



# BRITISH PIG ASSOCIATION ANNUAL REPORT 2024



## Message from the Chairman.

Twenty-five years ago in November 1999 the British Pig Association was relaunched as an independent pedigree Association. The first annual report published by the new Association was introduced by my predecessor Robert Overend MBE with the words

“It is only nine months since the last annual report was published with the title “End of an Era”. So it gives me great pleasure as a lifelong pedigree breeder with three sons and a grandson in the family pig business to announce the re-birth of our organisation dedicated once again exclusively to the needs of pedigree breeders.”

He and his management team of Viki Mills and Peter Brier and our President Lord Salisbury are featured on the cover of this report. Sadly Robert was not able to see the Association reach this important milestone but Viki and Peter are still with us and we are proud to have them as Honorary Life Members. Under Lord Salisbury's long-term presidency, Robert, Peter and Viki were able to nurture the Association through a difficult birth and set us on a course that has brought us to this anniversary. I must also pay tribute to all my other predecessors who have had a hand in bringing us to this special occasion. Alan Rose who bridged the generations, Guy Kiddy who oversaw the development of our Conservation Programmes, Jane Mathews, the first woman to chair the Association, who championed our Pedigree Pork initiatives and Chris Impey, who oversaw the restructuring programme that is now in its final stages of completion.

In some ways this may feel like the end of an era as the Association embarks on a new more inclusive path to represent all small-scale pig keepers regardless of the breed of pig that they keep. Yes it is a new beginning but as our president said at the last meeting without change we are doomed to failure. He also cautioned us not to throw out the baby with the bathwater and that is a message that we intend to heed. Our commitment to pedigree breeding and the conservation of our native breeds will remain at the heart of our Association but we have to see that work in the wider context of pig production in the United Kingdom. The landscape into which we ventured in 1999 has changed beyond all recognition. Just as happened with the poultry sector before us the commercial pig industry has become increasingly consolidated and vertically integrated. The larger producers have grown larger and larger whilst medium sized family enterprises have all but disappeared. The future of our native breeds may not lie in a pig industry dominated by a handful of international breeding companies supplying customers with thousands of sows whose Red Tractor assured pigs are killed by three dominant processors. That does not mean that we do not have a future.

Outside the framework of vertically integrated mainstream production supplying the supermarkets there are more than 7000 small scale non assured producers still striving to maintain their place in the rural economy. The majority of these are not pedigree breeders but that does not mean that they cannot be our partners. We face the same challenges. If there are no small abattoirs for non-assured pigs there will be no native breeds and no small-scale independent pig keepers. This is just one example where the BPA as a member of the Government's Small Abattoir Working Group is acting on behalf of all small-scale keepers.

In February 2022 you approved a new constitution with a three-year transition period. We have now completed that transition ahead of schedule with the final appointments to the board to be confirmed at the Annual General Meeting. Now we need to set out on a new journey for the next 25 years that will take our core business of pedigree recording and conservation and embed it in the wider small scale pig sector. If we fail to do so we risk our survival as an independent organisation. Our Treasurer sets out some stark home truths in her report and if we fail to act we will not survive for long.

We have put in place a framework that allows all our members to contribute to the work of the Association. As a charity we have to rely on volunteers and I ask again that everyone of you ask yourselves what you can do to help. I am not asking you to help the “Association” as some sort of distant entity. The British Pig Association is you the members - nothing else. Everyone of you has a role to play and I hope that there will be many of you who can play a much greater role under our new constitution.

If we want our children and our Junior Pig Club members to enjoy keeping our wonderful native pig breeds we must act together now to ensure the future of those breeds. I call on all of our members to work together with our new Board so that future generations will have the opportunity to celebrate a 50-year anniversary with all our native breeds safe and secured.

Our Conservation committee led by Guy Kiddy has been working hard on our Genebanking project and I am pleased to announce that we have completed the first phase of this important piece of work. I would like to take this opportunity to thank the Overend family and our partners the RBST. A full review of this project can be found at the end of this report.

The other key area that we have identified as a priority is Sustainable Pork Production. In this context sustainability refers to building long term successful businesses producing and selling pork from pedigree pigs. This is essential to complement the work of the conservation committee and is being taken forward by Jane Mathews.

### **Sustainable Pork Production Committee**

Conservation of our breeds is underpinned by sustainable pork production. The drive for locally produced, high quality food presents a real opportunity for our members and the Sustainable Pork Production Committee is keen to capitalise on this.

The Committee comprises a small, dedicated team with a variety of skills and we are lucky to have recently recruited Slow Food Chef Paula McIntyre and pig breeder and chef Matthijs Geerdink to the Committee. We look forward to working with them in coming months to develop new promotional ideas and outlets for pedigree pork.

#### Pedigree Pork Promotion

Committee member Anthony Davidson has developed a Big Barn listing/map for members of the Pedigree Pork Scheme. This appears on the Pedigree Pork website and a number of other Big Barn maps. The listing is free with the option to upgrade to an online shop. Big Barn has a huge following and this is an excellent way for members to advertise their pedigree pork.

The Committee has been looking at ways of engaging with the public and small-scale producers to share the conservation benefits of eating pedigree pork. We are embarking on a series of podcasts to get this message into the public domain, as well as a whole range of other topics relevant to our members and small-scale producers. Our first podcast will feature sausages in the context of Bonfire Night.

We are also working on developing publicity materials for members to use and continue with our popular pedigree pork stickers.

2023 saw us hosting a series of webinars on a range of topics relevant to members. We have a further series of webinars planned over the coming weeks. Planned topics include:

- Story telling/network developing – how to develop your pig keeping/meat production story and establish a customer network
- Carcase cut/prep
- Animal Health and Welfare Pathway/biosecurity/vaccination

## English Winter Fair – Pedigree Pork Product Competition



November 2023 saw the Committee host its inaugural Pedigree Pork Product Competition at the English Winter Fair. This was a great success and well supported by members. Entries were anonymised and competition was keen!

We have built on this for 2024 with additional classes for charcuterie products and a novelty product class themed '25<sup>th</sup> Anniversary of the BPA'. Entry forms are available on the BPA website.

In addition to the competition we will be celebrating our 14 pig breeds and pedigree pork with a series of cookery demonstrations

and samples of cooked pork for members/show attendees to try. The event will feature in a future edition of BBQ magazine courtesy of Board and Committee member Ian Jones.



## Food Hub



Anthony Davidson has recently opened Frank's Farm, a regional hub celebrating local produce including pedigree pork. Produce is sourced from sustainable sources within a 20-mile radius of the Farm. Anthony's work and that of his butcher will feature in future podcasts and pedigree pork promotion.

We believe that members could work together regionally to look at the possibility of setting up regional groups to sell their produce and plan to have a working group operating under the Committee to look at different models and how this might work.

## Additional Work

In addition to the work of the Committee as it relates to pedigree pork and sustainable pork production, members of the Committee and CEO Marcus Bates carry out a host of other work relevant to members – representing members/small scale producers on the Pig Health and Welfare Council Food Safety Group, involvement in the Small Abattoir Working Group, work relating to vet attestations, the Animal Health and Welfare Pathway to name but a few. We work closely with DEFRA Policy, Government and APHA to represent the voice of the small-scale producer in relation to conservation, herd books and disease prevention and control. Although not obvious to members, this work is vital to our breeds and their survival. We are currently working to encourage eligible members to sign up for the Animal Health and Welfare Pathway and hope to see this extended further in the future.

The Committee has much planned for the coming year and is hoping to see members working together, helping and supporting each other for the benefit of our breeds. If you have ideas relating to pedigree pork promotion or would like to be involved in a regional/working group, please let us know.

**Jane Mathews – Chair – Sustainable Pork Production Committee**

As Chairman I must also point out that in addition to the work of our two core committees we also have a **Show Committee**. Maria Naylor has done a wonderful job of taking over the bulk of the work relating to shows that used to be carried out in the office. This is the essence of our new way of working that we implemented following the restructuring and the development of a new constitution, The Association has to evolve and devolve. This means that work that used to be carried out by paid staff in an office has to be carried out by willing volunteers. We always had a Show Committee but now as well as making decisions the committee also has to undertake all the work that comes with implementing those decisions. Maria has led the way in taking up this challenge and I would like to thank her for all her hard work. More detailed reports of the activities of her committee along with reports and photos of prize-winning pigs and people can be found in Practical Pigs.

And lastly we have our **Junior Pig Club** led by Tracey Bretherton. Pedigree breeding is all about ensuring that the next generation of pigs are as good as or better than the one that we have inherited. To do that we have to encourage the next generation of pedigree pig keepers. That is exactly what the Junior Pig Club does and I want to say special thank you to Tracey and all her helpers for the magnificent work that they do with our pig keepers of the future.

### **Junior Pig Club**

The Juniors have had a very busy year, with lots of added shows and events. Our ambassadors and reporters have worked hard throughout the year and have been to Ireland to help the juniors there, which was a huge success and we are excited to announce that we have bought some new banners!

This year, we have been raising money for our conservation programme with the Large White. We have bought a boar, which has gone to Bredon School to serve the Queen gilts we have there in partnership with the RBST. We bought a Fanny gilt from David Brock, which is with Skyla Hudson-Jones, and she has successfully shown her this season. Two Beryl gits have gone to Askam Bryan Wildlife Park.

Our camps this year have been amazing, and thanks must go to Irvin Carter and family for hosting a camp at their farm, where they had a vet doing an autopsy on a young pig. On their fun day we took them trampolining.



Boston Farm Park was our second camp. This is the second year here, and it's such a fabulous place. David and Amanda, the owners, always make us feel so welcome. Here, the juniors did some tattooing, notching, and stock judging. Their fun day was a trip to the local aqua park, where they had lots of fun.

Future Stars and the Junior Championships is our main event of the year held at Three Counties showground Malvern. Here we had 80 juniors competing in different sections. They impress every year with their team spirit, hard work and dedication. Of course none of this would be possible without the support of our wonderful sponsors Mr & Mrs Holroyd , Mr & Mrs Bemand and Contended Pig Products.



Our last event of the year will be the English Winter Fair. Our younger juniors will make scotch eggs and sausage rolls this year, while our older ones will make burgers. The winning teams will be entered into the product competition to compete against the professionals.

You can follow our activities on our website and social media channels as well as in Practical Pigs magazine.

### **Tracey Bretherton – Junior Pig Club**

One final word from the Chair before I hand over to our Treasurer, Chris Coe. The new constitution is designed to allow all our members to contribute to the work of the Association as we strive to conserve our pedigree pigs for the future. You don't have to be elected or have been a member for 25 years to get involved. Anyone with a good idea who is willing to work with others for the benefit of the pigs is not just welcome but actively encouraged to contact a board member or our Chief Executive. We can have as many working groups as we like and I hope very much that going forward we will see more members getting involved.

### **Finance Report for the Year Ending 31<sup>st</sup> December 2023**

#### Financial Imperatives

The Financial results for the Year ending 31<sup>st</sup> December 2023 show a deficit of £77,353 compared to £81,793 in the previous year. Importantly, it is the aggregation effect of continued losses over of a number of years, which has seen the resources of the BPA reduce from c £600K to £393K at the end of 2023, with the prospect of a further deficit in 2024 and projected 2025, in total c £150K unless significant changes are made.

The performance of our investments, showed a good turnaround compared with the 2022 financial year, with a net gain of £5,103.00 (2022 – loss of £61,159).

Income from Charitable Activities (which includes member subscriptions) reduced from £196,747 to £95,655 in 2023, but expenditure on Charitable activities reduced similarly from £174K to £67K. Income included some non-recurring grants and funds from trade show support, whilst expenditure does not reflect some of the cost saving initiatives, where the full benefit will come through in 2024.

Charity Accounts differ in their format to Corporate Accounts as they have to segregate income and costs directly relating to the Charity objectives.

To remind Members, the BPA is a member-based Charity and Company limited by Guarantee. Its income has predominately come from Subscriptions, member services, donations and legacies and prior to Brexit, Export related income. Following the combination of Brexit and Covid, Export Income effectively evaporated, as grant monies and government support ceased. (This is not simply a BPA issue but has affected many Charities).

In the absence of new sources of income, your Board has taken significant cost cutting measures, ensuring we are focused on its core activities, eliminating the BPA physical office, cutting out all non-core activity expenses, reducing administrative staff and costs and reducing the CEO time to 3 days per week from 1<sup>st</sup> November 2024. We have outsourced herd book processing to ensure long term service provision and contingency, leaving only two cost cutting measures left (Practical Pigs being the biggest and an adjustment to semen tank costs). Notwithstanding these cost cutting initiatives, on current projections, we remain circa £60K p.a short of membership and current donation income.

