INDUCTION AND TRAINING

A good induction is a key part of ensuring new Board members can fully contribute, so we get the most benefit from their experience. Our induction programme has three main elements:

- > helping our Board members to conduct themselves effectively, through a course run by Spencer Stuart, one of the world's leading global executive search and leadership consulting firms;
- > ensuring our Directors understand the legal and regulatory aspects of being a Board member; and
- > an introduction to our business, through site visits and meetings with our management teams.

COMMITTEE EFFECTIVENESS AND FOCUS AREAS FOR FY20

Alongside the Board evaluation process described on page 58, we reviewed the performance of the Nomination Committee. This identified a number of important areas of focus for the coming year, including a robust process for the recruitment and transition to the new Chief Executive, the identification of a new Group Finance Director, and subsequently consideration of the succession of the Chairman of the Board.

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 14 November 2019, and at the AGM from at least 15 minutes prior to the meeting until its conclusion.

AUDIT & RISK COMMITTEE REPORT

Ensuring integrity



LYSANNE GRAY
CHAIR OF THE AUDIT & RISK
COMMITTEE

“
The members
bring a sound
range of financial,
commercial and
scientific expertise
to the Committee.

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 was followed during the year.

Last year I welcomed two new members to the Committee, Lesley Knox and Ian Charles. This year has seen two changes to the Committee's membership with the departure of Nigel Turner and Duncan Maskell. On behalf of the Committee I would like to thank both Nigel and Duncan for their years of service to Genus and for ensuring a smooth transfer of knowledge to the new members. I am happy to report that the Committee's membership continues to comply with the UK Corporate Governance Code and related guidance, with all members being NEDs who bring a sound range of financial, commercial and scientific expertise to the Committee. In addition, all members received regular updates from the external auditor, to ensure that they continue to have current knowledge of the accounting and financial reporting standards relevant to the Group's operations.

We have carefully considered the critical accounting policies and judgements, the quality of disclosures and compliance with financial reporting standards, and reviewed the half-year and Annual Report, together with the related external audit reports. We also supported the Board in reviewing the going concern and viability statements and supporting analysis. In addition to this annual work, we have overseen the preparation for the adoption of and on-going compliance with IFRS 9 (Financial Instruments), IFRS 15 (Revenue from Contracts with Customers) in 2019 and IFRS 16 (Leases) in 2020.

Risk management requires continuous focus and during the year we discussed existing and emerging risks. We ensured that the Committee and the Board received and discussed detailed input from management on key risks and mitigation action plans as appropriate. We also discussed the Group's continuing programme to monitor and improve internal controls and received regular updates on the development of a Group-wide enterprise system, which will further strengthen the control environment and support control standardisation across the Group.

Based on assessments of the effectiveness of internal and external audit, the Committee was satisfied with the performance of both internal and external auditors, while taking opportunities to further enhance the audit services provided during the year.

LYSANNE GRAY

Chair of the Audit & Risk Committee
4 September 2019

COMMITTEE COMPOSITION

Chair	Members
Lysanne Gray	Lesley Knox
	Ian Charles
	Lykele van der Broek

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

In addition to all of the Committee members being NEDs, the Committee met the UK Corporate Governance Code's requirement that at least one Committee member should have recent and relevant financial experience, with Lysanne Gray having this experience.

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 systems and control environment, including risk management and 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 perform an independent review to evaluate its performance, and that of its Committees. The last review was performed in 2019 and concluded that the Committee was effective in meeting its objectives. The review recommended that the Audit Committee be renamed the Audit & Risk Committee, and its risk management focus increase from oversight of operational and financial risks

AUDIT & RISK COMMITTEE REPORT CONTINUED

to include risks associated with innovation and future opportunities. A summary of the Board effectiveness review can be found on page 58 of this report.

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 Group Finance Director, the Group Financial Controller, 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:

FINANCIAL REPORTING

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

Financial reporting area	Judgement and assumptions considered
BIOLOGICAL ASSETS VALUATION	In compliance with IAS 41, Genus records its biological assets at fair value in the Group balance sheet (£366.7m), with the net valuation movement excluding foreign exchange translation shown in the income statement. At each reporting period, the Committee was updated on the methodology and outcomes of the biological assets valuation. The methodology remained unchanged during the year and the Committee discussed the estimates used as inputs to the bovine model, to ensure they appropriately reflect the business and market in which Genus operates. 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 was satisfied with management's accounting treatment, including the income statement reduction of £1.9m in the value of porcine biological assets and the reduction of £12.8m in the value of bovine biological assets.
GOODWILL	Genus has £106.3m of goodwill (tested annually for impairment) and £80.1m of intangible assets (tested for any indications of impairment) on the Group balance sheet. Within intangible assets, Genus's policy is to capitalise certain development costs and to perform periodic impairment reviews of the carrying amounts. At the balance sheet date, the Group had £19.0m of capitalised development expenses in respect of IntelliGen. The Committee discussed management's goodwill and intangible asset impairment reviews, as well as the external auditor's report on this area, including its assessment of management's models underpinning the estimates and judgements. After due challenge and debate, the Committee was satisfied with management's assumptions and judgements.
PRESENTATION AND DISCLOSURE OF EXCEPTIONAL AND ADJUSTING ITEMS	Genus had £49.0m of adjusting items, including £21.8m 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.
NEW ACCOUNTING STANDARDS	<p>The Audit & Risk Committee reviewed updates on the impact of the new international accounting standard relating to leases (IFRS 16) on the Group's financial statements.</p> <p>The Group will adopt the IFRS 16 'Leases' standard from 1 July 2019 using the modified retrospective approach. It will recognise the cumulative effect of applying IFRS 16 at the 1 July 2019 transitional date and the prior period will not be restated. The impact on the opening balance sheet as at 1 July 2019 will be to recognise a right of use asset and corresponding lease liability in the region of £28.0m. Operating profit in FY20 is expected to increase in the region of £1m due to the depreciation expense being lower than the lease expense it replaces. Profit before tax is not expected to change materially as increased finance charges will offset the increase in operating profit. IFRS 16 also requires a reclassification of cash flow from operations to net cash used in financing activities, however the overall impact to the Group is cash flow neutral. The Audit & Risk Committee reviewed the disclosure contained in this Annual Report regarding the anticipated impact of the standard on the Group's financial results and position (see note 3 to the consolidated financial statements) and concluded that the presentation of the financial statements is appropriate.</p>

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 risk areas:

- > Enterprise system: the Committee received regular updates on the project to implement a new enterprise-wide business system. The Committee also considered the approach adopted by the project for controls design and integration.
- > Cyber security: the Committee requested and received updates from the Chief Information Officer on the cyber security risk faced by the Group and the activities being undertaken to strengthen infrastructure and systems security.
- > Brexit: the Committee was updated on the Company's assessment of the uncertainty surrounding Brexit, the impact on operations and the mitigation plans developed by management to mitigate the risks.

INTERNAL CONTROL SYSTEM

Our risk management process and system of internal control are described in detail on page 46. The Committee reviewed the approach to internal control standardisation and the results of the key financial controls self-assessment process, which is performed every six months. The Committee also reviewed internal audit's findings at each scheduled meeting and received updates on the implementation of management's remedial actions.

The Committee further reviewed the Group's whistleblowing policy and bribery prevention procedures.

The Committee conducted its annual review of the effectiveness of the Group's internal controls and disclosures. The review did not identify any material deficiencies. However, Genus routinely identifies and implements control improvement opportunities and the Committee discussed with management various opportunities to further strengthen the Group system of internal control.

GOING CONCERN AND VIABILITY STATEMENTS

The Committee supported the Board in performing its assessment of the going concern and long-term viability of the Group, with input from management. The viability assessment, which was based on the Group's operating, capital and funding plans, included consideration of the principal risks, as detailed on pages 44 to 45, and the liquidity and capital projections over the period. The Committee was satisfied that the viability statement could be provided and advised the Board that three years was a suitable period of review. The going concern and viability statement is disclosed on page 46 of the report.

OVERSIGHT OF INTERNAL AUDIT AND EXTERNAL AUDIT INTERNAL AUDIT

The Committee received and reviewed the results of a benchmarking assessment of the internal audit function, which covered its reporting lines, resources, and areas covered by the function. The Committee concluded that the function's set up and coverage were consistent with peer companies of similar size.

The Committee reviewed and agreed the internal audit function's scope, terms of reference, resources and activities. 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 with Andrew Bond as the lead audit partner. This year's audit concluded his five year term (four as lead audit partner and one as partner for a significant component for the Group). A new Deloitte lead audit partner, Mark Tolley, will be appointed for the audit of the financial year ending 30 June 2020. 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 audits 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 received details of the external auditor's non-audit services to the Group, reviewed the nature and monetary levels of these services, which stood at 10% 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 2018 year end, based on questionnaires completed by 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 any regulatory reviews performed on the external auditor. While noting some opportunities for further improvement, 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.

AUDIT & RISK COMMITTEE REPORT CONTINUED

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 on-going risk management process for the Group's significant risks has been 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 44 and 45.

To further assist its understanding of risk, the Board continued its programme of visits to our local operations and received regular political, economic and industry risk updates from the relevant business groups.

The Board performed its annual risk review in May 2019. 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.

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 the 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.

INDEPENDENT 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 Audit & Risk 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.

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 material weaknesses in our internal controls.

REMUNERATION COMMITTEE REPORT

Section A – Annual statement

Continued alignment with business strategy



LESLEY KNOX
SENIOR INDEPENDENT
NON-EXECUTIVE DIRECTOR
AND CHAIR OF THE
REMUNERATION COMMITTEE

Dear Shareholder

On behalf of the Board I am pleased to present the Directors' Remuneration Report for 2019. This is my first report as Chair of the Committee following the retirement of Nigel Turner at the AGM in 2018.

Genus continues to evolve as an organisation which underlines the importance of ensuring we have a Remuneration Policy designed to fit the business and that enables us to attract and retain key talent. In 2018, we increased the base pay of the Chief Executive as a reflection of the evolution of Genus from a traditional agriculture company into an agricultural biotechnology business. We were disappointed with the overall response to the implementation of the Policy in 2018 and the final voting outcome received. We have taken time to understand the cause of our shareholders concerns, which were focussed on the method and pace of the increase rather than the resulting level of fixed pay.

This year as we have approached a full policy review we have engaged closely with many of our shareholders to gain feedback on our existing Policy and on our new Policy proposals. I would like to record my thanks to all shareholders who participated in the review and gave us their thoughts and feedback in a constructive manner.

In March we announced that our Chief Executive, Karim Bitar, had chosen to resign and he leaves the business on 13 September 2019. As a Board we believe that the strategy of the business is robust, and the focus and efforts of the wider team in evolving the business into a technology driven organisation has created solid foundations for the future, focussed on customer led innovation. We are delighted to confirm that Stephen Wilson will move from his existing role as Group Finance Director to become our new Chief Executive from this date. Under his leadership we will seek to enable the company to leverage and develop what is in place, for the benefits of our customers and ultimately to the creation of additional shareholder value. Full details of future reward arrangements for Stephen are outlined within the disclosure on page 76, reflecting the changes we propose within our revised Remuneration Policy.

Genus is a global organisation where future Executive Director appointments could be sourced from outside of the UK where the reward profile may differ from UK norms, both in terms of overall quantum and package structure. We have developed a Policy capable of enabling us to secure the level of talent needed, while recognising the reward structures that potential candidates may be used to, along with expectations from shareholders. These points may not always fully align, and we have sought to strike an appropriate balance in the future design. Areas where we have identified potential differences and sought through our Policy to find an appropriate position are highlighted later in the report.

OUR APPROACH TO THE NEW POLICY

Our assessment is that the essence of the current Policy has served the business well and driven alignment with shareholder interests. The use of Company Milestones enabled a focus on developing the key strategic foundations under which we now operate, such as gaining legal freedom to launch our sexed semen technology and successfully achieving the BCA collaboration in China to research, develop and market PRRS-resistant pigs which we announced in May 2019. We now want to use the Policy that will apply for the next three years to ensure we build upon these foundations and take Genus to the next stage.

Our proposals simplify the annual bonus structure, with a strategic element included within the annual bonus design each year. Therefore 2019 will be the last year that we utilise Company Milestones and these will not form part of our new Policy. The amended structure continues to place emphasis on core financial metrics, while focussing executives on a small number of key strategic objectives, aligned with our business strategy and in pursuit of the creation of long-term shareholder value.

In 2018 the new Governance Code was published which includes clear principles that govern the operation of remuneration and the role of the Committee. These are fully supported by the Committee. Many aspects of our existing Policy already aligned with these, and you will see within our proposed Policy some additions or modifications in response to the expectations of the Code. These include areas such as amendments to our pension policy and the introduction of a post-cessation shareholding policy.

We have always sought to drive consistency through the organisation in our approach to reward, so that our people share a common focus and are united in moving the business forward in a collaborative way. We have highlighted the application of our new Policy across the business within our disclosure. We believe that we should have a common reward framework, which is underpinned by our organisational values, and many aspects of our proposed Policy are items we will continue to cascade through the organisation.

The shareholder consultation process indicated broad support for our planned Policy, but in some areas we heard a range of responses to our proposals. In Section c of the report we highlight these themes, any modifications that we determined were appropriate in response, and the associated rationale.

We believe the proposed Policy demonstrates our role in ensuring that reward structures align with the evolution of the business and the underlying strategy and will enable us to attract and retain talent that reflects the global organisation that Genus has become.

REMUNERATION COMMITTEE REPORT CONTINUED

Section A – Annual statement

This Remuneration Report has been prepared so it complies with the provisions of the Large and Medium-sized Companies and Groups (Accounts & Reports) (Amendment) Regulations 2013, which set out the disclosures required for Directors' remuneration as at the reporting date. The Report is also in accordance with the requirements of the Financial Conduct Authority's Listing Rules.

The Independent Auditor's Report states whether, in the auditor's opinion, the parts of the Report that are subject to audit have been properly prepared in accordance with the legislation. We have highlighted the parts of this Report which have been audited.

CONSIDERATION OF THE WIDER WORKFORCE

Further details on our people and the culture are described within the Annual Report. As a Committee we discussed overall satisfaction with reward and the routes we employ to get insights into how people feel about working in the business. This included our global engagement survey ('YourVoice'), and the way that feedback from the survey drives and influences future plans and priorities. As a Board we will review in 2020 the outputs of the next global engagement survey that will run this Autumn. Lykele van der Broek and I were pleased to be designated as the Board directors charged with understanding the 'employee voice' as cited within the Code, and we have held a number of working sessions with team members on the employee experience at Genus. All Board Directors have engaged with the wider workforce through visits during the year and we look forward to more of these in the future.

Over the past year we discussed the wider reward framework within the business, and the way that the philosophy and values that underpin the remuneration for senior leaders is cascaded through the wider business. We also reviewed the actions taken to ensure understanding of reward by employees, focussing on both what this means at an individual level, but also the underlying rationale for the way we structure reward.

We also reviewed the gender pay outcomes for Genus Breeding Limited, our largest UK subsidiary. This showed a median pay gap of 12.9%, broadly consistent with the previous year and reflecting the current gender profile of the business and proportion of men in more senior roles rather than equal pay differences. We considered the changing gender balance of people joining the organisation and the way we expect the gap to fall over time, as more females come into the business, particularly in our research roles and through our leadership pipeline.

REWARD OUTCOMES FOR 2019

Consistent with our existing Remuneration Policy, Karim Bitar will forfeit any entitlement to a bonus in respect of 2019. Any unvested share awards will also lapse in full following cessation of employment.

Awards were made to Stephen Wilson reflecting attainment against targets set, which are disclosed in detail within the report. The Committee was comfortable that the formulaic outcome was representative of underlying performance of the business over the period and is a fair reflection of achievement against the financial and individual objectives

that were set. The Core Bonus element (based on a combination of financial and non-financial metrics) means that 42.6% of the bonus opportunity is payable, of which one quarter is made in shares under the Deferred Share Bonus Plan ('DSBP') which are deferred for three years.

We set Company Milestones in 2019 against two specific initiatives, one of which we cannot disclose at this stage due to commercial sensitivity reasons, but where we continue to make progress. The other was the strategic collaboration in China with BCA which is explained in depth elsewhere in the Annual Report. This is a highly significant and important step in our PRRSv resistance commercialisation programme, which validates our technology and gives us an excellent partner to advance work on PRRSv resistance in China. The innovative nature of the arrangement is an excellent example of how the business is placing itself to grow strategically in a key market. In recognition of the outcomes achieved through the China collaboration we determined that share awards of 40% of salary would be made through the Company Milestones element to Stephen Wilson.

Awards under the Performance Share Plan ('PSP') granted in September 2016 vest in September 2019. These awards were linked to our EPS performance over the three-year period. Average annual EPS growth of 12.4% means that 78.9% of these shares will vest. Under our Policy, recipients are obliged to retain the post-tax number of shares for a further two years post vesting.

SUMMARY

We have focused over the past year in ensuring that our Remuneration Policy aligns with our pay for performance philosophy. We hope that the accompanying disclosure demonstrates both how we have operated our existing Policy, but also that through a wider review and comprehensive engagement with shareholders, we have defined a new Policy that both reflects wider expectations from shareholders while ensuring we can attract and retain key talent, irrespective of where those candidates may be located in the world.

I look forward to your support at our forthcoming AGM, both in respect of the implementation of our existing Policy in 2019 and the design of our future Remuneration Policy for the coming three years. 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

KEY CHANGES IN OUR NEW POLICY

Our proposed new Policy draws upon the key elements in place now, continuing to align with the business strategy and our pay for performance philosophy.

Theme	Key Change
ALIGNMENT WITH SHAREHOLDER EXPERIENCE	<ul style="list-style-type: none"> > Extended malus and clawback provisions and introduction of a post-cessation holding period > Greater weighting towards key financial metrics within core bonus > Increased deferral levels
SIMPLIFICATION	<ul style="list-style-type: none"> > Consolidation of company milestone into the core design of the Annual Bonus > Simplification of overall bonus design
BEST PRACTICE	<ul style="list-style-type: none"> > Reduction in pension contribution levels for appointment of new Executive Directors in line with wider workforce

Section B – At a glance 2019/20
(For more detail please see pages 83 to 94)

What executive directors were paid in 2019:

1

BASE SALARY AND BENEFITS

- > Salaries were increased effective from 1 September 2018
- > Benefits include a car allowance for each Executive Director and a pension allowance of 25% of base salary for the Chief Executive and 15% for the Group Finance Director

2

ANNUAL BONUS – CORE BONUS

- > Maximum opportunity 125% of salary comprising 80% adjusted profit before tax, 20% cash generation and 25% personal objectives
- > Overall award 42.6% of maximum for Stephen Wilson
- > 25% of the total award under this element made in shares deferred for three years

3

ANNUAL BONUS – COMPANY MILESTONES

- > Maximum opportunity of 75% of salary for the Chief Executive and 50% of salary for the Group Finance Director
- > Company Milestones linked to strategic progress resulted in share awards made to the Group Finance Director of 40% of salary
- > Awards will be made in shares deferred for three years

4

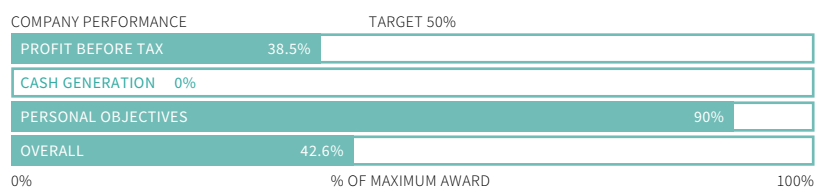
PSP

- > Awards granted in September 2016 vested at 78.9% of maximum based on average annual adjusted earnings per share growth achieved of 12.4%

5

TOTAL REMUNERATION BREAKDOWN

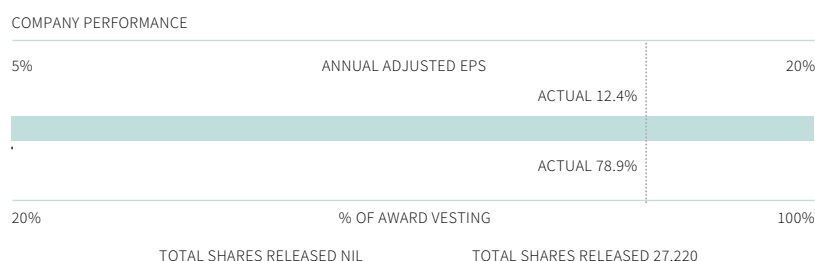
CHIEF EXECUTIVE KARIM BITAR



No annual bonus was payable to Karim on account of his notice to resign which was received in March 2019 ahead of scheduled payment in September 2019. This is in line with the Remuneration Policy agreed in 2016 by shareholders.

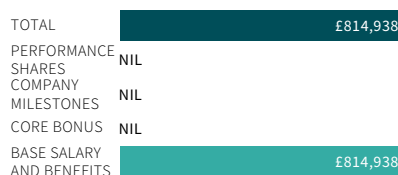


No awards under the company milestone element of the bonus will be made to Karim on account of his notice to resign which was received in March 2019 ahead of the scheduled award date in September 2019.



INDICATIVE VALUE NIL

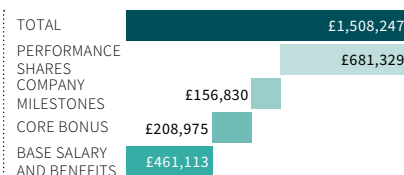
- 1 Calculated based on the average share price for the final quarter of financial year ended 30 June 2019 (2,503p).
- 2 No shares vested for Karim on account of his employment ending before the scheduled vesting date, in line with the rules of the 2014 PSP Plan.



GROUP FINANCE DIRECTOR STEPHEN WILSON



INDICATIVE VALUE £681,329



REMUNERATION COMMITTEE REPORT CONTINUED

Section B – At a glance 2019/20

(For more detail please see pages 83 to 94)

What executive directors can earn in 2020 and how:

1

BASE SALARY AND BENEFITS

- > Stephen will become Chief Executive from 13 September 2019

CHIEF EXECUTIVE: KARIM BITAR (TO 13 SEPT 2019)

Karim Bitar will cease employment on 13 September. His pay and benefits will continue at the current rate through to his date of departure in line with the previous market disclosure.

CHIEF EXECUTIVE: STEPHEN WILSON (FROM 13 SEPT 2019)

Stephen Wilson will be appointed as Chief Executive on 13 September and his salary will change to £590,000 upon appointment into the role.

Benefits such as car allowance and private healthcare will remain unchanged. The pension allowance for Stephen will be reduced to 10% (currently 15% of salary).

The forecast salary and benefits for the year will therefore be as follows, reflecting the transition between roles part-way through our financial year.



1 Including pension.

GROUP FINANCE DIRECTOR

We will announce the details of this Executive Director appointment of this role in due course and confirm remuneration details at that time.

Any payments will be in line with the prevailing Remuneration Policy in place.

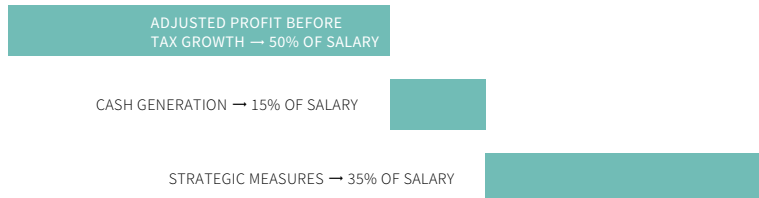
2

ANNUAL BONUS – CORE BONUS

- > Subject to Shareholder approval the structure of the Annual Bonus will change for 2020 and beyond as shown in the table. The weightings between measures will be as shown in the table to the right

Karim Bitar will not be eligible for a bonus in respect of 2020.

STEPHEN WILSON: MAXIMUM OF 175% OF SALARY, TARGET AWARD OF 87.5% OF SALARY



The salary reflecting his appointment as Chief Executive (£590,000) will be used to determine calculation of annual bonus awards for 2020.

3

PSP (SEPTEMBER 2017 AWARDS)

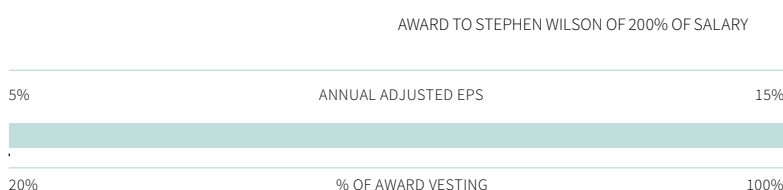
- > The vesting of these awards depends on the adjusted earnings per share (excluding gene editing costs) achieved in the three financial years ending 30 June 2020

Karim Bitar – Not Applicable – Awards will lapse in full upon cessation of employment.



4

PSP (SEPTEMBER 2019 AWARDS)



The vesting of these awards will be subject to an adjusted earnings per share growth, with the 2022 adjusted earnings per share being compared to the 2019 adjusted earnings per share (excluding gene editing costs). Vesting levels will be calculated on a straight-line basis between the values shown.

Section C – Our Remuneration Policy

We are seeking shareholder approval for a new Directors' Remuneration Policy at our 2019 AGM which would apply for awards made from this date. In line with legislation, this is a policy that would be expected to apply for three years from November 2019.

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 2016 had been achieved through implementation and remain applicable for the business.

We discussed our subsequent proposals through a comprehensive shareholder engagement process, approaching our largest 20 shareholders and shareholder representative bodies. Feedback indicated broad support for the alignment of the Policy to the business. It also highlighted a small number of specific themes which are summarised below. We have explained how we considered shareholder responses and any changes to we have made to the proposed Policy in response to the feedback received.

KEY DESIGN/PHILOSOPHY OF OUR PROPOSED POLICY

WHAT WE ARE TRYING TO ACHIEVE

- > 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

HOW WE ARE LOOKING TO ACHIEVE IT

- > Draw upon the aspects of our current policy that are already working
- > Include strategic measures within annual bonus assessment whilst increasing the focus on financial metrics
- > Reduction to pension contribution levels permitted within the policy
- > Introduction of a post-cessation shareholding requirement and enhanced malus and clawback provisions

REMUNERATION COMMITTEE REPORT CONTINUED

Section C – Our remuneration policy continued

KEY AREAS OF FEEDBACK THROUGH SHAREHOLDER CONSULTATION

The full policy that is being tabled to shareholders is provided on pages 76 to 82, indicating changes from our existing Policy.

Area	Theme	Discussion Point	Shareholder Perspective	Summary of proposed change as a result of consultation.
ANNUAL BONUS	Desire to understand the use of strategic and individual metrics within the assessment.	We want metrics that build upon the firm foundations set for the business and demonstrate tangible progress in evolving Genus towards the identified strategy.	Support for metrics that take a broader perspective. Desire for quantifiable assessment (where possible) and an opportunity for further simplification of our Policy.	We will consolidate these into a single Strategic category, with a small number of key metrics for each executive linked to an identified strategic aim.
ANNUAL BONUS	Level of deferral within Policy.	We want to drive alignment through shareholding but recognise that potential recruits may be used to a structure with no deferral (e.g. if previously based in the US).	A clear belief that alignment through shareholding is a positive aspect of the policy, and a desire for an increased level of deferral, with one-third being frequently cited.	We have increased the level of mandatory deferral from 25% to 33%.
ANNUAL BONUS	Potential to make bonus awards to an executive who has resigned.	Ability to make a bonus award to an executive who had resigned but was still actively employed at the scheduled payment date.	Concerns about situations where this could occur and a belief from shareholders that the Policy should not allow for this circumstance.	We have amended our proposed Policy such that bonus awards cannot be made to Executive Directors who have resigned but remain employed at the payment date.
PERFORMANCE SHARE PLAN (PSP)	Whether other metrics or a combination of metrics had been considered?	<p>We believe EPS has served us well and delivered an appropriate alignment in outcomes between reward and performance.</p> <p>We have considered other metrics (in particular TSR) and have rejected this metric due to difficulties in application and the potential for inconsistent performance outcomes.</p>	Shareholders highlighted other potential metrics through discussion. The conclusion was that EPS was working well, and that other metrics had risks of unintended consequences in practice.	No Change.

Area	Theme	Discussion Point	Shareholder Perspective	Summary of proposed change as a result of consultation.
GENE EDITING COSTS	Questions as to the timeframes behind the exclusion of these costs in determining reward outcomes.	We propose to continue to exclude these costs in setting annual bonus targets, and in the determination of vesting of PSP awards through the life of our next Remuneration Policy. This is consistent with our approach since 2016 and continues to encourage management to take a long-term view. (We remain committed to continue to full and transparent disclosure of the impact of this adjustment.)	Shareholders indicated support for this adjustment and the rationale behind it. Some questioned the point at which we believed that these costs should be included as part of normal business activity, and we will review this as part of our next Policy Review, when the rate of progress in this area will be clearer.	No Change.
POST CESSATION HOLDING PERIOD	Question as to the level of holding required and intended application of the Policy.	We want to balance the introduction of a Policy with recognition of existing commitments we have made to executives under our existing Policy. We are committed to a change calculated based on future awards made under our variable plans.	Support for establishment of a Policy and ongoing alignment of executives to company performance beyond cessation of employment.	Increase in holding period for Executives to be 100% of shareholding requirement for 2 years beyond cessation, forward looking in application.
PENSION CONTRIBUTIONS	How level determined within Policy for future hires.	We want flexibility to consider potential candidates and their pension level. This may differ depending on where they are located in the world. 15% is within the range of contributions offered in the UK (not an average number). The UK is a subset of our Global workforce where we see a range of rates and practice.	Many were comfortable with our position and rationale. Others took the stance that it would be simpler to align to a UK number, and ensure that the overall package was competitive.	We will amend our policy such that future hires will have a contribution in line with those available for the wider workforce.

REMUNERATION COMMITTEE REPORT CONTINUED

Section C – Our remuneration policy continued

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					
<p>Payable in cash.</p> <p>Reviewed annually by the Committee with any change effective from 1 September. Factors considered when reviewing salary include:</p> <ul style="list-style-type: none"> > 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. 	<p>Benefits generally include a car allowance and insured benefits (e.g. life assurance and private medical insurance).</p> <p>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.</p> <p>Directors may participate in a Share Incentive Plan (SIP) or any other all employee share scheme on the same terms as other employees.</p> <p>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.</p>	<p>Directors may participate in the Company Pension Plan (a defined Contribution arrangement) or an alternative pension saving vehicle that the Company may provide.</p> <p>Alternatively, the Company may provide a cash supplement in lieu of pension contributions into a scheme.</p> <p>Only base salary is pensionable.</p>	<p>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.</p> <p>Malus and clawback provisions exist for awards made under the Annual Bonus.</p> <p>A dividend equivalent provision enables dividends to be paid (in cash or shares) on deferred shares that vest.</p> <p>See explanatory notes for further details on the operation including leaver provisions.</p>	<p>Awards scheduled to vest three years from grant, subject to continued employment and satisfaction of challenging three-year performance targets.</p> <p>Following vesting the post-tax number of vested shares must be held for at least a further two-year period.</p> <p>A dividend equivalent provision enables dividends to be paid (in cash or shares) on shares that vest.</p> <p>Malus and clawback provisions may apply for a period of three years.</p> <p>See explanatory notes for further details on the operation including leaver provisions.</p>	<p>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 and Performance Share Plans.</p> <p>Once met, individuals are expected to maintain at least this level of shareholding and it will be reviewed by the Committee annually.</p> <p>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).</p> <p>This will apply considering shares awarded in respect of 2020 and beyond (including to any new appointments), and we will not amend existing conditions for current awards. 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.</p>

Base Salary	Benefits	Pension	Annual Bonus	Performance Share Plan	Shareholding
MAXIMUM					
<p>There is no set maximum, but changes are typically in line with the wider workforce.</p> <p>Individual changes may be made at the discretion of the Committee outside of these levels by exception. This could include the following situations:</p> <ul style="list-style-type: none"> > 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. 	<p>The car allowance is capped under the Policy at £20,000 per annum.</p> <p>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.</p>	<p>An allowance will be made available in line with the rate available to the wider workforce.</p> <p>Maximum permitted under the Policy will be 10% of salary.</p>	Maximum opportunity of 200%.	Maximum annual award of 200% of salary (300% of salary in exceptional circumstances, such as recruitment).	n/a
PERFORMANCE CONDITIONS					
n/a	n/a	n/a	<p>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.</p> <p>The specific performance measures are reviewed every year to ensure they continue to support the Company's strategy.</p> <p>Financial measures govern the majority of the bonus and are typically linked to key performance indicators (e.g. profit and cash generation).</p> <p>Strategic measures reflect key areas of importance identified by the Committee in advance.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>Awards vest based on three-year performance against a challenging range of targets, aligned with the delivery of the Company's long-term strategy.</p> <p>Financial targets (including adjusted earnings per share growth) will determine the vesting of a majority of awards granted in any year.</p> <p>The threshold level of vesting is 20% of the maximum. For performance between threshold and maximum, awards vest on a straight-line basis.</p> <p>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.</p> <p>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.</p>	n/a
KEY CHANGE					
Change:	Change:	Change:	Change:	Change:	Change:
> No change.	> No change.	> Contribution aligned to wider workforce for new hires.	> Strategic element included within annual bonus design > Greater weighting towards financial metrics > Increased level of core deferral (to 33%).	> Enhanced malus and clawback provisions.	> Introduction of post-cessation holding period.

REMUNERATION COMMITTEE REPORT CONTINUED

Section C – Our remuneration policy continued

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.

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.

HOW ARE VIEWS OF SHAREHOLDERS CONSIDERED?