Our focus on cost control will continue, but, in the absence of immediate new sources of income our aim is to focus on the core service of pedigree herd book control and the maintenance of our genebank. Ensuring that these base case services can be covered by membership income with some small use if required of our investment funds, we will create a basic service, which meets the charity objectives but will relieve the financial pressure seen over recent years whilst giving us a platform on which to build the future.

### Key Initiatives

Following the Board Strategy meeting 3 years ago, we set out initiatives that could lead us to secure an independent future for the BPA. A key component being the need to significantly increase membership creating different categories for non-pedigree pig breeders and keepers. Clearly, in order to do this, we have to have a compelling reason for these pig keepers to see the benefit of membership. Key to this is the Animal Health and Welfare Pathway and our initiative to develop an Accreditation scheme, for some 7000 producers who are too small to be members of Red Tractor. We would need a material recruitment campaign to achieve the level of membership to eliminate the level of expected deficit but we are aware that there are a significant level of pig keepers, who are not currently our members but whose interests are being represented by BPA, so the task is far from impossible.

Preliminary work has already started and we must now focus on its delivery, recognising that we must design, approve and then provide this to our existing membership before new members can be recruited.

We have recently been exploring opportunities for Pedigree Pork distribution with the assistance of our Non-Executive Directors, who have the skills to help us develop these programmes. We are also exploring opportunities to work with Organisations such as Slow Food, London Borough Market and the London Food Board to look at how we can scale up the sale of Pedigree Pork into wider markets.

The BPA has contacts that would be prepared to sponsor specific projects and we have tentatively approached breeders with the concept of establishing local co-operatives to ensure continuity of standards and supply. The Board will look to develop these initiatives to ensure both feasibility and self-funding paths to delivery.

The combination of these initiatives would, if successful, provide for the long-term viability of the BPA and provide its membership with business opportunities not currently available.

### Summary

Whilst the continued financial pressures mean that the BPA Board of Trustees face a number of Challenges, the broad skill base of willing volunteers we have established over the last couple of years will work tirelessly to develop the initiatives detailed above.

These initiatives can give rise to a clear pathway for a brighter and more sustainable financial future for the BPA and provide business benefit and services to a broader membership.

**Chris Coe - Treasurer, British Pig Association**

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

REPORT AND FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31st DECEMBER 2023

Charity No: 248119

Company No: 00022088 (England and Wales)

Agutter . Khanderia  
Chartered Accountants  
27 Imperial Drive, Harrow HA2 7DG

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

REPORT AND FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31st DECEMBER 2023

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CHARITY REFERENCE ADMINISTRATIVE DETAILS

FOR THE YEAR ENDED 31st DECEMBER 2023

|  |  |
|--|--|
| Charity name:                            | The British Pig Association  |
| Charity registration number:             | 248119   |
| Company registration number:             | 00022088 (England and Wales)   |
| Registered office:                       | 22 George Road<br>Edgbaston<br>Birmingham<br>B15 1PJ   |
| Bankers:                                 | National Westminster Bank Plc.<br>72-74 High Street<br>Watford<br>Hertfordshire<br>WD1 2BQ                     |
| Investment advisers and bankers:         | Cazenove Capital Management<br>Schroder & Co. Limited<br>1 London Wall Place<br>London<br>EC2Y 5AU             |
| Accountants and Independent:<br>Examiner | Kishor Khanderia ACA<br>Agutter . Khanderia<br>Chartered Accountants<br>27 Imperial Drive<br>Harrow<br>HA2 7DG |

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CHARITY REFERENCE ADMINISTRATIVE DETAILS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

Trustees and management Committee:

President: The Most Hon. The Marquess of Salisbury KG KCVO  
PCDL

Chairperson: B. Kelly

Vice Chairperson: Ian Jones

Chief executive officer  
and Secretary: M. Bates

Directors and Trustees: Mrs. T. Bretherton – resigned 27/10/2023  
Mrs. C. Coe  
Dr. M. Giles – resigned 01/11/2023  
C. Impey  
B. Kelly  
Guy Kiddy – appointed 27/10/2023  
Mrs. S. Lugg  
Jane Mathews – appointed 27/10/2023  
Mrs. M Naylor – resigned 27/10/2023  
N. Overend – resigned 27/10/2023  
Ryan Perry – appointed 27/10/2023

Non-Executive Directors: Anthony Davison – appointed 12/05/2023  
Rachel Graham – appointed 29/04/2024\*  
Stewart Houston – appointed 29/04/2024\*  
Ian Jones – appointed 12/05/2023  
John Millard – appointed 18/12/2023 – resigned 29/04/2024\*  
Rex Walters – appointed 18/12/2023\*

\*Co-options as Casual Vacancies in accordance with the Articles of Association

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TRUSTEES' ANNUAL REPORT (INCLUDING DIRECTORS' REPORT)

FOR THE YEAR ENDED 31st DECEMBER 2023

The trustees, who are also directors of the charity for the purposes of the Companies Act, present their annual report together with the financial statements for the year ended 31st December 2023. The trustees have adopted the provisions of the Statement of Recommended Practice (SORP) "Accounting and Reporting by Charities" the Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland (FRS 102) in preparing the annual report and financial statements of the charity.

The financial statements have been prepared in accordance with the accounting policies set out in notes to the accounts and comply with the charity's governing document, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland published in October 2019.

**Trustees of the charity**

The directors of the charitable company are its trustees for the purposes of charity law. List of trustees who served during the year and since the year-end are listed on page 2 of the financial statements.

**Public benefit statement**

The charity is a public benefit entity.

**Our Aims, objectives and activities**

Purposes and Aims

Our charity's purposes as set out in the objects clauses contained in the company's memorandum of association are to:

Procure advancement of breed society functions in pedigree pig breeding, conservation and recording of all major breed and in particular, native breeds.

The aims of our charity are to provide comprehensive services to pedigree pig farmers in maintenance of their individual pigs and herds; educate members about the risks of disease through organising training workshops, shows and exhibitions both in the U. K. and overseas through representative bodies; development of the pedigree pig industry both in the United Kingdom and overseas by exchanges between countries. Our aims fully reflect the purposes that the charity was set up.

Ensuring our work delivers our aims

We review our aims, objectives and activities each year. Regular meetings are arranged by dedicated committees to review training, organisation of shows and events, regional and specific matters, and conservation of rare breeds, inspection of animal herds, welfare and special projects. The executive committee meets at least once a year to review the work of the individual committees.

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(Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

The reviews look at the success of each core activity and the benefits they have delivered to those groups of people we are set to help. The reviews also help us to ensure our aims; objectives and activities remain focused and deliver the planned benefits. We have referred to the guidance contained in the Charity Commission's general guidance on public benefit when reviewing our aim and objectives and in planning our future activities. In particular, the trustees consider how planned activities will contribute to the aims and objectives they have set.

The focus of our work

Our main objectives for the year continued to be that of the advancement of pedigree breeding, conservation and recording. The strategies we used to meet these objectives included:

Electronic and manual registrations of breed society functions in pedigree pig recordings;  
Active support for members by telephone, correspondence, Internet and educational workshops;  
Conservation of rare pedigree pigs semen stocks as part of our heritage; and

Organising events, shows and exhibitions both in the United Kingdom and worldwide to promote breeding and conservation of pedigree pigs. As from 1st July 2023, a related company, UK TAG Limited, carries out our activities to represent members' interests overseas and undertake commitments to UK Government Agencies.

**How our activities deliver public benefit**

Our main activities and whom we try to help are described below. All our charitable activities focus on delivering advancement and conservation within the pig industry that helps in delivering public benefit to a wider community.

Who used and benefited from our services

Our objects and our coverage helped us to provide services to the pedigree pig farmers throughout the United Kingdom. Advanced methods deployed in animal husbandry help the ultimate consumers in obtaining safe source of food and promote pedigree farming to regions outside the UK.

Our activities of organising shows and missions deliver services to improve methods of pedigree breeding, control and help to eradicate disease and improve food supply chain for public benefit.

Advice and information

Members and other users may obtain advice and information by Internet. We have developed our website to meet the assurance and accreditation standards. We have a dedicated website '[www.britishpigs.org](http://www.britishpigs.org)'

We provide dedicated support to members by telephone, electronic mail and by correspondence.

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TRUSTEES' ANNUAL REPORT (INCLUDING DIRECTORS' REPORT)  
(Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

**Financial Review**

The Statement of Financial Activities and balance sheet for the year are set out on pages 12 and 13 of the financial statements. A summary of the financial results and the work of the charity are set out below.

The trustees consider that the performance of the charity this year has been severely affected by several factors such as the ongoing geo-political turmoil resulting from the war in Ukraine, and uncertainties in other countries affected by financial constraints.

We still operate in extremely challenging and uncertain financial and operational environment caused by the unpredictable global economy.

The statement of financial activities shows net deficit for the year of £77,353 (2022: Deficit of £81,793).

Gains arising from sale and unrealised losses on revaluation of our Quoted Stock Market Investments for the year resulted in a net gain of £5,103 (2022: Loss of £61,159).

Our reserves after revaluation of assets and investment gains stand at £392,648 (2022: £464,898).

The trustees have reviewed fund-raising strategies and return on fund-raising costs. We have managed to control costs to achieve stable delivery of services in an extremely difficult year. Fund-raising costs were financed by sponsorships, grants and contributions from members participating in the activities.

Global stock markets were stable during 2023. Value of our quoted investments stabilised and was trading at approximately 9.5% above cost. Our return on investments has continued to perform well in the year 2023. Current investments consist of SUTL Cazenove Charity Class S Multi-Asset Fund income units. During the year, quoted investments costing £111,985 was sold for £120,750. Cost of our holding at the year-end was £343,037 (2022: £455,023).

The trustees expect a yield of around 4.0% on our investments. We achieved a yield of over 4.0% on the market value of our investments.

The activities of the charity have remained the same as in previous year.

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FOR THE YEAR ENDED 31st DECEMBER 2023

Principal Fund-raising Sources

Our charity receives principal funding from membership subscriptions, donations and pedigree recording services together with sponsorships, grants and voluntary donations.

The Council has authorised to continue to promote and expand the pedigree pig industry both in the United Kingdom and overseas through representative bodies.

Investment policy and returns

The executive committee has considered the most appropriate policy for investing funds and has found that specialised unit trusts, designed for the charity sector to control financial and other risks, meet their requirements to generate both income and capital growth. Our portfolio of investments should deliver stability and income return of approximately 4.00%.

Reserves policy and funds available

The Charity funds its various activities partly from membership subscriptions and fees, investment income and other fund-raising activities including grants and sponsorships. The current levels of services we provide are normally expected to result in a deficit of income over expenditure in the short term, which is financed by reserves of the Charity.

The trustees have reviewed the level of reserves required to effectively continue the breed society functions in pedigree pig recordings and conservation and provide other related services to its members.

Our free reserves as described below were £372,774.

|                                      |                 |
|--------------------------------------|-----------------|
| Total reserves                       | 392,648         |
| <u>Less: Restricted income funds</u> | <u>(4,701)</u>  |
| : Non-liquid assets                  | <u>(15,173)</u> |
| <u>Funds available</u>               | <u>£372,774</u> |

The review concluded that to allow the charity to be managed efficiently and to provide uninterrupted services, the current level of reserves should be maintained.

The present level of funding is adequate to support the continuation of the charity's functions for the short to medium term, and the trustees consider the financial position of the charity to be satisfactory.

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We also hold as part of our unrestricted reserves, £4,701 for designated income funds:

- Irish Members' Committee: £313
- Large White Breeders' Committee, which is available to facilitate continuation of White breed conservation activities: £1,207
- Geoffrey Cloke Memorial Fund to honour Mr. G. E. Cloke. This was set up during 2004 from donations to serve the interests of the Association and its members: £3,181

**Plans for future periods**

The trustees expect to continue its breed society functions in pedigree pig recordings and conservation; organise events, participate at shows and exhibitions in the United Kingdom to promote animal welfare and the recording and conservation of pedigree pigs.

The chief executive monitors progress to ensure that the charity delivers the services specified and that key performance targets are met to include individual supervision of the staff team.