We are committed to constructive ongoing dialogue with the Company's shareholders on remuneration. We recognise the cause of concern by some shareholders in 2018 and over the past year we have had conversations with many of our largest shareholders (covering over 60% of our issued share capital) on remuneration and undertook a comprehensive consultation exercise to gain feedback on the proposed Policy. 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. To support ongoing operation of the Policy we will be seeking approval for new Share Plans for both the Deferred Share Bonus Plan (DSBP) and Performance Share Plan (PSP) at the forthcoming AGM. Subject to approval from shareholders, any future awards made after the AGM will be made under these revised Plans.

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 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).

We have increased the range of possible situations where clawback or malus provisions could exist compared to the previous Policy, and these are reflected within the associated revised Plan rules also being tabled for approval at our 2019 AGM. These situations (which would apply to Performance Periods beginning on or after 1 July 2019) include:

- > 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.

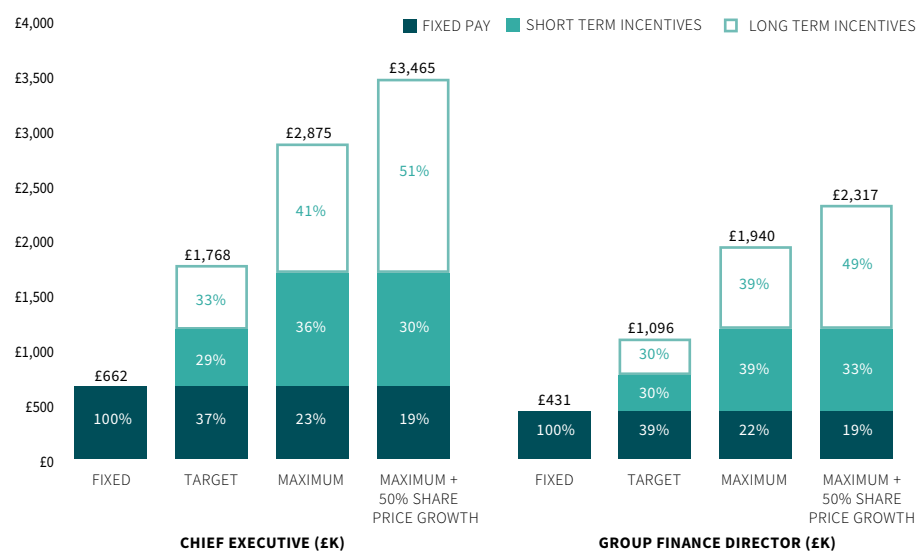
	Annual Bonus (cash)	Annual Bonus (Deferred shares)	PSP
MALUS	Up to the date of payment of a cash bonus	Over vesting period	Over vesting period
CLAWBACK	Two years from the reporting date to which the award relates in event of restatement of financial accounts	Three years from the date of grant of a deferred 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 holding periods.



ASSUMPTIONS

Fixed – Shows the value of fixed pay using a salary value of £590k for Chief Executive and £380k for Group Finance Director, with benefits as per the 2019 single figure value. Pension contributions are shown based on 10% 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.

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.

REMUNERATION COMMITTEE REPORT CONTINUED

Section C – Our remuneration policy continued

Recruitment Policy

Area	Policy and Operation
OVERALL	<p>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.</p> <p>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 pro-rated to reflect the remaining period of the vesting period or financial year. Any award will take into consideration awards granted prior to promotion.</p>
BASE SALARY	<p>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.</p> <p>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.</p>
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 wider workforce as outlined in our Policy table.
ANNUAL BONUS	<p>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.</p> <p>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.</p>
LONG-TERM INCENTIVES	<p>Awards under the Performance Share Plan would be granted in line with the policy outlined for the current Executive Directors.</p> <p>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.</p> <p>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 pro-rated for the portion of vesting period served.</p>
BUY-OUT AWARDS	<p>In addition to normal incentive awards, the Committee will assess whether it is necessary to buy-out remuneration which would be forfeited by an individual from their previous employer.</p> <p>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.</p> <p>In establishing the appropriate value of any buy-out, the Committee would also take into account the value of the other elements of the new remuneration package. The Committee would aim to minimize the cost to the Company. However, buy-out awards are not subject to a formal maximum. Any awards would be no more valuable than those being replaced.</p> <p>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.</p>

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 serves 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

¹ As being tabled for approval by shareholders at the November 2019 AGM.

REMUNERATION COMMITTEE REPORT CONTINUED

Section C – Our remuneration policy continued

NON-EXECUTIVE DIRECTORS' REMUNERATION POLICY

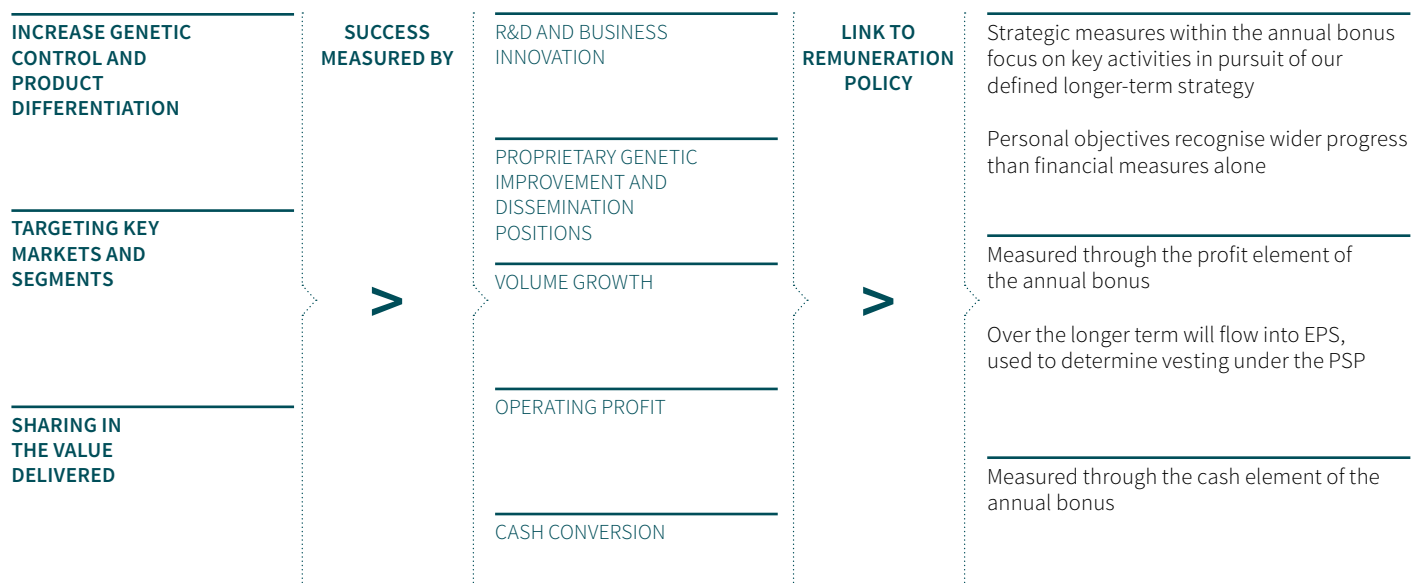
The table below outlines the approach to remuneration for the Chairman and non-executive directors. Neither the Chairman nor other non-executive directors participate in any bonus or share plans. All Non-Executive Directors have specific terms of engagement. Their appointment is for a fixed term of three 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	<p>Payable in cash.</p> <p>The Committee determines the Chairman's fee.</p> <p>The Board periodically reviews Non-Executive Directors' fees.</p> <p>Additional fees are paid to non-executive directors who chair a Board Committee and to the Senior Independent Director ('SID').</p> <p>No Directors take part in meetings where their own remuneration is discussed.</p> <p>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.</p>
MAXIMUM	<p>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.</p> <p>The periodic review may result in an increase beyond the fees currently payable.</p> <p>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. The fees payable for 2020 are stated on page 90.</p>
PERFORMANCE CONDITIONS	None
KEY CHANGE	<p>Change:</p> <p>None</p>

Section D – Remuneration and Performance Statement

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

See pages 73 to 82 for the details of our Proposed Remuneration Policy. Our strategy and the way this is linked to variable reward is shown below.

**PERFORMANCE COMPONENTS AND THEIR IMPACT ON REMUNERATION**

	2018	2019	Movement %	Impact on remuneration
Adjusted results				
Revenue	£470.3m	£488.5m	4	Input to annual bonus profit and earnings per share in PSP.
Adjusted profit before tax	£58.5m	£61.0m	4	Annual bonus measure.
Generation of free cash flow	£24.3	£10.0m	(59)	Annual bonus measure.
Adjusted earnings per share	75.9p	73.2p	(4)	PSP performance condition.
Dividend per share	26p	27.7p	6.5	Executives rewarded via dividend equivalent feature of deferred bonuses and PSP awards.
Share price at year end	2,636p	2,648p	0	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 earnings per share 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 2019 (£) ¹	Consequence of a +/- £2 share price change (£)	Conclusion
Karim Bitar	96,461	22,026	118,487	2,965,723	236,973	Executives remain aligned to share price
Stephen Wilson	56,754	11,923	68,677	1,718,996	137,355	

1 Value calculated using the average share price for the final quarter of the financial year ended 30 June 2019 (2,503p).

REMUNERATION COMMITTEE REPORT CONTINUED

Section E – Annual Report on Remuneration

INTRODUCTION

This section of the Directors' Remuneration Report is subject to an advisory vote at the 2019 AGM. Remuneration in respect of 2019 is determined by our Remuneration Policy agreed by 96.1% of shareholders at the 2016 AGM. This can be found in our 2016 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 2019.
2. What the Executive Directors Can Earn in 2020.
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 2019

EXECUTIVE DIRECTORS' SINGLE TOTAL REMUNERATION FIGURE (AUDITED)

The following table shows a single total figure of remuneration for the 2019 financial year for each of the Executive Directors and compares this figure to the prior year.

	Year	Salary and fees £000s	Benefits ¹ £000s	Benefits ² £000s	Subtotal for fixed pay £000s	Annual bonus ³ (Core Bonus) £000s	Annual bonus (Company Milestone) ⁴ £000s	PSP ⁵ £000s	Subtotal for variable pay £000s	Total £000s
Karim Bitar	2019	626	33	156	815	Nil	Nil	Nil	Nil	815
	2018	555	23	138	716	515	195	1,123 ⁶	1,833	2,549
Stephen Wilson	2019	390	13	58	461	209	157	681 ⁵	1,047	1,508
	2018	376	13	57	446	349	88	666 ⁶	1,103	1,549

1 Benefits include a car allowance of £20,000 for Karim Bitar and £12,000 for Stephen Wilson. Insured benefits include life assurance, private medical insurance and a medical screen. The increase in benefits value for the Chief Executive relates to a change in the costs of private healthcare provision.

2 Executive Directors receive a cash allowance in lieu of pension, which is shown in the Pension column.

3 Bonus earned includes the 25% of the Core Bonus element which is deferred into Company shares.

4 All awards under the Company Milestone element are made in shares deferred for three years.

5 The value of the PSP is determined by the number of awards vesting in relation to performance in the period ended 30 June 2019. Dividend equivalents are not added to awards made under the PSP. The value shown for 2019 is based on the average share price for the final three months of the 2019 financial year (which was 2,503p). This compares to the share price at grant of 1,884p (+33%).

6 The 2018 values shown as estimated in the previous Annual Report have been restated to reflect the actual value at vesting. The share price was 2,544p on 14 September 2018 when awards vested for the Chief Executive and Group Finance Director.

HOW THE BONUSES FOR 2019 WERE CALCULATED

ANNUAL BONUS: CORE BONUS ELEMENT

The 2019 bonuses for Executive Directors were calculated by reference to performance against a challenging sliding scale of profit, cash flow and personal targets. 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 2017 and 2018) 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	Proportion of salary (maximum)	Actual 2019 performance	Threshold (0% Award)	Target (50% award)	Stretch (Full Award)	Extent to which targets were met (%)
Adjusted profit before tax ²	Year-on-year profit growth	80%	£68.4m	£63.5m	£69.8m	£73.0m	38.5%
Generation of free cash flow	Generate cash for reinvestment and dividend	20%	£10.0m	£12.4m	£15.4m	£18.4m	0%
Personal objectives	To build the foundation for future growth	25%	See table				Chief Executive n/a Group Finance Director 90%

1 The financial elements of the bonus are payable on a straight-line basis between each threshold, target and stretch level.

2 Adjusted profit before tax in constant currency was £61.3m (actual currency was £61m).

PERSONAL OBJECTIVES

Performance against personal objectives related to targets set in a number of areas that included customers, people, and product and service improvement. Performance against these targets is disclosed retrospectively, as follows:

Executive Director	Key achievements in the year		Payout against maximum of 25% of salary
Stephen Wilson	Customer/ stakeholders	<ul style="list-style-type: none"> > Strong performance in capital placement process and associated reaction from shareholders. 5% equity placement raised a net £66.5m. > Role in negotiating and steering business development and commercial activity to a successful conclusion. > Active participation in driving new business development within IntelliGen. 	90%
	People	<ul style="list-style-type: none"> > Continuing strengthening of the Finance and IT functions including deepening of succession planning. 	
	Product and service improvement	<ul style="list-style-type: none"> > Go-live of our HR and financial reporting modules within our new enterprise system ('GenusOne'). Continued progression of developing and implementing against wider roll-out plans. > Improvements to delivery of IT support through the business, and enhancements to IT hardware and software across the Group. 	

No bonus was payable to Karim Bitar as he resigned from the business in March 2019. Under our Remuneration Policy no bonus is payable if an executive has resigned and is under notice at the point of payment. The award for Stephen Wilson under our Core Bonus was an award of 42.6% of maximum, which represents 53.3% of salary.

ANNUAL BONUS: COMPANY MILESTONES

The Committee included this element of the annual bonus for 2019 as disclosed in our 2018 Directors' Remuneration Report.

The maximum opportunity under the Company Milestone element of the bonus was an award of shares deferred for three years and worth up to 75% of salary for the Chief Executive and 50% of salary for the Group Finance Director. As was the case with our Core Bonus, no award was payable to Karim Bitar following his decision to resign from the business earlier in 2019. The performance criteria and resulting award for Stephen Wilson as determined by the Committee is as follows:

Performance criteria	Outcome/progress made	Resulting award
Securing a technology partnership in China in connection with our PRRS programme	<p>Innovative strategic collaboration with BCA announced in May 2019 – a key step in our PRRS commercialisation programme.</p> <p>Initial agreed phase to focus on research, development and regulatory approval of PRRSv resistant pigs.</p> <p>Agreed schedule of upfront and milestone cash payments (as disclosed elsewhere within the Annual Report). Agreed terms to create joint venture combining existing PIC China with BCA Future Bio-Tech.</p> <p>Intellectual property royalties from the joint venture on sales in China of PRRSv resistant pigs.</p>	Award of shares deferred for three years for Group Finance Director of 40% of salary.
Confidential Project	We have continued to make good progress against a second project that cannot be disclosed for commercial sensitivity reasons ¹ .	

¹ Committee will disclose the nature of this project at a point where it is deemed no longer commercially sensitive.

As a result of this performance, the total annual bonus (comprising both the Core Bonus and Company Milestone elements) awarded to the Executive Directors was:

	Annual bonus: Core Bonus			Annual bonus: Company Milestone		Total bonus		
	Extent to which targets were met	(75%) Cash bonus	(25%) Deferred shares	Extent to which targets were met	Deferred shares	Total cash	Deferred shares ¹	Total
Karim Bitar	n/a	Nil	Nil	n/a	Nil	Nil	Nil	Nil
Stephen Wilson	42.6%	£156,732	£52,244	80%	£156,830	£156,732	£209,074	£365,805

¹ The number of shares will be calculated in September 2019 when bonuses are paid.

REMUNERATION COMMITTEE REPORT CONTINUED

Section E – Annual Report on Remuneration continued

1. WHAT THE EXECUTIVE DIRECTORS WERE PAID IN 2019 CONTINUED

HOW THE PERFORMANCE SHARE PLAN FIGURE WAS CALCULATED IN THE SINGLE TOTAL REMUNERATION TABLE

The award made to Karim Bitar will lapse in full (and no corresponding value is shown in the single figure table) reflecting his leave date from Genus of 13 September, ahead of when these awards are scheduled to vest.

Stephen Wilson's PSP award granted on 14 September 2016 was subject to a performance condition, based on the growth in adjusted earnings per share from 2016 to 2019. The range of targets applicable to the award, which had a value of 175% of salary at grant was as follows:

Average annual growth in adjusted earnings per share ¹	% of award Vesting
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 2019 earnings per share after the cost of share-based payments and adjusting for costs relating to gene editing was 78.3p. This represents an average annual growth in adjusted earnings per share of 12.4% compared to the comparable 2016 adjusted earnings per share figure (after the cost of share-based payments). The resulting level of vesting is therefore 78.9% of maximum¹. Stephen Wilson's award was over a maximum of 34,500 shares, so the actual level of vesting is 27,220 shares and these will vest on 14 September 2019.

The Company's average share price for the period from 1 April 2019 to 30 June 2019 was 2,503p, meaning that the values shown for these awards within the single figure table are £nil for Karim Bitar and £681,329 for Stephen Wilson.

1 The average annual earnings per share growth including gene editing costs after share-based payments was 8% and the associated vesting level would have been 44.4% of maximum.

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.

EXECUTIVE 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. Karim Bitar is a Non-Executive Director of Spectris Plc and received fees totalling £60,000 during the year.

2. WHAT THE EXECUTIVE DIRECTORS CAN EARN IN 2020

A summary of this chapter is given on page 72.

BASE SALARY

In line with other UK employees, the date of salary review is 1 September 2019. No change will be made to the salary for Karim Bitar and we will continue to pay existing base salary and benefits through to the cessation of his employment on 13 September 2019. Stephen Wilson will be appointed as Chief Executive on 13 September with an annual salary of £590,000.

BENEFITS

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

PENSION

In lieu of Company pension contributions, the Company pays the outgoing Chief Executive and Group Finance Director a taxable pension allowance of 25% and 15% of basic salary per annum respectively. On appointment to the Chief Executive role the value paid to Stephen Wilson will be reduced to 10% of salary. Any future appointments to Executive Director roles will have an allowance aligned to that available to the wider workforce.

PERFORMANCE-RELATED ANNUAL BONUS

Attached with this disclosure is our proposed Remuneration Policy that we will table to shareholders at our forthcoming AGM in November 2019. Subject to approval by Shareholders the structure for variable remuneration for executive directors for 2020 will be as follows:

ANNUAL BONUS

Value of bonus	A maximum of 175% for the Chief Executive Officer based on profit, cash generation and strategic measures. On-target value of 87.5% of salary. The salary reflecting Stephen Wilson's appointment as Chief Executive (£590,000) will be used to determine calculation of annual bonus awards, consistent with how we operate our annual bonus plan across the business.		
Performance measures	Adjusted profit before tax	50% of opportunity	
	Cash generation	15% of opportunity	
	Strategic Measures	35% of opportunity	
Calibration of profit target	No bonus is payable in respect of profit unless the prior year's result is exceeded. Thereafter, the Bonus award is determined on the following basis:		
	Growth on prior year adjusted before tax ¹		Pay-out (profit element)
	0%		0%
	10% growth delivers		50%
	15% growth delivers		100%
	Straight-line payout between performance points.		
	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 £3m below the target and £3m above. Specific numbers were set (rather than a percentage range) to ensure Executives are focused on actual cash generation.		
Calibration of strategic measure	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 them in advance. We will retrospectively disclose performance against these targets.		
Bonus deferral	33% 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 2020 will be granted under the 2014 PSP Plan. Stephen Wilson will be granted an award over shares worth 200% of salary. 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 2023 for two years. Enhanced Clawback and malus provisions will apply to these awards as outlined within our Remuneration Policy, including reputational damage and corporate failure. Future awards would be expected to be made under the 2019 PSP Plan, subject to approval of this Plan by shareholders at the 2019 AGM.

The performance targets for the awards to be granted in 2020 will primarily relate to average annual growth in adjusted earnings per share, measured over three years and excluding gene editing costs. The same approach will govern awards due to vest in 2020.

The range of targets for the 2020 awards is as follows:

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 excluding gene editing costs.

The Committee continues to believe that using adjusted earnings per share is an appropriate measure of long-term performance of the business, and this is consistent with awards granted over the past few years. The Committee believes the above performance range is appropriately challenging, that they incentivise Executives to deliver the Company's growth strategy and are therefore aligned with shareholders' interests. They also adhere to the principles of transparency and simplicity, to maximise the incentive provided to participants by the 2014 PSP.

The Committee will be able to scale back vesting based on earnings per share performance 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.

REMUNERATION COMMITTEE REPORT CONTINUED

Section E – Annual Report on Remuneration continued

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 2019, the Committee comprised:

Director	Independent	Attendance at meetings
Nigel Turner ¹ (Chairman)	Yes	4/4
Lesley Knox ²	Yes	6/6
Duncan Maskell ³	Yes	2/4
Lykele van der Broek	Yes	6/6
Lysanne Gray	Yes	6/6
Ian Charles	Yes	4/6
Bob Lawson	Yes	6/6

1 Nigel retired from the Board following the AGM on 15 November 2018.

2 Lesley was appointed Chair of the Remuneration Committee on 15 November 2018.

3 Duncan retired from the Board following the AGM on 15 November 2018.

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 Group Finance Director 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 £71,125 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, international assignments and actuarial advice to the Group.

During the year to 30 June 2019, the Committee met six times and considered the following matters:

JULY 2018

- > Pay review for GELT members.
- > Discussion of Company Milestones.

JULY 2018

- > Review of Directors' Remuneration Report.

SEPTEMBER 2018

- > Approval of the Directors' Remuneration Report for 2018.
- > Determination of Annual Bonus awards in respect of 2018.
- > Testing of the performance conditions and approval of the vesting levels of long-term share incentive awards granted in 2015.
- > Approval of long-term share incentive awards under the Company's 2015 PSP and the associated performance targets.
- > Review of shareholdings by Executive Directors and GELT.
- > Approval of PSP for senior leadership and review of share dilution.

NOVEMBER 2018

- > Discussion of shareholder voting on the Annual Remuneration Report and follow up actions.
- > Review of remuneration reporting trends for 2018.

APRIL 2019

- > Discussion of policy review analysis and proposed changes.
- > Review of shareholder perspectives and trends in corporate governance and discussion of AGM season.
- > Discussion of gender pay findings within Genus Breeding Limited.

MAY 2019

- > Follow up discussion on policy review and approach to shareholder consultation.
- > Update on approach to reward for all employees in Genus and read across to executives.

HOW SHAREHOLDERS' VIEWS ARE TAKEN INTO ACCOUNT

We consulted with shareholders ahead of proposing our existing Remuneration Policy to shareholders at our 2016 AGM, where over 96% of shareholders voted in support of the Policy. In 2019 we have undertaken a comprehensive engagement exercise in determining our new Policy contained within this report.

In our 2018 Annual Report we described the change that we were making to the pay arrangements of our Chief Executive. This followed a consultation process with our largest shareholders, and the associated rationale was described in the Report. A number of shareholders chose not to support the way we had implemented the Policy, resulting in around 32% voting against the resolution. The results of the most recent vote was as follows:

	Vote on Directors' Remuneration Report (advisory)	
	Total number of votes	% of votes cast
For	26,732,450	67.9
Against	12,621,755	32.1
Total number of shares in respect of which votes were validly made	39,354,205	100
Votes withheld	3,288,952	

We believe that the actions taken were appropriate, to retain and motivate a very high calibre leader who was steering the transformation of the business, creating significant long-term stakeholder value, and setting the future strategic direction of the Company as it transforms into an agricultural biotechnology pioneer.

Following the vote we engaged again with shareholders and offered to meet with them to discuss the vote and the concerns raised, and published updates on this point following our AGM and within six months of our AGM on our website.

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 on the pay structures across the organisation and how they fit the Group's Remuneration Policy. The process includes a staff engagement survey that includes questions on pay, as well as consulting employees informally on their views of the current overall Remuneration Policy. This forms part of the feedback provided to the Committee and is used to assess the Remuneration Policy's ongoing effectiveness and the changes that should be made.

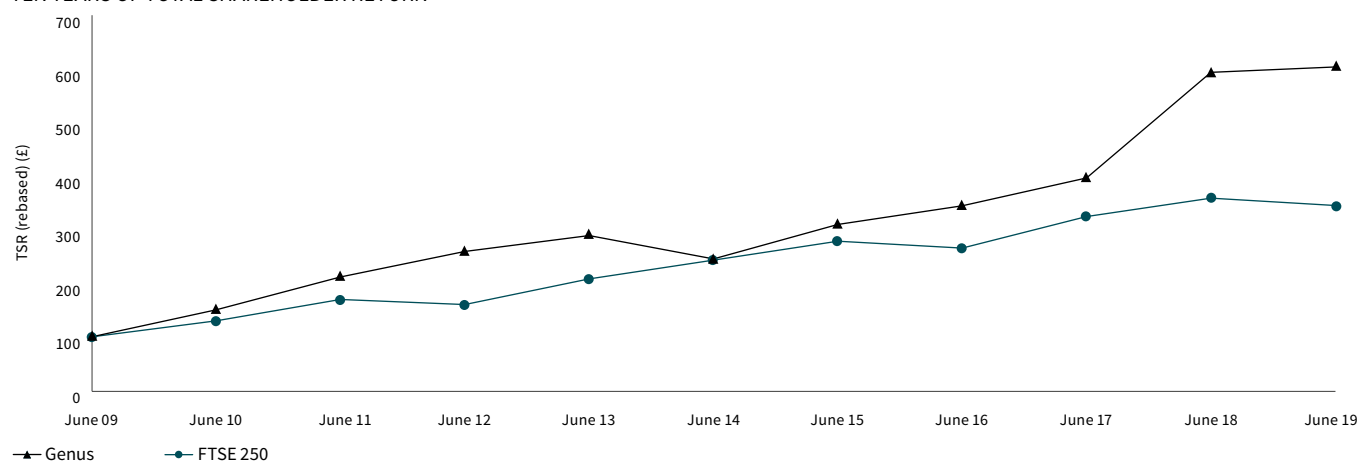
When setting the Executive Directors' base salaries, the Committee compares the salary increases proposed for each Executive Director within those proposed for employees in their geographical location, as well as considering the typical increase proposed across our UK business and the wider Group.

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



This graph shows the value, by 30 June 2019, of £100 invested in Genus plc on 30 June 2009 compared with the value of £100 invested in the FTSE 250 index. Source: Thomson Datastream.

REMUNERATION COMMITTEE REPORT CONTINUED

Section E – Annual Report on Remuneration continued

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

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.

	Year ending 30 June 2019										
	Richard Wood			Karim Bitar							
	2010	2011 ¹	2012	2012 ²	2013	2014	2015	2016	2017	2018	2019
Total remuneration (£000s)	£2,034	£2,383	£231	£1,776	£868	£877	£1,622	£1,704	£2,856	£2,549	£815
Annual bonus (% of max)	64%	94%	88%	77%	31%	32%	99%	78%	59% ³	64% ³	Nil⁴
Total PSP vesting (% of max)	100%	88%	–	–	–	–	26%	34%	79%	56%	Nil⁵

1 PSP vesting relates to all awards that were tested early on cessation of employment.

2 Includes payment (as previously disclosed) for loss of annual bonus (£163,000) and the value of restricted stock (£755,000) granted to compensate him for loss of value forfeit on joining Genus.

3 Includes the award under the Company Milestone element of the annual bonus.

4 No awards are payable in respect of 2019 following the decision of Karim to resign from the business.

5 Vesting will be nil as Karim's employment cessation date (13 September 2019) is before the scheduled vesting of the 2016 PSP award.

CHIEF EXECUTIVE PAY COMPARED TO GENUS EMPLOYEES

REMUNERATION RECEIVED (% CHANGE FROM 2018 TO 2019)

	Salary %	Benefits ³ %	Annual bonus %
Chief Executive	13%	43%	(100%) ¹
UK comparators ²	3.9%	0%	(21%)

1 Includes the award made under the Company Milestone element of the annual bonus.

2 A subset of the UK workforce comprising employees with a bonus structure based on Group performance. This is considered the most relevant comparator group for these purposes.

3 Excludes pension. The increase for the Chief Executive relates to costs of provision of private healthcare under our agreed Policy.

DISTRIBUTION STATEMENT

	2018	2019	% change
Employee costs (£m)	£148.4m	£157m	5.8%
Distributions to shareholders ¹	£14.9m	£16.8m	12.8%

1 Includes dividends and share buy-backs.

5. THE CHAIRMAN AND NON-EXECUTIVE DIRECTORS' FEES

Fees payable to the Non-Executive Directors per annum are as follows:

Position	2017 fees	2018 fees	2019 fees
Chairman	£160,000	£160,000	£160,000
Audit and Remuneration Committee Chairs	£60,000	£60,000	£60,000
Adviser to R&D PMT	n/a	£65,000	£65,000
Base Non-Executive Director fee	£55,000	£55,000	£55,000

Fees were increased in 2016 (as explained in the Directors' Remuneration Report set out in the 2015 Annual Report and approved at the 2015 AGM). The Chairman's fee, which had not been reviewed since 2010, was increased to £160,000 and Non-Executive Director fees, which were last reviewed in 2012, increased to £55,000 which includes, for each of them, their fees for membership of the Board's Committees. The responsibilities of chairing the Audit and Remuneration Committees were also recognised with an additional fee of £5,000, giving the Chairs of these Committees a total fee of £60,000. Fees will continue at this level for the coming year.

TOTAL SINGLE FIGURE OF REMUNERATION (AUDITED) FOR 2018 AND 2019 ARE AS FOLLOWS:

		Fees £000s	Taxable expenses £000s	Benefits £000s	Total £000s
Non-Executive Directors					
Bob Lawson	2019	160	11	–	171
	2018	160	3	–	163
Nigel Turner ¹	2019	25	2	5	32
	2018	60	2	–	62
Duncan Maskell ²	2019	27	1	3	31
	2018	65	2	–	67
Lykele van der Broek	2019	55	1	4	60
	2018	55	1	3	59
Lysanne Gray	2019	60	1	–	61
	2018	60	1	–	61
Ian Charles ³	2019	55	0	–	55
	2018	–	–	–	–
Lesley Knox ⁴	2019	55	2	–	57
	2018	5	–	–	5
Total	2019	437	18	12	467
	2018	405	9	3	417

1 Nigel Turner stepped down from the Board on 15 November 2018.

2 Duncan Maskell stepped down from the Board on 15 November 2018.

3 Ian Charles joined the Board on 1 July 2018.

4 Lesley Knox joined the Board on 1 June 2018.

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:

	At 30 June 2019 Number	% of salary held ¹	Shareholding guideline ²	Unvested DSBP awards at 30 June 2019 Number	Unvested PSP awards held at 30 June 2019 Number	At 30 June 2018 Number
Bob Lawson	8,557	n/a	n/a	n/a	n/a	8,557
Karim Bitar	96,461	464%	200%	41,558	169,815	68,213
Stephen Wilson	56,754	438%	200%	22,497	97,556	39,528
Ian Charles	0	n/a	n/a	n/a	n/a	–
Lykele van der Broek	3,750	n/a	n/a	n/a	n/a	3,750
Lysanne Gray	0	n/a	n/a	n/a	n/a	0
Lesley Knox	2,000	n/a	n/a	n/a	n/a	2,000
Duncan Maskell ³	0	n/a	n/a	n/a	n/a	0
Nigel Turner ³	15,000	n/a	n/a	n/a	n/a	15,000
Total	182,522			64,055	267,371	137,048

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 2019 of 2,503p.

2 Executive Directors are expected to work towards achieve a shareholding of 200% of salary as set out in the Remuneration Policy agreed by shareholders in 2016.

3 Value shown as at their date of ceasing to be a Director of the Company.

There were no changes in the Directors' interests between 30 June 2019 and the date of this report.

REMUNERATION COMMITTEE REPORT CONTINUED

Section E – Annual Report on Remuneration continued

6. DETAILS OF THE DIRECTORS' SHAREHOLDINGS AND RIGHTS TO SHARES CONTINUED**COMPANY SHARE PRICE**

The market price of the Company's shares on 30 June 2019 was 2,648p and the lowest and highest share prices during the financial year were 2,098p and 2,992p respectively.

PERFORMANCE SHARE AWARDS GRANTED IN 2019 (AUDITED)

The awards granted under the 2014 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
Karim Bitar	55,225	£1,279,563 (200%)	20	01.07.18–30.06.21
Stephen Wilson	29,613	£686,133 (175%)	20	01.07.18–30.06.21

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 2,317p for Karim Bitar and Stephen Wilson (award granted on 9 October 2018).

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 2019 (AUDITED)

The following DSBP awards were granted in relation to the 2018 annual bonus. The basis of the awards' calculation is described in more detail on page 85:

Executive	Number of shares comprising award	Face value of awards at grant date ¹
Karim Bitar	13,956	£323,361
Stephen Wilson	7,559	£175,142

These awards are not subject to any further performance conditions and will normally vest in full on 9 October 2021, subject to continued service. The award for Karim will lapse on 13 September 2019 on cessation of employment with Genus.

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 2,317p for Karim Bitar and Stephen Wilson (award granted on 9 October 2018).

SUMMARY OF SCHEME INTERESTS (AUDITED)

At 30 June 2019, the Executive Directors had the following beneficial interests in share awards and share options:

KARIM BITAR

Grant date	Award	Vesting period	Share price at grant	At 30 June 2018 Number	Granted in year Number	Lapsed in year Number	Exercised in year Number	At 30 June 2019 Number
14 September 2015	DSBP	14 September 2015 to 14 September 2018	1,363p	11,927	–	–	(11,927)	–
14 September 2015	PSP	14 September 2015 to 14 September 2018	1,363p	78,850	–	(34,694)	(44,156)	–
14 September 2016	PSP	14 September 2016 to 14 September 2019	1,884p	58,186	–	–	–	58,186
14 September 2016	DSBP	14 September 2016 to 14 September 2019	1,884p	6,973	–	–	–	6,973
13 September 2017	PSP	13 September 2017 to 13 September 2020	1,973p	56,404	–	–	–	56,404
13 September 2017	DSBP	13 September 2017 to 13 September 2020	1,973p	20,629	–	–	–	20,629
09 October 2018	PSP	9 October 2018 to 9 October 2021	2,317p	–	55,225	–	–	55,225
09 October 2018	DSBP	9 October 2018 to 9 October 2021	2,317p	–	13,956	–	–	13,956
Total				232,969	69,181	(34,694)	(56,083)	211,373

STEPHEN WILSON

Grant date	Award	Vesting period	Share price at grant	At 30 June 2018 Number	Granted in year Number	Lapsed in year Number	Exercised in year Number	At 30 June 2019 Number
14 September 2015	DSBP	14 September 2015 to 14 September 2018	1,363p	7,980	–	–	(7,980)	0
14 September 2015	PSP	14 September 2015 to 14 September 2018	1,363p	46,753	–	(20,572)	(26,181)	–
14 September 2016	PSP	14 September 2016 to 14 September 2019	1,884p	34,500	–	–	–	34,500
14 September 2016	DSBP	14 September 2016 to 14 September 2019	1,884p	4,725	–	–	–	4,725
13 September 2017	PSP	13 September 2017 to 13 September 2020	1,973p	33,443	–	–	–	33,443
13 September 2017	DSBP	13 September 2017 to 13 September 2020	1,973p	10,213	–	–	–	10,213
09 October 2018	PSP	09 October 2018 to 09 October 2021	2,317p	–	29,613	–	–	29,613
09 October 2018	DSBP	09 October 2018 to 09 October 2021	2,317p	–	7,559	–	–	7,559
Total				137,614	37,172	(20,572)	(34,161)	120,053

In relation to the share awards granted on 9 October 2018, the closing average share price over the three days prior to 9 October 2018 (the grant date for the PSP awards) of 2,317p was used to determine the number of shares comprising individual awards.

The performance targets applying to the 09 October 2018 awards are as described above. An earnings per share range also applied to awards made in 2017 and 2016. No further performance conditions apply to the DSBP awards other than continued employment with the business.

DILUTION

The aggregate dilution of all relevant share incentives is 4.30% as at 30 June 2019, which is less than the permissible 10% in ten years dilution limit.

REMUNERATION COMMITTEE REPORT CONTINUED

Section E – Annual Report on Remuneration continued

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				
Karim Bitar	24 May 2011	24 May 2011	n/a	12 (from Company), 6 (from Executive)
Stephen Wilson	12 December 2012	12 December 2012	n/a	12 (from Company), 6 (from Executive)
Non-Executives				
Bob Lawson	11 November 2010	11 November 2016	11 November 2019	1
Lykele van der Broek	1 July 2014	1 July 2017	1 July 2020	1
Lysanne Gray	1 April 2016	1 April 2019	1 April 2022	1
Lesley Knox	1 June 2018	1 June 2018	1 June 2021	1
Ian Charles	1 July 2018	1 July 2018	1 July 2021	1

Approved by the Board and signed on its behalf by:

LESLEY KNOX

Chair of the Remuneration Committee

4 September 2019

DIRECTORS' REPORT



DAN HARTLEY
GROUP GENERAL COUNSEL
AND COMPANY SECRETARY

DIRECTORS

The Directors and the dates of their respective appointments are listed on pages 50 and 51.

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.

DIVIDEND

The Board is recommending to shareholders a final dividend of 18.8 pence per ordinary share, resulting in a total dividend for the year of 27.7 pence per ordinary share, an increase of 7% for the year. It is proposed that the final dividend will be paid on 29 November 2019 to shareholders on the register at the close of business on 8 November 2019.

SHARE CAPITAL

Note 29 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 2018 AGM and a new authority is being sought at the 2019 AGM within the limits set out in the notice of meeting, that is up to a nominal value of £4,337,116.33 (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 28. 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 24.

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 2018 AGM and a new authority

is being sought at the 2019 AGM within the limits set out in the notice of meeting, that is up to a nominal value of £650,567 (representing 10% of the Company's current issued share capital). No shares were bought back by the Company under the authority granted at the 2018 AGM, from the date of that AGM up to the date of this report.

SUBSTANTIAL SHAREHOLDINGS

As at 2 September 2019, we were aware of the following material interests in the Company's ordinary shares:

Fund Manager	Shareholding	%
Baillie Gifford & Co Limited	5,485,304	8.43
Lansdowne Partners	4,691,947	7.21
Columbia Threadneedle Investments	3,066,838	4.71
Wellington Management Company	2,629,187	4.04
Legal & General Investment Management	1,998,716	3.07

There have been no material changes in shareholding since 30 June 2019.

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.

REQUIREMENTS OF THE LISTING RULES

Details of the Company's long-term incentive schemes can be found in the Directors' Remuneration Report on pages 69 to 94.

Approved by the Board and signed on its behalf by:

DAN HARTLEY

Group General Counsel and Company Secretary
4 September 2019

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 International Financial Reporting Standards ('IFRSs') as adopted by the European Union and Article 4 of the IAS Regulation and 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 Accounting 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:

KARIM BITAR

Chief Executive
4 September 2019

STEPHEN WILSON

Group Finance Director
4 September 2019

INDEPENDENT AUDITOR'S REPORT

To the Members of Genus plc

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

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 2019 and of the Group's profit for the year then ended;
- > the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards ('IFRSs') as adopted by the European Union;
- > 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 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

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 38 and C1 to C17.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and IFRSs as adopted by the European Union. 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).

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. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided 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.

SUMMARY OF OUR AUDIT APPROACH

Key audit matters	The key audit matters that we identified in the current year were: > key estimates and assumptions used in determining the fair value of biological assets under IAS 41 'Agriculture'; and > consideration of the key assumptions used in the impairment model for the ABS cash-generating unit.
Materiality	The materiality that we used for the Group financial statements was £2,300,000 (2018: £2,300,000) which was determined as 5.0% (2018: 5.4%) of pre-tax profit before exceptional items and changes in fair value in biological assets.
Scoping	Our audit scope covered 14 components (2018: 15). Of these, nine were subject to a full audit (2018: seven), whilst the other five (2018: eight) were subject to specified audit procedures. The coverage of key account balances was 75% of revenue (2018: 75%), 84% pre-tax profit before exceptional items and changes in fair value in biological assets (2018: 75%) and 79% of net assets (2018: 84%).
Significant changes in our approach	There have been no significant changes in our audit approach in 2019; our key audit matters remain consistent with prior year.

INDEPENDENT AUDITOR'S REPORT CONTINUED

To the Members of Genus plc

CONCLUSIONS RELATING TO GOING CONCERN, PRINCIPAL RISKS AND VIABILITY STATEMENT**GOING CONCERN**

We have reviewed the Directors' statement in note 2 to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's and Company's ability to continue to do so over a period of at least 12 months from the date of approval of the financial statements.

We considered as part of our risk assessment the nature of the Group, its business model and related risks, including where relevant, the impact of Brexit, the requirements of the applicable financial reporting framework and the system of internal control. We evaluated the Directors' assessment of the Group's ability to continue as a going concern, including challenging the underlying data and key assumptions used to make the assessment, and evaluated the Directors' plans for future actions in relation to their going concern assessment.

We are required to state whether we have anything material to add or draw attention to in relation to that statement required by Listing Rule 9.8.6R(3) and report if the statement is materially inconsistent with our knowledge obtained in the audit.

PRINCIPAL RISKS AND VIABILITY STATEMENT

Based solely on reading the Directors' statements and considering whether they were consistent with the knowledge we obtained in the course of the audit, including the knowledge obtained in the evaluation of the Directors' assessment of the Group's and the Company's ability to continue as a going concern, we are required to state whether we have anything material to add or draw attention to in relation to:

- > the disclosures on pages 44 and 45 that describe the principal risks and explain how they are being managed or mitigated;
- > the Directors' confirmation on page 46 that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity; or
- > the Directors' explanation on page 46 as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they 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 of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We are also required to report whether the Directors' statement relating to the prospects of the Group required by Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.

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.

Going concern is the basis of preparation of the financial statements that assumes an entity will remain in operation for a period of 12 months from the start of the financial statements.

We confirm that we have nothing material to report, add or draw attention to in respect of going concern.

Viability means the ability of the Company to continue over the time horizon considered appropriate by the Directors.

We confirm that we have nothing material to report, add or draw attention to in respect of the Directors' disclosure of principal risks and viability.

KEY ESTIMATES AND ASSUMPTIONS USED IN DETERMINING THE FAIR VALUE OF BIOLOGICAL ASSETS UNDER IAS 41 'AGRICULTURE'**Key audit matter description**

The Group calculates the fair value of biological assets through the use of discounted cash flow models and recent transaction prices. As at 30 June 2019, the total fair value of biological assets is £348m (2018: £343m).

Certain assumptions contain high levels of estimation and therefore represent potential areas where management could fraudulently manipulate the financial statements. We focused specifically on the following key assumptions for each species, being the most sensitive assumptions applied in the valuation models.

For bovine asset valuations: the future growth rates of semen volumes; the forecast average age of bulls producing saleable semen; and the discount rates applied.

For porcine asset valuations: the expected useful breeding life of pigs; the number of future generations attributable to the current herds; and the discount rate applied.

Details of the biological assets are disclosed in note 15 to the accounts. The Audit Committee has included their assessment of this key audit matter on page 66 and it is included in the key accounting estimates and judgements on page 134.

How the scope of our audit responded to the key audit matter



We considered the separate elements of the fair value calculations, including specifically the basis for management's key estimates and assumptions. For both species' valuation models, we evaluated the design and implementation of key controls relevant to the valuation model.

For the bovine asset valuations we challenged management's assumptions by assessing the historical forecasting accuracy of management's model, compared management's assumptions to third party data, applied sensitivities to the assumptions, and reviewed the model logic.

For the porcine asset valuations our audit work included consideration of the appropriateness of management's assessment of the number of future generations from which output is attributable to the current herd and expected useful lives. We tested the expected percentages of animals to be sold, retained and slaughtered as well as recent selling prices by reference to historical transaction data.

For both species' valuation models, we used internal valuation experts in our testing of the discount rates applied to the cash flows.

For all other key assumptions in each model, we challenged the significant estimates with reference to third party or historical transaction data as appropriate.

Key observations



From the work performed, we are satisfied that the key assumptions applied in respect of the fair value determination of biological assets are reasonable, and were overall in the middle of our acceptable range.

CONSIDERATION OF THE KEY ASSUMPTIONS USED IN THE IMPAIRMENT MODEL FOR THE ABS CASH-GENERATING UNIT

Key audit matter description



The Group has £32.2m of goodwill (2018: £31.2m) on its balance sheet in relation to the ABS cash-generating unit ('CGU'). Management is required to perform an impairment assessment over this goodwill at least once a year, or more frequently if an indicator of impairment exists.

We considered there to be a risk of material misstatement, whether due to error or fraud, in this balance. This is because of the significant judgements and estimates that are applied by management in setting the key assumptions used in their impairment assessment.

In the current period we focused specifically on the goodwill associated with the ABS business due to the more limited headroom associated with this cash-generating unit. The key assumptions in testing the carrying value of the ABS CGU for impairment include the short-term and long-term growth rates and the discount rate.

The associated disclosure is included in note 14. The Audit Committee has included their assessment of this key audit matter on page 66.

How the scope of our audit responded to the key audit matter



We challenged the assumptions used by management in their annual impairment assessment by comparing the projected growth rates and forecast cash flows against historical trends achieved in the business. We analysed historical budgeting accuracy to assess the reliability of the growth rates used in management's forecasts. Where available, we reviewed third party market data to challenge the assumptions used, including benchmarking the long-term growth rate against the applicable industry and regional long-term growth rates which Genus operate in.

We considered whether management's sensitivity analysis relating to the Group's key impairment assumptions, as identified above, covered a range of reasonably possible changes and considered the disclosures provided by the Group in relation to its impairment review within note 14.

We used valuation specialists within the audit team to challenge the discount rates applied to these cash flows by reference to market data, including the risk premium applied to the ABS CGU.

Key observations



We are satisfied with management's conclusions that the ABS CGU is not impaired and a reasonably possible change in a key assumption does not give rise to an impairment. The base case impairment model results in significant headroom, whilst reasonably possible sensitivity scenarios also result in significant headroom.

OUR APPLICATION OF MATERIALITY

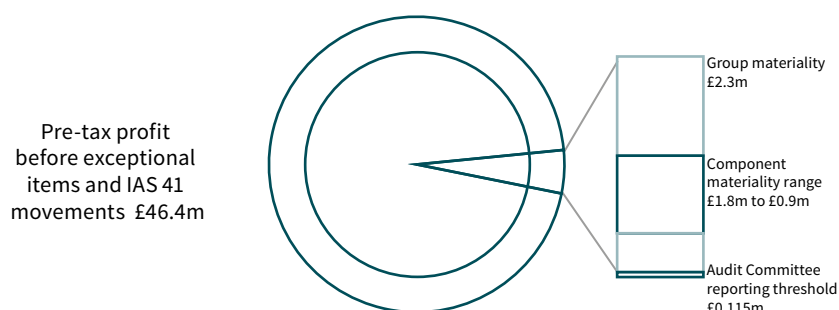
We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

INDEPENDENT AUDITOR'S REPORT CONTINUED

To the Members of Genus plc

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	£2,300,000 (2018: £2,300,000)	£1,840,000 (2018: £1,820,000)
Basis for determining materiality	5.0% of pre-tax profit before exceptional items and changes in fair value of biological assets (2018: 5.4%)	1% of net assets, capped at 80% of Group materiality which was lower than this benchmark (2018: 1% of net assets which was lower than our benchmark of 80% of Group materiality)
Rationale for the benchmark applied	We have used a profit-based measure given the Group is listed and therefore shareholders focus on profitability. The profit is adjusted for the exceptional items and changes in fair value of biological assets to avoid distortion that could otherwise arise due to non-recurring items and fair value movements.	Genus plc (Company only) does not generate any external income and therefore we deem that net assets is a more appropriate basis for determining materiality.



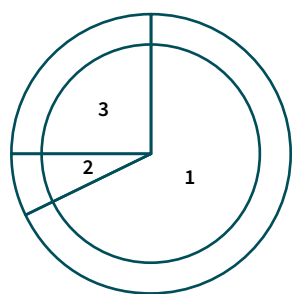
Some of the tests in our audit are based on a sampling approach. Given that it is possible there may be undetected errors in the population not sampled, we set performance materiality at a lower level to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole. Group performance materiality was set at 70% of Group materiality for the 2019 audit (2018: 70%). In determining performance materiality, we considered the level of engagement risk, the low level of uncorrected misstatements identified in the prior year, our understanding of the entity and its environment and the willingness of management to investigate and correct misstatements.

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £115,000 (2018: £115,000), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

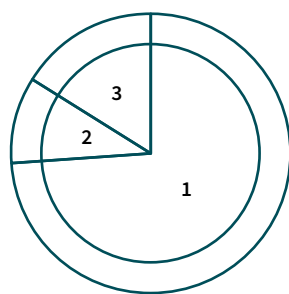
AN OVERVIEW OF THE SCOPE OF OUR AUDIT

Our Group 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. Based on that assessment, we focused our Group audit scope primarily on the audit work at 14 components (2018: 15). Of these, nine were subject to a full audit (2018: seven), whilst the remaining five (2018: eight) were subject to specified audit procedures where the extent of our testing was based on our assessment of the risks of material misstatement and of the materiality of the Group's operations at those locations.

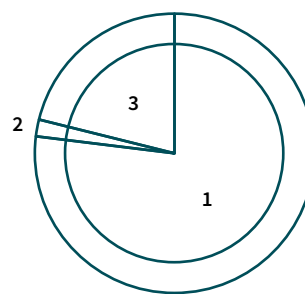
These 14 components represent the principal business units and account for 75% (2018: 75%) of the Group's revenue, 84% (2018: 75%) of the Group's pre-tax profit before exceptional items and changes in fair value of biological assets, and 79% (2018: 84%) of the Group's net assets.

REVENUE

1 Full audit scope	68%
2 Specified audit procedures	7%
3 Revenue at Group level	25%

ADJUSTED PROFIT BEFORE TAX*

1 Full audit scope	74%
2 Specified audit procedures	10%
3 Revenue at Group level	16%

NET ASSETS

1 Full audit scope	77%
2 Specified audit procedures	2%
3 Revenue at Group level	21%

* Adjusted PBT in this graphic represents pre-tax profit before exceptional items and changes in fair value of biological assets.

At the parent entity level we also tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to audit or audit of specified account balances.

The Group audit team continued to follow a programme of planned visits. Senior members of the Group audit team visited the USA, Brazil, Chile and the UK during the current year, and in the previous year visited the USA and UK. In years when we do not visit a significant component we include the component audit team in our team briefing, discuss their risk assessment, and review documentation of the findings from their work. As well as component reporting, in the current year we have reviewed a selection of audit papers for all in scope components.

We elected not to rely on IT controls as part of our audit. Instead we tested the completeness and accuracy of all relevant information produced by the entity as part of our audit. At two full scope components, we relied on the operating effectiveness of controls for certain areas of our testing. We did not rely on controls at the other component audits, and instead performed a fully substantive audit.

OTHER INFORMATION

The Directors are responsible for the other information. The other information comprises the information included in the Annual Report, other than the financial statements and our auditor's report thereon.

We have nothing to report in respect of these matters.

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

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

In this context, matters that we are specifically required to report to you as uncorrected material misstatements of the other information include where we conclude that:

Fair, balanced and understandable – the statement given by the Directors that they consider the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or

Audit Committee reporting – the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; or

Directors' statement of compliance with the UK Corporate Governance Code – the parts of the Directors' statement required under the Listing Rules relating to the Company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

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.

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.

Details of the extent to which the audit was considered capable of detecting irregularities, including fraud, are set out on the following page.

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.

INDEPENDENT AUDITOR'S REPORT CONTINUED

To the Members of Genus plc

EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

We identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and then design and perform audit procedures responsive to those risks, including obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.

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 Company's remuneration policies;
- > the Company's own assessment of the risks that irregularities may occur either as a result of fraud or error was approved by the Board;
- > results of our enquiries of management, internal audit and the Audit Committee about their own identification and assessment of the risks of irregularities;
- > the discussion amongst the engagement team, including significant component audit teams and involving relevant internal specialists, including tax, valuations, pensions, IT, financial instrument specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud;
- > our understanding of the legal and regulatory frameworks that the Group operates in, focusing on those laws and regulations that had a direct effect on the financial statements or that had a fundamental effect on the operations of the Group. The key laws and regulations we considered in this context included the UK Companies Act, Listing Rules, pensions legislation, tax legislation, Bribery Act, and the UK Corporate Governance Code. In addition, compliance with regulations in respect of animal health, disease control, environmental control, health and safety (farm and nitrogen related), and transport related (live animals and semen) were fundamental to the Group's ability to operate on a going concern basis.

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 following areas:

- > The significant management judgements exercised in relation to certain assumptions used in determining the fair value of biological assets.
- > The historic adverse variance against budget of the ABS cash-generating unit results in a risk of fraud in relation to inappropriate overstatement of ABS goodwill.
- > In common with all audits under ISAs (UK), there is a presumed risk of fraud due to management override of controls.

AUDIT RESPONSE TO RISKS IDENTIFIED

As a result of performing the above we identified key audit matters in relation to: (1) key estimates and assumptions used in determining the fair value of biological assets under IAS 41 'Agriculture'; and (2) consideration of the key assumptions used in the impairment model for the ABS cash-generating unit. The key audit matters section of our report explains the matters in more detail and also describes the specific procedures we performed in response to those key audit matters.

In addition to the above, our procedures to respond to risks identified included the following:

- > reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with relevant laws and regulations discussed above;
- > enquiring of management, the Audit Committee and 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 and reviewing correspondence with relevant regulatory authorities;
- > evaluating the financial reporting process and the controls over journal entries and other adjustments made in the preparation of the financial statements, and testing the appropriateness of a sample of such entries and adjustments;
- > challenging adjustments made to the Group accounts by the head office team, primarily through the review of the key audit matters and other consolidation adjustments;
- > reviewing accounting estimates for bias that could result in material misstatement due to fraud, including whether any differences between estimates best supported by evidence and those in the financial statements if individually reasonable, indicate possible bias on the part of management;
- > assessing significant remuneration/incentive plans and linkage with key management judgements;
- > obtaining and understanding of the business rationale of significant transactions that we became aware of that are outside the normal course of business or that otherwise appear to be unusual given our understanding of the Group and its environment; and
- > in addressing the risk of fraud through 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.

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

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 of 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.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

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.

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.

OTHER MATTERS

AUDITOR TENURE

Following the recommendation of the Audit 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 14 years, covering the years ending 30 June 2006 to 30 June 2019.

CONSISTENCY OF THE AUDIT REPORT WITH THE ADDITIONAL REPORT TO THE AUDIT COMMITTEE

Our audit opinion is consistent with the additional report to the Audit Committee we are required to provide in accordance with ISAs (UK).

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.

ANDREW BOND, FCA (SENIOR STATUTORY AUDITOR)

For and on behalf of Deloitte LLP

Statutory Auditor

Reading, United Kingdom

4 September 2019

GROUP INCOME STATEMENT

For the year ended 30 June 2019

	Note	2019 £m	2018 £m
REVENUE	5, 6	488.5	470.3
ADJUSTED OPERATING PROFIT	5	57.7	57.7
ADJUSTING ITEMS:			
– Net IAS 41 valuation movement on biological assets	15	(14.7)	(28.7)
– Amortisation of acquired intangible assets	14	(9.5)	(9.5)
– Share-based payment expense	28	(3.0)	(5.4)
		(27.2)	(43.6)
– Exceptional items:	7		
– Pension related		(15.2)	–
– Litigation		(5.0)	(5.0)
– Acquisition and integration		(0.7)	(1.2)
– Other		(0.9)	0.3
Total exceptional items		(21.8)	(5.9)
TOTAL ADJUSTING ITEMS		(49.0)	(49.5)
OPERATING PROFIT	8	8.7	8.2
Share of post-tax profit of joint ventures and associates retained	17	5.1	4.2
Finance costs	10	(4.7)	(4.8)
Finance income	10	0.8	0.2
PROFIT BEFORE TAX		9.9	7.8
Taxation	11	(3.2)	33.8
PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS		6.7	41.6
ATTRIBUTABLE TO:			
Owners of the Company		7.8	42.7
Non-controlling interest		(1.1)	(1.1)
		6.7	41.6
EARNINGS PER SHARE FROM CONTINUING OPERATIONS	12		
Basic earnings per share		12.4p	69.7p
Diluted earnings per share		11.9p	68.7p
ALTERNATIVE PERFORMANCE MEASURES			
Adjusted operating profit from continuing operations		57.7	57.7
Adjusted operating profit attributable to non-controlling interest		(0.4)	(0.8)
Pre-tax share of profits from joint ventures and associates excluding net IAS 41 valuation movement		7.6	6.2
ADJUSTED OPERATING PROFIT INCLUDING JOINT VENTURES AND ASSOCIATES		64.9	63.1
Net finance costs	10	(3.9)	(4.6)
ADJUSTED PROFIT BEFORE TAX FROM CONTINUING OPERATIONS		61.0	58.5
ADJUSTED EARNINGS PER SHARE FROM CONTINUING OPERATIONS	12		
Basic adjusted earnings per share		73.2p	75.9p
Diluted adjusted earnings per share		70.7p	74.9p

GROUP STATEMENT OF COMPREHENSIVE INCOME

For the year ended 30 June 2019

	Note	2019 £m	2019 £m	2018 £m	2018 £m
PROFIT FOR THE YEAR			6.7		41.6
Items that may be reclassified subsequently to profit or loss					
Foreign exchange translation differences		19.7		(22.4)	
Fair value movement on net investment hedges		(1.6)		1.3	
Fair value movement on cash flow hedges		(2.2)		1.1	
Tax relating to components of other comprehensive income	11	(2.5)		2.2	
			13.4		(17.8)
Items that may not be reclassified subsequently to profit or loss					
Actuarial (loss)/gain on retirement benefit obligations	27	(5.4)		43.4	
Movement on pension asset recognition restriction	27	(10.1)		(2.5)	
Release/(recognition) of additional pension liability	27	34.5		(39.4)	
Tax relating to components of other comprehensive income	11	(3.2)		(0.3)	
			15.8		1.2
OTHER COMPREHENSIVE INCOME/(EXPENSE) FOR THE YEAR			29.2		(16.6)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR			35.9		25.0
ATTRIBUTABLE TO:					
Owners of the Company			37.1		26.1
Non-controlling interest			(1.2)		(1.1)
			35.9		25.0

GROUP STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2019

	Note	Called up share capital £m	Share premium account £m	Own shares £m	Trans- lation reserve £m	Hedging reserve £m	Retained earnings £m	Total £m	Non- controlling interest £m	Total equity £m
BALANCE AT 30 JUNE 2017		6.1	112.8	(0.1)	39.2	1.1	240.2	399.3	2.8	402.1
Foreign exchange translation differences, net of tax		–	–	–	(19.7)	–	–	(19.7)	–	(19.7)
Fair value movement on net investment hedges, net of tax		–	–	–	1.0	–	–	1.0	–	1.0
Fair value movement on cash flow hedges, net of tax		–	–	–	–	0.9	–	0.9	–	0.9
Actuarial gain on retirement benefit obligations, net of tax		–	–	–	–	–	36.0	36.0	–	36.0
Movement on pension asset recognition restriction, net of tax		–	–	–	–	–	(2.1)	(2.1)	–	(2.1)
Recognition of additional pension liability, net of tax		–	–	–	–	–	(32.7)	(32.7)	–	(32.7)
Other comprehensive (expense)/income for the year		–	–	–	(18.7)	0.9	1.2	(16.6)	–	(16.6)
Profit for the year		–	–	–	–	–	42.7	42.7	(1.1)	41.6
Total comprehensive income for the year		–	–	–	(18.7)	0.9	43.9	26.1	(1.1)	25.0
Recognition of share-based payments, net of tax		–	–	–	–	–	6.0	6.0	–	6.0
Adjustment arising from change in non-controlling interest		–	–	–	–	–	–	–	0.8	0.8
Dividends	13	–	–	–	–	–	(14.9)	(14.9)	–	(14.9)
Issue of ordinary shares		0.1	–	–	–	–	–	0.1	–	0.1
BALANCE AT 30 JUNE 2018		6.2	112.8	(0.1)	20.5	2.0	275.2	416.6	2.5	419.1
Foreign exchange translation differences, net of tax		–	–	–	16.6	–	–	16.6	(0.1)	16.5
Fair value movement on net investment hedges, net of tax		–	–	–	(1.3)	–	–	(1.3)	–	(1.3)
Fair value movement on cash flow hedges, net of tax		–	–	–	–	(1.8)	–	(1.8)	–	(1.8)
Actuarial loss on retirement benefit obligations, net of tax		–	–	–	–	–	(4.6)	(4.6)	–	(4.6)
Movement on pension asset recognition restriction, net of tax		–	–	–	–	–	(8.3)	(8.3)	–	(8.3)
Release of additional pension liability, net of tax		–	–	–	–	–	28.7	28.7	–	28.7
Other comprehensive income/(expense) for the year		–	–	–	15.3	(1.8)	15.8	29.3	(0.1)	29.2
Profit for the year		–	–	–	–	–	7.8	7.8	(1.1)	6.7
Total comprehensive income/(expense) for the year		–	–	–	15.3	(1.8)	23.6	37.1	(1.2)	35.9
Recognition of share-based payments, net of tax		–	–	–	–	–	0.2	0.2	–	0.2
Adjustment arising from change in non-controlling interest and written put option		–	–	–	–	–	–	–	(2.6)	(2.6)
Dividends	13	–	–	–	–	–	(16.8)	(16.8)	–	(16.8)
Issue of ordinary shares		0.3	66.2	–	–	–	–	66.5	–	66.5
BALANCE AT 30 JUNE 2019		6.5	179.0	(0.1)	35.8	0.2	282.2	503.6	(1.3)	502.3

GROUP BALANCE SHEET

As at 30 June 2019

	Note	2019 £m	2018 £m
ASSETS			
Goodwill	14	106.3	102.0
Other intangible assets	14	80.1	78.7
Biological assets	15	307.6	305.8
Property, plant and equipment	16	86.0	76.9
Interests in joint ventures and associates	17	23.6	19.9
Other investments	18	7.4	5.9
Derivative financial asset	24	0.4	0.3
Deferred tax assets	11	3.5	4.3
TOTAL NON-CURRENT ASSETS		614.9	593.8
Inventories	19	36.0	34.2
Biological assets	15	40.1	37.0
Trade and other receivables	20	98.0	91.0
Cash and cash equivalents	21	30.5	29.1
Income tax receivable		3.3	1.4
Derivative financial asset	24	1.1	2.5
Asset held for sale		0.2	0.2
TOTAL CURRENT ASSETS		209.2	195.4
TOTAL ASSETS		824.1	789.2
LIABILITIES			
Trade and other payables	22	(87.7)	(83.7)
Interest-bearing loans and borrowings	25	(2.1)	(13.4)
Provisions	23	(3.1)	(2.8)
Deferred consideration	36	(2.0)	(19.3)
Obligations under finance leases	26	(2.2)	(1.4)
Current tax liabilities		(6.1)	(4.4)
Derivative financial liabilities	24	(1.0)	(0.3)
TOTAL CURRENT LIABILITIES		(104.2)	(125.3)
Interest-bearing loans and borrowings	25	(101.9)	(120.7)
Retirement benefit obligations	27	(24.2)	(33.9)
Provisions	23	(5.7)	(4.5)
Deferred consideration	36	(4.2)	(4.2)
Non-current income tax liability		–	(0.9)
Deferred tax liabilities	11	(72.0)	(74.8)
Derivative financial liabilities	24	(5.7)	(3.7)
Obligations under finance leases	26	(3.9)	(2.1)
TOTAL NON-CURRENT LIABILITIES		(217.6)	(244.8)
TOTAL LIABILITIES		(321.8)	(370.1)
NET ASSETS		502.3	419.1
EQUITY			
Called up share capital	29	6.5	6.2
Share premium account		179.0	112.8
Own shares	29	(0.1)	(0.1)
Translation reserve	29	35.8	20.5
Hedging reserve	29	0.2	2.0
Retained earnings		282.2	275.2
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY		503.6	416.6
Non-controlling interest	37	4.2	5.7
Put option over non-controlling interest	24	(5.5)	(3.2)
TOTAL NON-CONTROLLING INTEREST		(1.3)	2.5
TOTAL EQUITY		502.3	419.1

The Financial Statements were approved and authorised for issue by the Board of Directors on 4 September 2019.

Signed on behalf of the Board of Directors

KARIM BITAR
 Chief Executive

STEPHEN WILSON
 Group Finance Director

GROUP STATEMENT OF CASH FLOWS

For the year ended 30 June 2019

	Note	2019 £m	2018 £m
NET CASH FLOW FROM OPERATING ACTIVITIES	30	33.4	43.2
CASH FLOWS FROM INVESTING ACTIVITIES			
Dividends received from joint ventures and associates		2.7	2.8
Joint venture loan repayment		0.7	–
Acquisition of trade and assets	36	(2.0)	–
Disposal of subsidiary		0.4	–
Payment of deferred consideration		(21.1)	(1.8)
Purchase of property, plant and equipment		(17.1)	(17.8)
Purchase of intangible assets		(11.2)	(4.7)
Proceeds from sale of property, plant and equipment		1.5	0.4
Proceeds from sale of assets held for sale		–	0.3
NET CASH OUTFLOW FROM INVESTING ACTIVITIES		(46.1)	(20.8)
CASH FLOWS FROM FINANCING ACTIVITIES			
Drawdown of borrowings		104.8	64.4
Repayment of borrowings		(138.9)	(66.5)
Payment of finance lease liabilities		(2.0)	(2.2)
Equity dividends paid		(16.8)	(14.9)
Issue of ordinary shares		66.5	0.1
NET CASH INFLOW/(OUTFLOW) FROM FINANCING ACTIVITIES		13.6	(19.1)
NET INCREASE IN CASH AND CASH EQUIVALENTS		0.9	3.3
Cash and cash equivalents at start of the year		29.1	26.5
Net increase in cash and cash equivalents		0.9	3.3
Effect of exchange rate fluctuations on cash and cash equivalents		0.5	(0.7)
TOTAL CASH AND CASH EQUIVALENTS AT 30 JUNE	21	30.5	29.1

NOTES TO THE GROUP FINANCIAL STATEMENTS

For the year ended 30 June 2019

1. REPORTING ENTITY

Genus plc (the 'Company') is a public company limited by shares and incorporated in the United Kingdom under the Companies Act 2006. Its registered office is Matrix House, Basing View, Basingstoke, Hampshire RG21 4DZ. The Group Financial Statements for the year ended 30 June 2019 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 10 and 11 explains the Group's operations and principal activities.

2. BASIS OF PREPARATION

We have prepared the Group Financial Statements in accordance with International Financial Reporting Standards ('IFRS') as adopted by the European Union and therefore comply with Article 4 of the IAS Regulation.

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 46 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

In reporting financial information, the Group presents alternative performance measures ('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 the executive leadership team. Some of these measures are also used to set remuneration targets.

The key APMs that the Group uses include: adjusted operating profit, adjusted profit before tax from continuing operations, adjusted earnings per share, net debt and adjusted EBITDA (as calculated under our financing facilities and includes cash received from joint ventures and historical cost depreciation of biological assets).