**Structure, Governance and Management**

Governing document

The charity is a charitable company limited by guarantee. It is governed by its Memorandum and Articles of Association.

Structure and management

The charity is organised so that the trustees meet regularly to manage its affairs.

All directors of the company are also trustees of the Charity, and there are no other trustees. All of the trustees named on page 2 served partly or throughout the year. The Board has the power to appoint additional trustees, as it considers fit to do so.

All trustees serve for a three-year period and may be re-elected.

Trustee Induction and Training

Most trustees are already familiar with our charity's work through their activities as pedigree pig farmers.

Our charity regularly organises training workshops.

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FOR THE YEAR ENDED 31st DECEMBER 2023

Risk Management

The executive committee has conducted its own review of the major risks to which the charity is exposed and systems have been established to mitigate those risks. Significant external risks to funding have led to the development of regular appraisals of plans, which would allow for the diversification of resources.

Internal risks are minimised by implementation of procedures for authorisation of transactions and projects. All projects and procedures are regularly reviewed for compliance with our objectives.

The trustees continue to monitor pandemic risk and have implemented measures to overcome short-term problems that may arise due to the continued presence of viruses that may lead to a pandemic.

Organisational Structure

There is one chief executive who manages the day-to-day administration of the charity, and organises fundraising initiatives. The remaining staff members are deployed to assist with fundraising and administration. The trustees volunteer their services to the company.

Our charity has several committees that meet regularly to review the achievement of our aims. There are separate committees that manage shows and events, pedigree pork schemes, regional issues, conservation, herd inspections, and breed enhancement and protection projects. The Council of trustees and the executive committee meet at least once a year to review progress and assess achievement of our aims.

**Trustees' responsibilities**

Company and Charity law requires the trustees to prepare financial statements for each financial year, which give a true and fair view of the financial activities of the charity and of its financial position at the end of that year. In preparing those financial statements, the trustees have:

- (a) selected suitable accounting policies and then applied them consistently;
- (b) made judgements and estimates that are reasonable and prudent;
- (c) stated whether applicable accounting standards have been followed, subject to any material departure disclosed and explained in the financial statements; and
- (d) prepared the financial statements on the going concern basis.

Statement of trustees' responsibilities

The trustees (who are also the directors of the company) are responsible for preparing a trustees' annual report, keeping proper accounting records which disclose with reasonable accuracy at any time, the financial position of the charity and enable them to ensure that the financial statements

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TRUSTEES' ANNUAL REPORT (INCLUDING DIRECTORS' REPORT)  
(Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

comply with the Companies Act 2006 and Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102). 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.

**Reporting accountants and independent examiner**

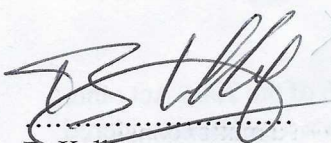
We, the directors of the company who held office at the date of approval of these Financial Statements as set out above each confirm, so far as we are aware, that:

- there is no information of which the company's independent examiner is unaware, and
- we have taken all the steps that we ought to have taken as directors in order to make ourselves aware of any relevant information and to establish that the company's independent examiner is aware of that information.

**Approval**

The board of directors and trustees approved this report on the 23rd September 2024 and signed on its behalf.

On behalf of the board



B. Kelly  
Chair Person and Trustee

23rd September 2024

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

REPORT OF THE INDEPENDENT EXAMINER

**Independent Examiner's Report to the Trustees of The British Pig Association**

I report to the charity trustees on my examination of the accounts of the Company for the year ended 31 December 2023 which are set out on pages 12 to 26.

**Responsibilities and basis of report**

As the charity's trustees of the Company and also its directors for the purposes of company law you are responsible for the preparation of the accounts in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the accounts of the company are not required to be audited under Part 16 of the 2006 Act and are eligible for independent examination, I report in respect of my examination of your charity's accounts as carried out under section 145 of the Charities Act 2011 ('the 2011 Act'). In carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

**Independent examiner's statement**

Your examiner must be a member of a body listed in section 145 of the 2011 Act if the Company's gross income exceeded £250,000. I confirm that I am qualified to undertake the examination because I am a member of the Institute of Chartered Accountants in England and Wales (ICAEW), which is one of the listed bodies.

I have completed my examination. I confirm that no matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not been kept in respect of the Company as required by section 386 of the 2006 Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the accounts give a 'true and fair view' which is not a matter considered as part of an independent examination; or
4. the accounts have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102).

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

REPORT OF THE INDEPENDENT EXAMINER

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

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Agutter Khanderia

Chartered accountants

The Institute of Chartered Accountants in England and Wales (ICAEW)

27 Imperial Drive

Harrow

HA2 7DG

UK

23rd September 2024

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**STATEMENT OF FINANCIAL ACTIVITIES**  
(INCLUDING INCOME AND EXPENDITURE ACCOUNT)

**FOR THE YEAR ENDED 31st DECEMBER 2023**

|   | <u>Note</u> | <u>Unrestricted</u><br><u>Funds</u><br>£ | <u>Restricted</u><br><u>income funds</u><br>£ | <u>Total funds</u><br><u>2023</u><br>£ | <u>Total funds</u><br><u>2022</u><br>£ |
|---|-------------|--|---|--|--|
| <b>Incoming resources</b>                               |             |  |   |  |  |
| Income and endowments from:                             |             |  |   |  |  |
| Donations and legacies                                  | (2)         | 41,249                                   | -   | 41,249                                 | 39,858                                 |
| Charitable activities                                   | (3)         | 95,655                                   | -   | 95,655                                 | 196,747                                |
| Other income  | (4)         | 5,000                                    | -   | 5,000                                  | 5,000                                  |
| Investments   | (5)         | 22,137                                   | -   | 22,137                                 | 23,248                                 |
| <b>Total income and endowments</b>                      |             | <u>164,041</u>                           | <u>-</u>                                      | <u>164,041</u>                         | <u>264,853</u>                         |
| <b>Resources expended</b>                               |             |  |   |  |  |
| Expenditure on:   |             |  |   |  |  |
| Raising funds   | (6)         | 32,766                                   | -   | 32,766                                 | 31,912                                 |
| Charitable activities                                   | (7)         | 66,907                                   | -   | 66,907                                 | 174,066                                |
| Governance and support                                  | (8)         | 141,721                                  | -   | 141,721                                | 140,668                                |
| <b>Total expenditure</b>                                |             | <u>241,394</u>                           | <u>-</u>                                      | <u>241,394</u>                         | <u>346,646</u>                         |
| <u>Net income/(expenditure) before investment gains</u> | (9)         | (77,353)                                 | -   | (77,353)                               | (81,793)                               |
| Other recognised gains/(losses):                        |             |  |   |  |  |
| Gains on sale of charity's Investments                  | (10)        | 8,765                                    | -   | 8,765                                  | 4,368                                  |
| Gains/(losses) on revaluation of charity's investments  | (10)        | (3,662)                                  | -   | (3,662)                                | (65,527)                               |
| <b>Net movement in funds</b>                            |             | <u>(72,250)</u>                          | <u>-</u>                                      | <u>(72,250)</u>                        | <u>(142,952)</u>                       |
| <b>Reconciliation of funds:</b>                         |             |  |   |  |  |
| Total funds at 1st January 2023                         |             | 460,197                                  | 4,701   | 464,898                                | 607,850                                |
| Total funds at 31st December 2023                       |             | <u>387,947</u>                           | <u>4,701</u>                                  | <u>392,648</u>                         | <u>464,898</u>                         |

All income and expenditure derive from continuing activities.

The notes on pages 15 to 26 form part of these financial statements.

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**BALANCE SHEET**

**AS AT 31st DECEMBER 2023**

|   | <u>Note</u> | <u>Unrestricted<br/>Funds</u> | <u>Restricted<br/>income funds</u> | <u>Total<br/>funds<br/>2023</u> | <u>Prior year<br/>funds<br/>2022</u> |
|---|-------------|-------------------------------|------------------------------------|---------------------------------|--------------------------------------|
|   |             | £                             | £                                  | £                               | £                                    |
| <b>Fixed assets</b>                     |             |                               |                                    |                                 |                                      |
| Intangible assets                       | (13)        | 366                           | -                                  | 366                             | 2,917                                |
| Tangible assets                         | (14)        | 1,056                         | -                                  | 1,056                           | 1,156                                |
| Investments                             | (15)        | 375,640                       | -                                  | 375,640                         | 491,288                              |
| <b>Total fixed assets</b>               |             | <u>377,062</u>                | <u>-</u>                           | <u>377,062</u>                  | <u>495,361</u>                       |
| <b>Current assets</b>                   |             |                               |                                    |                                 |                                      |
| Debtors                                 | (16)        | 21,980                        | -                                  | 21,980                          | 68,702                               |
| Cash at bank and in hand                |             | 80,459                        | 4,701                              | 85,160                          | 6,594                                |
| <b>Total current assets</b>             |             | <u>102,439</u>                | <u>4,701</u>                       | <u>107,140</u>                  | <u>75,296</u>                        |
| <b>Creditors:</b>                       |             |                               |                                    |                                 |                                      |
| Amounts falling due within<br>one year  | (17)        | 91,554                        | -                                  | 91,554                          | 105,759                              |
| <b>Net current assets/(liabilities)</b> |             | <u>10,885</u>                 | <u>4,701</u>                       | <u>15,586</u>                   | <u>(30,463)</u>                      |
| <b>Total assets</b>                     |             | <u>387,947</u>                | <u>4,701</u>                       | <u>392,648</u>                  | <u>464,898</u>                       |
| <b>Charity Funds</b>                    |             |                               |                                    |                                 |                                      |
| Restricted income funds                 | (18)        | -                             | 4,701                              | 4,701                           | 4,701                                |
| Unrestricted funds                      | (19)        | 387,947                       | -                                  | 387,947                         | 460,197                              |
| <b>Total charity funds</b>              |             | <u>387,947</u>                | <u>4,701</u>                       | <u>392,648</u>                  | <u>464,898</u>                       |

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

BALANCE SHEET

AS AT 31st DECEMBER 2023

The trustees have prepared these accounts in accordance with the provisions of the Companies Act 2006 and of the Charities Act 2011.

The charitable Company is entitled to exemption from audit under section 477 of the Companies Act 2006 for the year ended 31st December 2023.

The members have not deposited notice pursuant to section 476 of the Companies Act 2006 requiring an audit of these financial statements.

The trustees acknowledge their responsibilities for:


- (a) ensuring that the charitable Company keeps accounting records that comply with sections 386 and 387 of the Companies Act 2006; and
- (b) preparing financial statements which give a true and fair view of the state of affairs of the charitable Company as at the end of each financial year and of its surplus or deficit for each financial year in accordance with the requirements of sections 394 and 395 of the Companies Act 2006 relating to financial statements so far as applicable to the charitable Company.

The financial statements were approved and authorised for issue by the Board on 23rd September 2024.

Signed on behalf of the board of trustees:

  
.....

B. Kelly (Director and trustee)

  
.....

Mrs C Coe (Director and trustee)

The notes on pages 15 to 26 form part of these financial statements.

Company registration number: 00022088

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31st DECEMBER 2023

**1. Summary of significant accounting policies**

The significant accounting policies applied for the preparation of these financial statements are set out below. These policies have been consistently applied to all years presented unless otherwise stated.

**1.1 General information and basis of preparation**

The British Pig association is a company limited by guarantee in England & Wales. In the event of the charity being wound up, the liability of the guarantee is limited to £1 per member of the charity. The registered address of the charity is given on page 1 of these financial statements.

The nature of the charity's operations and principal activities are that of the advancement of pedigree breeding, conservation and pedigree pig recordings.

The British Pig Association meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standards applicable in the UK and Republic of Ireland issued in October 2019, the Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland (FRS 102), the Charities Act 2011, the Companies Act 2006 and UK Generally Accepted Accounting Practice.

The financial statements are prepared on a going concern basis under the historical cost convention with items recognised at cost or transaction value unless otherwise stated in the relevant notes to these accounts. The financial statements are presented in sterling which is the functional currency of the charity.

**1.2 Funds**

Unrestricted funds are available for use at the discretion of the trustees in furtherance of the general objectives of the charity and which have been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the charity for particular purposes. The cost of raising and administering such funds are charged against the specific funds. The aim and use of each restricted fund is set out in the notes to the financial statements.

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

NOTES TO THE FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

### **1.3 Income recognition**

All incoming resources are included in the Statement of Financial Activities (SoFA) when the charity is legally entitled to the income after the performance conditions have been met, the amount can be measured reliably and it is probable that the income will be received.