The Group reports certain financial measures, on both a reported and constant currency basis. The constant currency basis, which is an APM, retranslates the current year's results at the average actual exchange rates used in the previous financial year. This measure eliminates the effects of exchange rate fluctuations when comparing the year-on-year reported results.

The Group makes certain adjustments to the statutory profit measures in order to derive many of these APMs. The Group's policy is to exclude items that it considers to be significant in nature and/or quantum and where treatment as an adjusted item provides stakeholders with additional useful information to assess the Group's year-on-year trading performance. On this basis, the following were included within adjusted items for the year ended 30 June 2019:

- > 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. See note 7 for further details.

The reconciliation between operating profit from continuing operations and adjusted operating profit from continuing operations is shown on the face of the Group Income Statement. All other reconciliations are included within the Financial Review section.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

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.

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.

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. We translate these operations' revenues and expenses using an average rate for the period.

When exchange differences arise from translating foreign operations into Sterling, or 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 designated as long-term funding are taken to the foreign currency translation reserve, together with any related taxation.

The principal exchange rates were as follows:

	Average			Closing		
	2019	2018	2017	2019	2018	2017
US Dollar/£	1.29	1.35	1.27	1.27	1.32	1.30
Euro/£	1.13	1.13	1.16	1.12	1.13	1.14
Brazilian Real/£	4.99	4.51	4.11	4.89	5.12	4.30
Mexican Peso/£	25.04	25.37	24.61	24.40	26.30	23.51

REVENUE

The Group recognises revenue from the following sources:

- > sale of bovine and porcine semen, porcine breeding animals, embryos and ancillary products;
- > royalties;
- > consulting;
- > installation and maintenance of IntelliGen technology; and
- > slaughter animal sales.

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.

3. SIGNIFICANT ACCOUNTING POLICIES APPLIED IN THE CURRENT REPORTING PERIOD THAT RELATE TO THE FINANCIAL STATEMENTS AS A WHOLE CONTINUED

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.

SLAUGHTER OF ANIMALS

Revenue from the slaughter of animals is recognised when control of the goods has transferred to the slaughter house, which is generally on the delivery of animals to the slaughter house. Payment of the transaction price is due immediately, or within a short period of time, from the point the slaughter house controls the goods.

ROYALTIES

Royalties are recognised when receivable. 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, and from IntelliGen customers based on the number of sexed straws produced. 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.

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).

NEW STANDARDS AND INTERPRETATIONS

In the current period, 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 2018 and have been implemented with effect from 1 July 2018. Their application has not had any material impact on the disclosures or the amounts reported in the Group Financial Statements.

- > IFRS 15 – 'Revenue from Contracts with Customers';
- > IFRS 9 – 'Financial Instruments';
- > Amendments to IFRS 2 – 'Classification and Measurement of Share-based Payments Transactions';
- > IFRIC 22 – 'Foreign Currency Transactions and Advance Consideration'; and
- > Annual Improvements to IFRSs 2014–2016.

IFRS 15 'Revenue from Contracts with Customers' replaces IAS 18 'Revenue'. It is effective for periods beginning on or after 1 January 2018 and has therefore been implemented with effect from 1 July 2018. The standard establishes a principles-based approach for revenue recognition and is based on the concept of recognising revenue for performance obligations only when they are satisfied, and the control of goods or services is transferred. In doing so, the standard applies a five-step approach to the timing of revenue recognition and applies to all contracts with customers, except those in the scope of other standards. It replaces the separate models for goods, services and construction contracts under the previous accounting standard. Following an assessment of the impact of IFRS 15 and based on the straightforward nature of the Group's revenue streams and the absence of significant judgement required in determining the timing of transfer of control, the adoption of IFRS 15 has not had a material impact on the timing or nature of the Group's revenue recognition.

IFRS 9 'Financial Instruments' replaces IAS 39 'Financial Instruments: Recognition and Measurement'. The standard is effective for periods beginning on or after 1 January 2018 and has been implemented with effect from 1 July 2018. The standard introduces changes to three key areas:

- > new requirements for the classification and measurement of financial instruments;
- > a new impairment model based on expected credit losses for recognising provisions; and
- > simplified hedge accounting through closer alignment with an entity's risk management methodology.

The adoption of IFRS 9 has not had a material impact on either the Consolidated Income Statement or the Consolidated Statement of Financial Position.

All equity financial instruments classified as available for sale under IAS 39 were irrevocably re-designated as fair value through other comprehensive income under IFRS 9 whereby gains or losses will never recycle to the profit and loss, and instead are recognised as movements within retained earnings in other comprehensive income only. The classification was considered appropriate as the investments are expected to be held for the long term and are not expected to be sold in the short to medium term.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

3. SIGNIFICANT ACCOUNTING POLICIES APPLIED IN THE CURRENT REPORTING PERIOD THAT RELATE TO THE FINANCIAL STATEMENTS AS A WHOLE CONTINUED

On the date of initial application, 1 July 2018, the Group's Financial Instruments were classified as follows, with any reclassification noted:

Financial instrument	Classification under IFRS 9
Other investments	Fair value through other comprehensive income (previously Available for sale)
Trade and other receivables, excluding prepayments and accrued income	Amortised cost (previously Amortised cost)
Trade and other payables, excluding other taxes and social security	
Loans and overdrafts	
Derivative instruments	Fair value through profit and loss (previously Fair value through profit and loss)

On initial application there were no changes to carrying value of the Group's financial instruments. The carrying values on the date of initial application are equivalent to the amounts reported in note 24 for 30 June 2018.

NEW STANDARDS AND INTERPRETATIONS NOT YET ADOPTED

At the date of the Annual Report, the following standards and interpretations were in issue but not yet effective (and in some cases had not yet been adopted by the EU) and have therefore not been applied in the report.

- > IFRS 16 – 'Leases';
- > Amendments to IFRS 9 – 'Prepayment Features with Negative Compensation';
- > Amendments to IAS 28 – 'Long-term Interests in Associates and Joint Ventures';
- > IFRIC 23 – 'Uncertainty over Income Tax Treatments';
- > Amendments to IAS 19 – 'Plan Amendment, Curtailment or Settlement';
- > Amendments to IAS 1 and IAS 8 – 'Definition of Material';
- > Amendments to IFRS 3 – 'Definition of a Business';
- > Annual Improvements to IFRS 2015–2017 Cycle; and
- > Conceptual Framework for Financial Reporting.

IFRS 16

IFRS 16 'Leases' is effective for periods beginning on or after 1 January 2019. The Group will therefore adopt the standard from 1 July 2019 and the Group Financial Statements for the year ending 30 June 2020 will be the first prepared under IFRS 16. The Group has adopted the modified retrospective approach and will recognise the cumulative effect of applying IFRS 16 at the 1 July 2019 transitional date. The prior period will not be restated.

As a lessee, IFRS 16 removes distinctions between operating and finance leases and requires the recognition of a right of use asset and corresponding liability for future lease payables. The right of use asset will be subsequently depreciated on a straight-line basis over the life of the lease. Interest will be recognised on the lease liability. This will result in earlier recognition of expense for leases currently classified as operating leases, although over the life of a lease the total expense recognised will not change. Right of use assets recognised by the Group comprise property, motor vehicles and equipment.

The Group has elected not to recognise right of use assets and lease liabilities for leases of low-value assets, and lease payments associated with those assets will be recognised as an expense on a straight-line basis. The Group will make use of the practical expedient available on transition to IFRS 16 not to reassess whether a contract is or contains a lease. Therefore, the definition of a lease in accordance with IAS 17 'Leases' will continue to apply to those leases entered into or modified before 1 July 2019. For leases entered into or modified on or after 1 July 2019, a contract will be determined as a lease if the Group has control of the leased asset, as defined by IFRS 16.

In addition, the Group will utilise the following practical expedients, permitted by IFRS 16:

- > the right of use asset for each lease will be measured as the present value of the lease liability adjusted for any prepaid or accrued lease payments prior to application;
- > for leases that were previously classified as an operating lease under IAS 17, the lease liability on 1 July 2019 will be calculated as the present value of the remaining lease payments using the incremental borrowing rate as at 1 July 2019;
- > for existing leases that incurred initial direct costs, these will be excluded from the measurement of the right of use asset as at 1 July 2019;
- > we will apply the use of hindsight for existing leases in determining options to extend or terminate the lease;
- > we will elect not to separate lease components from non-lease components; and
- > we will elect to apply a single discount rate to a portfolio of leases with similar characteristics.

There will be a significant impact on the balance sheet as at 1 July 2019 whereby, on a pre-tax basis, a right of use asset and corresponding lease liability in the region of £28.0m will be recognised. Additionally, fixed assets of £7.2m relating to existing finance leases will be re-designated as right of use assets.

Operating profit is expected to increase in the region of £1m due to the depreciation expense being lower than the lease expense it replaces. Profit before tax is not expected to change materially as increased finance charges will offset the increase in operating profit.

The application of IFRS 16 requires a reclassification of cash flow from operations to net cash used in financing activities; however, the overall impact to the Group is cash flow neutral.

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 the executive leadership team.

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 15)

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'.

	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	Observable	Readily obtainable
	Animals' useful lifespan ¹	Observable	Readily obtainable
	Percentage of new dairy bulls to be produced internally each year ¹	Unobservable	n/a
Porcine (general)	Age profile of bulls ¹	Unobservable	n/a
	Risk-adjusted discount rate ¹	Unobservable	n/a
	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
Porcine (pure line herds)	Risk-adjusted discount rate	Unobservable	n/a
	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
	Risk-adjusted discount rate ¹	Unobservable	n/a

¹ Key sources of estimation uncertainty.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

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 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
- > 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	2019 £m	2018 £m
Genus PIC	253.7	247.7
Genus ABS	222.6	210.6
Research and Development		
Porcine Product Development	9.4	9.8
Bovine Product Development	2.8	2.2
Gene Editing	–	–
Other Research and Development	–	–
	12.2	12.0
	488.5	470.3

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 face of the Group Income Statement.

Adjusted operating profit	2019 £m	2018 £m
Genus PIC	93.1	88.7
Genus ABS	29.9	26.2
Research and Development		
Porcine Product Development	(18.4)	(17.0)
Bovine Product Development	(19.7)	(16.6)
Gene Editing	(7.3)	(5.0)
Other Research and Development	(9.0)	(7.6)
	(54.4)	(46.2)
Adjusted segment operating profit	68.6	68.7
Central	(10.9)	(11.0)
Adjusted operating profit	57.7	57.7

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 £21.8m expense (2018: £5.9m expense) relate to Genus ABS (£5.1m expense), Genus PIC (£0.1m income) and our Central segment (£16.8m 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.

5. SEGMENTAL INFORMATION CONTINUED

OTHER SEGMENT INFORMATION

	Depreciation		Amortisation		Additions to non-current assets	
	2019 £m	2018 £m	2019 £m	2018 £m	2019 £m	2018 £m
Genus PIC	0.7	0.8	7.2	7.0	1.3	2.9
Genus ABS	2.3	2.3	2.4	2.1	6.8	9.7
Research and Development						
Research	0.5	0.3	1.2	1.1	0.8	–
Porcine Product Development	2.3	2.0	–	–	3.0	0.8
Bovine Product Development	3.4	2.1	2.9	3.6	11.5	8.9
	6.2	4.4	4.1	4.7	15.3	9.7
Segment total	9.2	7.5	13.7	13.8	23.4	22.3
Central	3.4	2.9	–	–	9.4	5.5
Total	12.6	10.4	13.7	13.8	32.8	27.8

	Segment assets		Segment liabilities	
	2019 £m	2018 £m	2019 £m	2018 £m
Genus PIC	262.1	235.9	(51.6)	(48.3)
Genus ABS	157.1	160.6	(41.9)	(41.2)
Research and Development				
Research	7.4	12.5	(0.6)	(1.3)
Porcine Product Development	200.5	209.5	(56.1)	(76.5)
Bovine Product Development	161.5	152.8	(32.8)	(31.1)
	369.4	374.8	(89.5)	(108.9)
Segment total	788.6	771.3	(183.0)	(198.4)
Central	35.5	17.9	(138.8)	(171.7)
Total	824.1	789.2	(321.8)	(370.1)

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

	2019 £m	(Restated ¹) 2018 £m
North America	211.8	208.6
Latin America	81.1	75.1
Rest of Europe, Middle East, Russia and Africa	67.7	60.9
UK	83.7	76.7
Asia	44.2	49.0
	488.5	470.3

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.

	2019 £m	(Restated ¹) 2018 £m
North America	420.7	450.2
Latin America	45.7	37.4
Rest of Europe, Middle East, Russia and Africa	59.3	42.2
UK	70.6	41.0
Asia	14.7	18.4
	611.0	589.2

1 Following a change in our internal reporting, the revenue and non-current assets attributable to Russia, which were previously included within 'Asia', have been reclassified to the 'Rest of Europe, Middle East, Russia and Africa' geographical segment in the year. In accordance with IFRS 8 the comparatives have been restated.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

6. REVENUE

	2019 £m	(Restated ¹) 2018 £m
Sale of animals, semen, embryos, products and services	358.9	352.2
Royalties – animal and semen	122.0	110.7
Consulting services	7.6	7.4
	488.5	470.3

¹ Revenue of £11.7m reported at 30 June 2018 has been reclassified from 'Royalties – animal and semen' to 'Sale of animals, semen, embryos, products and services'. There is no impact to the overall revenue reported.

REVENUE FROM CONTRACTS WITH CUSTOMERS

The Group's revenue is analysed below and stated by the timing at which it is recognised.

	2019 £m	2018 £m
Genus PIC	251.3	245.5
Genus ABS	200.3	192.3
Research and Development	12.2	12.0
Recognised at a point in time	463.8	449.8
Genus PIC	2.4	2.2
Genus ABS	22.3	18.3
Research and Development	–	–
Recognised over time	24.7	20.5
Total revenue	488.5	470.3

The transaction price allocated to partially unsatisfied performance obligations at 30 June 2019 is £8.4m. It is expected that the Group will recognise this revenue over the next five years.

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 30, respectively.

Operating (expense)/income:

	2019 £m	2018 £m
Pension related	(15.2)	–
Litigation	(5.0)	(5.0)
Acquisition and integration	(0.7)	(1.2)
Other	(0.9)	0.3
	(21.8)	(5.9)

PENSION RELATED

In October 2018, the High Court handed down judgment in the Lloyds Bank pensions case, requiring pension schemes to equalise Guaranteed Minimum Pensions ('GMPs'). Genus's legacy pension schemes are affected by this ruling, resulting in an aggregate past service charge of £16.1m in the period, partially offset by a settlement gain of £0.9m (net of fees).

The judgment also confirmed the range of permissible equalisation methods to calculate the costs and that the sponsoring company may direct the trustees to use the lowest cost method. There is some uncertainty about the final calculation of GMP equalisation costs, due to the treatment of certain past events which are still to be determined. Accordingly, we have not made any allowances for additional costs that could potentially arise once the treatment of backdated claims and transfers has been agreed (see note 27).

7. EXCEPTIONAL ITEMS CONTINUED**LITIGATION**

Litigation includes legal fees of £5.0m (2018: £5.0m) related to the actions between ABS Global, Inc. ('ABS') and Inguran, LLC (aka Sexing Technologies ('ST')).

On 14 July 2014, ABS launched a legal action against ST in the US District Court for the Western District of Wisconsin alleging, among other matters, that ST: (i) has a monopoly in the processing of sexed bovine semen in the US; and (ii) unlawfully maintains this monopoly through anticompetitive conduct. The legal action aimed to remove these barriers and allow free and fair competition in the sexed bovine semen processing market ('ABS Action'). In parallel with the ABS Action, ABS also filed Inter-Partes Review applications ('IPR') before the US Patent Office challenging the validity of several of ST's group patents, which ST later claimed were infringed by ABS.

On 11 January and 15 April 2016, the Patent Trial and Appeal Board ('PTAB') ruled that US Patent No. 7,195,920 (the "'920 patent'") and US Patent No. 7,820,425 (the "'425 patent'") were unpatentable. ST appealed these decisions, and on 23 May 2018, the federal court of appeals confirmed that the '920 and '425 patents were unpatentable. On 14 July 2015 and 2 October 2017, PTAB declined to revoke US Patent No. 8,206,987 (the "'987 patent'") and US Patent No. 8,198,092 (the "'092 patent'") respectively. ABS appealed the '092 patent decision, and the court of appeals affirmed the decision on 7 February 2019. The validity of the '987 patent was considered as part of the ABS Action appeal, addressed below.

On 31 March 2017, the Court entered a judgment in the ABS Action which confirmed: (i) the Company and ABS had proved that ST had wilfully maintained a monopoly in the market for sexed bovine semen processing in the US since July 2012, and awarded a permanent injunction against ST which, among other matters, relieved ABS of certain research, marketing and other non-compete restrictions contained in the 2012 semen sorting agreement between the parties; (ii) ST's '987 and '092 patents were valid and infringed; and (iii) that ABS had materially breached the confidentiality obligations under the 2012 semen sorting agreement. The Court also confirmed that: (i) the Company and ABS should pay ST an upfront amount of \$750,000 and an ongoing royalty of \$1.25 per straw on commercialisation of the Genus Sexed Semen technology for the use of ST's '987 patent in the US; (ii) the Company and ABS should pay ST an upfront payment of \$500,000 and an ongoing royalty of \$0.50 per straw for the use of ST's '092 patent in the US; (iii) ABS should pay XY LLC damages of \$750,000 for the use of certain XY trade secrets; and (iv) ABS had breached the confidentiality obligations under the 2012 semen sorting agreement.

Damages of \$1,250,000 were paid by ABS to ST shortly after the Court's decision in the ABS Action, and ABS has subsequently amended its technology such that it does not infringe the '092 patent claims. ABS has informed ST that it does not intend to pay the \$0.50 royalty going forward. Claims for legal fees and costs (and post-judgment interest) already incurred in connection with the ABS Action were filed by both parties.

On 27 September 2018, the court awarded ABS legal fees of approximately \$4.8 million and ST legal costs of approximately \$22,000. ST appealed this decision, and on 4 June 2019, the Court of Appeals vacated the original award for further consideration after the final resolution of the entire 2014 action, as discussed below. No credit has been accounted for this award pending the appeal.

ABS also appealed the '987 patent and the breach of contract decisions and the appeal hearing was heard on 20 February 2018. On 29 January 2019, the Court of Appeals accepted, in part, ABS's appeal and reversed the decision of the district court not to allow a new '987 patent trial. A date for the new '987 trial is identified below, and the district court will revisit the question of legal costs and fees following the resolution of the new trial.

On 7 June 2017, ST, XY LLC and Cytonome/ST, LLC filed proceedings against ABS, the Company and Premium Genetics (UK) Limited ('PG') in the United States District Court for the Western District of Wisconsin ('New Litigation'). The New Litigation alleged that ABS and the Company infringe seven further patents and asserts trade secret and breach of contract claims. ABS and the Company have filed an Answer and Counterclaim confirming that they do not infringe any valid patent and alleging, among other things, that ST has breached its 2012 semen sorting agreement with ABS by failing to produce sorted semen that complies with the contractual specifications. In addition, ABS has filed six IPRs seeking to revoke the additional patents raised in the New Litigation. PTAB instituted hearings in relation to three IPRs and refused to institute hearings on two other IPRs. In relation to the final IPR, relating to U.S. Patent No. 7,208,265 ("265 patent"), ST requested an adverse judgment. ST has subsequently dismissed its '265 patent infringement claim from the New Litigation and ABS has also dismissed its anti-trust and unfair competition counter-claims. ABS filed Motions for Rehearing in relation to the IPRs that were not instituted, and these Motions were denied on 14 December 2018.

The hearing date for the New Litigation had been set for 1 April 2019. However, on 21 February 2019, the Court noted that it intended to issue multiple opinions on the parties' summary judgment motions, and while those opinions were not wholly dispositive of the issues in dispute, for the reasons to be explained in the Court's opinions, the 1 April hearing date was struck. On 26 February 2019, the Court issued a summary judgment opinion finding that: (i) ST's trade secret misappropriation and breach of contract claims were barred by the decision in the ABS Action; (ii) the asserted claims of US patent 6,524,860 were invalid; and (iii) the asserted claim of US patent 9,365,822 was invalid.

In early April 2019, PTAB held that all of the relevant claims of ST's US patent 9,446,912 ("912 patent") were unpatentable and that some of the claims of US patent 8,529,161 ("161 patent") were also unpatentable, while others were patentable. On 29 April 2019, the Court issued its second summary judgment opinion, granting in part and denying in part ABS's motions. In summary, the Court: (i) confirmed ABS' non-infringement of the '161 and '912 patents; (ii) confirmed non-infringement by ABS under most of ST's theories of infringement in relation to the US patents 7,311,476 ("476 patent") and 7,611,309 ("309 patent"); and (iii) denied all of ST's motions for partial summary judgment.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

7. EXCEPTIONAL ITEMS CONTINUED

The Court scheduled a trial for 3 September 2019, for the remaining theories of infringement, and the parties agreed to consolidate this hearing with the '987 re-trial on invalidity. From the seven patents initially asserted against ABS in the New Litigation, only the '476 and '309 patents remain. The five other ST patents, along with the trade secrets claim, initially asserted by ST, have either been struck out, found invalid, found not to be infringed or been withdrawn. The Company and ABS will continue to pursue vigorously their breach of contract counter-claim, defend the remaining patent infringement claims and seek the invalidity of the '987 patent.

ACQUISITIONS AND INTEGRATION

During the year, £0.7m of expenses were incurred in relation to acquisitions and integration, principally of Møllevang and Progenex S.L. (see note 36).

OTHER

Included within 'Other' are £1.5m of expenses which relate to our strategic porcine collaboration in China and an insurance receipt of £0.6m from a legacy environmental claim.

8. OPERATING PROFIT

Operating costs comprise:

	2019 £m	2018 £m
Cost of sales excluding net IAS 41 valuation movement on biological assets and amortisation of multiplier contract intangible assets	(204.8)	(196.6)
Net IAS 41 valuation movement on biological assets	(14.7)	(28.7)
Amortisation of multiplier contract intangible assets	(0.3)	(0.3)
Cost of goods sold	(219.8)	(225.6)
Other cost of sales	(97.7)	(91.0)
Amortisation of customer relationship intangible assets	(6.5)	(6.2)
Other cost of sales	(104.2)	(97.2)
Research and Development expenditure	(54.9)	(45.5)
Amortisation and impairment of technology, software and licences and patents	(6.0)	(5.9)
Research and Development costs	(60.9)	(51.4)
Administrative expenses	(68.0)	(75.2)
Share-based payment expense	(3.0)	(5.4)
Amortisation of software, licences and patents	(2.1)	(1.4)
Exceptional items within administrative expenses	(21.8)	(5.9)
Total administrative expenses	(94.9)	(87.9)
Total operating costs	(479.8)	(462.1)

Profit for the year is stated after charging/(crediting):

	2019 £m	2018 £m
Net foreign exchange losses	0.4	0.2
Depreciation of owned fixed assets	10.6	8.5
Depreciation of assets held under finance leases and hire purchase contracts	2.0	1.9
Profit on disposal of fixed assets	–	(0.1)
Profit on disposal of intangible fixed assets	(0.1)	–
Operating lease rentals		
– plant and machinery	3.2	4.0
– other	3.0	4.3
Employee costs (see note 9)	154.1	147.4
Cost of inventories recognised as an expense	88.8	92.6

Auditor's remuneration is as follows:

	2019 £m	2018 £m
Fees payable to the Company's auditor and its associates for the audit of the Company's Annual Report and Financial Statements	0.3	0.3
Fees payable to the Company's auditor and its associates for the audit of the Company's undertakings	0.5	0.5
Total audit fees	0.8	0.8
Tax compliance services	0.1	0.1
Other services	–	–
Total non-audit fees	0.1	0.1
Total fees to the Group's auditor	0.9	0.9

Fees payable to other auditors of Group companies

– –

Non-audit tax services principally comprise tax compliance support services. These services fall within the non-audit services policy approved by the Company's Audit Committee.

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:

	2019 £m	2018 £m
Wages and salaries (including bonuses and sales commission)	136.6	127.5
Social security costs	13.3	12.7
Contributions to defined contribution pension plans	4.4	3.6
Share-based payment expense (excluding National Insurance)	2.7	4.6
	157.0	148.4

The employee costs above include £2.9m (2018: £1.0m) which has been capitalised into intangible assets as part of the development of GenusOne (see note 14).

The average monthly number of employees and full-time equivalent employees, including Directors, was as follows:

	No. of employees		Full-time equivalent	
	2019 Number	2018 Number	2019 Number	2018 Number
Genus PIC	705	707	655	658
Genus ABS	1,803	1,749	1,707	1,665
Research and Development	329	219	324	215
Central	127	112	122	104
	2,964	2,787	2,809	2,642
Included in the totals above:				
UK	818	766	753	707

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 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.

	2019 £m	2018 £m
Interest payable on bank loans and overdrafts	(3.3)	(3.0)
Amortisation of debt issue costs	(0.4)	(0.4)
Other interest payable	(0.1)	(0.2)
Net interest cost in respect of pension scheme liabilities	(0.9)	(1.0)
Net interest cost on derivative financial instruments	–	(0.2)
Total interest expense	(4.7)	(4.8)
Interest income on bank deposits	0.2	0.2
Net settlement income on derivative financial instruments	0.6	–
Total interest income	0.8	0.2
Net finance costs	(3.9)	(4.6)

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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

11. TAXATION AND DEFERRED TAXATION CONTINUED

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

	2019 £m	2018 £m
Current tax expense		
Current period	12.6	11.7
Adjustment for prior periods	(0.9)	0.9
Total current tax expense in the Group Income Statement	11.7	12.6
Deferred tax expense		
Origination and reversal of temporary differences	(7.7)	(45.3)
Adjustment for prior periods	(0.8)	(1.1)
Total deferred tax credit in the Group Income Statement	(8.5)	(46.4)
Total income tax expense/(credit) excluding share of income tax of equity accounted investees	3.2	(33.8)
Share of income tax of equity accounted investees (see note 17)	1.4	1.5
Total income tax expense/(credit) in the Group Income Statement	4.6	(32.3)

RECONCILIATION OF EFFECTIVE TAX RATE

	2019 %	2019 £m	2018 %	2018 £m
Profit before tax		9.9		7.8
Add back share of income tax of equity accounted investees		1.4		1.5
Profit before tax excluding share of income tax of equity accounted investees		11.3		9.3
Income tax at UK corporation tax of 19.0% (2018: 19.0%)	19.0	2.2	19.0	1.8
Effect of tax rates in foreign jurisdictions	52.3	5.9	–	–
Non-deductible expenses	14.3	1.6	25.3	2.3
Tax-exempt income and incentives	(43.3)	(4.9)	(27.8)	(2.6)
Change in tax rate	(3.5)	(0.4)	(350.4)	(32.6)
Movements in recognition of tax losses	6.2	0.7	(2.3)	(0.2)
Change in unrecognised temporary differences	(1.8)	(0.2)	(1.4)	(0.1)
Tax overprovided in prior periods	(14.9)	(1.7)	(2.8)	(0.2)
Change in provisions	11.5	1.3	1.4	0.1
Tax on undistributed reserves	0.9	0.1	(8.3)	(0.8)
Total income tax expense in the Group Income Statement	40.7	4.6	(347.3)	(32.3)

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.

In the prior year, the effective tax rate of (347.3)% was lower than the UK corporation tax rate of 19% primarily due to the impact of the Tax Cuts and Jobs Act (US Tax Reform), enacted on 22 December 2017, which reduced the US Federal corporate income tax rate from 35% to 21%. This resulted in a one-off non-cash tax credit of £32.5m as a result of the remeasurement of the Group's US deferred tax liabilities in the prior period.

11. TAXATION AND DEFERRED TAXATION CONTINUED

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.

In October 2017, the European Commission announced that it would be conducting a State Aid investigation into the Group Financing Partial Exemption ('FINCO exemption') contained within the UK's controlled foreign company ('CFC') legislation. The Commission's decision was announced in April 2019 and found that this exemption constituted partial state aid in situations where profits previously availing of the FINCO exemption were attributable to Significant People Functions ('SPFs') in the UK.

The UK government has appealed the Commission's decision and there is still considerable uncertainty as to how any final liability under this ruling and attribution to UK SPFs will be determined in practice. The maximum potential exposure if all the relief previously claimed by the Group was repayable would be £4.3m, but the Commission's final decision that the aid is limited to profits attributable to UK SPFs and the potential availability of alternative reliefs will likely result in a substantially lower liability arising. Based on our current interpretation of the relevant legislation and management's judgement, the Group has partially provided in the current year against these previously claimed reliefs based on an initial assessment.

The tax credit attributable to exceptional items is £3.9m (2018: credit of £1.6m).

INCOME TAX RECOGNISED DIRECTLY IN THE STATEMENT OF COMPREHENSIVE INCOME AND STATEMENT OF CHANGES IN EQUITY

	2019 £m	2018 £m
Financial instruments	0.4	0.2
Foreign exchange differences on long-term intra-Group currency loans and balances	(0.3)	0.2
Actuarial movement on retirement benefit obligations	(3.2)	0.3
Translation of biological assets, intangible assets and finance leases	(2.6)	(2.6)
Income tax recognised directly to the Statement of Comprehensive Income	(5.7)	(1.9)
Share-based payment expense	–	(1.4)
Change of non-controlling interest deferred tax on biological assets and intangibles	–	(0.8)
Income tax recognised directly to the Statement of Changes in Equity	–	(2.2)

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 £14.4m (2018: £14.5m). We have recognised a deferred tax asset in respect of £2.9m (2018: £2.2m) 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 £11.5m (2018: £12.3m), due to uncertainty about the availability of future taxable profits in the relevant jurisdictions.

At 30 June 2019, the expiry dates of deferred tax assets in respect of losses available for the carry forward were as follows:

	Expiring within		Unlimited £m	Total £m
	1–10 years £m	11–20 years £m		
Losses for which a deferred tax asset is recognised	–	0.2	2.7	2.9
Losses for which no deferred tax asset is recognised	0.2	0.1	11.2	11.5
	0.2	0.3	13.9	14.4

At 30 June 2018, the expiry dates of deferred tax assets in respect of losses available for the carry forward were as follows:

	Expiring within		Unlimited £m	Total £m
	1–10 years £m	11–20 years £m		
Losses for which a deferred tax asset is recognised	–	0.1	2.1	2.2
Losses for which no deferred tax asset is recognised	–	–	12.3	12.3
	–	0.1	14.4	14.5

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

11. TAXATION AND DEFERRED TAXATION CONTINUED

The gross value of losses for which deferred tax assets are recognised is £16.7m (2018: £12.7m). The gross value of losses for which deferred tax assets are not recognised is £37.9m (2018: £42.3m).

We have not recognised deferred tax liabilities totalling £2.3m (2018: £2.0m) 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 above, to the extent that they arise in the same tax jurisdiction.

The analysis of deferred tax balances is set out below:

	2019 £m	2018 £m
Deferred tax assets	(3.5)	(4.3)
Deferred tax liabilities	72.0	74.8
	68.5	70.5

UK deferred tax assets and liabilities are stated at 17%, which is the UK headline rate of tax effective from 1 April 2020. The tax effect of timing differences reversing in the UK between the reporting date and 1 April 2020, at current rates over 17%, is immaterial.

MOVEMENT IN NET DEFERRED TAX LIABILITIES DURING THE YEAR

	As at 1 July 2018 £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	Acquisitions £m	Foreign exchange difference £m	As at 30 June 2019 £m
Property, plant and equipment	4.9	(0.5)	(0.1)	–	–	–	0.2	4.5
Intangible assets	13.0	(1.5)	(0.2)	0.2	–	(1.1)	0.3	10.7
Biological assets	70.7	(3.2)	(0.1)	–	3.0	1.5	–	71.9
Retirement benefit obligations	(6.0)	(1.4)	–	–	3.1	–	(0.1)	(4.4)
Share-based payment expense	(3.4)	0.2	–	–	0.5	–	–	(2.7)
Short-term timing differences	(6.5)	(0.6)	0.2	(0.9)	(0.8)	–	(0.1)	(8.7)
Tax loss carry-forwards	(2.2)	(0.6)	0.1	(0.1)	–	–	–	(2.8)
	70.5	(7.6)	(0.1)	(0.8)	5.8	0.4	0.3	68.5

	As at 1 July 2017 £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	Acquisitions £m	Foreign exchange difference £m	As at 30 June 2018 £m
Property, plant and equipment	8.6	(0.8)	(3.0)	0.3	–	–	(0.2)	4.9
Intangible assets	20.8	(2.4)	(3.6)	(0.5)	(1.3)	–	–	13.0
Biological assets	111.7	(10.2)	(29.3)	0.6	(2.1)	–	–	70.7
Retirement benefit obligations	(8.5)	1.1	0.7	0.3	0.3	–	0.1	(6.0)
Share-based payment expense	(2.6)	(0.1)	–	–	(0.7)	–	–	(3.4)
Short-term timing differences	(7.2)	(0.7)	2.6	(1.6)	0.2	–	0.2	(6.5)
Tax loss carry-forwards	(2.4)	0.4	–	(0.2)	–	–	–	(2.2)
	120.4	(12.7)	(32.6)	(1.1)	(3.6)	–	0.1	70.5

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

	2019 (pence)	2018 (pence)
Basic earnings per share	12.4	69.7

The calculation of basic earnings per share from continuing operations for the year ended 30 June 2019 is based on the net profit attributable to owners of the Company from continuing operations of £7.8m (2018: £42.7m) and a weighted average number of ordinary shares outstanding of 63,141,000 (2018: 61,234,000), which is calculated as follows:

WEIGHTED AVERAGE NUMBER OF ORDINARY SHARES (BASIC)

	2019 000s	2018 000s
Issued ordinary shares at the start of the year	61,542	61,162
Effect of own shares held	(405)	(180)
Share placement	1,697	–
Shares issued on exercise of stock options	6	20
Shares issued in relation to Employee Benefit Trust	301	232
Weighted average number of ordinary shares in year	63,141	61,234

DILUTED EARNINGS PER SHARE FROM CONTINUING OPERATIONS

	2019 (pence)	2018 (pence)
Diluted earnings per share	11.9	68.7

The calculation of diluted earnings per share from continuing operations for the year ended 30 June 2019 is based on the net profit attributable to owners of the Company from continuing operations of £7.8m (2018: £42.7m) and a weighted average number of ordinary shares outstanding, after adjusting for the effects of all potential dilutive ordinary shares, of 65,304,000 (2018: 62,120,000), which is calculated as follows:

WEIGHTED AVERAGE NUMBER OF ORDINARY SHARES (DILUTED)

	2019 000s	2018 000s
Weighted average number of ordinary shares (basic)	63,141	61,234
Dilutive effect of share options	763	886
Impact of share placement	1,400	–
Weighted average number of ordinary shares for the purposes of diluted earnings per share	65,304	62,120

ADJUSTED EARNINGS PER SHARE FROM CONTINUING OPERATIONS

	2019 (pence)	2018 (pence)
Adjusted earnings per share	73.2	75.9
Diluted adjusted earnings per share	70.7	74.9

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 £46.2m (2018: £46.5m), which is calculated as follows:

	2019 £m	2018 £m
Profit before tax from continuing operations	9.9	7.8
Add/(deduct):		
Net IAS 41 valuation movement on biological assets	14.7	28.7
Amortisation of acquired intangible assets	9.5	9.5
Share-based payment expense	3.0	5.4
Exceptional items (see note 7)	21.8	5.9
Net IAS 41 valuation movement on biological assets in joint ventures	1.1	0.5
Tax on joint ventures and associates	1.4	1.5
Attributable to non-controlling interest	(0.4)	(0.8)
Adjusted profit before tax	61.0	58.5
Adjusted tax charge	(14.8)	(12.0)
Adjusted profit after tax	46.2	46.5
Effective tax rate on adjusted profit	24.3%	20.5%

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

12. EARNINGS PER SHARE CONTINUED RECONCILIATION OF EFFECTIVE TAX RATE

	2019 Profit £m	2019 Tax £m	2019 %
Total income tax expense in the Group Income Statement	11.3	4.6	40.7
Net IAS 41 valuation movement on biological assets	14.7	3.3	22.4
Amortisation of acquired intangible assets	9.5	2.1	22.1
Share-based payment expense	3.0	0.5	16.7
Exceptional items (see note 7)	21.8	3.9	17.9
Net IAS 41 valuation movement on biological assets in joint ventures	1.1	0.4	36.4
Attributable to non-controlling interest	(0.4)	–	–
Adjusted profit before tax	61.0	14.8	24.3
	2018 Profit £m	2018 Tax £m	2018 %
Total income tax expense in the Group Income Statement	9.3	(32.3)	(347.3)
Net IAS 41 valuation movement on biological assets	28.7	38.8	135.2
Amortisation of acquired intangible assets	9.5	3.1	32.6
Share-based payment expense	5.4	0.9	16.7
Exceptional items (see note 7)	5.9	1.6	27.1
Net IAS 41 valuation movement on biological assets in joint ventures	0.5	–	–
Attributable to non-controlling interest	(0.8)	(0.1)	12.5
Adjusted profit before tax	58.5	12.0	20.5

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

	2019 £m	2018 £m
Final dividend		
Final dividend for the year ended 30 June 2018 of 17.9 pence per share	11.0	–
Final dividend for the year ended 30 June 2017 of 16.2 pence per share	–	9.9
Interim dividend		
Interim dividend for the year ended 30 June 2019 of 8.9 pence per share	5.8	–
Interim dividend for the year ended 30 June 2018 of 8.1 pence per share	–	5.0
	16.8	14.9

The Directors have proposed a final dividend of 18.8 pence per share for 2019. This is subject to shareholders' approval at the Annual General Meeting and we have therefore not included it as a liability in these financial statements.

14. INTANGIBLE ASSETS

Our Group Balance Sheet contains significant intangible assets, mainly in relation to goodwill, acquired technology, customer relationships 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.

GOODWILL

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.

14. INTANGIBLE ASSETS CONTINUED

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.

INTANGIBLE ASSETS

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
Customer relationships	10 to 17 years
IntelliGen	10 years
Patents and licences	term of agreement (4 years)
Software	2 to 10 years

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.

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 net selling price 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.

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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

14. INTANGIBLE ASSETS CONTINUED

	Technology £m	Brand, multiplier contracts and customer relationships £m	Separately identified acquired intangible assets £m	Software including assets under construction £m	IntelliGen £m	Patents, licences and other £m	Total £m	Goodwill £m
Cost								
Balance at 1 July 2017	53.4	82.3	135.7	8.8	21.3	4.1	169.9	104.7
Additions	–	–	–	3.6	1.1	–	4.7	–
Reclassified from tangible fixed assets	–	–	–	1.9	–	–	1.9	–
Transfer between classes	(1.3)	–	(1.3)	1.3	–	–	–	–
Disposals	–	–	–	–	–	(0.2)	(0.2)	–
Effect of movements in exchange rates	(0.4)	(1.8)	(2.2)	(0.2)	(0.2)	–	(2.6)	(2.7)
Balance at 30 June 2018	51.7	80.5	132.2	15.4	22.2	3.9	173.7	102.0
Additions	–	–	–	10.2	1.0	0.5	11.7	–
Acquisitions (note 36)	–	1.8	1.8	–	–	–	1.8	1.1
Disposals	–	–	–	(0.1)	–	(0.1)	(0.2)	–
Effect of movements in exchange rates	1.3	2.8	4.1	0.2	0.8	0.1	5.2	3.2
Balance at 30 June 2019	53.0	85.1	138.1	25.7	24.0	4.4	192.2	106.3
Amortisation and impairment losses								
Balance at 1 July 2017	24.8	47.9	72.7	7.5	0.4	1.0	81.6	–
Reclassified from tangible fixed assets	–	–	–	0.4	–	–	0.4	–
Amortisation for the year	3.0	6.5	9.5	1.4	2.1	0.8	13.8	–
Effect of movements in exchange rates	(0.1)	(0.7)	(0.8)	–	–	–	(0.8)	–
Balance at 30 June 2018	27.7	53.7	81.4	9.3	2.5	1.8	95.0	–
Impairment	–	–	–	1.2	–	–	1.2	–
Disposals	–	–	–	(0.1)	–	–	(0.1)	–
Amortisation for the year	2.7	6.8	9.5	1.0	2.1	1.1	13.7	–
Effect of movements in exchange rates	0.4	1.3	1.7	0.2	0.4	–	2.3	–
Balance at 30 June 2019	30.8	61.8	92.6	11.6	5.0	2.9	112.1	–
Carrying amounts								
At 30 June 2019	22.2	23.3	45.5	14.1	19.0	1.5	80.1	106.3
At 30 June 2018	24.0	26.8	50.8	6.1	19.7	2.1	78.7	102.0
At 30 June 2017	28.6	34.4	63.0	1.3	20.9	3.1	88.3	104.7

Included within the software class of assets is £11.0m of costs capitalised in relation to software assets that are in the course of construction. Of this, £9.8m relates to the ongoing development of GenusOne, a single global enterprise system.

IMPAIRMENT TESTING FOR CGUs CONTAINING GOODWILL

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.

The aggregate carrying amounts of goodwill allocated to each operating segment are as follows:

	2019 £m	2018 £m
Genus PIC	73.0	70.8
Genus ABS	33.3	31.2
	106.3	102.0

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, growth rates, expected changes to selling prices, direct costs and the cost saving derived from the IntelliGen technologies.

14. INTANGIBLE ASSETS CONTINUED

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 10% to the WACC as appropriate. The post-tax WACC of 9.8% (2018: 8.7%) we applied to our cash flow projections equates to a pre-tax rate of approximately 13.0% (2018: 11.4%). 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 immediately before year end. It is based on cash flows derived from our most recent financial and strategic plans approved by management. A growth rate of 2.5% (2018: 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.

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	
	2019	2018	2019	2018	2019	2018
Genus PIC	nil-10%	nil-10%	6-29%	6-23%	2.5%	2.5%
Genus ABS	nil-10%	nil-10%	9-19%	8-20%	2.5%	2.5%

	Weighted average risk-adjusted discount rate		Weighted average short-term growth rates (CAGR)	
	2019	2018	2019	2018
Genus PIC	10%	9%	13%	10%
Genus ABS	10%	9%	14%	11%

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 sensitivity analysis on the key assumptions with other variables held constant, with other variables simultaneously changed and incorporating the potential impact of the principal risks and uncertainties outlined on pages 44 to 45, in particular the impacts of biosecurity, market down turns, continuity of supply and increased competition 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. 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 and semen 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.

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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

15. BIOLOGICAL ASSETS CONTINUED

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 pre-tax 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.

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.

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 discount rate.

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 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 IAS 39. We do not recognise the offspring as biological assets under IAS 41, as we do not own or control them.

15. BIOLOGICAL ASSETS CONTINUED

Fair value of biological assets	Bovine £m	Porcine £m	Total £m
Non-current biological assets	137.5	171.8	309.3
Current biological assets	–	43.8	43.8
Balance at 30 June 2017	137.5	215.6	353.1
Increases due to purchases	9.1	117.3	126.4
Decreases attributable to sales	–	(194.7)	(194.7)
Decrease due to harvest	(35.5)	(20.0)	(55.5)
Changes in fair value less estimated sale costs	(4.2)	99.9	95.7
Acquisition	–	25.1	25.1
Effect of movements in exchange rates	(2.9)	(4.4)	(7.3)
Balance at 30 June 2018	104.0	238.8	342.8
Non-current biological assets	104.0	201.8	305.8
Current biological assets	–	37.0	37.0
Balance at 30 June 2018	104.0	238.8	342.8
Increases due to purchases	9.2	117.5	126.7
Decreases attributable to sales	–	(191.5)	(191.5)
Decrease due to harvest	(25.3)	(22.2)	(47.5)
Changes in fair value less estimated sale costs	7.2	97.2	104.4
Effect of movements in exchange rates	3.6	9.2	12.8
Balance at 30 June 2019	98.7	249.0	347.7
Non-current biological assets	98.7	208.9	307.6
Current biological assets	–	40.1	40.1
Balance at 30 June 2019	98.7	249.0	347.7

Bovine biological assets include £3.9m (2018: £6.7m) 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 finance leases.

There were no movements in the carrying value of the bovine biological assets in respect of sales or other changes during the year.

The current market-determined post-tax rate used to discount expected future net cash flows from the sale of bull semen is the weighted risk-adjusted cost of capital. This has been assessed as 8.7% (2018: 8.7%).

Decreases due to harvest represent the semen extracted from the biological assets. Inventories of such semen are shown as biological asset harvest in note 19.

In 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 £36.3m (2018: £47.7m).

Decreases attributable to sales during the year of £191.5m (2018: £194.7m) include £71.4m (2018: £71.9m) 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 £85.4m (2018: £88.2m) 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 £179.6m (2018: £159.6m) in respect of these contracts, comprising £57.6m (2018: £48.9m) on initial transfer of animals and semen to customers and £122.0m (2018: £110.7m) in respect of royalties received.

For pure line porcine herds, the net cash flows from the expected output of the herds are discounted at the Group's required rate of return, adjusted for the greater risk implicit in including output from future generations. This risk-adjusted rate has been assessed as 11.0% (2018: 11.0%). The number of future generations which have been taken into account is seven (2018: seven) and their estimated useful lifespan is 1.4 years (2018: 1.4 years).

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

15. BIOLOGICAL ASSETS CONTINUED

YEAR ENDED 30 JUNE 2019

	Bovine £m	Porcine £m	Total £m
Net IAS 41 valuation movement on biological assets ¹			
Changes in fair value of biological assets	7.2	97.2	104.4
Inventory transferred to cost of sales at fair value	(20.0)	(22.2)	(42.2)
Biological assets transferred to cost of sales at fair value	–	(77.2)	(77.2)
	(12.8)	(2.2)	(15.0)
Fair value movement in related financial derivative	–	0.3	0.3
	(12.8)	(1.9)	(14.7)

YEAR ENDED 30 JUNE 2018

	Bovine £m	Porcine £m	Total £m
Net IAS 41 valuation movement on biological assets ¹			
Changes in fair value of biological assets	(4.2)	99.9	95.7
Inventory transferred to cost of sales at fair value	(29.8)	(20.0)	(49.8)
Biological assets transferred to cost of sales at fair value	–	(75.1)	(75.1)
	(34.0)	4.8	(29.2)
Fair value movement in related financial derivative	–	0.5	0.5
	(34.0)	5.3	(28.7)

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.

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.

UNOBSERVABLE INPUTS

	2019	Sensitivity
Bovine		
Risk-adjusted discount rate	8.7%	1 percentage point increase in the discount rate would result in approximately a £2.9m reduction in value.
Value at point of production	37.5%	1 percentage point decrease in the rate would result in approximately a £4.2m reduction in value.
% of new dairy bulls to be produced internally in future years	FY20 49% FY21 61% FY22 72% FY23 and thereafter 79%	If % remained at FY19 level of 48% there would be a decrease in value of approximately £4.4m.
Age profile of Holstein bulls generating future sales	FY20 – avg age 4.0 yrs FY21 – avg age 3.9 yrs FY22 – avg age 3.9 yrs FY23 and thereafter – avg age 3.8 yrs	If age profile remains at FY19 average age of 4.1 years, there would be an increase in value of approximately £4.3m.
Age profile of US beef on dairy bulls generating future sales	FY20 – avg age 5.1 yrs FY21 – avg age 5.6 yrs FY22 – avg age 5.2 yrs FY23 and thereafter – avg age 5.3 yrs	If age profile remains at FY19 average age of 4.2 years, there would be a decrease in value of approximately £1.9m.
Long-term dairy volume growth rate	1.4%	1 percentage point decrease in the growth rate would result in approximately a £0.2m reduction in value.
Short-term dairy volume growth rate	4.4%	1 percentage point decrease in the growth rate would result in approximately a £1.6m reduction in value.
Porcine		
Risk-adjusted discount rate – upfront prices	8.8%	1 percentage point increase in the discount rate would result in approximately a £0.3m reduction in value.
Risk-adjusted discount rate – pure line herd	11%	1 percentage point increase in the discount rate would result in approximately a £3.1m reduction in value.

15. BIOLOGICAL ASSETS CONTINUED

Additional information	2019	2018
BOVINE		
Quantities at year end		
Number of bulls in production	644	628
Number of bulls under development (including calves)	982	979
Total number of bulls	1,626	1,607
Number of doses of semen valued in inventory	10.9m	10.2m
Amounts during the year		
Fair value of agricultural produce – semen harvested during the year	£25.3m	£35.5m
PORCINE		
Quantities at year end		
Number of pigs (own farms)	97,468	88,091
Number of pigs, excluding parent gilts, despatched on a royalty basis and valued at fair value	80,992	87,431
Amounts during the year		
Fair value of agricultural produce – semen harvested during the year	£22.2m	£20.0m

16. 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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

16. PROPERTY, PLANT AND EQUIPMENT CONTINUED

	Land and buildings £m	Plant, motor vehicles and equipment £m	Assets under construction £m	Total £m
Cost or deemed cost				
Balance at 1 July 2017	51.7	66.4	6.9	125.0
Additions	4.7	10.6	7.8	23.1
Reclassification to intangible assets	–	(0.7)	(1.2)	(1.9)
Transfer	2.0	7.3	(9.3)	–
Disposals	(0.3)	(4.2)	–	(4.5)
Effect of movements in exchange rates	(1.6)	(1.3)	(0.2)	(3.1)
Balance at 30 June 2018	56.5	78.1	4.0	138.6
Additions	1.0	10.1	10.0	21.1
Transfer	3.5	6.0	(9.5)	–
Disposals	(1.6)	(6.0)	(0.1)	(7.7)
Effect of movements in exchange rates	2.7	3.1	0.3	6.1
Balance at 30 June 2019	62.1	91.3	4.7	158.1
Depreciation and impairment losses				
Balance at 1 July 2017 (restated) ¹	16.5	41.0	–	57.5
Depreciation for the year	2.5	7.9	–	10.4
Reclassification to intangible assets	–	(0.4)	–	(0.4)
Disposals	(0.3)	(3.9)	–	(4.2)
Effect of movements in exchange rates	(0.6)	(1.0)	–	(1.6)
Balance at 30 June 2018	18.1	43.6	–	61.7
Depreciation for the year	3.0	9.6	–	12.6
Disposals	(1.5)	(4.7)	–	(6.2)
Effect of movements in exchange rates	1.2	2.8	–	4.0
Balance at 30 June 2019	20.8	51.3	–	72.1
Carrying amounts				
At 30 June 2019	41.3	40.0	4.7	86.0
At 30 June 2018	38.4	34.5	4.0	76.9
At 30 June 2017 (restated)¹	35.2	25.4	6.9	67.5

1 Accumulated depreciation of £3.2m reported at 30 June 2017 has been reclassified from 'Plant, motor vehicles and equipment' to 'Land and buildings' in the year with £nil impact on the net book value of property, plant and equipment.

LEASED PLANT AND MACHINERY

At 30 June 2019, plant, motor vehicles and equipment included assets held under finance leases with a carrying value of £7.2m (2018: £7.6m, 2017: £7.3m). The associated depreciation charge for the year was £2.0m (2018: £1.9m, 2017: £1.7m).

17. EQUITY ACCOUNTED INVESTEEES

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.

17. EQUITY ACCOUNTED INVESTEEES CONTINUED

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 £5.1m (2018: £4.2m).

The carrying value of the investment is reconciled as follows:

	2019 £m	2018 £m
Balance at 1 July	19.9	22.7
Share of post-tax profits of joint ventures and associates retained	5.1	4.2
Dividends received from Agrocere – PIC Genética de Suínos Ltda (Brazil)	(2.7)	(2.8)
Loan repayment	(0.7)	–
Effect of other movements including exchange rates	2.0	(4.2)
Balance at 30 June	23.6	19.9

During the year, under the subscription agreement with Avlscenter Møllevang A/S ('Møllevang'), Genus purchased 49% of the Danish porcine genetics company and obtained economic control of its elite genetics. Under this agreement, the majority shareholders have a call option to purchase the entire shares held by Genus, after a three-year period, for a consideration which is capped at Genus's share of total retained profits during the period of ownership. As a result of this call option, Genus will receive no economic benefit from the net assets of the entity other than its share of retained interest, and therefore has restricted the net assets to nil.

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	
	2019 £m	2018 £m	2019 £m	2018 £m
Purchase of goods and services from joint ventures and associates	2.0	3.5	(2.6)	(1.3)

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 below:

JOINT VENTURES AND ASSOCIATES – YEAR ENDED 30 JUNE 2019

Net assets	Ownership	Current assets £m	Non-current assets £m	Biological assets £m	Total assets £m	Current liabilities £m	Total liabilities £m	Net assets £m
Agrocere – PIC Genética de Suínos Ltda (Brazil)	49%	9.1	8.1	3.6	20.8	(2.8)	(2.8)	18.0
HY-CO Hybridschweine-Cooperations GmbH (Germany)	50%	0.2	0.1	–	0.3	(0.1)	(0.1)	0.2
Xianyang Yongxiang Agriculture Technology Co., Ltd.(China) ¹	49%	2.1	3.7	(0.1)	5.7	(1.4)	(1.4)	4.3
Chitale Genus ABS (India) Private Limited (India)	50%	0.3	0.8	–	1.1	–	–	1.1
		11.7	12.7	3.5	27.9	(4.3)	(4.3)	23.6

¹ Classified as an associate.

Joint ventures and associates have a December year end, except Chitale Genus ABS (India) Private Limited, which has a March year end.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

17. EQUITY ACCOUNTED INVESTEEES CONTINUED

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%	25.1	(1.2)	(18.1)	5.8	(1.5)	4.3
HY-CO Hybridschweine-Cooperations GmbH (Germany)	50%	1.3	–	(1.3)	–	–	–
Xianyang Yongxiang Agriculture Technology Co., Ltd. (China) ¹	49%	3.1	0.1	(2.5)	0.7	0.1	0.8
Chitale Genus ABS (India) Private Limited (India)	50%	0.3	–	(0.3)	–	–	–
		29.8	(1.1)	(22.2)	6.5	(1.4)	5.1

JOINT VENTURES AND ASSOCIATES – YEAR ENDED 30 JUNE 2018

Net assets	Ownership	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%	4.9	8.0	4.3	17.2	(2.8)	(2.8)	14.4
HY-CO Hybridschweine-Cooperations GmbH (Germany)	50%	0.3	–	–	0.3	(0.1)	(0.1)	0.2
Xianyang Yongxiang Agriculture Technology Co., Ltd. (China) ¹	49%	2.1	3.6	0.7	6.4	(2.2)	(2.2)	4.2
Chitale Genus ABS (India) Private Limited (India)	50%	0.4	1.0	–	1.4	(0.3)	(0.3)	1.1
		7.7	12.6	5.0	25.3	(5.4)	(5.4)	19.9

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%	22.2	–	(16.0)	6.2	(1.5)	4.7
HY-CO Hybridschweine-Cooperations GmbH (Germany)	50%	0.7	–	(0.6)	0.1	–	0.1
Xianyang Yongxiang Agriculture Technology Co., Ltd. (China) ¹	49%	2.3	(0.5)	(2.4)	(0.6)	–	(0.6)
Chitale Genus ABS (India) Private Limited (India)	50%	0.3	–	(0.3)	–	–	–
		25.5	(0.5)	(19.3)	5.7	(1.5)	4.2

¹ Classified as an associate.

Joint ventures and associates have a December year end, except Chitale Genus ABS (India) Private Limited, which has a March year end.

18. OTHER INVESTMENTS

We hold a number of unlisted and listed investments, mainly comprising our strategic investment in Caribou Biosciences, Inc. and shares in listed entity National Milk Records plc ('NMR').

ACCOUNTING POLICY

Other investments are classified as 'fair value through other comprehensive income' ('available for sale' for periods before 1 July 2018). Financial assets held at fair value through other comprehensive income are initially measured at fair value, including transaction costs directly attributable to the acquisition of the financial asset. For equity investments at 'fair value through comprehensive income', gains or losses arising from changes in fair value are recognised in other comprehensive income, until the security is disposed of, at which time the cumulative gain or loss previously recognised in other comprehensive income is included directly in retained earnings and is not recycled to the income statement.

18. OTHER INVESTMENTS CONTINUED

	2019 £m	2018 £m
INVESTMENTS CARRIED AT FAIR VALUE		
Unlisted equity shares – Caribou Biosciences, Inc.	3.7	3.7
Unlisted equity shares	1.1	0.3
Listed equity shares – NMR	2.6	1.9
	7.4	5.9

We hold a strategic non-controlling interest of 5% in Caribou Biosciences, Inc.

As part of the NMR pension agreement, we acquired 2,120,000 ordinary shares in NMR.

During the year, we acquired a strategic non-controlling interest in a herd management software company for £1.1m.

19. 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 15.

	2019 £m	2018 £m
Biological assets' harvest classed as inventories	19.0	20.2
Raw materials and consumables	0.8	0.6
Goods held for resale	16.2	13.4
	36.0	34.2

20. 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.

	2019 £m	2018 £m
Trade receivables	82.8	73.9
Other debtors	5.1	5.3
Prepayments and accrued income	8.2	10.3
Other taxes and social security	1.9	1.5
	98.0	91.0

TRADE RECEIVABLES

The average credit period our customers take on the sales of goods is 62 days (2018: 58 days). We do not charge interest on receivables for the first 30 days from the date of the invoice. We provide for all receivables based on knowledge of the customer and historical experience, and estimate irrecoverable amounts by reference to past default experience.

No customer represents more than 5% of the total balance of trade receivables (2018: nil).

At 30 June 2019, £64.7m (2018: £55.4m) of trade receivables were not yet due for payment.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

20. TRADE AND OTHER RECEIVABLES CONTINUED

Included in the Group's trade receivables balance, net of provision, are debtors with a carrying amount of £21.5m (2018: £18.0m) which are past due at the reporting date but which we have not provided for, as there has been no significant change in credit quality and we consider the amounts are recoverable. The Group does not hold any collateral over these balances. The average age of these receivables is 49 days (2018: 42 days).

Ageing of trade receivables that are past due and presented net of provisions that have been established:

Days past due	2019 £m	2018 £m
0–30 days	11.4	9.6
31–90 days	6.6	6.3
91–180 days	2.3	1.7
Over 180 days	1.2	0.4
	21.5	18.0

At 30 June 2019, trade receivables of £23.8m (2018: £22.4m) were past due but not impaired. The ageing of these receivables is as follows:

Days past due	2019 £m	2018 £m
0–30 days	11.4	9.6
31–90 days	6.7	6.4
91–180 days	2.8	2.4
Over 180 days	2.9	4.0
	23.8	22.4

The Directors consider that the carrying amount of trade and other receivables approximates their fair value.

At 30 June 2019, trade receivables are shown net of an allowance for expected credit losses of £2.6m (2018: £4.4m).

MOVEMENT IN THE ALLOWANCE FOR EXPECTED CREDIT LOSSES ('ECL')

	2019 £m	2018 £m
Balance at the start of the year	4.4	4.4
Impairment losses recognised	1.7	1.0
Amounts written off as uncollectible	(2.2)	(0.2)
Impairment losses reversed	(1.4)	(0.8)
Effect of movements in exchange rates	0.1	–
Balance at the end of the year	2.6	4.4

In determining the recoverability of a trade receivable, we consider any change in the receivable's credit quality from the date we initially granted credit, up to the reporting date. The concentration of credit risk is limited, as our customer base is large and unrelated.

The Group always recognises lifetime ECL for trade receivables. The expected credit losses on these are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

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, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or when the trade receivables are over two years past due, whichever occurs earlier.

Receivables denominated in currencies other than Sterling comprise £31.4m denominated in US Dollars (2018: £31.6m), £12.3m denominated in Euros (2018: £11.0m) and £34.3m denominated in other currencies (2018: £29.8m).

21. 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. We only include them in cash and cash equivalents in the statement of cash flows.

	2019 £m	2018 £m
Bank balances	30.5	29.1

The carrying amount of these assets approximates to their fair value. Included within bank balances above is £nil (2018: £11.4m) which was subject to certain local restrictions, principally in China.

22. 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.

	2019 £m	2018 £m
Trade payables	24.5	23.6
Other payables, accrued expenses and deferred income	56.2	53.7
Other taxes and social security	7.0	6.4
	87.7	83.7

The average credit period taken for trade purchases is 31 days (2018: 31 days).

Payables denominated in currencies other than Sterling comprise £32.8 m denominated in US Dollars (2018: £33.6m), £11.3m denominated in Euros (2018: £10.2m) and £22.4m denominated in other currencies (2018: £18.9m). The carrying values of these liabilities are a reasonable approximation of their fair values.

23. PROVISIONS

A provision is a liability recorded in the 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 contingent deferred consideration 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.

	Contingent deferred consideration £m	Share forfeiture £m	Other provisions £m	Total £m
Balance at 1 July 2017	5.1	–	1.3	6.4
Additional provision in the year	–	2.2	0.6	2.8
Utilisation of provision	(0.8)	–	(0.7)	(1.5)
Release of provision	(0.3)	–	(0.1)	(0.4)
Balance at 30 June 2018	4.0	2.2	1.1	7.3
Additional provision in the year	0.9	–	1.7	2.6
Utilisation of provision	(0.4)	(0.2)	(0.3)	(0.9)
Release of provision	–	–	(0.2)	(0.2)
Balance at 30 June 2019	4.5	2.0	2.3	8.8

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

23. PROVISIONS CONTINUED

	2019 £m	2018 £m
Current	3.1	2.8
Non-current	5.7	4.5
	8.8	7.3

Additions to contingent deferred consideration of £0.9m, primarily relates to the acquisition of Progenex S.L. (note 36) and is subject to certain conditions being met by the seller.

The share forfeiture provision of £2.0m relates to potential claims that could be made by untraced members over the next two 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 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.

24. 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, co-ordinates 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's 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, when such options may only be settled by exchanging a fixed amount of cash or other financial asset for a fixed number of shares in the subsidiary.

The amount that may become payable under the option on exercise is initially recognised at present value within borrowings, 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.

24. FINANCIAL INSTRUMENTS CONTINUED**DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES**

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.

CASH FLOW HEDGES

Where a derivative financial instrument is designated as hedging the variability in cash flows of a recognised asset or liability, or a highly probable forecast transaction, we recognise the effective part of any gain or loss on the instrument directly in the Group Statement of Comprehensive Income. We recognise any ineffective portion of the hedge immediately in the Group Income Statement.

If we hedge a forecast transaction that subsequently results in our recognising a financial asset or liability, we recycle in the Group Income Statement the associated gains and losses that we had recognised in equity. We do this in the same period or periods that the asset or liability affects the Group Income Statement, which are the periods when we recognise the interest income or expense.

If we expect a hedged forecast transaction to occur but the hedging instrument has expired, been sold, terminated or exercised, or we have revoked the designation of the hedge relationship, then the cumulative gain or loss at that point remains in equity and we recognise it in accordance with the above policy when the transaction occurs. If we no longer expect the hedged transaction to take place, we immediately recognise in the Group Income Statement the cumulative unrealised gain or loss recognised in equity.

NET INVESTMENT HEDGES

Where we have designated a derivative financial instrument as hedging the variability of the net assets of an overseas subsidiary, which arises from the spot or forward exchange rate translation risk associated with the subsidiary's functional currency, we recognise the effective part of any gain or loss on the instrument directly in the hedging reserve. Any ineffective portion of the hedge is recognised immediately in the Group Income Statement.

When a hedging instrument expires or is sold, terminated or exercised, or we revoke designation of the hedge relationship, the cumulative gain or loss at that point remains in equity until we dispose of the investment it relates to.

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 25, cash and cash equivalents, and equity attributable to equity holders of the Parent, comprising issued capital, reserves and retained earnings, as disclosed in note 29.

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:

	2019 £m	2018 £m
Debt (see note 25)	110.1	137.6
Cash and cash equivalents (see note 21)	(30.5)	(29.1)
Net debt (see note 30)	79.6	108.5
Equity	502.3	419.1
Net debt to equity ratio	16%	26%

Debt is defined as long and short-term borrowings, as detailed in note 25.

Equity includes all capital and reserves of the Group attributable to equity holders of the Parent.

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. We have not categorised any financial instruments as Level 1 or Level 3.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

24. FINANCIAL INSTRUMENTS CONTINUED

	2019 Carrying value £m	2018 Carrying value £m
Financial assets		
Other investments	7.4	5.9
Trade receivables and other debtors, excluding prepayments and accrued income (see note 20)	89.8	80.7
Cash and cash equivalents	30.5	29.1
Derivative instruments in non-designated hedge accounting relationships	0.9	0.3
Assets held for sale	0.2	0.2
Derivative instruments in designated hedge accounting relationships	0.6	2.5
Financial liabilities		
Trade and other payables, excluding other taxes and social security (see note 22)	(80.7)	(77.3)
Loans and overdrafts (see note 25)	(104.0)	(134.1)
Leasing obligations (see note 26)	(6.1)	(3.5)
Derivative instruments in non-designated hedge accounting relationships	(0.6)	(0.3)
Derivative instruments in designated hedge accounting relationships	(0.6)	(0.6)
Put option over non-controlling interest	(5.5)	(3.2)

There is no material difference between the carrying value and fair value.

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 at the reporting date were as follows:

	Liabilities		Assets	
	2019 £m	2018 £m	2019 £m	2018 £m
US Dollar (including leases)	(83.3)	(92.9)	11.6	8.8
Euro	(11.5)	(11.9)	0.5	–
Chinese Yuan Renminbi	–	–	1.2	1.9

FOREIGN CURRENCY INCOME STATEMENT SENSITIVITY ANALYSIS

The Group is mainly exposed to movements in the US Dollar, Euro, Brazilian Real, Mexican Peso and Chinese Yuan Renminbi exchange rates.

The following table details the Group's sensitivity to a 10% increase and decrease in Sterling against these currencies. Ten percent 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% 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.