For donations to be recognised the charity will have been notified of the amounts and the settlement date in writing.

Donated facilities are recognised in income at their fair value when their economic benefit is probable, it can be measured and the charity has control over them. Fair value is determined on the basis of the value of the gift to the charity. No amount is included in the financial statements for volunteer time in line with the SORP, FRS102 and Companies Act 2006.

Fixed asset gifts in kind are recognised when receivable and are included at their fair value. They are not deferred over the life of the asset.

For legacies, entitlement is the earlier of the charity being notified of an impending distribution or the legacy being received. At this point income is recognised.

Income from membership activities and services and fundraising events to raise funds for the charity, is recognised when goods or services are provided.

The charity receives government grants for organising trade shows for promotion of pedigree pig farming and livestock genetics work. Income from government and other grants are recognised at their fair value when the charity has entitlement after any performance conditions have been met, it is probable that the income will be received and the income can be measured reliably. If entitlement is not met then these amounts are deferred.

Investment income is earned through holding assets for investment purposes such as shares. It includes dividends and interest. Investment management costs incurred are recognised as governance costs. Dividend and interest income is recognised as the charity's right to receive payment is established.

Other income is recognised as the charity's right to receive payment is established.

### **1.4 Expenditure recognition**

All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the category. Expenditure is recognised where there is a legal or constructive obligation to make payments to third parties, it is probable that the settlement will be required and the amount of the obligation can be measured reliably. It is categorised under the following headings:

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

NOTES TO THE FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

**1.4 Expenditure recognition - Continued**

- Costs of raising funds
- Expenditure on charitable activities
- Other expenditure including irrecoverable VAT, governance and support costs

**1.5 Support costs allocation**

Support costs are those that assist the work of the charity but do not directly represent charitable activities and include office costs, governance costs, administrative payroll costs. They are incurred directly in support of expenditure on the objects of the charity. Support payroll costs are allocated between administrative, raising funds and charitable activities on a basis consistent with use of the resources.

The analysis of these costs is included in note 8.

**1.6 Intangible assets**

Intangible assets are amortised on a straight-line basis over their useful lives at the following rates:

- Computer software and website – 15% per annum straight line
- Computer software and website cost since 01/01/2020 – 33.33% per annum straight line

Provision is made for any impairment.

**1.7 Tangible fixed assets**

Tangible fixed assets are stated at cost or valuation. Cost includes costs directly attributable to making the asset capable of operating as intended.

Depreciation is provided on all tangible fixed assets, at rates calculated to write off the cost, less estimated residual value, of each asset over its expected useful life as follows:

Furniture, fittings and equipment - 25% reducing balance method

**1.8 Heritage conservation costs**

Heritage expenditure comprise frozen semen bank of rare pedigree pigs that is donated by pedigree pig farmers and purchased by the charitable company. Expenditure includes storage costs of the semen bank. The company receives grant to fund part of the cost for conservation.

Expenditure for conservation in the current year is charged as expenditure on charitable activities.

The company also supports its pedigree farmers by providing support grants for conservation.

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

NOTES TO THE FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

**1.9 Investments**

Investments are recognised initially at fair value which is normally the transaction price excluding transaction costs. Subsequently, they are measured at fair value with changes recognised in 'net gains/(losses) on investments' in SoFA if shares are publicly traded or their fair value can otherwise be measured reliably.

**1.10 Impairment**

Assets not measured at fair value are reviewed for any indication that the asset may be impaired at each balance sheet date. If such indication exists, the recoverable amount of the asset, or the asset's cash generating unit, is estimated and compared to the carrying amount. Where the carrying amount exceeds its recoverable amount, an impairment loss is recognised in profit and loss unless the asset is carried at a re-valued amount where the impairment loss is a revaluation decrease.

**1.11 Provisions**

Provisions are recognised when the charity has an obligation at the balance sheet date as a result of a past event, it is probable that an outflow of economic benefit will be required in settlement and the amount can be reliably estimated.

**1.12 Leases**

Assets acquired under finance leases are capitalised and depreciated over the shorter of the lease term and the expected useful life of the asset. Lease payments are apportioned between the finance charges and the reduction of the outstanding lease liability using the effective interest method. The related obligations, net of future finance charges, are included in creditors.

Rentals payable under operating leases are charged to the SoFA on a straight-line basis over the period of the lease.

**1.13 Foreign currency**

Foreign currency transactions are initially recognised by applying to the foreign currency amount at the spot exchange rate between the functional currency and the foreign currency at the date of the transaction.

Monetary assets and liabilities denominated in a foreign currency at the balance sheet are translated using the closing rate.

**1.14 Employee benefits**

When employees have rendered service to the charity, short-term employee benefits to which the employees are entitled are recognised at the undiscounted amount to be paid in exchange for that service.

THE BRITISH PIG ASSOCIATION  
(A company limited by Guarantee)

NOTES TO THE FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

**1.14 Employee benefits - Continued**

The charity operates workplace money purchased pension contribution plan for all eligible employees. Contributions payable by the charity are expensed as they become payable.

**1.15 Tax**

The charity is an exempt charity within the meaning of schedule 3 of the Charities Act 2011 and is considered to pass the tests set out in Paragraph 1 Schedule 6 Finance Act 2010 and therefore meets the definition of a charitable company for UK corporation tax purposes.

**1.16 Government and other grants**

Government and other grants are recognised using the performance model.

Under the performance model, where the grant does not impose specified future performance-related conditions on the recipient, it is recognised in income when the grant proceeds are received or receivable. When the grant does impose specified future performance-related conditions on the recipient, it is recognised in income only when the performance-related conditions have been met. Where grants received are prior to satisfying the revenue recognition criteria, they are recognised as a liability.

**1.17 Going concern**

The financial statements have been prepared on a going concern basis as the trustees believe that no material uncertainties have been identified that may cast significant doubt about the ability of the charitable company to continue as a going concern. The trustees have considered the level of funds held and the expected level of income and expenditure for 12 months from authorising these financial statements. The budgeted income and expenditure is sufficient with the level of reserves of the charity to be able to continue as a going concern.

**1.18 Judgements and key sources of estimation uncertainty**

No changes to accounting estimates have occurred in the reporting period.

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**FOR THE YEAR ENDED 31st DECEMBER 2023**

**2. Income from donations and legacies**

|                     | <u>Unrestricted<br/>Funds</u> | <u>Restricted<br/>income funds</u> | <u>Total<br/>funds<br/>2023</u> | <u>Prior year<br/>funds<br/>2022</u> |
|---------------------|-------------------------------|------------------------------------|---------------------------------|--------------------------------------|
|                     | £                             | £                                  | £                               | £                                    |
| <b>Donations:</b>   |                               |                                    |                                 |                                      |
| Donations and gifts | 1,749                         | -                                  | 1,749                           | 3,108                                |
| Gift aid            | 39,500                        | -                                  | 39,500                          | 36,750                               |
| <b>Total</b>        | <u>41,249</u>                 | <u>-</u>                           | <u>41,249</u>                   | <u>39,858</u>                        |

**3. Income from charitable activities**

|   |               |          |               |                |
|---|---------------|----------|---------------|----------------|
| Membership subscriptions                                | 23,922        | -        | 23,922        | 32,869         |
| Fees from breed society                                 | 17,525        | -        | 17,525        | 20,158         |
| Grants for trade shows and genetics work                | 10,505        | -        | 10,505        | 59,300         |
| Grants for rare breeds conservation                     | 6,000         | -        | 6,000         | 7,200          |
| Other income from trade shows and supporting activities | 37,703        | -        | 37,703        | 77,220         |
| <b>Total</b>  | <u>95,655</u> | <u>-</u> | <u>95,655</u> | <u>196,747</u> |

**Other information:**

There were no unfulfilled conditions and other contingencies attaching to sponsorships and grants for activities.

|  | <u>Unrestricted<br/>Funds</u> | <u>Restricted<br/>income funds</u> | <u>Total<br/>funds<br/>2023</u> | <u>Prior year<br/>funds<br/>2022</u> |
|--|-------------------------------|------------------------------------|---------------------------------|--------------------------------------|
|  | £                             | £                                  | £                               | £                                    |
| <b>4. Income from other activities</b> |                               |                                    |                                 |                                      |
| H M Revenue & Customs:                 |                               |                                    |                                 |                                      |
| Employment allowance                   | 5,000                         | -                                  | 5,000                           | 5,000                                |
| <b>Total</b>                           | <u>5,000</u>                  | <u>-</u>                           | <u>5,000</u>                    | <u>5,000</u>                         |

**5. Income from investments**

|                 |               |          |               |               |
|-----------------|---------------|----------|---------------|---------------|
| Interest income | 1,801         | -        | 1,801         | 54            |
| Dividend income | 20,336        | -        | 20,336        | 23,194        |
| <b>Total</b>    | <u>22,137</u> | <u>-</u> | <u>22,137</u> | <u>23,248</u> |

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**FOR THE YEAR ENDED 31st DECEMBER 2023**

|  | Unrestricted<br><u>Funds</u> | Restricted<br><u>income funds</u> | Total<br><u>funds</u><br><u>2023</u> | Prior year<br><u>funds</u><br><u>2022</u> |
|--|------------------------------|-----------------------------------|--------------------------------------|---|
|  | £                            | £                                 | £                                    | £   |
| <b>6. Analysis of expenditure on raising funds</b>         |                              |                                   |                                      |   |
| Staff support costs apportioned:                           |                              |                                   |                                      |   |
| Seeking donations  | 7,800                        | -                                 | 7,800                                | 7,500                                     |
| Advertising and marketing                                  | 1,259                        | -                                 | 1,259                                | 480                                       |
| Publication of Practical Pig News                          | 18,700                       | -                                 | 18,700                               | 18,700                                    |
| Subscriptions and donations                                | 3,528                        | -                                 | 3,528                                | 3,882                                     |
| Investment management costs                                | 1,479                        | -                                 | 1,479                                | 1,350                                     |
| Total  | <u>32,766</u>                | <u>-</u>                          | <u>32,766</u>                        | <u>31,912</u>                             |
| <b>7. Analysis of expenditure on charitable activities</b> |                              |                                   |                                      |   |
| Staff support costs apportioned:                           |                              |                                   |                                      |   |
| -Operating membership schemes                              | 35,386                       | -                                 | 35,386                               | 34,824                                    |
| - Management of UK shows and events                        | 2,400                        | -                                 | 2,400                                | 1,800                                     |
| - Management of overseas exhibitions                       | <u>3,800</u>                 | -                                 | <u>3,800</u>                         | <u>24,139</u>                             |
| Total staff costs  | 41,586                       | -                                 | 41,586                               | 60,763                                    |
| Staff agencies – Temporary staff                           | 5,557                        |                                   | 5,557                                | -   |
| UK shows and events costs                                  | 5,465                        | -                                 | 5,465                                | 5,216                                     |
| Overseas exhibitions and events costs                      | -                            | -                                 | -                                    | 77,753                                    |
| Travel costs to promote overseas events                    | -                            | -                                 | -                                    | 7,234                                     |
| Conservation of traditional breeds                         | 12,816                       | -                                 | 12,816                               | 22,533                                    |
| Conservation grants  | 1,308                        | -                                 | 1,308                                | 217                                       |
| BLUP benchmarking royalties                                | 175                          | -                                 | 175                                  | 350                                       |
| Total  | <u>66,907</u>                | <u>-</u>                          | <u>66,907</u>                        | <u>174,066</u>                            |
| <b>8. Analysis of Governance and support costs</b>         |                              |                                   |                                      |   |
| Establishment  | 15,295                       | -                                 | 15,295                               | 17,683                                    |
| Staff costs apportioned: - Administrative                  | 50,751                       | -                                 | 50,751                               | 35,200                                    |
| Other operating costs                                      | 71,766                       | -                                 | 71,766                               | 81,711                                    |
| Amortisation of intangible fixed assets                    | 2,551                        | -                                 | 2,551                                | 5,690                                     |
| Depreciation of tangible fixed assets                      | 1,358                        | -                                 | 1,358                                | 384                                       |
| Total  | <u>141,721</u>               | <u>-</u>                          | <u>141,721</u>                       | <u>140,668</u>                            |

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**FOR THE YEAR ENDED 31st DECEMBER 2023**

|   | <u>2023</u>  | <u>2022</u>     |
|---|--------------|-----------------|
|   | £            | £               |
| <b>9. Net income before investment gains/(losses) and after charging:</b>     |              |                 |
| Independent examiner's remuneration and other services                        | 8,374        | 7,746           |
| Operating lease rentals   | 27,427       | 27,975          |
| Amortisation of owned intangible fixed assets                                 | 2,551        | 5,690           |
| Depreciation of owned tangible fixed assets                                   | 1,358        | 384             |
|   | =====        | =====           |
| <b>10. Gains and losses on sale and revaluation of charity's investments:</b> |              |                 |
| Realised gains on sale  | 8,765        | 4,368           |
| Unrealised gains/(losses) on revaluation                                      | (3,662)      | (65,527)        |
|   | =====        | =====           |
| <u>Net gain/(loss)</u>  | <u>5,103</u> | <u>(61,159)</u> |
|   | =====        | =====           |

**11. Trustees' remuneration and expenses**

The trustees neither received nor waived any remuneration during the year (2022: Nil)

There were 3 (2022:3) trustees who had expenses reimbursed. Total expenses reimbursed for attending meetings and other meeting costs during the year was £2,067 (2022: £866).

|   |                |                |
|---|----------------|----------------|
| <b>12. Staff costs and employee benefits</b>                      | <u>2023</u>    | <u>2022</u>    |
|   | £              | £              |
| Salaries and wages  | 85,118         | 92,060         |
| Social security costs   | 9,023          | 9,390          |
| Statutory pension costs   | 1,945          | 2,013          |
| Redundancy costs  | 4,051          | -              |
|   | =====          | =====          |
| Total   | <u>100,137</u> | <u>103,463</u> |
|   | =====          | =====          |
| Staff costs apportionment based on activities during the year:    |                |                |
| - Seeking donations   | 7,800          | 7,500          |
| - Operating membership schemes                                    | 35,386         | 34,824         |
| - Management of UK shows and events                               | 2,400          | 1,800          |
| - Management of overseas exhibitions and events and genetics work | 3,800          | 24,139         |
| - Governance costs (including redundancy)                         | 50,751         | 35,200         |
|   | =====          | =====          |
|   | <u>100,137</u> | <u>103,463</u> |
|   | =====          | =====          |

THE BRITISH PIG ASSOCIATION  
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NOTES TO THE FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

**12. Staff costs and employee benefits - Continued**

There were no employees who received total employee benefits of more than £60,000. The average number of persons employed by the charity during the year was 3 (2022: 4).

**13. Intangible fixed assets**

|                       | <u>Computer<br/>software</u><br>£ | <u>Total</u><br>£ |
|-----------------------|-----------------------------------|-------------------|
| <u>Cost</u>           |                                   |                   |
| At 01.01.2023         |                                   |                   |
| and                   |                                   |                   |
| At 31.12.2023         | <u>79,177</u>                     | <u>79,177</u>     |
| <u>Amortisation</u>   |                                   |                   |
| At 01.01.2023         | 76,260                            | 76,260            |
| Charge for the year   | <u>2,551</u>                      | <u>2,551</u>      |
| At 31.12.2023         | <u>78,811</u>                     | <u>78,811</u>     |
| <u>Net Book Value</u> |                                   |                   |
| At 31.12.2023         | 366                               | 366               |
|                       | =====                             | =====             |
| At 31.12.2022         | 2,917                             | 2,917             |
|                       | =====                             | =====             |

**14. Tangible fixed assets**

|                       | <u>Equipment,<br/>Fixtures &amp; fittings</u><br>£ | <u>Total</u><br>£ |
|-----------------------|--|-------------------|
| <u>Cost</u>           |  |                   |
| At 01.01.2023         | 7,008  | 7,008             |
| Disposals             | (5,738)  | (5,738)           |
| Additions             | <u>1,258</u>                                       | <u>1,258</u>      |
| At 31.12.2023         | <u>2,528</u>                                       | <u>2,528</u>      |
| <u>Depreciation</u>   |  |                   |
| At 01.01.2023         | 5,852  | 5,852             |
| Disposals             | (5,738)  | (5,738)           |
| Charge for the year   | <u>1,358</u>                                       | <u>1,358</u>      |
| At 31.12.2023         | <u>1,472</u>                                       | <u>1,472</u>      |
| <u>Net Book Value</u> |  |                   |
| At 31.12.2023         | 1,056  | 1,056             |
|                       | =====  | =====             |
| At 31.12.2022         | 1,156  | 1,156             |
|                       | =====  | =====             |

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**FOR THE YEAR ENDED 31st DECEMBER 2023**

|   | <u>2023</u><br>£ | <u>2022</u><br>£ |
|---|------------------|------------------|
| <b>15. Fixed asset investment</b>   |                  |                  |
| <b>Listed investments: U.K.</b>   |                  |                  |
| Carrying fair value at beginning of year  | 491,288          | 597,447          |
| Additions/(disposals)   | (111,985)        | (40,631)         |
| Net gain/(loss) on revaluation  | (3,663)          | (65,528)         |
| Carrying fair value at end of year  | 375,640          | 491,288          |
|   | =====            | =====            |
| The fair value of listed investments is determined by reference to the quoted price for the shares on the London Stock Exchange. Historic cost of listed investments on 31st December 2023 was £343,037 (2022: £455,023). |                  |                  |
|   | <u>2023</u><br>£ | <u>2022</u><br>£ |
| <b>16. Debtors</b>  |                  |                  |
| Amounts falling due within one year:  |                  |                  |
| Trade debtors   | 13,423           | 53,950           |
| Prepayments and other debtors   | 7,751            | 14,752           |
| Taxation – VAT  | 806              | -                |
|   | 21,980           | 68,702           |
|   | =====            | =====            |
| <b>17. Creditors</b>  |                  |                  |
| Amounts falling due within one year:  |                  |                  |
| Trade creditors   | 28,358           | 78,471           |
| Amounts due to a related company (Note 21)  | 49,213           | -                |
| Accruals  | 11,172           | 23,095           |
| Taxation and social security  | 2,811            | 4,193            |
|   | 91,554           | 105,759          |
|   | =====            | =====            |
| <b>18. Charity funds</b>  |                  |                  |
| <b>Restricted income funds available for specific projects:</b>   |                  |                  |
| Geoffrey Cloke Memorial Fund  | 3,181            | 3,181            |
| Large White Breeders' Memorial Fund   | 1,207            | 1,207            |
| Irish Members' Committee Fund   | 313              | 313              |
| <b>At end of the year</b>   | 4,701            | 4,701            |
|   | =====            | =====            |

The committee that has control of the fund governs the aim and use of each restricted fund.

**THE BRITISH PIG ASSOCIATION**  
(A company limited by Guarantee)

**NOTES TO THE FINANCIAL STATEMENTS (Continued)**

**FOR THE YEAR ENDED 31st DECEMBER 2023**

|                                    |                |                |
|------------------------------------|----------------|----------------|
| <b>19. Charity funds</b>           | <u>2023</u>    | <u>2022</u>    |
| <b>Unrestricted income funds:</b>  | £              | £              |
| Balance brought forward            | 460,197        | 603,158        |
| Net surplus/(deficit) for the year | (72,250)       | (142,961)      |
| <b>At end of the year</b>          | <u>387,947</u> | <u>460,197</u> |

**20. Financial commitments**

Operating leases:

Contractual commitments for the acquisition of intangible and tangible fixed assets contracted for but not provided in the financial statements amounted to £13,180 (2022: £36,984).

Contractual commitments are analysed by year of payment, as follows:

Due within one year £5,272 (2022: £18,623)

Due in the second to fifth year £7,908 (2022: £18,361)

**21. Related party transactions with trustees and members**

Trustees' remuneration and meeting expenses:

The trustees are entitled to claim expenses incurred wholly and exclusively in attending meetings organised by the charity. No remuneration was paid to trustees in the year.

|                                       |             |             |
|---------------------------------------|-------------|-------------|
|                                       | <u>2023</u> | <u>2022</u> |
|                                       | £           | £           |
| Travel, subsistence and accommodation | 2,067       | 866         |

Related party transactions with trustees

The charitable company entered into transactions with one trustee in the normal course of business activities during the year. Business services and products were acquired from this trustee on normal commercial terms resulting in no financial or privileged terms at a cost of £7,776 (2022: £18,494).

Services are provided to all trustees, members and non-members on same commercial terms resulting in no financial or privileged terms. Sources of income include annual amount for subscriptions, registration fees for pedigree birth notifications, herd book entries and registered pedigree pig transfers. Total income from trustees was £500 (2022: £500).

THE BRITISH PIG ASSOCIATION  
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NOTES TO THE FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED 31st DECEMBER 2023

**21. Related party transactions with trustees and members - Continued**

Related party transactions- Other

21.1 The chief executive, who is not a trustee, acts as a director of a connected company, Export Certification Limited to represent the interests of the charity's members. The chief executive has no financial interest in this company and does not personally receive any remuneration or benefits from this source.

For the year ended 31 December 2023, the charity received income of £27,814 (2022: £28,935) for services provided to the related company. Export certification Limited owed £Nil (2022: £3,979) to the company at the year-end.

21.2 The Chief Executive and two other trustees act as directors of a related company, UK TAG Limited (Limited by Guarantee) to represent members' interests overseas and undertake commitments to UK Government Agencies. All undertakings and representations as from 1st July 2023 have resulted in the Charity acting as an agent during part of the year 2023. Agency transactions undertaken during the period ending 31st December 2023, were:

|   | <u>2023</u>   | <u>2022</u> |
|---|---------------|-------------|
|   | £             | £           |
| Receipts on behalf of UK TAG Limited                        | 106,900       | -           |
| Payments on behalf of UK TAG Limited                        | (57,687)      | -           |
| <b>Cash held by the Charity on behalf of UK TAG Limited</b> | <u>49,213</u> | <u>-</u>    |
|   | =====         | =====       |

**22. Non-adjusting events after the end of the period**

Review of our fixed asset investments since the end of the period

Our investment manager has valued our fixed asset investments more recently on 30th June 2024 at £395,002.

**A review of the Association’s Genebanking Project in partnership with Deerpark Pedigree Pig and Rare Breeds Survival Trust**

**Introduction**

The United Kingdom has one of the most impressive genebanks in the world for plant genetic resources which is supported by government funding but there is no equivalent provision for livestock genetic resources. The UK lists 95 native breeds of livestock including 11 pig breeds all of which are at risk of extinction. Genebanking for these breeds has been left entirely in the hands of breeders, breeding companies and NGO’s. This is in spite of the UK government signing up to various treaties at big international conferences on biodiversity and sustainability and claiming to take a leading role in these areas.

The UN Sustainability Goal 2.5.1 (b) measures the number of animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities.




All signatories of the Convention on Biodiversity are required to meet Target 4 of the Kunming-Montreal Global Biodiversity Framework:

*maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation*

A project to create a genebank was established by one such NGO, the Rare Breeds Survival Trust in the 1980s. With sponsorship from an international veterinary pharmaceutical company boars were taken to a commercial AI centre, Masterbreeders AI Ltd for semen collection and freezing. Semen was frozen in pellets which was the standard practice at that time and stored in liquid nitrogen.

| Table 1             | Semen freezing data 1987 - 1989 |                 |                                    |        |              |
|---------------------|---------------------------------|-----------------|------------------------------------|--------|--------------|
|                     | Number Boars                    | Number Sessions | Density (10 <sup>9</sup> cells/ml) | Volume | Number Tubes |
| Berkshire           | 4                               | 7               | 1.098                              | 49     | 10           |
| British Saddleback  | 7                               | 9               | 1.296                              | 56     | 11           |
| Gloucester Old Spot | 1                               | 2               | 1.06                               | 56     | 11           |
| Large Black         | 2                               | 3               | 1.54                               | 64     | 11           |
| Middle White        | 5                               | 10              | 1.219                              | 63     | 11           |
| Tamworth            | 2                               | 2               | 9.2                                | 56     | 11           |
| British Lop         | 1                               | 2               | 1.189                              | 58     | 11           |

Walters and Hooper - British Experience of AI and its us in the conservation of rare pig breeds 1990.

|   |   |   |
|---|---|---|
|  |  |  |
| Semen frozen in pellets 1992  | Semen in 5ml straw 1980's   | Semen in 2.5ml straws 2024  |

Unfortunately during the 1990’s there were some storage problems with this genebank and the viability of the remaining stored semen may not be as good as expected.