10% currency movement	2019 £m	2018 £m
Euro	1.1	0.9
US Dollar	1.9	1.7
Brazilian Real	0.8	1.0
Mexican Peso	1.3	1.2
Chinese Yuan Renminbi	0.2	0.8

24. FINANCIAL INSTRUMENTS CONTINUED**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		Foreign currency	Contract value		Fair value	
	2019	2018		2019 £m	2018 £m	2019 £m	2018 £m
Outstanding contracts							
Buy DKK	–	8.40	DKK	–	19.5	–	(0.1)
Sell CAD	1.71	–	CAD	0.2	–	–	–
Sell CNY	8.80	8.90	CNY	1.3	2.2	–	–
Buy AUD	1.87	1.76	AUD	1.2	1.5	–	–
Buy RON	5.48	–	RON	0.3	–	–	–
Sell CLP	879.4	–	CLP	–	–	–	–
Buy BRL	4.90	–	BRL	0.2	–	–	–
Sell PHP	65.35	71.40	PHP	–	0.5	–	–
Sell RUB	81.65	83.20	RUB	0.6	1.0	–	–
Buy EUR	1.13	1.13	EUR	3.9	8.8	–	–
Sell PLN	4.79	4.79	PLN	0.7	0.3	–	–
Buy MXN	24.86	–	MXN	0.4	–	–	–
Buy USD	–	1.33	USD	–	7.6	–	–
Sell USD	1.27	–	USD	1.6	–	–	–
Buy EUR/Sell CHF	1.13	1.15	CHF	0.3	0.3	–	–
Buy EUR/Sell CAD	1.51	–	CAD	0.2	–	–	–
Buy USD/Sell COP	3,253	2,924	COP	0.6	0.6	–	–
Buy USD/Sell BRL	3.88	–	BRL	1.7	–	–	–
Buy CLP/Sell USD	686.20	–	CLP	0.2	–	–	–
Buy ARS/Sell USD	45.83	–	ARS	0.3	–	–	–
Buy USD/Sell ARS	–	26.35	ARS	–	0.3	–	–
Buy USD/Sell CNY	6.91	6.42	CNY	0.8	1.0	–	–
Buy PHP/Sell USD	52.67	53.15	PHP	3.4	2.7	0.1	0.1
Buy CAD/Sell USD	–	1.30	CAD	–	1.0	–	–
Buy USD/Sell CAD	1.33	–	CAD	0.8	–	–	–
Buy MXN/Sell USD	19.25	–	MXN	0.2	–	–	–
Buy USD/Sell EUR	1.14	1.18	EUR	0.9	1.0	–	–
Buy USD/Sell RUB	64.99	62.57	RUB	0.2	0.1	–	–
Buy USD/Sell INR	69.65	68.45	INR	2.4	1.2	–	–
Buy USD/Sell ZAR	14.90	13.72	ZAR	0.2	0.1	–	–
						0.1	–

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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

24. FINANCIAL INSTRUMENTS CONTINUED

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 higher or lower and all other variables were held constant, the Group's profit for the year ended 30 June 2019 would have decreased or increased by £0.1m (2018: decrease/increase by £0.3m). 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 below. 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	
	2019 %	2018 %	2019 £m	2018 £m	2019 £m	2018 £m
Outstanding receive floating pay fixed contracts						
USD interest rate swaps						
Less than one year	1.10	–	35.4	–	0.1	–
One to five years	1.22	1.04	35.5	83.3	0.4	2.3
			70.9	83.3	0.5	2.3
GBP interest rate swaps						
One to five years	1.07	0.73	25.0	35.0	(0.2)	0.2

The interest rate swaps settle on a quarterly basis. The corresponding floating rate on the interest rate swaps is three-month LIBOR. 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 profit or loss, over the period that the floating rate interest payments on debt affect profit or loss.

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	
	2019 US\$	2018 US\$	2019 £m	2018 £m	2019 £m	2018 £m
Commodity hedge						
Open commodity contracts as at June 2019						
Lean hog	0.74	0.67	6.0	6.8	–	0.2
Corn	4.06	3.77	(4.0)	(3.0)	0.3	(0.1)
Soybean meal	314	353	(2.8)	(2.9)	0.1	(0.1)
			(0.8)	0.9	0.4	–

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.

24. FINANCIAL INSTRUMENTS CONTINUED**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 25 and 26.

The following table details the Group's remaining contractual maturity for its non-derivative financial liabilities, excluding trade payables and other creditors. 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
2019							
Variable interest rate instruments	3.13	0.2	3.1	5.2	119.8	–	128.3
2018							
Variable interest rate instruments	2.80	3.4	11.4	4.1	139.1	–	158.0

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
2019							
Variable interest rate instruments	1.04	30.5	–	–	–	–	30.5
2018							
Variable interest rate instruments	0.66	29.1	–	–	–	–	29.1

The Group has financing facilities with a total unused amount of £125.6m (2018: £99.3m) 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
2019						
Interest rate swaps	(0.1)	(0.2)	(0.4)	–	–	(0.7)
2018						
Interest rate swaps	–	–	0.5	2.0	–	2.5

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

25. 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.

	2019 £m	2018 £m
Non-current liabilities		
Unsecured bank loans	101.9	120.7
Obligations under finance leases (see note 26)	3.9	2.1
	105.8	122.8
Current liabilities		
Unsecured bank loans and overdrafts	2.1	10.6
Obligations under finance leases (see note 26)	2.2	1.4
Other unsecured borrowings	–	2.8
	4.3	14.8
Total interest-bearing liabilities	110.1	137.6

TERMS AND DEBT REPAYMENT SCHEDULE

Terms and conditions of outstanding loans and overdrafts were as follows:

	Currency	Interest rate	2019 £m	2018 £m
Revolving credit facility and overdraft	GBP	1.8%	25.0	33.5
Revolving credit facility, term loan and overdraft	USD	3.5%	77.2	90.1
Revolving credit facility and overdraft	EUR	–	–	0.9
Finance lease liabilities	USD	4.0%	6.1	3.5
Other unsecured bank borrowings	Other	1.3%	1.8	6.8
Other unsecured borrowings	USD	–	–	2.8
Total interest-bearing liabilities			110.1	137.6

The above revolving credit facilities are unsecured. Information about the Group's exposure to interest rate and foreign currency risks is shown in note 24.

	2019 £m	2018 £m
Loans and borrowings (excluding finance leases) comprise amounts falling due:		
In one year or less or on demand	2.5	13.8
In more than one year but not more than two years	–	–
In more than two years but not more than five years	102.2	121.4
	104.7	135.2
Less: unamortised issue costs	(0.7)	(1.1)
	104.0	134.1
Current liabilities	(2.1)	(13.4)
Non-current liabilities	101.9	120.7

At the balance sheet date, the Group's credit facilities comprised a £95m multi-currency revolving credit facility and a US\$165m revolving credit facility. £45m of the Group's credit facilities expire in February 2021, with the remaining facilities expiring in February 2022.

As part of its interest rate strategy, the Group has entered into interest rate swaps to hedge floating LIBOR rates. As a result, bank loan and overdrafts include borrowings of US\$90m (£70.9m) fixed at 1.16% and GBP £25m fixed at 1.07%, excluding applicable bank margin.

26. FINANCE LEASE LIABILITIES

A finance lease is a commitment to make a payment in the future, primarily in relation to plant and machinery and motor vehicles.

ACCOUNTING POLICIES

We classify leases as finance leases whenever the lease terms transfer substantially all the risks and rewards of ownership to us. All other leases are operating leases.

We recognise the assets we hold under finance leases at their fair value or, if lower, at the present value of the minimum lease payments, each of which we determine at the start of the lease. We include our corresponding liability in the balance sheet, as a finance lease obligation.

We apportion lease payments between finance charges and a reduction in our lease obligation, so we achieve a constant rate of interest on the remaining liability. We recognise finance charges directly in the income statement, unless they are directly attributable to qualifying assets, in which case we capitalise them in accordance with our general policy on borrowing costs.

Finance lease liabilities are payable as follows:

	Minimum lease payments 2019 £m	Interest 2019 £m	Principal 2019 £m	Minimum lease payments 2018 £m	Interest 2018 £m	Principal 2018 £m
Less than one year	2.2	0.4	2.6	1.4	0.1	1.5
Between one and five years	3.9	0.7	4.6	2.1	0.1	2.2
	6.1	1.1	7.2	3.5	0.2	3.7

Finance lease liabilities are secured on the assets to which they relate. There are no other restrictions imposed by the lessor. The fair value of the leases is approximately equal to the carrying amount.

27. 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 and the Dalgety Pension Fund 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 Milk Pension Fund'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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

27. 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.

	2019 £m	2018 £m
The Milk Pension Fund – Genus's share	14.1	24.2
The Dalgety Pension Fund	–	–
Other retirement benefit obligations and other unfunded schemes	10.1	9.7
Overall net pension liability	24.2	33.9

Overall, we expect to pay £7.7m (2018: £7.5m) in contributions to defined benefit plans in the 2020 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 HM Revenue & Customs 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 26 October 2018, the High Court issued a judgment in a claim involving Lloyds Banking Group's defined benefit pension schemes. This judgment concluded the schemes should be amended in order to equalise pension benefits for men and women in relation to guaranteed minimum pension benefits. The issues determined by the judgment have reduced the value of the assets in the Group's defined benefit pension schemes by £16.1m. This increase has been reflected in the results as a past service cost.

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 (2018: 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 2018 and was carried out by qualified actuaries. The valuation has been agreed by the trustees.

The principal actuarial assumptions adopted in the 2018 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 0.9% per annum lower than Retail Price Index ('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.

At 31 March 2018, the market value of the fund's assets was £454m. This represented approximately 95% of the value of the uninsured liabilities, which were £480m at that date.

27. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

The deficit in the fund as a whole, by reference to the 31 March 2018 valuation, was £26m (of which Genus's notional share was £22m). This shortfall is being addressed by additional contributions from the participating employers. Under the trustee-prepared schedule of contributions, Genus is required to make deficit repair contributions of £6.0m per annum commencing 1 April 2018, and rising thereafter by 3.4% per annum until 30 September 2021, in addition to funding the scheme's operating expenses.

The disclosures required under IAS 19 have been calculated by an independent actuary, based on accurate calculations carried out as at 31 March 2018 and updated to 30 June 2019.

Genus has assessed its additional pension liability under IFRIC 14 by reference to this schedule of contributions, resulting in an amount of £26.7m (2018: £59.5m) being recognised in the Group Statement of Comprehensive Income.

DALGETY PENSION FUND ('DPF')

The most recent actuarial valuation of the DPF was at 31 March 2018 and was carried out by qualified actuaries.

The principal actuarial assumptions adopted in the 2018 valuation were that:

- > investment returns on existing assets would exceed fixed interest gilt yields by 1.6% per annum until 31 March 2028, then equal the gilt yield per annum thereafter;
- > CPI price inflation is expected to be 0.7% 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 31 March 2018 was £32.9m. The value of those assets represented approximately 109% of the value of the uninsured liabilities, which were £30.2m at 31 March 2018. 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 2018 and updated to 30 June 2019.

As at 30 June 2019, the DPF, which includes a £22.5m separate reserve held against future unknown liabilities materialising, was in an overall net pension asset position of £19.1m. 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.

In addition to the aggregate assets and liabilities disclosed, a 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 2019 was £727m (2018: £698m).

OTHER DEFINED BENEFIT SCHEME IN DEFICIT

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 2019, under the provisions of IAS 19, were £5.7m (2018: £5.2m) and £6.5m (2018: £6.3m), respectively.

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.

The scheme liabilities for the three unfunded defined benefit schemes amounted to £7.9m (2018: £7.9m), based on IAS 19's methods and assumptions. This amount is included within pension liabilities in the Group Balance Sheet. Interest on pension scheme liabilities amounted to £0.2m (2018: £0.2m).

The principal assumptions used to calculate the scheme liabilities were that the discount rate would be 2.35% (2018: 2.90%) and that inflation and pension payment increases would be 3.2% per annum (2018: 3.1%).

The scheme liabilities for the unfunded retirement health benefit plan amounted to £0.6m (2018: £0.7m), 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 (2018: £nil).

The principal assumptions used to calculate the plan liabilities were that the discount rate would be 2.35% (2018: 2.90%) and that the long-term rate of medical expense inflation would be 7.2% (2018: 7.1%).

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

27. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

AGGREGATED POSITION OF DEFINED BENEFIT SCHEMES

	2019 £m	2018 £m
Present value of funded obligations (includes Genus's 86% share of MPF (2018: 86%))	443.5	388.6
Present value of unfunded obligations	9.2	8.6
Total present value of obligations	452.7	397.2
Fair value of plan assets (includes Genus's 86% share of MPF (2018: 86%))	(474.3)	(431.8)
Restrict recognition of asset (DPF)	19.1	9.0
Recognition of additional liability (MPF)	26.7	59.5
Recognised liability for defined benefit obligations	24.2	33.9

Plan assets consist of the following:

	2019 £m	2018 £m
Equities	60.7	78.9
Diversified growth funds	122.5	100.9
Liability-driven investments	139.1	91.8
Gilts and corporate bonds	105.8	59.6
Cash	5.4	22.0
Other	40.8	78.6
	474.3	431.8

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.

MOVEMENT IN THE LIABILITY FOR DEFINED BENEFIT OBLIGATIONS

	2019 £m	2018 £m
Liability for defined benefit obligations at the start of the year	397.2	433.2
Benefits paid by the plans	(22.6)	(18.6)
Current service costs and interest	11.2	11.2
Actuarial gains recognised on fund liabilities arising from changes in demographic assumptions	(0.2)	(10.4)
Actuarial losses/(gains) recognised on fund liabilities arising from changes in financial assumptions	43.7	(22.0)
Actuarial losses recognised on fund liabilities arising from experience (other)	13.2	3.4
Gains on curtailments and settlements	(6.0)	–
Past service cost	16.1	–
Reclassified from accruals	–	0.5
Exchange rate adjustment	0.1	(0.1)
Liability for defined benefit obligations at the end of year	452.7	397.2

MOVEMENT IN PLAN ASSETS

	2019 £m	2018 £m
Fair value of plan assets at the start of the year	431.8	418.4
Administration expenses	(0.9)	(0.4)
Gains on curtailments and settlements	(4.9)	–
Contributions paid into the plans	7.6	7.3
Benefits paid by the plans	(22.6)	(18.6)
Interest income on plan assets	12.0	10.7
Actuarial gains recognised in equity	51.3	14.4
Fair value of plan assets at the end of the year	474.3	431.8

27. RETIREMENT BENEFIT OBLIGATIONS CONTINUED
SUMMARY OF MOVEMENTS IN GROUP DEFICIT DURING THE YEAR

	2019 £m	2018 £m
Deficit in schemes at the start of the year	(33.9)	(40.9)
Administration expenses	(0.9)	(0.4)
Exceptional cost of GMP equalisation	(16.1)	–
Exceptional gain on settlement	1.1	–
Contributions paid into the plans	7.6	7.3
Net pension finance cost	(0.9)	(1.0)
Actuarial (losses)/gains recognised during the year	(5.4)	43.4
Movement in restriction of assets	(10.1)	(2.5)
Recognition of additional liability	34.5	(39.4)
Reclassified from accruals	–	(0.5)
Exchange rate adjustment	(0.1)	0.1
Deficit in schemes at the end of the year	(24.2)	(33.9)

AMOUNTS RECOGNISED IN THE GROUP INCOME STATEMENT

	2019 £m	2018 £m
Administrative expenses	0.9	0.4
Interest obligation	11.2	11.2
Interest income on plan assets	(12.0)	(10.7)
Interest on additional liability	1.7	0.5
Exceptional cost of GMP equalisation	16.1	–
Exceptional gains on settlement and past service	(1.1)	–
	16.8	1.4

THE EXPENSE IS RECOGNISED IN THE FOLLOWING LINE ITEMS IN THE INCOME STATEMENT

	2019 £m	2018 £m
Administrative expenses	0.9	0.4
Exceptional cost of GMP equalisation	16.1	–
Exceptional gains on settlement and past service	(1.1)	–
Net finance charge	0.9	1.0
	16.8	1.4

ACTUARIAL LOSSES/(GAINS) RECOGNISED IN THE GROUP STATEMENT OF COMPREHENSIVE INCOME

	2019 £m	2018 £m
Cumulative loss at the start of the year	80.8	82.4
Actuarial losses/(gains) recognised during the year	5.4	(43.4)
Movement in restriction of assets	10.1	2.5
(Release)/recognition of additional liability	(34.5)	39.4
Exchange rate adjustment	0.1	(0.1)
Cumulative loss at the end of the year	61.9	80.8

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

27. RETIREMENT BENEFIT OBLIGATIONS CONTINUED

ACTUARIAL ASSUMPTIONS AND SENSITIVITY ANALYSIS

Principal actuarial assumptions at the reporting date (expressed as weighted averages):

	2019	2018
Discount rate	2.35%	2.90%
Consumer Price Index ('CPI')	2.15%	1.95%
Retail Price Index ('RPI')	3.15%	3.05%

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 2019 and 2018, the mortality tables used are 97% of the S2NA tables, with birth year and 2017 CMI projections with a smoothing parameter of $Sk = 7.5$, subject to a long-term rate of improvement of 1.25% for males and females.

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.

		2019 Years	2018 Years
Retiring at balance sheet date at age 65	Male	22.4	22.4
	Female	24.7	24.6
Retiring at age 65 in 20 years' time	Male	23.8	23.8
	Female	26.2	26.1

DURATION OF BENEFIT OBLIGATIONS

The weighted average duration of the defined benefit obligations at 30 June 2019 was 17.4 years (2018: 17.3 years).

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 2019.

	Discount rate		Rate of inflation		Life expectancy	
	Decrease by 0.25% £m	Increase by 0.25% £m	Decrease by 0.25% £m	Increase by 0.25% £m	Decrease by 1 year £m	Increase by 1 year £m
Increase/(decrease) in present value of defined obligation	17.8	(15.8)	(12.8)	12.0	(19.5)	19.5

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 aims to hold matching assets which should move broadly in line with the liabilities of the funds, to protect partially 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:

	2019 £m	2018 £m	2017 £m	2016 £m	2015 £m
Present value of the defined benefit obligation	452.7	397.2	433.2	356.8	386.1
Fair value of plan assets	(474.3)	(431.8)	(418.4)	(334.0)	(329.2)
Restrict recognition of asset and recognition of additional liability	45.8	68.5	26.1	21.7	6.2
Deficit in the plans	24.2	33.9	40.9	44.5	63.1
Experience adjustments arising on plan liabilities (%)	12.5	7.1	7.1	5.3	4.9
Experience adjustments arising on plan assets (%)	6.3	2.8	7.6	4.1	3.7

28. 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 Consolidated 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 £3.0m (2018: £5.4m), including National Insurance contributions of £0.3m (2018: £0.8m).

SHARE AWARDS

There were 933,772 conditional share awards outstanding at 30 June 2019. These conditional shares were awarded to Executive Directors and senior management under the 2014 Performance Share Plan on 20 November 2014, 14 September 2015, 14 September 2016, 13 September 2017 and 9 October 2018. 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.

In the year ended 30 June 2019, 325,814 awards were granted on 9 October 2018, with an aggregate fair value of £6,522,000. 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 £21.63, based on an expected dividend yield of 0.95%.

	Number of awards 2019	Number of awards 2018
Outstanding at the start of year	980,421	1,089,391
Exercised during the year	(190,812)	(336,949)
Forfeited during the year	(181,651)	(108,709)
Granted during the year	325,814	336,688
Outstanding at 30 June	933,772	980,421
Exercisable at 30 June	36,359	9,986

BONUS AND RESTRICTED STOCK SHARE AWARDS

In addition to the outstanding share awards above, there were 138,633 bonus and restricted stock share awards outstanding at 30 June 2019. 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 2019, 47,338 bonus share awards were granted on 9 October 2018, with an aggregate fair value of £1,097,000, and 19,600 restricted stock share awards were granted, with an aggregate fair value of £457,000.

	Number of awards 2019	Number of awards 2018
Outstanding at the start of year	128,843	102,731
Exercised during the year	(50,909)	(35,092)
Forfeited during the year	(6,239)	–
Granted during the year	66,938	61,204
Outstanding at 30 June	138,633	128,843
Exercisable at 30 June	1,833	–

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

28. 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	15 September 2009	7,196	Exercisable	654.50p	10 years
2004 Company share plan	10 September 2010	18,068	Exercisable	729.83p	10 years
2004 Company share plan	9 September 2011	30,239	Exercisable	977.83p	10 years
2004 Company share plan	7 September 2012	29,186	Exercisable	1,334.00p	10 years
2004 Company share plan	26 September 2013	35,999	Exercisable	1,413.00p	10 years
Total share options		120,688			

The number and weighted average exercise prices of share options are as follows:

	Weighted average exercise price 2019	Number of options 2019	Weighted average exercise price 2018	Number of options 2018
Outstanding at the start of year	1,121p	145,828	1,118p	223,365
Forfeited during the year	–	–	703p	(8,199)
SAR effected during the year	1,128p	(10,248)	1,232p	(38,493)
Exercised during the year	987p	(14,892)	1,078p	(30,845)
Outstanding at 30 June	1,137p	120,688	1,121p	145,828
Exercisable at 30 June	1,137p	120,688	1,121p	145,828

The options at 30 June 2019 had a weighted average remaining contractual life of 2.6 years (2018: 3.4 years). No share options were granted during the year (2018: nil). The weighted average share price at the date of exercise during the year was £25.21 (2018: £20.95).

29. 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 to a share placement and 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

	2019 Number	2018 Number	2019 £m	2018 £m
Issued and fully paid				
Ordinary shares of 10 pence	65,054,559	61,542,467	6.5	6.2

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:

	2019 Number	2018 Number	2019 £m	2018 £m
Issued under the Executive Share Option Plan	14,892	30,845	–	–
Issued to Employee Benefits Trust	400,000	350,000	–	–
Issued at share placement	3,097,200	–	0.3	–
	3,512,092	380,845	0.3	–

29. CAPITAL AND RESERVES CONTINUED

Shares issued under the Executive Share Option Plans were issued at option prices as follows:

	2019 Number	Price	2018 Number	Price
Executive Share Option Plan	–	582.00p	2,721	582.00p
	3,932	776.00p	2,970	776.00p
	2,106	654.50p	3,268	654.50p
	1,915	729.83p	2,034	729.83p
	1,463	977.83p	4,580	977.83p
	3,685	1,334.00p	4,145	1,334.00p
	1,791	1,413.00p	11,127	1,413.00p
	14,892		30,845	

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:

	2019 Number	2018 Number	2019 £m	2018 £m
Shares allocated but not vested	313,125	87,265	8.3	2.3
Unallocated shares	92,334	92,334	2.4	2.4
	405,459	179,599	10.7	4.7

The shares have a nominal value of £40,546 (2018: £17,960).

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 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 2017	1.1	39.2
Exchange differences on translation of overseas operations	–	(22.4)
Loss recognised on net investment hedges	–	1.3
Loss recognised on cash flow hedges – interest swaps	1.1	–
Income tax related to net gains recognised in other comprehensive income	(0.2)	2.4
Balance at 30 June 2018	2.0	20.5
Exchange differences on translation of overseas operations	–	19.8
Gain recognised on net investment hedges	–	(1.6)
Gain recognised on cash flow hedges – interest swaps	(2.2)	–
Income tax related to net gains/losses recognised in other comprehensive income	0.4	(2.9)
Balance at 30 June 2019	0.2	35.8

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

30. NOTES TO THE CASH FLOW STATEMENT

	2019 £m	2018 £m
Profit for the year	6.7	41.6
Adjustment for:		
Net IAS 41 valuation movement on biological assets	14.7	28.7
Amortisation of acquired intangible assets	9.5	9.5
Share-based payment expense	3.0	5.4
Share of profit of joint ventures and associates	(5.1)	(4.2)
Finance costs (net)	3.9	4.6
Income tax expense/(income)	3.2	(33.8)
Exceptional items	21.8	5.9
Adjusted operating profit from continuing operations	57.7	57.7
Depreciation of property, plant and equipment	12.6	10.4
Profit on disposal of plant and equipment	–	(0.1)
Profit on disposal of intangible assets	(0.1)	–
Amortisation and impairment of intangible assets	5.4	4.3
Adjusted earnings before interest, tax, depreciation and amortisation	75.6	72.3
Cash impact of exceptional items	(7.3)	(4.9)
Other movements in biological assets and harvested produce	(5.5)	(1.9)
Increase in provisions	1.5	1.7
Additional pension contributions in excess of pension charge	(6.7)	(6.9)
Other	(4.1)	(2.0)
Operating cash flows before movement in working capital	53.5	58.3
Increase in inventories	(3.2)	(4.2)
Increase in receivables	(6.6)	(5.7)
Increase in payables	4.7	9.9
Cash generated by operations	48.4	58.3
Interest received	0.2	0.2
Interest and other finance costs paid	(3.3)	(3.9)
Cash flow from derivative financial instruments	0.6	0.2
Income taxes paid	(12.5)	(11.6)
Net cash from operating activities	33.4	43.2

ANALYSIS OF NET DEBT

	At 1 July 2018 £m	Net cash flows £m	Foreign exchange £m	Non-cash movements £m	At 30 June 2019 £m
Cash and cash equivalents	29.1	0.9	0.5	–	30.5
Interest-bearing loans – current	(13.4)	12.1	(0.4)	(0.4)	(2.1)
Obligation under finance leases – current	(1.4)	2.0	(0.1)	(2.7)	(2.2)
	(14.8)	14.1	(0.5)	(3.1)	(4.3)
Interest-bearing loans – non-current	(120.7)	22.0	(3.2)	–	(101.9)
Obligation under finance lease – non-current	(2.1)	–	(0.3)	(1.5)	(3.9)
	(122.8)	22.0	(3.5)	(1.5)	(105.8)
Net debt	(108.5)	37.0	(3.5)	(4.6)	(79.6)

Included within non-cash movements is £4.6m in relation to new finance leases and unwinding of debt issue costs.

31. OPERATING LEASES

The Group has entered into non-cancellable commercial arrangements on certain properties, plant, motor vehicles and equipment.

ACCOUNTING POLICIES

For operating leases, we charge the rentals payable, and any incentives we receive to enter into an operating lease, to the income statement on a straight-line basis over the lease term.

Total of future minimum lease payments under non-cancellable operating leases which expire:

	2019 £m	2018 £m
In less than one year	9.2	2.1
Between one and five years	18.2	12.4
In more than five years	5.3	6.3
	32.7	20.8

The leases have various terms and renewal rights. There are no other restrictions imposed by these lease agreements.

32. CAPITAL AND OTHER COMMITMENTS

At 30 June 2019, outstanding contracted capital expenditure amounted to £2.2m and related to the purchase of property, plant and equipment (2018: £1.8m).

A software agreement was signed on 23 June 2017, with a minimum five-year term, with an annual cost of £0.8m.

33. 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.

The retirement benefit obligations referred to in note 27 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% (2018: 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 27.

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 2019, we had entered into bank guarantees totalling £4.0m.

34. 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 the Executive Management Committee.

	2019 £m	2018 £m
Salaries and short-term employee benefits	5.4	7.0
Post-employment benefits	0.3	0.3
Share-based payment expense	1.3	3.4
	7.0	10.7

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.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

35. 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 2019 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 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, Pastoral 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%
ABS Progen Ireland Limited	Suite 6, Rineanna House, Shannon Free Zone, Co. Clare, Ireland	Ireland	Indirect	€1.25 Ordinary	100%
Bovec SASU	69 Chemin des Molieres, 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 Colombia SAS	Avenida Carrera 70, No. 105–51, Bogotá, Colombia	Colombia	Indirect	COP10,000 Ordinary	100%
Genus Australia Pty Ltd	15 Scholar drive, Bundoora VIC 3063, Australia	Australia	Indirect	No Par Value Ordinary	100%
Genus (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%
Genus Breeding India Private Limited	Amar Neptune, Office No.406, off Baner Road, S. No.6/1/1, Village Baner, Tal. Haveli, Pune, Pune, Maharashtra, India	India	Indirect	INR1 Ordinary	100%
Genus Breeding Limited (01192037) ²	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	United Kingdom	Direct	£1 Ordinary	100%
‘Genus Ukraine’ LLC	Pidlisna str., 1, KYIV 03164, Ukraine	Ukraine	Indirect	No Par Value Common Stock	100%
GIFCO (Ireland) Designated Activity Company	Suite 6, Rineanna House, Shannon Free Zone, Co. Clare, Ireland	Ireland	Indirect	USD1 Ordinary	100%
Inimex Genetics Limited (01315335) ²	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	United Kingdom	Indirect	£1 Ordinary	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%
In Vitro Russia LLC	188671, Distrito De Leningrado Região De Vsevoloskiy, Vilarejo De Lepsar, Russian Federation	Russia	Indirect	RUB1 Ordinary	50%
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 Tajés 7189, Uruguay	Uruguay	Indirect	UYU0.54 Provisional Certified Registered UYU1.00 Registered	100%

¹ Associated undertakings including joint venture interests.

² UK subsidiaries taking advantage of the audit exemption within section 479A of the Companies Act 2006.

35. GROUP ENTITIES CONTINUED

PORCINE

Name of undertaking	Registered address	Country of incorporation	Direct/indirect Group interest	Share class	% of share capital/voting rights held by Group companies
Agrocere PIC Genética de Suínos Ltda	Rua 1 JN, n° 1411, Sala 16 – Jardim Novo, Rio Claro/SP – CEP, 13.502-741, Brazil	Brazil	Indirect	BRL1 Ordinary	49% ¹
Agrocere PIC Suínos Ltda	Rua 1 JN, n° 1411, Sala 17 – Jardim Novo, Rio Claro/SP – CEP, 13.502-741, Brazil	Brazil	Indirect	BRL1 Ordinary	49% ¹
Avlscenter Mollevang A/S	Mollevvej 3, 6670 Holsted, Denmark	Denmark	Indirect	DKK 1 Ordinary	49% ¹
Birchwood Genetics, Inc.	465 Stephens Road, West Manchester OH 45382, United States	United States	Indirect	No Par Value Ordinary	100%
Génétiporc México, S.A. de C.V.	Wenceslao de la Barquera No.7, Col. Villas del Sur, 76040 Queretaro, Queretaro, Mexico	Mexico	Indirect	MXN1 Ordinary	100%
Génétiporc USA, LLC	100 Bluegrass Commons Blvd, Suite 2200, Hendersonville, TN 37075 United States	United States	Indirect	USD100 LLC units	100%
Genus China Limited Company	Office 1106, Ramada Plaza, 509 Caobao Road, Xuhui District, Shanghai, 200233, China	China	Indirect	No Par Value Common Stock	100%
HY-CO Hybridschweine-Cooperations GmbH	Tegelberg 19–21, 24576 Bad Bramstedt, Germany	Germany	Indirect	No Par Value Common Stock	50% ¹
PIC Genetics LLC	79 Narodnyy Boulevard, 308000, Belgorod, Russian Federation	Russia	Indirect	RUB1 Ordinary	100%
Morganite Investments Limited	Riverside One, Sir John Rogerson's Quay, Dublin 2, Ireland	Ireland	Indirect	€1 Ordinary	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	USD65.449 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%
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%
PIG Datendienst GmbH	Ratsteich 31, 24837 Schleswig, Germany	Germany	Indirect	No Par Value Common Stock	50% ¹
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 2101/2102, 21st Floor Jollibee Plaza, F. Ortigas, Jr. Rd., Ortigas Center, Pasig City, 1605, Philippines	Philippines	Indirect	PHP100 Ordinary	100%
PIC Romania S.R.L.	Str. Regele Ferdinand nr 22–26, Centrul comercial Central, nivel 3, Cluj-Napoca, Cluj, Romania	Romania	Indirect	RON2,983.10 Ordinary	100%
PIC USA, Inc.	100 Bluegrass Commons Blvd, Suite 2200, Hendersonville, TN 37075 United States	United States	Indirect	USD1 Ordinary	100%

1 Associated undertakings including joint venture interests.

2 UK subsidiaries taking advantage of the audit exemption within section 479A of the Companies Act 2006.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

35. GROUP ENTITIES CONTINUED

Name of undertaking	Registered address	Country of incorporation	Direct/indirect Group interest	Share class	% of share capital/voting rights held by Group companies
RenOVate Biosciences, Inc.	3500 South Dupont Highway, Dover, Delaware 19901, United States	United States	Direct	USD0.001 Series Seed Preferred	50%
Reprodutores PIC, Lda	Av. Eng. Duarte Pacheco, Amoreiras, Torre 2-14ºA, 1070-102 Lisboa, Portugal	Portugal	Indirect	No Par Value Common Stock	100%
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%
Xianyang Yongxiang Agriculture Technology Co., Ltd.	Qiaojiaguan Village, Jianjun Town, Yongshou County, Xianyang, Shaanxi Province, China	China	Indirect	No Par Value Common Stock	49% ¹

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	100%
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%
Bellapais Farm Limited	Julia House, 3 Th Dervis Street, Nicosia, Ch 1066, Cyprus	Cyprus	Indirect	No Par Value Common Stock	34.1% ¹
Bellapais Hatcheries Limited	Julia House, 3 Th Dervis Street, Nicosia, Ch 1066, Cyprus	Cyprus	Indirect	No Par Value Common Stock	34.1% ¹
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%
Elmira ABC Ltd.	1525 Floradale Road, Elmira ON N3B 2Z1, Canada	Canada	Indirect	NPV Class 'A' special shares NPV Class 'B' special shares NPV Common shares	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	One Spencer Dock, North Wall Quay, Dublin 1, Ireland	Ireland	Indirect	€1.25 'A' Ordinary €1.25 'B' Ordinary	100%
Génétiporc Servicios Tecnicos S.A. de C.V.	Wenceslao de la Barquera No.7, Col. Villas del Sur, 76040 Queretaro, Queretaro, Mexico	Mexico	Indirect	MXN 1 Ordinary	100%
Genus Investments Limited (02028517) ²	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	100%

1 Associated undertakings including joint venture interests.

2 UK subsidiaries taking advantage of the audit exemption within section 479A of the Companies Act 2006.

35. GROUP ENTITIES CONTINUED

Name of undertaking	Registered address	Country of incorporation	Direct/indirect Group interest	Share class	% of share capital/voting rights held by Group companies
Genus Quest Trustees Limited	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Direct	£1 Ordinary	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 (UK) Limited	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
PIC Do Brasil Empreendimentos e Participações Ltda.	Rua 1 JN, no. 1411, Sala 13, Jardim Novo, Rio Claro, Estado De Sao 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%
PIC Servicios Agropecuarios, S.A. de C.V.	Wenceslao de la Barquera No.7, Col. Villas del Sur, 76040 Queretaro, Queretaro, Mexico	Mexico	Indirect	MXN1,000 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 (01809650) ²	Matrix House, Basing View, Basingstoke, Hampshire, RG21 4DZ, United Kingdom	UK	Indirect	£1 Ordinary	100%
Premium Genetics (UK) Limited (08461779) ²	Alpha Building, London Road, Nantwich, Stapeley, Cheshire, CW5 7JW, United Kingdom	UK	Indirect	£0.10 Ordinary	100%
Premium Genetics Limited	Suite 6, Rineanna House, Shannon Free Zone, Co. Clare, Ireland	Ireland	Indirect	€1.27 Ordinary	100%
Progen Ltd	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 £1 Preference	100%
Spillers Overseas Limited	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	United Kingdom	Direct	£0.10 Ordinary	100%
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%

² UK subsidiaries taking advantage of the audit exemption within section 479A of the Companies Act 2006.