In 2001 the United Kingdom suffered a serious outbreak of Foot and Mouth disease. This brought the need for a genebank for native pig breeds back to the top of the agenda.

The initial priority in 2001 was to put traditional breed boars into an AI centre to provide an AI service for fresh semen matings. Many keepers of the traditional breeds relied on boar hire services to serve their

sows or the swapping of boars with other breeders to avoid inbreeding. The imposition of Foot and Mouth movement restrictions meant that these options were no longer available.

Two NGO partners, the British Pig Association and the Rare Breeds Survival Trust, both registered conservation charities decided to work together to develop this project. A commercial partner was identified, Deerpark Pedigree Pigs which had a government licenced AI centre.

The first boars selected for the programme were chosen because they were already in Northern Ireland where FMD movement restrictions were less onerous and sales of fresh semen began.

Robert Overend MBE of Deerpark Pedigree Pigs in Northern Ireland was already freezing semen successfully from Large White and Landrace boars at this time and it was proposed that semen from these boars could be frozen using updated techniques.

The first attempt to freeze traditional UK native pig breeds in straws took place in 2001 as part of the BPA / RBST Foot and Mouth project. Six boars were selected in Northern Ireland from the following breeds - Berkshire, British Saddleback, Gloucestershire Old Spots, Large Black, Middle White and Tamworth. The results of these initial collections and the freezing and thawing process were very encouraging as illustrated in tables 2 to 7

| Table 2 - Berkshire                |         |         | Hollybrook Freight Train 2 <sup>nd</sup> . |         |         |         |
|------------------------------------|---------|---------|--|---------|---------|---------|
| Date of collection                 | 13/8/01 | 20/8/01 | 24/8/01                                    | 31/8/01 | 07/9/01 | 17/9/01 |
| Volume (ml)                        | 180ml   | 100ml   | 160ml                                      | 160ml   | 140ml   | 150ml   |
| Density (10 <sup>9</sup> cells/ml) | 0.84    | 0.90    | 0.74                                       | 0.90    | 0.86    | 0.60    |
| Motility                           | EX      | EX      | EX   | EX      | EX      | EX      |
| No of bottles used fresh           | 9       | 3       | 3  | 6       | 6       | NONE    |
| No of straws frozen                | 16      | 17      | 13   | 17      | 13      | 15      |
| No. of straws inspected            | 1       | 1       | 1  | 1       | 1       | 1       |
| Post thaw motility                 | EX      | EX      | EX   | EX      | EX      | EX      |

| Table 3 - British Saddleback       |         |         | Bellevue Grand Duke 5 <sup>th</sup> . |         |  |  |
|------------------------------------|---------|---------|---------------------------------------|---------|--|--|
| Date of collection                 | 17/8/01 | 20/8/01 | 31/8/01                               | 07/9/01 |  |  |
| Volume (ml)                        | 150ml   | 140ml   | 150ml                                 | 140ml   |  |  |
| Density (10 <sup>9</sup> cells/ml) | 0.72    | 0.60    | 0.60                                  | 0.60    |  |  |
| Motility                           | EX      | EX      | EX                                    | EX      |  |  |
| No of bottles used fresh           | NONE    | 3       | NONE                                  | NONE    |  |  |
| No of straws frozen                | 14      | 10      | 13                                    | 11      |  |  |
| No. of straws inspected            | 1       | 1       | 1                                     | 1       |  |  |
| Post thaw motility                 | EX      | EX      | EX                                    | EX      |  |  |

| Table 4 - Gloucestershire Old Spots |         |         | Greenan Sambo 30 <sup>th</sup> . |         |         |  |
|-------------------------------------|---------|---------|----------------------------------|---------|---------|--|
| Date of collection                  | 13/8/01 | 20/8/01 | 24/8/01                          | 30/8/01 | 14/9/01 |  |
| Volume (ml)                         | 80ml    | 80ml    | 90ml                             | 84ml    | 90ml    |  |
| Density (10 <sup>9</sup> cells/ml)  | 0.70    | 0.60    | 0.60                             | 0.60    | 0.76    |  |
| Motility                            | EX      | EX      | EX                               | EX      | EX      |  |
| No of bottles used fresh            | 6       | 3       | 6                                | 3       | 3       |  |
| No of straws frozen                 | 5       | 6       | 6                                | 6       | 9       |  |
| No. of straws inspected             | 1       | 1       | 1                                | 1       | 1       |  |
| Post thaw motility                  | EX      | EX      | EX                               | EX      | EX      |  |

| Table 5 - Large Black              |         |         | Ardymargh Super 5 <sup>th</sup> . |  |  |  |
|------------------------------------|---------|---------|-----------------------------------|--|--|--|
| Date of collection                 | 07/9/01 | 14/9/01 | 28/9/01                           |  |  |  |
| Volume (ml)                        | 66ml    | 50ml    | 70ml                              |  |  |  |
| Density (10 <sup>9</sup> cells/ml) | 1.10    | 1.06    | 1.00                              |  |  |  |
| Motility                           | EX      | EX      | EX                                |  |  |  |
| No of bottles used fresh           | NONE    | NONE    | NONE                              |  |  |  |
| No of straws frozen                | 12      | 10      | 11                                |  |  |  |
| No. of straws inspected            | 1       | 1       | 1                                 |  |  |  |
| Post thaw motility                 | EX      | EX      | EX                                |  |  |  |

| Table 6 - Middle White             |         |         | Slievenalargy Revival |         |  |  |
|------------------------------------|---------|---------|-----------------------|---------|--|--|
| Date of collection                 | 20/8/01 | 31/8/01 | 17/9/01               | 13/8/01 |  |  |
| Volume (ml)                        | 100ml   | 120ml   | 165ml                 | 170ml   |  |  |
| Density (10 <sup>9</sup> cells/ml) | 0.66    | 0.66    | 0.64                  | 0.60    |  |  |
| Motility                           | EX      | EX      | EX                    | EX      |  |  |
| No of bottles used fresh           | 6       | 6       | 3                     | 6       |  |  |
| No of straws frozen                | 8       | 10      | 13                    | 7       |  |  |
| No. of straws inspected            | 1       | 1       | 1                     | 1       |  |  |
| Post thaw motility                 | EX      | Ex      | EX                    | EX      |  |  |

| Table 7 - Tamworth                 |         |         | Greenan Glen 2 <sup>nd</sup> |         |         |  |
|------------------------------------|---------|---------|------------------------------|---------|---------|--|
| Date of collection                 | 13/8/01 | 20/8/01 | 24/8/01                      | 28/9/01 | 31/8/01 |  |
| Volume (ml)                        | 130ml   | 140ml   | 60ml                         | 80ml    | 90ml    |  |
| Density (10 <sup>9</sup> cells/ml) | 0.80    | 0.62    | 1.02                         | 0.70    | 0.76    |  |
| Motility                           | EX      | EX      | EX                           | EX      | EX      |  |
| No of bottles used fresh           | 6       | 6       | 3                            | 3       | 3       |  |
| No of straws frozen                | 11      | 12      | 11                           | 9       | 8       |  |
| No. of straws inspected            | 1       | 1       | 1                            | 1       | 1       |  |
| Post thaw motility                 | Ex      | EX      | EX                           | EX      | EX      |  |

The success of these initial collections and the viability of the semen frozen in straws created a workable model for a project to build a porcine semen genebank as joint venture between the British Pig Association, Deerpark Pedigree Pigs and the Rare Breeds Survival Trust.



Investigations into the freezing of boar semen began at Deerpark Pedigree Pigs in the mid-1980s. At the time the Family-owned business (three generations photo) managed a large herd of pedigree Large White and Landrace as well as an AI centre supplying fresh semen.

Robert Overend and his son Nigel first visited Norway in 1989 to see how porcine semen was being collected and frozen in straws and they followed this up with a visit to Finland in 1993 where semen was being frozen in pellets.

Using knowledge acquired from various sources they developed and refined their own techniques for

the collection, processing, freezing and thawing. This included developing their own diluents.

Over the years there have been many developments in their process.

From the start they rejected freezing in pellets and used straws. Initially these were 5ml straws but from 1996 onwards 2.5ml straws were used.

The semen freezing process has also evolved. Initially this was a two-step process using modified Beltsville diluents which took about 12 hours from collection to freezing. Typically boars would be collected at 7.00 am and straws would be in liquid nitrogen by 7.00pm the same day.

Today the process is more complex and takes around 21 hours to complete.

Semen is collected at 5.00 pm and following evaluation for motility and density the sperm rich fraction is added to a commercially available long-life diluent and cooled to 15°C.

The diluted and cooled semen stands from 8 to 10 hours. The following morning it is put into the centrifuge to extract the sperm cells. The semen is then added to a first stage Beltsville based freezing diluent which is prepared in house and a further resting period of 4 to 6 hours takes place during which the semen is cooled to 5°C. The second stage freezing diluent is then added and the semen is packed into 2.5ml straws in the cold room at 5°C.

The semen straws are then placed on cooling racks and immersed in liquid nitrogen vapour for about 35 mins before being placed in the liquid nitrogen tanks for long term storage.

The process is usually completed around 2.00 pm on the day after the collection.

The process for thawing and inseminating with the frozen semen has remained relatively unchanged over the years. The straw is removed from the Liquid Nitrogen and placed in a water bath at 50°C for 50 seconds. The insemination extender is prepared at 30°C. Once thawed the semen is mixed with the extender to produce an insemination dose of 100 ml with 3 billion sperm cells.

### **Funding models for genebank without government support.**

One of the challenges faced by the project was risk management. Deerpark Pedigree Pigs was based in Northern Ireland. This was an advantage during the early stages of the project when Foot and Mouth disease was affecting England. However the population of traditional native breed pigs in N. Ireland has always been very small.

In order to capture the maximum genetic diversity of each of these breeds, boars would have to be selected from the main population in England. Prior to 2001 some England based AI centres had been willing to host traditional breed boars on a bed and breakfast basis to supply fresh semen. After 2001 all these AI centres were owned by international breeding companies and were unwilling to risk bringing in boars from outside their own breeding pyramids. In addition none of these AI centres were freezing boar semen as there was no commercial demand for frozen as opposed to fresh semen. The development of long-life diluents and the work of Masterbreeders AI in pioneering exports of fresh semen in the late 1980's meant that European companies could supply their customers in Asia with fresh semen without the expense of shipping liquid nitrogen tanks around the world.

Deerpark had the expertise to freeze the semen and were willing to take on the risk of bringing boars from other breeders into their AI centre but that still left the additional cost of quarantining and shipping boars from England to N. Ireland.

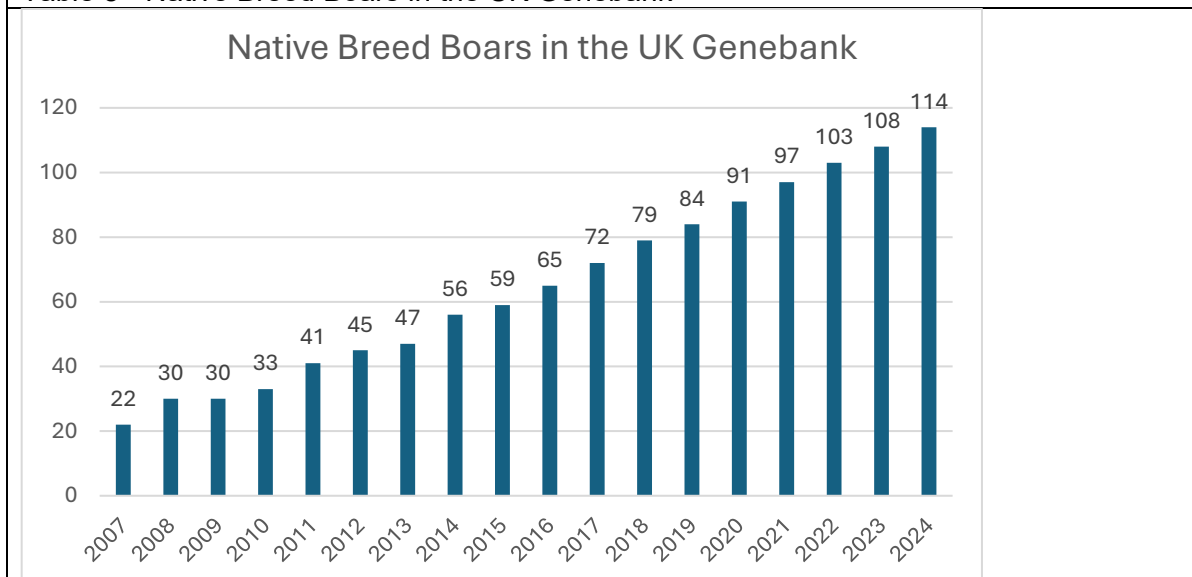
An additional risk to be faced was the possibility that some boars would produce semen that could not be frozen and thawed successfully. Libido and semen quality could be checked during quarantine but semen freezing could only be evaluated once all the expense of quarantine and shipment had been incurred.