NOTES TO THE GROUP FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

36. BUSINESS COMBINATIONS AND DEFERRED CONSIDERATION

During the year, we acquired the trade and assets of Progenex S.L., a distributor of bovine genetics operating in Spain, and made deferred consideration payments totalling £21.1m in respect of our previous acquisitions of De Novo Genetics, Hermitage Genetics and Møllevang.

PROGENEX S.L.

On 20 July 2018, the Group acquired the trade and assets of Progenex S.L., a distributor of bovine genetics operating in Spain, to further our growth in the Spanish bovine genetics market.

The amounts recognised in respect of the identifiable assets and liabilities acquired are set out as follows:

	£m
Inventory	0.1
Intangible assets identified – customer relationships (note 14)	1.8
Deferred tax liability	(0.4)
Total identifiable assets	1.5
Goodwill (note 14)	1.1
Total consideration	2.6
Satisfied by:	
Cash	2.0
Contingent consideration arrangement	0.6
Total consideration	2.6

The goodwill of £1.1m arising from the acquisition consists of the future synergies and market opportunities expected from combining the acquired operations with existing Genus operations. None of the goodwill is expected to be deductible for income tax purposes.

The contingent consideration arrangement requires certain sales targets to be achieved. The total that Genus could be required to pay under the contingent consideration agreement will not exceed £0.6m.

Acquisition-related costs of £0.1m were recognised within exceptional costs (see note 7).

The operations acquired contributed revenues of £1.6m and £0.2m to the Group's profit, for the period between the date of acquisition and the balance sheet date. Had the transaction occurred on 1 July 2018, the contribution to revenue and profit would not be materially different.

AVLSCENTER MØLLEVANG A/S ('MØLLEVANG')

On 2 July 2018, Genus PIC and Møllevang, a leading Danish porcine genetics company, signed an exclusive distribution agreement for Denmark, entered into a sireline nucleus agreement and Genus PIC purchased 49% of Møllevang. In accordance with the subscription agreement, Genus PIC paid £19.3m on 2 July 2018. Møllevang is an elite porcine genetics production partner for Genus PIC in Denmark and will continue to distribute elite genetics to the Danish market and certain other countries.

37. NON-CONTROLLING INTEREST

	2019 £m	2018 £m
Non-controlling interest	4.2	5.7
Put option over non-controlling interest (see note 24)	(5.5)	(3.2)
Total non-controlling interest	(1.3)	2.5

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

	2019 £m	2018 £m
Biological assets	11.6	10.7
Current assets	1.2	0.7
Non-current assets	0.8	3.1
Current liabilities	(6.1)	(4.2)
Net assets	7.5	10.3
Equity attributable to owners of the Company	(3.5)	(5.2)
Non-controlling interest for De Novo Genetics	4.0	5.1
Other non-controlling interest	0.2	0.6
Non-controlling interest	4.2	5.7

No dividends were paid to non-controlling interests (2018: £nil).

38. 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. Costs in FY19 amounted to £1.25m (2018: £0.3m). As at 30 June 2019, the balance owing to these entities was £nil; all amounts were settled in cash.

These related party transactions were made on terms equivalent to those that prevail in arms' length transactions.

PARENT COMPANY BALANCE SHEET

As at 30 June 2019

	Note	2019 £m	2018 £m
Non-current assets			
Intangible assets	C3	11.3	4.9
Tangible assets	C4	0.5	0.6
Investments in subsidiaries	C5	109.3	87.2
Other investments	C6	2.6	2.2
Derivative financial asset	C12	0.4	0.3
		124.1	95.2
Current assets			
Debtors	C7	443.7	461.7
Cash at bank and in hand		2.0	–
		445.7	461.7
Creditors: amounts falling due within one year	C9	(216.7)	(249.8)
Net current assets		229.0	211.9
Total assets less current liabilities		353.1	307.1
Non-current liabilities			
Creditors: amounts falling due after more than one year	C10	(102.1)	(121.3)
Provisions	C10	(2.0)	(2.2)
		(104.1)	(123.5)
Net assets		249.0	183.6
Capital and reserves			
Called up share capital	C13	6.5	6.2
Share premium account		179.0	112.8
Own shares		(0.1)	(0.1)
Retained earnings		63.4	62.7
Hedging reserve		0.2	2.0
Shareholders' funds		249.0	183.6

The Company recognised a total comprehensive profit for the year of £16.8m (2018: £21.6m profit).

The financial statements were approved and authorised for issue by the Board of Directors on 4 September 2019.

Signed on behalf of the Board of Directors

KARIM BITAR
Chief Executive

STEPHEN WILSON
Group Finance Director

Company number: 02972325

PARENT COMPANY STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2019

	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 2017	6.1	112.8	(0.1)	51.5	1.1	171.4
Total comprehensive profit for the financial year	–	–	–	21.6	–	21.6
Actuarial gain on retirement benefits obligations	–	–	–	2.8	–	2.8
Movement on pension asset recognition restriction	–	–	–	(2.8)	–	(2.8)
Shares issued	0.1	–	–	–	–	0.1
Dividends	–	–	–	(14.9)	–	(14.9)
Share-based payment expense, net of tax	–	–	–	4.5	–	4.5
Fair value of movement on cash flow hedges, net of tax	–	–	–	–	0.9	0.9
Balance at 30 June 2018	6.2	112.8	(0.1)	62.7	2.0	183.6
Total comprehensive profit for the financial year	–	–	–	16.8	–	16.8
Actuarial loss on retirement benefits obligations	–	–	–	(2.2)	–	(2.2)
Movement on pension asset recognition restriction	–	–	–	2.6	–	2.6
Shares issued	0.3	66.2	–	–	–	66.5
Dividends	–	–	–	(16.8)	–	(16.8)
Share-based payment expense, net of tax	–	–	–	0.3	–	0.3
Fair value of movement on cash flow hedges, net of tax	–	–	–	–	(1.8)	(1.8)
Balance at 30 June 2019	6.5	179.0	(0.1)	63.4	0.2	249.0

For information on dividends see note 13, cash flow hedges see note 24 and share-based payment expense see note 28, to the Group financial statements.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS

For the year ended 30 June 2019

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 EU-adopted IFRS.

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 1 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.

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 date of the Company financial statements 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.

There are no areas of critical accounting judgement or key sources of estimation uncertainty.

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 27 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.

SIGNIFICANT ACCOUNTING POLICIES APPLIED IN THE CURRENT REPORTING PERIOD THAT RELATE TO THE FINANCIAL STATEMENTS AS A WHOLE

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 or at the contracted rate, if the transaction is covered by a forward foreign currency contract. We retranslate monetary assets and liabilities denominated in foreign currencies at the prevailing rate of exchange at the balance sheet date or, if appropriate, at the forward contract rate. All differences are taken to the income statement.

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.

C1. ACCOUNTING INFORMATION AND POLICIES CONTINUED**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

Where a derivative financial instrument is designated as hedging the variability in cash flows of a recognised asset or liability, or a highly probable forecast transaction, we recognise the effective part of any gain or loss on the instrument directly in the hedging reserve. We recognise any ineffective portion of the hedge immediately in the profit and loss account.

If we hedge a forecast transaction that subsequently results in our recognising a financial asset or liability, then we reclassify the associated gains and losses that we had recognised directly in equity into profit or loss. We do this in the same period or periods that the asset or liability affects profit or loss, which are the periods when we recognise the interest income or expense.

If we expect a hedged forecast transaction to occur but the hedging instrument has expired, been sold, terminated or exercised, or we have revoked the designation of the hedge relationship, then the cumulative gain or loss at that point remains in equity and we recognise it in accordance with the above policy when the transaction occurs. If we no longer expect the hedged transaction to occur, we immediately recognise in the profit and loss account the cumulative unrealised gain or loss recognised in equity.

When a hedging instrument expires or is sold, terminated or exercised, or we revoke designation of the hedge relationship, the cumulative gain or loss at that point remains in equity until we dispose of the investment it relates to.

We treat derivatives embedded in other financial instruments or other host contracts as separate derivatives, when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not carried at fair value, with unrealised gains and losses reported in the income statement.

C2. EMPLOYEES

Staff costs including Directors' remuneration during the year amounted to:

	2019 £m	2018 £m
Wages and salaries	5.6	5.5
Social security costs	0.7	0.9
Pension costs	0.1	0.1
Share-based payment expense	0.6	2.4
	7.0	8.9

The employee costs above are inclusive of £0.2m (2018: £0.1m) which has been capitalised into intangible assets as part of the development of GenusOne (see note C3).

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:

	2019 Number	2018 Number
Administration	34	38

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

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 14 to the Group financial statements for useful economic life.

	Software £m	Patents and licences £m	Asset under construction £m	Total £m
Cost				
Balance at 1 July 2018	1.5	3.7	2.7	7.9
Additions	–	–	7.6	7.6
Transfers	0.2	–	(0.2)	–
Balance at 30 June 2019	1.7	3.7	10.1	15.5
Amortisation				
Balance at 1 July 2018	1.1	1.9	–	3.0
Amortisation for the year	0.2	1.0	–	1.2
Balance at 30 June 2019	1.3	2.9	–	4.2
Carrying amounts At 30 June 2019	0.4	0.8	10.1	11.3
At 30 June 2018	0.4	1.8	2.7	4.9

Assets under construction primarily relate to the on-going development of GenusOne, a unified enterprise-wide business system.

C4. TANGIBLE ASSETS

ACCOUNTING POLICIES

We state fixed assets 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
Equipment	3 to 20 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.

	Short leasehold improvements £m	Equipment £m	Total £m
Cost			
Balance at 1 July 2018	0.5	0.6	1.1
Balance at 30 June 2019	0.5	0.6	1.1
Depreciation			
Balance at 1 July 2018	0.1	0.4	0.5
Depreciation for the year	0.1	–	0.1
Balance at 30 June 2019	0.2	0.4	0.6
Carrying amounts At 30 June 2019	0.3	0.2	0.5
At 30 June 2018	0.4	0.2	0.6

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 2018	280.4
Additions	22.1
Balance at 30 June 2019	302.5
Provision for impairment	
Balance at 1 July 2018	193.2
Provided during the year	–
Balance at 30 June 2019	193.2
Carrying amounts	
At 30 June 2019	109.3
At 30 June 2018	87.2

Additions relate to increasing our investment in ABS Argentina S.A., ABS Pecplan Ltda. and Genus Investments Limited.

PRINCIPAL SUBSIDIARY UNDERTAKINGS

The Company's principal subsidiaries and their main activities are given in note 35 to the Group financial statements.

C6. OTHER INVESTMENTS**ACCOUNTING POLICIES**

Listed equity investments are stated at fair value. Unlisted equity investments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost less any identified impairment losses at the end of each reporting period.

	2019 £m	2018 £m
Listed investment	2.6	1.9
Other investment	–	0.3
	2.6	2.2

C7. DEBTORS

	Note	2019 £m	2018 £m
Amounts due within one year			
Amounts owed by Group undertakings		438.3	453.9
Corporation tax recoverable		0.9	2.0
Other taxes and social security		0.3	–
Prepayments and accrued income		1.6	1.8
Deferred taxation	C8	1.5	1.5
Derivative financial asset	C12	1.1	2.5
		443.7	461.7

At the balance sheet date, the amounts owed by Group undertakings were £438.3m (2018: £453.9m). The carrying amount of these assets approximates their fair value. There are impaired receivable balances of £nil (2018: £nil). Of the amounts owed by Group undertakings, £320.9m (2018: £333.3m) is interest-bearing.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

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.

The movements in deferred taxation are as follows:

	2019 £m	2018 £m
At the start of the year	1.5	1.5
Recognised in the income statement	–	–
Released in equity	–	–
At the end of the year	1.5	1.5

The amounts provided are as follows:

	2019 £m	2018 £m
Share-based payment expense	0.9	1.5
Other timing differences	0.3	–
Losses	0.3	–
	1.5	1.5

At the balance sheet date, the Company had unused tax losses available for offset against future profits, with a potential tax benefit of £0.3m (2018: £nil). 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. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	Note	2019 £m	2018 £m
Bank loans and overdrafts	C11	2.1	10.6
Trade creditors		2.0	2.5
Other creditors		0.3	1.0
Amounts owed to Group undertakings		208.2	233.1
Accruals and deferred income		3.1	2.3
Derivative financial liabilities	C12	1.0	0.3
		216.7	249.8

Included within amounts owed to Group undertakings are amounts of £192.4m (2018: £207.5m) which are interest bearing and payable on demand.

There are no outstanding contributions due to defined contribution pension schemes for the benefit of the employees (2018: £nil).

C10. CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR

	Note	2019 £m	2018 £m
Bank loans and overdrafts	C11	101.9	120.7
Derivative financial liabilities	C12	0.2	0.6
Provisions – share forfeiture		2.0	2.2
		104.1	123.5

The share forfeiture provision of £2.0m relates to potential claims that could be made by untraced members over the next two years, relating to the resale proceeds of shares that were identified during the prior year as being forfeited (see note 23 to the Group financial statements).

C11. 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.

	2019 £m	2018 £m
Loans and borrowings comprise amounts falling due:		
In one year or less or on demand	2.5	11.0
In more than one year but not more than two years	–	–
In more than two years but not more than five years	102.2	121.4
	104.7	132.4
Less: unamortised issue costs	(0.7)	(1.1)
	104.0	131.3
Amounts falling due within one year	(2.1)	(10.6)
Amounts falling due after more than one year	101.9	120.7

At the balance sheet date, the Company's credit facilities comprised a £95m multi-currency revolving credit facility and a US\$165m revolving credit facility. £45m of the Group's credit facilities expire in February 2021, with the remaining facilities expiring in February 2022.

As part of its interest rate strategy, the Company has entered into interest rate swaps to hedge floating LIBOR rates. As a result, bank loan and overdrafts include borrowings of US\$90m (£70.9m) fixed at 1.16% and £25m fixed at 1.07%, excluding applicable bank margin.

TERMS AND DEBT REPAYMENT SCHEDULE

The terms and conditions of outstanding loans and overdrafts were as follows:

	Currency	Interest rate	2019 £m	2018 £m
Revolving credit facility and overdraft	GBP	1.8%	25.0	33.5
Revolving credit facility, term loan and overdraft	USD	3.5%	77.2	90.1
Revolving credit facility and overdraft	EUR	–	–	0.9
Other unsecured bank borrowings	Other	1.3%	1.8	6.8
Total interest-bearing liabilities			104.0	131.3

The above revolving credit facilities are unsecured.

C12. DERIVATIVES AND OTHER FINANCIAL INSTRUMENTS

Additional disclosures on financial instruments can be found in note 24 to the Group financial statements.

C13. CAPITAL AND RESERVES**SHARE CAPITAL**

	2019 Number	2018 Number	2019 £m	2018 £m
Issued and fully paid				
Ordinary shares of 10 pence	65,054,559	61,542,467	6.5	6.2

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:

	2019 Number	2018 Number	2019 £m	2018 £m
Issued under the Executive Share Option Plan	14,892	30,845	–	–
Issued to Employee Benefits Trust	400,000	350,000	–	–
Issued at share placement	3,097,200	–	0.3	–
	3,512,092	380,845	0.3	–

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

For the year ended 30 June 2019

C13. CAPITAL AND RESERVES CONTINUED

Shares issued under the Executive Share Option Plans were issued at the following option prices:

	2019 Number	Price	2018 Number	Price
Executive Share Option Plan	–	582.00p	2,721	582.00p
	3,932	776.00p	2,970	776.00p
	2,106	654.50p	3,268	654.50p
	1,915	729.83p	2,034	729.83p
	1,463	977.83p	4,580	977.83p
	3,685	1,334.00p	4,145	1,334.00p
	1,791	1,413.00p	11,127	1,413.00p
	14,892		30,845	

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:

	2019 Number	2018 Number	2019 £m	2018 £m
Shares allocated but not vested	313,125	87,265	8.3	2.3
Unallocated shares	92,334	92,334	2.4	2.4
	405,459	179,599	10.7	4.7

The shares have a nominal value of £40,546 (2018: £17,960).

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 24.

C14. OPERATING LEASES

ACCOUNTING POLICIES

For operating leases, we charge the rentals payable, and any incentives we receive to enter into an operating lease, to the income statement on a straight-line basis over the lease term.

The Company has entered into non-cancellable commercial arrangements on certain equipment, properties and motor vehicles. The leases have various terms and renewal rights.

Total of future minimum lease payments under non-cancellable operating leases which expire:

	2019 £m	2018 £m
In less than one year	0.9	0.9
Between one and five years	2.1	3.8
In more than five years	0.4	0.8
	3.4	5.5

Operating lease rentals charged in the year:

	2019 £m	2018 £m
Other	0.9	0.2

The leases have various terms and renewal rights. There are no other restrictions imposed by these lease agreements.

C15. RELATED PARTY TRANSACTIONS

The Company is exempt under FRS 101 from disclosing transactions with other members of the Group.

C16. CAPITAL AND OTHER COMMITMENTS

At 30 June 2019, outstanding contracted capital expenditure amounted to £nil (2018: £nil).

A software agreement was signed on 23 June 2017, with a minimum five-year term, with an annual cost of £0.8m.

C17. PENSIONS, GUARANTEES AND CONTINGENCIES

The NMR pension assigned to Genus plc under the Flexible Apportionment Agreement recorded an actuarial loss of £2.2m, which has reduced the asset restriction made in the previous year. 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 27 to the Group financial statements.

The retirement benefit obligations referred to in note 27 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% (2018: 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 27.

Certain UK subsidiaries, which are detailed in note 35 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 2019. The Company has assessed the probability of loss under the guarantee as remote.

At 30 June 2019, the Company had entered into bank guarantees totalling £nil (2018: £1.0m).

FIVE-YEAR RECORD – CONSOLIDATED RESULTS

The information included in the five-year record below is in accordance with IFRS as adopted for use in the European Union.

Financial results	2019 £m	2018 £m	2017 £m	2016 £m	2015 £m
Revenue from continuing operations	488.5	470.3	459.1	388.3	398.5
Adjusted operating profit from continuing operations ¹	57.7	57.7	55.1	49.3	47.2
Adjusted operating profit including joint ventures and associates ¹	64.9	63.1	60.1	54.3	51.2
Adjusted profit before tax ¹	61.0	58.5	56.4	49.7	46.6
Basic adjusted earnings per share ¹	73.2p	75.9p	69.4p	60.7p	56.8p
Diluted adjusted earnings per share ¹	70.7p	74.9p	68.4p	60.1p	56.1p
Operating profit from continuing operations	8.7	8.2	38.2	58.6	59.5
Profit before tax from continuing operations	9.9	7.8	40.7	60.9	57.8
Profit after tax from continuing operations	6.7	41.6	34.3	50.3	40.5
Basic earnings per share	12.4p	69.7p	53.8p	81.1p	65.7p
Diluted earnings per share	11.9p	68.7p	53.0p	80.3p	64.9p
Net assets	502.3	419.1	402.1	368.1	305.1
Net debt	79.6	108.5	111.6	89.7	71.8

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.

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.

GLOSSARY CONTINUED

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.

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.

NOTICE OF ANNUAL GENERAL MEETING

THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION

If you are in any doubt as to the action you should take, you should consult your stockbroker, bank manager, solicitor, accountant or other independent financial adviser authorised under the Financial Services and Markets Act 2000. If you have sold or transferred all your shares in Genus plc, please send this document and the accompanying documents as soon as possible to the purchaser or transferee, or to the stockbroker, bank or other agent through whom the sale or transfer was effected for transmission to the purchaser or transferee.

NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that the 2019 Annual General Meeting of Genus plc (the 'Company') will be held at Buchanan Communications, 107 Cheapside, London EC2V 6DN on Thursday, 14 November 2019 at 11.00 am for the following purposes:

To consider and if thought fit, to pass the following resolutions, of which numbers 1 to 16 will be proposed as ordinary resolutions and numbers 17 to 20 as special resolutions.

ORDINARY RESOLUTIONS

1. To receive the Company's audited Financial Statements and the Directors' Reports for the year ended 30 June 2019.
2. To approve the Directors' Remuneration Report for the year ended 30 June 2019, as set out on pages 69 to 94 of the Company's Annual Report 2019.
3. To approve the Directors' Remuneration Policy, as set out on pages 72 to 82 of the Company's Annual Report 2019, to take effect immediately after the end of the AGM on 14 November 2019.
4. To approve the rules of the Genus plc Performance Share Plan (the 'PSP'), in the form produced to the AGM and initialled by the Chair for the purposes of identification (a summary of which is set out in the Explanatory Notes to the Notice of AGM); and to authorise the Directors of the Company to establish further plans based on the PSP for the benefit of Directors and employees of the Company and/or its subsidiaries who are located outside the United Kingdom, with such modifications as may be necessary or desirable in order to take account of local tax, exchange control or securities laws as they consider appropriate provided that any ordinary shares made available under such plans shall be treated as counting against any individual or overall limits contained in the PSP.
5. To approve the rules of the Genus plc Deferred Share Bonus Plan (the 'DSBP'), in the form produced to the AGM and initialled by the Chair for the purposes of identification (a summary of which is set out in the Explanatory Notes to the Notice of AGM); and to authorise the Directors of the Company to establish further plans based on the DSBP for the benefit of Directors and employees of the Company and/or its subsidiaries who are located outside the United Kingdom, with such modifications as may be necessary or desirable in order to take account of local tax, exchange control or securities laws as they consider appropriate provided that any ordinary shares made available under such plans shall be treated as counting against any individual or overall limits contained in the DSBP.
6. To approve the amendments to the rules of the Genus plc 2014 Deferred Share Bonus Plan, in the form produced to the AGM and initialled by the Chair for the purposes of identification (a summary of which is set out in the Explanatory Notes to the Notice of AGM).
7. To declare a final dividend of 18.8 pence per ordinary share, payable on 29 November 2019 to shareholders on the register of members at the close of business on 8 November 2019.
8. To re-elect Bob Lawson as a Director of the Company who, being eligible, offers himself for re-election.
9. To re-elect Stephen Wilson as a Director of the Company who, being eligible, offers himself for re-election.
10. To re-elect Lysanne Gray as a Director of the Company who, being eligible, offers herself for re-election.
11. To re-elect Lykele van der Broek as a Director of the Company who, being eligible, offers himself for re-election.
12. To re-elect Lesley Knox as a Director of the Company who, being eligible, offers herself for re-election.
13. To re-elect Ian Charles as a Director of the Company who, being eligible, offers himself for re-election.
14. To reappoint Deloitte LLP as auditor of the Company to hold office from the conclusion of the AGM until the conclusion of the next general meeting of the Company at which Financial Statements are laid.
15. To authorise the Audit Committee of the Board to determine the remuneration of the auditor.

NOTICE OF ANNUAL GENERAL MEETING CONTINUED

16. That the Directors be generally and unconditionally authorised in accordance with section 551 of the Companies Act 2006 (the 'Act') to exercise all the powers of the Company to allot shares in the Company and to grant rights to subscribe for, or to convert any security into, shares in the Company up to a maximum aggregate nominal amount of:

16.1. £2,168,994.10 being 21,689,941 ordinary shares of 10 pence each ('Ordinary Shares') representing one third of the issued share capital of the Company; and

16.2. £2,168,994.10 being 21,689,941 Ordinary Shares representing a further third of the issued share capital of the Company, provided that (i) they are equity securities (within the meaning of section 560(1) of the Act) and (ii) they are offered by way of an offer to holders of Ordinary Shares open for acceptance for a period fixed by the Directors to holders on the register on a fixed record date (as the Directors may determine) in proportion as nearly as may be to the respective numbers of Ordinary Shares held by them on any such record date and to other holders of equity securities entitled to participate therein, but subject to such exclusions or other arrangements as the Directors may deem necessary or expedient to deal with any fractional entitlements or legal or practical difficulties under the laws of, or the requirements of any regulatory body or any stock exchange in, any territory or by virtue of shares being represented by depositary receipts or any other matter (a 'rights issue'), such authority to expire on the conclusion of the Company's AGM next following or, if earlier, the close of business on the day which is 15 months after the date on which this resolution is passed save that the Company may, before the expiry of such period, make an offer or agreement which would or might require shares to be allotted or such rights to be granted after such expiry and the Directors may allot shares and grant rights in pursuance of such an offer or agreement as if the authority conferred hereby had not expired.

SPECIAL RESOLUTIONS

17. That subject to and conditional on the passing of resolution 16, the Directors be authorised, pursuant to sections 570 and 573 of the Companies Act 2006 (the 'Act'), to allot equity securities (within the meaning of section 560 of the Act) for cash pursuant to the authority conferred by resolution 16 and by way of a sale of treasury shares as if section 561(1) of the Act did not apply to any such allotment, provided that this power shall be limited to the allotment of equity securities (and sale of treasury shares):

17.1. in connection with an offer of securities (but in the case of the authority granted under paragraph 16.2 of resolution 16 above by way of rights issue only, as defined in that paragraph) to the holders of Ordinary Shares on a fixed record date (as the Directors may determine) in proportion as nearly as may be to the respective numbers of Ordinary Shares held by them, on any such record date and to such other holders of equity securities entitled to participate therein, but subject to such exclusions or other arrangements as the Directors may deem necessary or expedient to deal with any fractional entitlements or legal or practical difficulties under the laws of, or the requirement of any regulatory body or any stock exchange in, any territory or by virtue of shares being represented by depositary receipts or any other matter; and

17.2. other than pursuant to paragraph 17.1 above, to any person or persons up to an aggregate nominal amount of £162,674.50 representing not more than 2.5% of the issued share capital of the Company as at 30 September 2019 (being the latest practicable date prior to the publication of this Notice),

such authority to expire upon the expiry of the general authority conferred by resolution 16 above, save that the Company may, before such expiry, make an offer or agreement which would, or might, require equity securities to be allotted, or treasury shares to be sold, after such expiry and the Directors may allot equity securities or sell treasury shares in pursuance of any such offer or agreement as if the power had not expired.

18. That subject to and conditional on the passing of resolution 16, and in addition to any authority granted by resolution 17, the Directors be authorised, pursuant to sections 570 and 573 of the Companies Act 2006 (the 'Act'), to allot equity securities (within the meaning of section 560 of the Act) for cash pursuant to the authority conferred by that resolution and by way of a sale of treasury shares as if section 561(1) of the Act did not apply to any such allotment and sale, provided that this power shall be:

18.1. limited to the allotment of equity securities, or sale of treasury shares, up to an aggregate nominal amount of £325,349.10 representing not more than 5% of the issued share capital of the Company as at 30 September 2019 (being the latest practicable date before publication of this Notice); and

18.2. used only for the purposes of financing (or refinancing, if the authority is to be used within six months after the original transaction) a transaction which the Directors of the Company determine to be an acquisition or other capital investment of a kind contemplated by the Statement of Principles on Disapplying Pre-Emption Rights most recently published by the Pre-Emption Group prior to the date of this Notice,

such authority to expire upon the expiry of the general authority conferred by resolution 16 above, save that the Company may, before such expiry, make an offer or agreement which would, or might, require equity securities to be allotted, or treasury shares sold, after such expiry and the Directors may allot equity securities or sell treasury shares in pursuance of any such offer or agreement as if the power had not expired.

19. That the Company be generally and unconditionally authorised to make market purchases (within the meaning of section 693(4) of the Companies Act 2006) of Ordinary Shares on such terms and in such manner as the Directors think fit provided that:
- 19.1. the maximum aggregate number of Ordinary Shares hereby authorised to be purchased is 6,506,982 (representing 10% of the Company's issued ordinary share capital as at 30 September 2019, being the latest practicable date before publication of this Notice);
- 19.2. the minimum price, exclusive of any expenses, which may be paid for an Ordinary Share is 10 pence;
- 19.3. the maximum price, exclusive of any expenses, which may be paid for an Ordinary Share is an amount equal to the higher of: (a) 105% of the average of the middle market quotations for an Ordinary Share, as derived from the London Stock Exchange Daily Official List, for the five business days immediately before the day on which such share is contracted to be purchased; and (b) the higher of the price of the last independent trade and the highest current independent bid for an Ordinary Share in the Company on the trading venues where the market purchases by the Company pursuant to the authority conferred by this resolution 20 will be carried out; and
- 19.4. the authority conferred by this resolution shall expire on the conclusion of the Company's AGM next following or the close of business on the day which is 15 months after the date of its passing (whichever occurs first) unless previously renewed, varied or revoked by the Company in general meeting, except that the Company may, before such expiry, enter into a contract for the purchase of Ordinary Shares under the authority hereby conferred prior to the expiry of such authority, which will or may be completed by or executed wholly or partly after the expiration of this authority, and may purchase its Ordinary Shares in pursuance of any such contract.
20. That a General Meeting, other than an Annual General Meeting, may be called on not less than 14 clear days' notice and that such authority shall expire on the conclusion of the Company's AGM next following.

The Board considers that all the resolutions to be considered at the AGM are in the best interests of the Company and its members as a whole and are therefore likely to promote the success of the Company for the benefit of its members as a whole. The Directors unanimously recommend that you vote in favour of all the proposed resolutions as they intend to do in respect of their own beneficial holdings which amount in aggregate to 85,186 shares representing approximately 0.131% of the existing issued ordinary share capital of the Company.

By order of the Board

Registered office:

Matrix House

Basing View

Basingstoke

RG21 4DZ

Registered in England and Wales with number 02972325



DAN HARTLEY

Group General Counsel & Company Secretary

30 September 2019

NOTICE OF ANNUAL GENERAL MEETING CONTINUED

EXPLANATORY NOTES

This section contains an explanation of each of the resolutions to be put to the AGM. Resolutions 1 to 16 are ordinary resolutions requiring the approval of a simple majority of shareholders present (in person or by proxy) and voting at the AGM. Resolutions 17 to 20 are special resolutions requiring the approval of 75% of shareholders present (in person or by proxy) and voting at the AGM.

RESOLUTION 1 – TO RECEIVE THE ANNUAL REPORT

The Chairman will present the Annual Report to the AGM.

RESOLUTION 2 – APPROVAL OF THE DIRECTORS' REMUNERATION REPORT

The Company is required to offer an annual advisory vote on the implementation of the Company's existing remuneration policy in terms of the payments and share awards made to Directors during the year (the 'Directors' Remuneration Report').

Resolution 2 seeks shareholder approval for the Directors' Remuneration Report (other than the part containing the Directors' Remuneration Policy) as set out on pages 69 to 94 of the Company's Annual Report 2019. The Directors' Remuneration Report gives details of the Directors' remuneration for the year ended 30 June 2019. Resolution 2 is an advisory resolution and does not affect the future remuneration paid to any Director. The report also includes details of the Remuneration Committee's representations and activities. The Company's auditor Deloitte LLP has audited those parts of the Directors' Remuneration Report which are required to be audited and their report is issued in the Company's Annual Report 2019.

The current Directors' Remuneration Policy was approved at the Company's Annual General Meeting held in November 2016 and is set out in our 2016 Annual Report which is available from our website at www.genusplc.com. The 2016 remuneration policy does not form part of the Directors' Remuneration Report for the purposes of resolution 2.

RESOLUTION 3 – APPROVAL OF THE DIRECTORS' REMUNERATION POLICY

The Company is required to offer a binding vote on the Company's forward looking remuneration policy (the 'Directors' Remuneration Policy') at least once every three years or earlier if a change is made to the Directors' Remuneration Policy, or if the advisory vote is not passed by shareholders.

Resolution 3 seeks shareholder approval for the Directors' Remuneration Policy given the changes made to it as outlined in the letter from the Chairman of the Remuneration Committee within the Directors' Remuneration Report (the 'Revised Policy'). The Revised Policy is set out on pages 72 to 82 of the Company's Annual Report 2019. The Revised Policy is designed to support the continued transformation of the Company into a global agricultural biotechnology pioneer by allowing the Company to recognise innovation and progress and to attract and motivate a high quality leadership team and drive focus and behaviours on long term achievement.

Subject to such approval, the proposed effective date of the Directors' Remuneration Policy is 14 November 2019, being the date of the AGM, and all payments from that date from the Company to the Directors and any former Directors must be made in accordance with such policy if approved (unless a revision to the policy has been separately approved by a shareholder resolution to allow for such a payment).

If the Directors' Remuneration Policy is not approved for any reason, the Company will, if and to the extent permitted by the Act, continue to make payments to Directors in accordance with the existing Remuneration Policy until a new Directors' Remuneration Policy is approved by shareholders.

RESOLUTION 4 – ADOPTION OF THE GENUS PLC PERFORMANCE SHARE PLAN (THE 'PSP')

The Remuneration Committee has determined that it is appropriate to seek shareholder approval for the implementation of a performance share plan to replace the existing plan, which has been prepared taking account of the significant updates to best practice in corporate governance since the existing plan was adopted by shareholders in 2014.

A summary of the PSP rules is set out in the Explanatory Notes to this document on pages 182 to 184.

RESOLUTION 5 – ADOPTION OF THE GENUS PLC DEFERRED SHARE BONUS PLAN (THE 'DSBP')

The Remuneration Committee has determined that it is appropriate to seek shareholder approval for the implementation of a deferred share bonus plan to replace the existing plan which has been prepared taking account of the significant updates to best practice in corporate governance since the existing plan was adopted by the Board in 2014.

A summary of the DSBP rules is set out in the Explanatory Notes to this document on pages 182 to 184.

RESOLUTION 6 – APPROVAL OF AMENDMENTS TO THE GENUS PLC 2014 DEFERRED SHARE BONUS PLAN (THE '2014 DSBP')

The Remuneration Committee has determined that it is appropriate to seek shareholder approval to amend the 2014 DSBP, so that existing awards made under the 2014 DSBP can be satisfied using newly issued or treasury shares. Allowing the use of new issue or treasury shares will give the Company greater flexibility in satisfying existing awards and ensures that Company cash need not be used to acquire existing shares in the market to satisfy awards if it is determined that there are other uses for such cash.

The 2014 DSBP will also be amended so that awards may not be satisfied by newly issued or treasury shares where to do so would cause the number of shares which may be issued pursuant to outstanding awards granted within the previous 10 years under the 2014 DSBP:

- > and any other employees' share scheme adopted by the Company, when added to the number of shares issued for the purpose of any such 2014 DSBP awards, to exceed 10 per cent. of the Company's ordinary share capital in issue immediately prior to the proposed date of grant; and
- > and any other executive (discretionary) employees' share scheme adopted by the Company, when added to the number of shares issued for the purpose of any such 2014 DSBP awards, to exceed 5 per cent. of the Company's ordinary share capital in issue immediately prior to the proposed date of grant. For these purposes, the Committee interprets this 5 per cent. limit as applying to awards granted to Executive Directors and executive committee members only.

RESOLUTION 7 – FINAL DIVIDEND

Final dividends must be approved by shareholders but must not exceed the amount recommended by Directors. If the meeting approves the recommended final dividend it will be paid out in accordance with resolution 7. An interim dividend of 8.9 pence per Ordinary Share was paid on 4 April 2019 to shareholders on the register at 8 March 2019, resulting in a total dividend for the year of 27.7 pence per Ordinary Share.

RESOLUTIONS 8 TO 13 – RE-ELECTION OF DIRECTORS

In accordance with provisions of the UK Corporate Governance Code, all Directors of the Company are required to offer themselves for annual re-election. Biographies of all of the current Directors can be found on pages 50 to 51 of the Company's Annual Report 2019 together with reasons why their contributions are, and continue to be, important to the Company's long term sustainable success. The Board has considered whether each of the independent Non-Executive Directors is free from any relationship that could materially interfere with the exercise of his or her independent judgement and has determined that each continues to be considered to be independent.

The Board recognises that Robert Lawson will have served nine years as Chairman of the Company at the date of the AGM. He recognises the requirement to move on from the role of Chairman in due course, but the Board has postponed this change, to ensure a smooth transition to the new Chief Executive. Robert Lawson continues to make an outstanding contribution to the Board and provides continuity during the transition, given his significant knowledge of the business.

RESOLUTIONS 14 AND 15 – APPOINTMENT OF AUDITOR AND AUDITOR'S REMUNERATION

The Company is required to appoint an auditor at each general meeting at which accounts are presented, to hold office until the end of the next such meeting. This resolution is recommended by the Audit Committee and proposes the reappointment of the Company's existing auditor, Deloitte LLP and gives authority to the Audit Committee to agree the auditor's remuneration.

RESOLUTION 16 – AUTHORITY TO ALLOT SHARES

Resolution 16 is proposed as an ordinary resolution and seeks the approval of shareholders, in accordance with section 551 of the Act, to authorise the Directors to allot Ordinary Shares for a period as stated in resolution 16.

The Investment Association ('IA') guidelines on Directors' authority to allot shares state that IA members will regard as routine resolutions seeking the authority to allot shares representing up to two-thirds of the Company's issued share capital, provided that any amount in excess of one-third of the Company's issued share capital is only used to allot shares pursuant to a fully pre-emptive rights issue.

In light of the IA guidelines, the Board considers it appropriate that Directors be granted authority to allot shares in the capital of the Company up to a maximum nominal amount of £4,337,988.30 representing two-thirds of the Company's issued ordinary share capital as at 30 September 2019 (the latest practicable date prior to publication of this Notice). If the Company wishes to allot more than a nominal amount of £2,168,994.10 (representing one-third of the Company's issued ordinary share capital), then any additional amount can only be allotted pursuant to a rights issue. The power will last until the end of the next AGM of the Company or, if earlier, on the close of business on the day which is 15 months after the date on which resolution 16 is passed.

The Directors have no current intention to allot new Ordinary Shares (other than in relation to the Company's employee share schemes) however they consider it appropriate to maintain the flexibility that this resolution provides. As at the date of this Notice, no shares are held by the Company in treasury.

RESOLUTIONS 17 AND 18 – DISAPPLICATION OF PRE-EMPTION RIGHTS

Resolutions 17 and 18 are special resolutions and give the Directors authority to allot Ordinary Shares in the capital of the Company pursuant to the authority granted under resolution 16 above for cash without complying with the pre-emption rights in the Act in certain circumstances.

The Pre-Emption Group's Statement of Principles (the 'Pre-Emption Group Principles') allow the Company to seek authority for an issue of shares for cash otherwise than in connection with a pre-emptive offer of up to 10% of the Company's issued share capital, provided that:

- (a) shares are not allotted for cash on a non pre-emptive basis in excess of an amount equal to 7.5% of the total issued ordinary share capital of the Company (excluding treasury shares) within a rolling three-year period, without prior consultation with shareholders; and
- (b) 5% of the authority can only be used in connection with an acquisition or specified capital investment which is announced contemporaneously with the issue or which has taken place in the preceding six-month period and is disclosed in the announcement of the issue (a 'Relevant Acquisition or Specified Capital Investment').

In line with Pre-Emption Group guidance, the annual disapplication of pre-emption rights is being proposed as two separate resolutions.

Resolution 17 will permit the Directors to allot:

17.1 equity securities for cash and sell treasury shares up to a nominal amount of 4,337,988.30, representing two-thirds of the Company's issued share capital as at 30 September 2019 (the latest practicable date prior to publication of this Notice) on an offer to existing shareholders on a pre-emptive basis (that is including a rights issue or an open offer), with one-third being available only in connection with a rights issue (in each case subject to any adjustments, such as for fractional entitlements and overseas shareholders, as the Directors see fit); and

17.2 equity securities for cash and sell treasury shares up to a maximum nominal value of £162,674.50, representing approximately 2.5% of the issued ordinary share capital of the Company as at 30 September 2019 (the latest practicable date prior to publication of this Notice) otherwise than in connection with a pre-emptive offer to existing shareholders.

The authority contained in resolution 17.2 above is limited to approximately 2.5% of the issued ordinary share capital of the Company as at 30 September 2019 (the latest practicable date prior to publication of this Notice) following the allotment by the Company in December 2018 of 3,097,000 Ordinary Shares of 10p each by way of an equity placing.

Resolution 18 is being proposed as a separate resolution to authorise the Directors to allot additional equity securities for cash and sell treasury shares up to a maximum nominal value of £325,349.10, representing a further 5% of the issued ordinary share capital of the Company (as at 30 September 2019, being the latest practicable date prior to publication of this Notice), otherwise than in connection with a pre-emptive offer to existing shareholders for the purposes of financing a transaction (or refinancing within six months of the transaction) which the Directors determine to be an acquisition or other capital investment contemplated by the Pre-Emption Group Principles.

The authorities contained in resolutions 17 and 18 will expire upon the expiry of the authority to allot shares conferred in resolution 18 (that is at the end of the next AGM of the Company or, if earlier, on the close of business on the day which is 15 months from the date of these resolutions). The Directors' existing authority expires at the forthcoming AGM.

RESOLUTION 19 – AUTHORITY TO PURCHASE OWN SHARES

Resolution 19 is proposed as a special resolution and seeks authority for the Company to purchase up to 10% of its Ordinary Shares at, or between, the minimum and maximum prices specified in this resolution. This power would be used only after careful consideration by the Directors, having taken into account market conditions prevailing at that time, the investment needs of the Company, its opportunities for expansion and its overall financial position. The Directors would exercise the authority to purchase Ordinary Shares only if they considered it to be in the best interests of shareholders as a whole and if the purchase could be reasonably expected to result in an increase in earnings per share.

The Directors have no present intention of exercising the authority to purchase Ordinary Shares but consider it prudent to obtain the flexibility this resolution provides. In considering whether to use this authority, the Directors will take into account factors including the financial resources of the Company, the Company's share price and future funding opportunities. The authority will be exercised only if the Directors believe that to do so would result in an increase in earnings per share and would be in the interests of shareholders generally. Any purchases of Ordinary Shares would be by means of market purchases through the London Stock Exchange.

NOTICE OF ANNUAL GENERAL MEETING CONTINUED

Under the Act, the Company is allowed to hold its own shares in treasury following a purchase of its own shares, instead of cancelling them. Such shares may be resold for cash or used to satisfy share options and share awards under the Company's share incentive schemes but all rights attaching to them, including voting rights and any right to receive dividends, are suspended whilst they are held in treasury. If the Directors exercise the authority conferred by resolution 19, the Company will have the option of holding repurchased shares in treasury.

If resolution 19 is passed at the AGM, it is the Company's current intention to hold in treasury all of the shares it may purchase pursuant to the authority granted to it. However, in order to respond properly to the Company's capital requirements and prevailing market conditions, the Directors will reassess at the time of any and each actual purchase whether to hold the shares in treasury or cancel them, provided it is permitted to do so. As at the date of this Notice, no shares are held by the Company in treasury.

At 30 September 2019 (the latest practicable date prior to the publication of this Notice), options were outstanding to subscribe for 993,099 Ordinary Shares, representing 1.53% of the issued share capital at that date. If the full authority to purchase such shares (existing and sought) was exercised, they would represent 1.7% of the Company's issued share capital as at that date. The authority sought at the AGM will expire at the conclusion of the AGM next following, or the close of business on the day which is 15 months from the date of this resolution (whichever is earlier).

RESOLUTION 20 – NOTICE PERIOD FOR GENERAL MEETINGS

Resolution 20 is proposed as a special resolution and seeks the approval of shareholders to reduce to 14 clear days the notice period required for a general meeting (other than an Annual General Meeting). The notice period required for general meetings for listed companies is 21 days but the Company may provide a shorter notice period of 14 clear days (for meetings other than Annual General Meetings) provided two conditions are met. The first condition is that the Company offers a facility for shareholders to vote by electronic means. This condition is met if the Company offers a facility, accessible to all shareholders, to appoint a proxy by means of a website. The second condition is that there is an annual resolution of shareholders approving the reduction of the minimum notice period from 21 days to 14 days. Annual General Meetings will continue to be held on at least 21 clear days' notice. It is intended that the shorter notice period would not be used as a matter of routine for general meetings but only where the flexibility is merited by the business of the meeting and is thought to be in the interests of the shareholders as a whole.

GENERAL NOTES

This Notice is being sent to all members and to any person nominated by a member of the Company under section 146 of the Act to enjoy information rights. Information regarding the AGM, including the information required by section 311A of the Act, is available from www.genusplc.com.

PROXIES

Members will find an attendance card and a form of proxy enclosed with this Notice. If you are attending the AGM, you should bring the attendance card with you. Only holders of Ordinary Shares, or their duly appointed representatives, are entitled to attend, vote and speak at the AGM. Any member so entitled may appoint one or more proxies to attend, speak and to vote instead of him or her. A proxy need not be a member of the Company but must attend the AGM to represent you. Your proxy could be the Chairman, another Director of the Company or another person who has agreed to attend to represent you. Your proxy must vote as you instruct and must attend the meeting for your vote to be counted. Details of how to appoint one or more proxies are set out in the notes to the proxy form. A member may appoint more than one proxy provided each proxy is appointed to exercise rights attached to different shares. You may not appoint more than one proxy to exercise rights attached to any one

share. A vote withheld is not a vote in law, which means that the vote will not be counted in the calculation of votes for or against the resolution. If no voting indication is given, your proxy will vote or abstain from voting at his or her discretion. Your proxy will vote (or abstain from voting) as he or she thinks fit in relation to any other matter which is put before the AGM.

To be valid, a duly executed form of proxy for use at the AGM together, if appropriate, with the power of attorney or other authority (if any) under which it is signed or a duly certified copy of such power or authority must be deposited at the offices of Equiniti Registrars, Freepost RTHJ-CLLL-KBKU, Equiniti, Aspect House, Spencer Road, Lancing, BN99 8LU at least 48 hours before the time appointed for holding the AGM or any adjournment thereof. Alternatively, proxies may be appointed by having an appropriate CREST message transmitted, if you are a user of the CREST system (further details are below). In the case of a member which is a company, the proxy form must be executed under its common seal or signed on its behalf by an officer of the company or an attorney for the company.

To change your proxy instructions you may return a new proxy appointment using the methods set out above. Where you have appointed a proxy using the hard copy proxy form and would like to change the instructions using another hard copy proxy form, please contact Equiniti Limited, Aspect House, Spencer Road, Lancing BN99 6DA. The deadline for receipt of proxy appointments (see above) also applies in relation to amended instructions. Where two or more valid separate appointments of proxy are received in respect of the same share in respect of the same meeting, the one which is last sent shall be treated as replacing and revoking the other or others.

Completion and return of a form of proxy will not preclude shareholders from attending the AGM and voting in person if they wish to do so.

The right to appoint a proxy does not apply to persons whose shares are held on their behalf by another person and who have been nominated to receive communications from the Company in accordance with section 146 of the Act ('nominated persons'). Nominated persons may have a right under an agreement with the registered member who holds shares on their behalf to be appointed (or to have someone else appointed) as a proxy. Alternatively, if nominated persons do not have such a right, or do not wish to exercise it, they may have a right under such an agreement to give instructions to the person holding the shares as to the exercise of voting rights.

VOTING RECORD DATE

Pursuant to Regulation 41 of the Uncertificated Securities Regulations 2001, the time by which a person must be entered on the register of members of the Company in order to have the right to attend and vote at the AGM is 6.30pm on 12 November 2019 (or if the AGM is adjourned, members on the register of members not later than 6.30pm on the day that is two working days prior to the reconvened AGM). Changes to entries on the register of members after the relevant time will be disregarded in determining the rights of any person to attend or vote (and the number of votes they may cast) at the AGM or adjourned meeting.

DOCUMENTS ON DISPLAY

Copies of contracts of service and letters of appointment between the Directors and the Company will be available for inspection at the Registered Office of the Company during normal business hours until the conclusion of the AGM, and at the place of the AGM for at least 15 minutes prior to the AGM until its conclusion.

The PSP, DSBP and the amended 2014 DSBP rules are available for inspection during normal business hours (Saturdays, Sundays and public holidays excepted) at the offices of Herbert Smith Freehills LLP, Exchange House, Primrose Street, EC2A 2EG up until the close of the AGM. The PSP, DSBP and the amended 2014 DSBP rules will also be available at the place of the meeting for at least 15 minutes prior to the AGM until its conclusion.

CREST

CREST members who wish to appoint a proxy or proxies through the CREST electronic proxy appointment service may do so for this AGM to be held on 14 November 2019 at 11.00am and any adjournment(s) thereof by using the procedures described in the CREST Manual found on the Euroclear website www.euroclear.com. CREST Personal Members or other CREST sponsored members, and those CREST members who have appointed a voting service provider(s), should refer to their CREST sponsor or voting service provider(s), who will be able to take the appropriate action on their behalf. In order for a proxy appointment or instruction made using the CREST service to be valid, the appropriate CREST message (a 'CREST Proxy Instruction') must be properly authenticated in accordance with Euroclear UK and Ireland Limited's specifications and must contain the information required for such instructions, as described in the CREST Manual. The message, regardless of whether it constitutes the appointment of a proxy or to an amendment to the instruction given to a previously appointed proxy must, in order to be valid, be transmitted so as to be received by the issuer's agent (ID RA19) by the latest time(s) for receipt of proxy appointments specified in this Notice of AGM. For this purpose, the time of receipt will be taken to be the time (as determined by the timestamp applied to the message by the CREST Applications Host) from which the issuer's agent is able to retrieve the message by enquiry to CREST in the manner prescribed by CREST. After this time, any change of instructions to proxies appointed through CREST should be communicated to the appointee through other means.

CREST members and, where applicable, their CREST sponsors or voting service providers should note that Euroclear UK and Ireland Limited do not make available special procedures in CREST for any particular messages. Normal system timings and limitations will therefore apply in relation to the input of CREST Proxy Instructions. It is the responsibility of the CREST member concerned to take (or, if the CREST member is a CREST personal member or sponsored member or has appointed a voting service provider(s), to procure that his CREST sponsor or voting service provider(s) take(s) such action as shall be necessary to ensure that a message is transmitted by means of the CREST system by any particular time. In this connection, CREST members and, where applicable, their CREST sponsors or voting service providers are referred, in particular, to those sections of the CREST Manual concerning practical limitations of the CREST system and timings.

The Company may treat as invalid a CREST Proxy Instruction in the circumstances set out in Regulation 35(5) (a) of the Uncertificated Securities Regulations 2001, as amended.

CORPORATE REPRESENTATIVES

Any corporation that is a member can appoint one or more corporate representatives who may exercise on its behalf all of its powers as a member provided that they do not do so in relation to the same shares.

TOTAL VOTING RIGHTS

As at 30 September 2019 (being the latest practicable date before publication of this Notice), the Company's issued share capital comprised 65,069,825 Ordinary Shares of 10 pence each. As at the date of this Notice, no shares are held by the Company in treasury. Each Ordinary Share carries the right to one vote at a general meeting of the Company and, therefore, the total number of voting rights in the Company as at 30 September 2019 is 65,069,825. The Company's website, referred to above, will include the contents of this Notice, information on the number of shares and voting rights and, if applicable, any shareholders' statements, shareholders' resolutions or shareholders' matters of business received by the Company after the date of this Notice.

QUESTIONS

Under section 319A of the Act, the Company must cause to be answered at the AGM any question a member asks relating to the business being dealt with at the AGM unless answering the question would interfere unduly with the preparation for the AGM or involve the disclosure of confidential information; the answer has already been given on a website in the form of an answer to a question; or it is undesirable in the interests of the Company or the good order of the AGM that the question be answered.

REQUISITION RIGHTS

Under section 527 of the Act, members meeting the threshold requirements set out in that section have the right to require the Company to publish on its website a statement setting out any matter relating to: (i) the audit of the Company's Accounts (including the auditor's report and the conduct of the audit) that are to be laid before the AGM; or (ii) any circumstances connected with an auditor of the Company ceasing to hold office since the previous meeting at which annual accounts and reports were laid in accordance with section 437 of the Act. The Company may not require the members requesting any such website publication to pay its expenses in complying with sections 527 or 528 of the Act. Where the Company is required to place a statement on its website under section 527 of the Act, it must forward the statement to the Company's auditor not later than the time when it makes the statement available on the website. The business which may be dealt with at the AGM includes any statement that the Company has been required under section 527 of the Act to publish on its website.

VOTING AT THE MEETING

In order for the voting preferences of all shareholders including those who cannot attend the meeting but who validly appoint a proxy, to be taken into account, a poll will be conducted on all resolutions at the AGM this year. Each shareholder and proxy present at the meeting will be invited to complete a poll card indicating how they wish to cast their votes in respect of each resolution. The results of the voting will be posted on the Company's website as soon as practicable after the meeting. Except as provided above, members who have general queries about the AGM should call Equiniti registrars on 0371 384 2290. If calling from overseas, please call the Equiniti overseas helpline number of +44 121 415 7047. Lines open 8.30am to 5.30pm, Monday to Friday (excluding UK public holidays). No other methods of communication will be accepted. You may not use any electronic address provided either in this Notice of AGM, or any related documents (including the proxy form) to communicate with the Company for any purposes other than those expressly stated.

NOTICE OF ANNUAL GENERAL MEETING CONTINUED

APPENDIX 1: SUMMARY OF THE PSP AND THE DSBP

The Board believes that it is important to attract, motivate and retain employees of the appropriate calibre and to align their interests with those of shareholders in the Company. Following review by the Remuneration Committee (the 'Committee'), it has been determined to introduce the new PSP and DSBP, which have been prepared taking account of the significant updates to best practice in corporate governance since the existing performance share plan and deferred share bonus plan were adopted in 2014. Accordingly, the Board is seeking shareholder approval for the new PSP and DSBP to replace the existing Genus plc Performance Share Plan and Deferred Share Bonus Plan.

The PSP incentivises executives to deliver superior returns to shareholders over a three year period, by providing them with the opportunity to acquire ordinary shares in the Company ('Shares') dependent on satisfying performance conditions.

The DSBP provides that a proportion of an employee's annual cash bonus is deferred into shares over a three year period, conditional upon remaining in employment.

TERMS COMMON TO THE PSP AND DSBP (TOGETHER THE 'PLANS')

1. ADMINISTRATION

Awards may be granted, and the Plans will be administered, by the Board, or a duly authorised committee of the Board. The current intention is that the Plans will be administered and awards granted by the Committee (and this will always be the case in respect of awards for Executive Directors of the Company ('Executive Directors')).

2. ELIGIBILITY

Awards may be granted to any of the employees of the Company or its subsidiaries, including the Executive Directors ('Participants'). In respect of the DSBP only, where an employee or Executive Director ceases to hold office or employment with the Company or any company which from time to time is a subsidiary of the Company (the 'Group'), the Board may determine that a proportion of any annual bonus payable to such employee or Director following such cessation shall be deferred in accordance with the rules of the DSBP.

EXECUTIVE DIRECTORS

Participation by the Executive Directors shall, unless and until approved otherwise by shareholders, be in accordance with the terms of the Company's remuneration policy as approved by shareholders from time to time (the 'Remuneration Policy').

FORM OF AWARDS

Under the Plans, awards ('Awards') will take the form of either:

- (a) a conditional right to receive Shares which will be automatically transferred to the Participant following vesting (a 'Conditional Award'); or
- (b) a nil-cost option, exercisable by the Participant following vesting during a permitted exercise period (extending not later than the tenth anniversary of the date of grant) (an 'Option').

NON-TRANSFERABLE AND NON-PENSIONABLE

Awards are non-transferable, save to personal representatives following death, and do not form part of pensionable earnings.

PLAN LIMITS

Shares may be newly issued, transferred from treasury or market purchased for the purposes of the Plans.

Awards may not be granted under the Plans on terms capable of being satisfied by newly issued Shares where to do so would cause the number of Shares which may be issued pursuant to outstanding Awards granted within the previous 10 years under the Plans and any other employees' share scheme adopted by the Company, when added to the number of Shares issued for the purpose of any such Awards, to exceed 10 per cent. of the Company's ordinary share capital in issue immediately prior to the proposed date of grant.

Awards may not be granted under the Plans on terms capable of being satisfied by newly issued Shares where to do so would cause the number of Shares which may be issued pursuant to outstanding Awards granted within the previous 10 years under the Plans and any other discretionary employees' share scheme adopted by the Company, when added to the number of Shares issued for the purpose of any such Awards, to exceed 5 per cent. of the Company's ordinary share capital in issue immediately prior to the proposed date of grant. For these purposes, the Committee interprets this 5 per cent. limit as applying to Awards granted to Executive Directors and executive committee members only.

These limits do not include rights to Shares which have been released, lapsed or otherwise become incapable of exercise or vesting.

Treasury shares will count as new issue Shares for the purpose of these limits for so long as institutional investor bodies consider that they should be so counted.

RETENTION PERIOD

If the Committee so determines, Awards may be subject to a retention period of two years following the vesting of an Award granted under either Plan during which a Participant shall not be permitted to dispose of the Shares acquired on vesting (other than to cover tax liabilities, following a cessation of employment or in the event of a corporate action).

DIVIDEND EQUIVALENTS

Participants may receive additional Shares with equal value to the dividends which would have been paid during the vesting period on the number of Shares that vest.

CASH ALTERNATIVE

If the Committee so determines, an Award may be satisfied in whole or in part by a cash payment as an alternative to the issue or transfer of Shares.

LEAVERS

An Award granted under either Plan will normally lapse where the Participant ceases to hold office or employment with the Group. Awards will not lapse where the cessation of office or employment with the Group is due to injury, disability, redundancy, retirement, the transfer of the Participant's employment in connection with a business sale, the company with which the Participant holds office or employment ceasing to be a member of the Group, death, or any other reason if the Committee so determines (a 'Good Leaver').

Where a Participant ceases employment for a Good Leaver reason before the normal vesting date, the Award will continue to remain capable of vesting on its normal vesting date, provided that the Committee may determine that the Award will instead vest on or at any time following the date of cessation.

Where an Award remains outstanding in circumstances where the Participant has become a Good Leaver, the Committee may impose additional terms on the vesting of such Award including terms preventing awards vesting in whole or in part if the Participant takes up a new executive role with another company.

An Option will be exercisable during a period of six months from the vesting date (or such other period as the Committee may permit).

Any exercise of discretion in respect of Awards granted to Executive Directors shall be undertaken in accordance with the terms of the prevailing Directors' Remuneration Policy.

CORPORATE ACTIONS

In the event of a change of control, Conditional Awards will normally vest and Options may be exercised for a period of six months. In the event of the passing of a resolution for the voluntary winding-up of the Company, Conditional Awards will vest and Options will be exercisable for a period of two months. In the event of a demerger of a substantial part of the Group's business, a special dividend or a similar event affecting the value of the Shares to a material extent, Awards may be adjusted as set out below or the Committee may allow Awards to vest, in which case Options may be exercised for a period of two months, or such longer period as the Committee may permit. Where the corporate action forms part of an internal re-organisation, unless the Committee determines otherwise, an Award shall not vest, and instead will be replaced with an Award of equivalent value over shares in the new controlling company and, in the case of the PSP, will continue to be subject to performance conditions.

INTERNATIONAL TRANSFERS

If a Participant is transferred to work in another country as a result of which the Participant or a Group Company will suffer a tax disadvantage or the Participant will become subject to restrictions on his ability to receive or deal in Shares, or to exercise an Option, the Committee may determine that an Award will vest prior to the date of such transfer, in which case an Option may be exercised during a period of six months.

EXTENT OF VESTING

Where, prior to the normal vesting date, a Participant ceases employment, or gives or receives notice, for a Good Leaver reason, is subject to an international transfer on which Awards vest, or there is a corporate action, the number of Shares in respect of which an Award vests will, unless the Committee determines otherwise, be pro-rated on the basis of the number of whole months which have elapsed from the date of grant to the date of cessation (or, unless the Board determines otherwise, notice) or the corporate action (as applicable) and, in the case of the PSP, be based on satisfaction of the performance condition. The Committee may adjust the extent to which a PSP Award shall vest (negatively or positively, but never to more than the original number of Shares subject to the Award) if it determines that it is appropriate to do so to reflect the broader circumstances of the Group. In respect of Awards granted to Executive Directors, any such adjustment shall be undertaken in accordance with the terms of the prevailing Directors' Remuneration Policy.

VARIATION OF CAPITAL

The number of Shares subject to Awards and, where applicable, any Option exercise price may be adjusted, in such manner as the Committee may determine, following any variation of share capital of the Company or a demerger of a substantial part of the Group's business, a special dividend or a similar event affecting the value of Shares to a material extent.

ALTERATIONS

The Committee may amend the rules of the Plans as it considers appropriate, subject to any relevant legislation, provided that no modification may be made which confers any additional advantage on Participants relating to eligibility, plan limits, the basis of individual entitlement, the price payable for the acquisition of Shares and the provisions for the adjustment of Awards without prior shareholder approval, except in relation to performance conditions or for amendments which are minor amendments to benefit the administration of the Plans, to take account of a change in legislation, or to obtain or maintain favourable tax, exchange control or regulatory treatment for Participants or the Company (or other Group Companies).

CLAW-BACK

In respect of the PSP, the Committee may apply claw-back where at any time before vesting or at any time prior to the third set of audited accounts being published following the date on which an Award vests if it determines that the financial results of the Company were misstated, an error was made in any calculation or in assessing performance, in each case resulting in the number of Shares in respect of which the Award was granted or vested being more than it should have been.

In respect of the DSBP, the Committee may apply claw-back where at any time before vesting it determines that the financial results of the Company were misstated or an error was made in any calculation, which resulted in the number of Shares in respect of which the Award was granted or vested being more than it should have been.

In respect of Awards granted under both Plans, the Committee may also apply claw-back at any time where it determines that, at any time prior to the vesting of a Conditional Award (or exercise of an Option) either the Participant committed misconduct that justified, or could have justified, dismissal, the Participant committed an act or omission which had a significant detrimental impact on the reputation of any Group Company, a material failure of risk management occurred for which the Participant was directly or indirectly responsible or which occurred in the part of the business in which the Participant performs a role or has responsibility or in the event of corporate failure.

A claw-back may be satisfied in a number of ways, including by reducing the amount of any future bonus, by reducing the vesting of any subsisting or future Awards, by reducing the number of Shares under any vested but unexercised Option and/or by either one or both of a requirement to make a cash payment or transfer of Shares to the Company.

The claw-back provisions will not apply following the occurrence of a takeover or similar corporate event.

OVERSEAS PLANS

Each of the Plans contains provisions which permit the Board to establish further plans for the benefit of overseas Participants based on the relevant plan but modified as necessary or desirable to take account of overseas tax, exchange control or securities laws. Any new Shares issued under such plans would count towards the individual and overall plan limits outlined above.

EMPLOYEE BENEFIT TRUST (THE 'EBT')

The Company may use the existing EBT, or may establish a new EBT, to operate in conjunction with the Plans and otherwise to benefit Participants and former Participants of the Company and its subsidiaries.

The Company and its subsidiaries may fund the EBT by loan or gift to acquire Shares by market purchase, by subscription or from treasury. Any Shares issued to the EBT (where the trust does not acquire Shares by market purchase) will be treated as counting against the Plan limits contained in the rules of the Plans.

The EBT is, or will be, constituted by a trust deed between the Company and an offshore independent professional trustee. The power to appoint and remove the trustee rests with the Company. The EBT will not, without prior shareholder approval, be able to make an acquisition of Shares where it would then hold more than 5 per cent. of the Company's issued share capital from time to time.

NOTICE OF ANNUAL GENERAL MEETING CONTINUED

TERMS SPECIFIC TO THE PSP

3. INDIVIDUAL LIMIT

The maximum market value of the Shares over which a Participant may be granted an Award under the PSP in any financial year shall not exceed an amount equal to 200 per cent. of the Participant's gross annual basic salary as at the date of grant. In exceptional circumstances, this limit may be increased to 300 per cent. at the discretion of the Committee. The PSP may, in addition, be used to facilitate 'buy-out' Awards granted on the recruitment of a Participant.

For Executive Directors, unless or until otherwise approved by shareholders, Award levels will always be in accordance with the Company's prevailing Remuneration Policy.

PERFORMANCE CONDITIONS

The Committee will determine the performance conditions which will apply to PSP Awards and which will ordinarily be measured over a period (the 'Performance Period') of not less than three years. The Committee may specify a shorter Performance Period where an Award is granted in connection with the recruitment of a Participant or in circumstances which the Committee considers to be exceptional. There will be no provision for re-testing.

The Committee may alter the performance conditions attaching to an Award if events happen after the date of grant that cause the Committee to consider that any element of the performance conditions is no longer a fair measure of the Company's performance, provided that the revised target is not considered to be materially less challenging than was intended in setting the original conditions. Where an Award vests prior to the normal vesting date, the Committee will assess performance using such information as it determines to be appropriate.

Performance conditions for Executive Directors will be set in line with the Remuneration Policy, and will be set out in the annual report on Directors' remuneration.

4. TIMING OF GRANT OF AWARDS

Awards under the PSP may, save in exceptional circumstances, only be granted within a period of 42 days following the date of announcement by the Company of its interim or final results (or as soon as practicable thereafter if the Company is restricted from being able to grant Awards, or make invitations, during such period). Awards under the PSP made in connection with the recruitment of a Participant can be made as soon as reasonably practicable thereafter.

In circumstances where there is a dealing restriction, the Board may determine that the grant date of the Award shall be the date on which the Award would have been granted but for such a restriction having arisen.

VESTING

PSP Awards will normally vest on the third anniversary of the date of grant.

The Committee may specify a shorter vesting period only where an Award is granted in connection with the recruitment of a Participant or in circumstances which the Committee determines to be exceptional.

Awards will vest to the extent that the relevant performance conditions have been met, provided that the Committee may adjust the vesting level (either positively or negatively) where it considers it appropriate to do so to reflect the Company's broader circumstances. For the avoidance of doubt, any upwards adjustment of an Award will not result in such Award vesting in respect of a greater number of Shares than in respect of which the Award was originally granted.

TERMS SPECIFIC TO THE DSBP

5. BONUS DEFERRAL

Before the amount of a Participant's annual bonus is determined, the Board may specify that a proportion of the Employee's annual bonus that shall be deferred. A Participant has no entitlement to receive the proportion of the annual bonus that is deferred.

The Committee will grant to a Participant whose bonus is subject to deferral an Award over the number of Shares which have a value equivalent to the proportion of the Participant's bonus which is deferred.

TIMING OF GRANT OF AWARDS

Awards under the DSBP may be granted at any time, provided that there is no dealing restriction. In circumstances where there is a dealing restriction, the Board may determine that the grant date of the Award shall be the date on which the Award would have been granted but for such a restriction having arisen.

VESTING

Awards will normally vest on the third anniversary of the date of grant.

The Committee may specify a shorter vesting period (or multiple vesting periods) only where an Award is granted in connection with the recruitment of a Participant or in circumstances which the Committee determines to be exceptional. Where an Award is granted with multiple vesting dates, the DSBP rules will apply separately to each part of the Award.

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