The initial funding model had been based on a joint venture between the British Pig Association and the Rare Breeds Survival Trust sharing the risks and the income from sales of fresh semen with Deerpark acting as a service partner. However as it became apparent that some boars selected might not deliver any viable straws for the genebank the NGO partners felt the need for additional support to share the risk. In the aftermath of the 2001 FMD outbreak a ReGeneration Fund was launched to help repair some of the damage inflicted by the disease. It was hoped that this would fund the ongoing collections of boar semen but unfortunately the appeal did not go as well as had been hoped. Approaches to commercial sponsors were also not successful and the project faced an uncertain future.

At this time Robert Overend, the owner of Deerpark, was Chairman of the British Pig Association and he agreed that Deerpark would take on all the financial risk of the project as he was determined to see the project through to completion. In the new model all income from sales of fresh semen as well as any income from exports of frozen semen would be retained by Deerpark who would take on responsibility for purchasing the boars and arranging quarantine and shipment to N. Ireland whilst the BPA would be responsible for boar selection and programme management. The NGO partners would only pay for the semen straws once they were successfully frozen in the genebank. This model only worked thanks to the generosity of Deerpark Pedigree Pigs and the Overend family as it was never going to be a profitable venture.

The model continued to work for many years and survived the second Foot and Mouth outbreak of 2007 but the financial crisis of 2008 began to have a serious impact on the UK economy and the populations of native breed pigs were adversely affected. By this stage we had been able to add 30 boars to the genebank averaging around 4 boars per year. The credit crunch set back the rate of progress to less than 3 boars per year and the lack of sales of fresh semen was also having an impact on the viability of the project.

Table 8 - Native Breed Boars in the UK Genebank



In 2014 the British Pig Association received a substantial donation in the form of a legacy which could help to fund collections. However it was clear that the task of collecting 25 unrelated sires across 10 native breeds, a total of 250 boars, was formidable. A further 200 boars would be required at a minimum cost of £500,000. At the previous rate of collections this would take approximately 50 years.

### The Native Pig Breeds Genebanking Project - 2016

It was agreed that this was too long a time frame for the project and the sums of money involved were overly ambitious for two small NGO's with limited resources.

A review of the project was carried out by all the partners and it was agreed that a more achievable interim target would have to be set after which a further review could be undertaken.

According to the Animal Breeding Regulations 2016/1012, art.2, point 2: 'breed' means *"a population of animals sufficiently uniform to be considered distinct from other animals of the same species by one or more groups of breeders which have agreed to enter those animals in breeding books with details of their known ascendants for the purpose of reproducing their inherited characteristics by way of reproduction, exchange and selection within the framework of a breeding programme."*

The recognition that a breed is also a cultural artifact recognised and maintained by groups of breeders rather than just a specific DNA sequence is very important. The purpose of the genebank is not just to preserve the genetic variation of the breed but also its cultural history. This includes such things as named breeding lines. British native pigs breeds have used line names for over a 100 years and the lines are seen as very important by most of the breeders. In order to secure the support of the breeders for the project it was important to recognise that the individual boar lines within each breed should also be conserved.

It was agreed that 10 unrelated boars for each breed was a realistic target for which a medium-term funding commitment could be made. However this would be complicated by the need to ensure that all the boar lines of each breed were represented in the genebank. Some breeds had more than 10 bloodlines and in other cases the same bloodline had been collected more than once. The results can be seen in Table 9 which shows the number of boars and lines in the genebank in 2016 and the number of boars needed to complete the twin targets of 10 boars per breed and at least one boar from each bloodline.

| Table 9 – Native breed boars and bloodlines in the UK Genebank 2016 |                     |                 |                 |                     |                     |                                    |
|---|---------------------|-----------------|-----------------|---------------------|---------------------|------------------------------------|
| Breed   | Boar lines in breed | Boars collected | Lines Collected | Lines Not Collected | Boars needed for 10 | Boars needed to complete all lines |
| BK  | 7                   | 7               | 7               | 0                   | 3                   | 3                                  |
| BL  | 10                  | 5               | 5               | 0                   | 5                   | 5                                  |
| BS  | 14                  | 11              | 9               | 5                   | 0                   | 5                                  |
| GS  | 4                   | 9               | 4               | 0                   | 1                   | 1                                  |
| LB  | 6                   | 7               | 6               | 0                   | 3                   | 6                                  |
| LW  | 10                  | 5               | 4               | 8                   | 5                   | 8                                  |
| MW  | 5                   | 6               | 5               | 0                   | 4                   | 4                                  |
| OSB   | 4                   | 2               | 2               | 2                   | 8                   | 8                                  |
| TW  | 7                   | 7               | 7               | 1                   | 3                   | 1                                  |
| WE  | 11                  | 5               | 4               | 6                   | 5                   | 6                                  |
| Total   |                     | 64              | 53              | 22                  | 37                  | 47                                 |

A target date of November 1<sup>st</sup> 2024 was set to complete this interim phase of the project. This would require at least 6 boars to be collected each year and a total financial commitment from the NGO's of £113,000.

The selection of boars for the programme has not just focused on the bloodline names. The aim of the genebank is for the boars to be as unrelated to each other as possible and represent a wide cross-section of the existing herd for each breed.

The main tool used for this has been kinship analysis. Each candidate boar for the genebank should be as unrelated as possible to each of the boars already collected and should reduce the overall inbreeding within that breed in the genebank. Where possible boars are bred from females that have themselves been identified as least related to the overall population for the breed.

Table 8 showed that the Large Black breed required three more boars to meet the target of 10 boars and all the lines. For the first of these three boars the Large Black Pig Breeders Club (LBPBC) ran a special mating programme using the whole herd kinship figures that are published each year once the breed census has been completed. It is at this point that we have the most accurate picture of the live population on which to run a kinship analysis of the whole herd and identify the animals that are least related to the population as a whole.

In 2017 the Large Black Breeders Club identified 3 Gold Vase gilts in a herd in Scotland that had a very low kinship compared with the national population and they placed them with three different herds in the south of England. At the time these three sisters ranked in the top 10% of least related females on kinship analysis with a mean inbreeding figure of 0.0148 against the whole Large Black population which at the time had a mean inbreeding of 0.0420. They ranked at positions 33, 34 and 35 out of a female herd of 380 in total.

Each gilt was bred to a different boar with a view to identifying a boar from each of their litters, if good enough, to grow on and for one to be chosen to be used for the genebank. The boar chosen, Framfield Majestic 203, was born on 1 September 2017 from a litter of 11 born and 11 reared. He was ranked 8 out of 82 boars for low inbreeding and he reduced the average in the genebank significantly down from 0.0402 to 0.0314 (a 25% drop).

| Table 10 – Group inbreeding |                        |          |            |             |             |
|-----------------------------|------------------------|----------|------------|-------------|-------------|
| HB Reg No                   | Name                   | Ear No   | DOB        | IB coeff. 1 | IB coeff. 2 |
| CBJ/190                     | Westerly Majestic 190  | CBJ/190  | 10/03/2002 | 0.0498      | 0.0427      |
| R000455LB                   | Bilgrm Defender 14     | BBL/14   | 07/07/2005 | 0.0488      | 0.0422      |
| R000907LB                   | Sock Attempt 15        | SOK/3106 | 05/03/2007 | 0.0437      | 0.0379      |
| R001442LB                   | Crane Majestic Eagle 3 | CRW/439  | 05/08/2009 | 0.0441      | 0.0389      |
| R001661LB                   | Sock Super26th         | SOK/3482 | 02/01/2011 | 0.03        | 0.0266      |
| R002180LB                   | Donagheragh Malcolm 61 | KBB/61   | 04/12/2012 | 0.0407      | 0.0364      |
| R002312LB                   | Donagheragh Super 93   | KBB/93   | 28/10/2013 | 0.0246      | 0.0218      |
|                             |                        |          | Average    | 0.0402      |             |
| R003103LB                   | Framfield Majestic 203 | NMA/203  | 01/09/2017 |             | 0.0051      |
|                             |                        |          |            | Average     | 0.0314      |

| Table 11 - Individual inbreeding |           |                |
|----------------------------------|-----------|----------------|
| Current boar                     | New Boar  | IB coefficient |
| CBJ/190                          | R003103LB | 0              |
| R000455LB                        | R003103LB | 0.0027         |
| R000907LB                        | R003103LB | 0.0034         |
| R001442LB                        | R003103LB | 0.0078         |
| R001661LB                        | R003103LB | 0.0063         |
| R002180LB                        | R003103LB | 0.0107         |
| R002312LB                        | R003103LB | 0.0051         |

Table 11 shows the individual Inbreeding Co-efficient figures against each of the other boars in the tank. This is also an important check as it is possible for a boar to lower the average against the group in the genebank whilst being closely related to an individual boar in the group. Our target is that the individual figures for each boar should not exceed the average of the group.



The Three Gold Vase gilts arriving on farm in the south of England after their journey from Scotland and the Majestic boar which was selected for the genebank.

The final boar to complete the Large Black programme was again the product of a planned mating. This boar, Framfield Majestic Eagle 313, from a very rare Bess line sow which was part of a least related conservation programme, organised by the Large Black Breeders Club, completed the interim target of 10 boars and all the lines.

| Table 12- Group inbreeding |                              |          |            |             |             |
|----------------------------|------------------------------|----------|------------|-------------|-------------|
| HB Reg No                  | Name                         | Ear No   | DOB        | IB coeff. 1 | IB coeff. 2 |
| CBJ/190                    | Westerly Majestic 190        | CBJ/190  | 10/03/2002 | 0.0374      | 0.0332      |
| R000455LB                  | Bilgrm Defender 14           | BBL/14   | 07/07/2005 | 0.0372      | 0.0342      |
| R000907LB                  | Sock Attempt 15              | SOK/3106 | 05/03/2007 | 0.0333      | 0.0299      |
| R001442LB                  | Crane Majestic Eagle 3       | CRW/439  | 05/08/2009 | 0.0365      | 0.0335      |
| R001661LB                  | Sock Super26th               | SOK/3482 | 02/01/2011 | 0.0242      | 0.0224      |
| R002180LB                  | Donagheragh Malcolm 61       | KBB/61   | 04/12/2012 | 0.0388      | 0.0358      |
| R002312LB                  | Donagheragh Super 93         | KBB/93   | 28/10/2013 | 0.0198      | 0.0178      |
| R003103LB                  | Framfield Majestic 203       | NMA/203  | 01/09/2017 | 0.0064      | 0.008       |
| R003362LB                  | Luckygeorge Majestic 2       | LGP/33   | 02/01/2019 | 0.0134      | 0.0145      |
| Average                    |                              |          |            | 0.0275      |             |
| R003784LB                  | Framfield Majestic Eagle 313 | NMA/313  | 18/01/2021 |             | 0.0096      |
|                            |                              |          |            | Average     | 0.0239      |

| Table 13- Individual inbreeding |           |                |
|---------------------------------|-----------|----------------|
| Current boar                    | New Boar  | IB coefficient |
| CBJ/190                         | R003784LB | 0.0000         |
| R000455LB                       | R003784LB | 0.0098         |
| R000907LB                       | R003784LB | 0.0024         |
| R001442LB                       | R003784LB | 0.0098         |
| R001661LB                       | R003784LB | 0.0079         |
| R002180LB                       | R003784LB | 0.0114         |
| R002312LB                       | R003784LB | 0.0016         |
| R003103LB                       | R003784LB | 0.0208         |
| R003362LB                       | R003784LB | 0.0231         |



Framfield Majestic Eagle 313

Planned mating programmes were also required for the British Saddleback breed. Table 9 showed that in 2016 there were already 11 British Saddleback boars in the genebank but that only 9 of the 14 bloodlines had been collected. This meant that an additional 5 boars representing the Carl, Consort, Dominator, Earl Simon and Guardsman would be needed.

| Table 14 – British Saddleback Census results 2016 |      |            |                  |      |
|---|------|------------|------------------|------|
| Breeders keeping this line                        |      | Line Name  | Registered Boars |      |
| 2016  | 2015 |            | 2016             | 2015 |
| 4   | 3    | Carl       | 4                | 3    |
| 2   | 5    | Consort    | 2                | 5    |
| 3   | 1    | Dominator  | 3                | 1    |
| 3   | 4    | Earl Simon | 3                | 5    |
| 2   | 3    | Guardsman  | 3                | 3    |

Table 14 shows the results of the 2016 breed census. In each of the required boar lines 5 boars in the population and each line was present in less than 5 herds.

A breeding programme was organised by the British Saddleback Breeders Club (BSBC). The first objective was to ensure that none of the lines were lost from the live

population and the second was to breed a good quality boar for the genebank. The final three boars to be collected are shown in Tables 15 to 22. In his case the rarity of the lines and the need to ensure that they were collected in time meant that some compromises had to be made on the individual relationships.

The BSBC identified a suitable Earl Simon boar

| Table 15– Group inbreeding |                       |            |          |             |             |
|----------------------------|-----------------------|------------|----------|-------------|-------------|
| reg_no                     | Line                  | DOB        | Ear No   | IB coeff. 1 | IB coeff. 2 |
| BUK/157                    | Rajah                 | 06/08/1992 | BUK/157  | 0.0094      | 0.0086      |
| BZG/218                    | Grand Duke            | 06/10/1999 | BZG/218  | 0.0161      | 0.0147      |
| BZG/226                    | Dictator              | 07/10/1999 | BZG/226  | 0.0325      | 0.0298      |
| R001024BS                  | Golden Arrow          | 02/02/2005 | WMC/165  | 0.0167      | 0.016       |
| R002552BS                  | Prefect               | 23/01/2008 | SGX/86   | 0.0111      | 0.0104      |
| R002792BS                  | Rajah                 | 03/10/2007 | GJB/466  | 0.0284      | 0.0263      |
| R003062BS                  | Dictator              | 15/05/2008 | GJB/11A  | 0.0346      | 0.0319      |
| R005539BS                  | Stockbroker           | 12/05/2010 | GJB/278B | 0.0106      | 0.0099      |
| R005818BS                  | General               | 09/01/2012 | BSX/115E | 0.0123      | 0.0114      |
| R006428BS                  | Viscount              | 02/07/2013 | BSX/255E | 0.0049      | 0.0046      |
| R006465BS                  | Walter                | 25/07/2013 | NMA/48   | 0.0068      | 0.0091      |
| R007629BS                  | Tudor Dominator 5     | 09/03/2017 | NPR/71   | 0.0042      | 0.0066      |
| R007701BS                  | Framfield Consort 110 | 01/08/2017 | NMA/110  |             | 0.0071      |
|                            |                       |            |          | 0.0143      |             |
| R008089BS                  | Kajii Earl Simon      | 01/02/2019 | SDU/39A  |             | 0.0106      |
|                            |                       |            |          | Ave         | 0.01380     |

| Table 16- Individual inbreeding |           |                |
|---------------------------------|-----------|----------------|
| Current boar                    | New Boar  | IB coefficient |
| BUK/157                         | R008089BS | 0              |
| BZG/218                         | R008089BS | 0              |
| BZG/226                         | R008089BS | 0              |
| R001024BS                       | R008089BS | 0.0005         |
| R002552BS                       | R008089BS | 0.0234         |
| R002792BS                       | R008089BS | 0.001          |
| R003062BS                       | R008089BS | 0.0001         |
| R005539BS                       | R008089BS | 0              |
| R005818BS                       | R008089BS | 0.0002         |
| R006428BS                       | R008089BS | 0.0011         |
| R006465BS                       | R008089BS | 0.0062         |
| R007629BS                       | R008089BS | 0.0139         |
| R007701BS                       | R008089BS | 0.0918         |

The inbreeding of coefficient of the Earl Simon boar in relation to the group as a whole was low at 0.0106 and he brought the mean of the tank down from 0.0143 (see above) to 0.0138

Unfortunately he was quite closely related to one of the boars already in the genebank. Ideally, we would like the boar to be unrelated to each individual boar in the tank as well as bringing down the average.. When we look at the pedigree we can see that the sire of the Consort boar in Table 17 is also a maternal grandsire of the Earl Simon boar.

Table 17 – Rother Consort 302 is a common Sire on Sire Line and the Dam Line

| Framfield Consort 110  |  | Kajji Earl Simon   |  |
|--|--|--|--|
| Home Page Animal Search Progeny  |  | Home Page Animal Search Progeny  |  |
| <p>--Parents-- --Grand Parents-- --Great Grand Parents-- --Great Great Grand Parents--</p> <p>Sire : BSR006732BS - Rother Consort 302 (WLP/302)</p> <p>Dam : BSR006710BS - Framfield Alvis 87 (NMA/87)</p>   |  | <p>--Parents-- --Grand Parents-- --Great Grand Parents-- --Great Great Grand Parents--</p> <p>Sire : BSR007038BS - Chapel Earl Simon 6 (BSX/205F)</p> <p>Dam : BSR007354BS - Rother Biddy 341 (WLP/341)</p>  |  |
| <p>BSR000508BS - Colonyvalence Consort 10 (HMV/216A)</p> <p>BSR000512BS - Colonyvalence Ivvy 11 (HMV/346A)</p> <p>BSR006299BS - Smarden Consort (WKM/184)</p> <p>BSR003092BS - Kingswoodley Golden Arrow 2 (LDX/2)</p> <p>BSR005091BS - Smarden Duchess 9 (WKM/155)</p> <p>BSR003381BS - Fransgreen Duchess 9 (CHW/35)</p> <p>BSR001126BS - Colonyvalence Dictator 6 (HMV/203A)</p> <p>BSR001713BS - Colonyvalence Dictator 8 (HMV/292A)</p> <p>BSR000522BS - Colonyvalence Hilda 7 (HMV/134A)</p> <p>BSR004034BS - Colonyvalence Hilda 19 (HMV/96B)</p> <p>BSR002590BS - Colonyvalence Hilda 15 (HMV/228A)</p> <p>BSR000522BS - Colonyvalence Hilda 7 (HMV/134A)</p> <p>BSR002116BS - Fransgreen Walter 4 (CHW/380)</p> <p>BSR004068BS - Northwold Walter 3 (SGY/3)</p> <p>BSR001065BS - Helmingham Joyful 32 (SER/48)</p> <p>BSR005772BS - Muddylane Walter 3 (CIB/201A)</p> <p>BSR001967BS - Haytesbury Earl Simon 6 (RGY/158)</p> <p>BSR005033BS - Muddylane Lucy 2 (CIB/30A)</p> <p>BSR003484BS - Gwyndy Lucy 3 (PLD/186)</p> <p>BSR001217BS - Colonyvalence Consort 10 (HMV/216A)</p> <p>BSR001364BS - Colonyvalence Consort 11 (HMV/283A)</p> <p>BSR001241BS - Colonyvalence Babbie 26 (HMV/214A)</p> <p>BSR003473BS - Framfield Alvis 740 (NMA/740)</p> <p>BSR000626BS - Colonyvalence Dictator 11 (HMV/160A)</p> <p>BSR001274BS - Framfield Alvis 705 (NMA/705)</p> <p>BSR000397BS - Lydlings Alvis 55A (SPR/55A)</p> |  | <p>BSR001967BS - Haytesbury Earl Simon 6 (RGY/158)</p> <p>BSR004340BS - Muddylane Earl Simon 3 (CIB/571)</p> <p>BSR002310BS - Holwellmanor Rose 4 (TBW/1)</p> <p>BSR006745BS - Chapel Earl Simon 5 (BSX/SF)</p> <p>BSR003092BS - Kingswoodley Golden Arrow 2 (LDX/2)</p> <p>BSR006351BS - Colonyvalence Hilda 24 (HMV/363B)</p> <p>BSR005136BS - Colonyvalence Hilda 23 (HMV/98B)</p> <p>BSR002740BS - Prestcombe Golden Arrow 4 (NJ/343)</p> <p>BSR003092BS - Kingswoodley Golden Arrow 2 (LDX/2)</p> <p>BSR002509BS - Haytesbury Dinah 32 (RGY/181)</p> <p>BSR006350BS - Colonyvalence Bountiful 13 (HMV/260B)</p> <p>BSR003092BS - Kingswoodley Golden Arrow 2 (LDX/2)</p> <p>BSR005743BS - Colonyvalence Bountiful 10 (HMV/146B)</p> <p>BSR003082BS - Colonyvalence Bountiful 6 (HMV/12B)</p> <p>BSR005088BS - Colonyvalence Consort 17 (HMV/106B)</p> <p>BSR006299BS - Smarden Consort (WKM/184)</p> <p>BSR005091BS - Smarden Duchess 9 (WKM/155)</p> <p>BSR006732BS - Rother Consort 302 (WLP/302)</p> <p>BSR001713BS - Colonyvalence Dictator 8 (HMV/292A)</p> <p>BSR004034BS - Colonyvalence Hilda 19 (HMV/96B)</p> <p>BSR002590BS - Colonyvalence Hilda 15 (HMV/228A)</p> <p>BSR004857BS - Jellbury Stockbroker 5 (JTY/5)</p> <p>BSR006294BS - Farley Stockbroker (TWR/B29B)</p> <p>BSR005413BS - Farley Octavia 63 (TWR/B236)</p> <p>BSR006459BS - Rother Biddy 273 (WLP/273)</p> <p>BSR004952BS - Rother Consort 177 (WLP/177)</p> <p>BSR005761BS - Rother Biddy 233 (WLP/233)</p> <p>BSR002780BS - Colonyvalence Biddy 25 (HMV/389A)</p> |  |

The penultimate British Saddleback to be added, Blackthorn Carl 325, was again specially bred for the genebank. In this case there were no problems with either the group or individual figures.

| Table 18 – Group inbreeding |                       |            |          |             |             |
|-----------------------------|-----------------------|------------|----------|-------------|-------------|
| reg_no                      | Line                  | DOB        | Ear No   | IB coeff. 1 | IB coeff. 2 |
| BUK/157                     | Rajah                 | 06/08/1992 | BUK/157  | 0.0086      | 0.0074      |
| BZG/218                     | Grand Duke            | 06/10/1999 | BZG/218  | 0.0147      | 0.0126      |
| BZG/226                     | Dictator              | 07/10/1999 | BZG/226  | 0.0298      | 0.0255      |
| R001024BS                   | Golden Arrow          | 02/02/2005 | WMC/165  | 0.016       | 0.0137      |
| R002552BS                   | Prefect               | 23/01/2008 | SGX/86   | 0.0104      | 0.0106      |
| R002792BS                   | Rajah                 | 03/10/2007 | GJB/466  | 0.0263      | 0.0228      |
| R003062BS                   | Dictator              | 15/05/2008 | GJB/11A  | 0.0319      | 0.0273      |
| R005539BS                   | Stockbroker           | 12/05/2010 | GJB/278B | 0.0099      | 0.0085      |
| R005818BS                   | General               | 09/01/2012 | BSX/115E | 0.0114      | 0.0097      |
| R006428BS                   | Viscount              | 02/07/2013 | BSX/255E | 0.0046      | 0.004       |
| R006465BS                   | Walter                | 25/07/2013 | NMA/48   | 0.0091      | 0.0094      |
| R007629BS                   | Tudor Dominator 5     | 09/03/2017 | NPR/71   | 0.0066      | 0.0067      |
| R007701BS                   | Framfield Consort 110 | 01/08/2017 | NMA/110  | 0.0071      | 0.0129      |
| R008089BS                   | Kajji Earl Simon      | 01/02/2019 | SDU/39A  | 0.0106      | 0.0102      |
|                             |                       |            | Ave      | 0.01380     |             |
| R008594BS                   | Blackthorn Carl 325   | 07/05/2021 | SXD/325  |             | 0.0019      |
|                             |                       |            |          |             | 0.0122      |

| Table 19 - Individual inbreeding |           |                |
|----------------------------------|-----------|----------------|
| Current boar                     | New Boar  | IB coefficient |
| BUK/157                          | R008594BS | 0              |
| BZG/218                          | R008594BS | 0              |
| BZG/226                          | R008594BS | 0              |
| R001024BS                        | R008594BS | 0              |
| R002552BS                        | R008594BS | 0              |
| R002792BS                        | R008594BS | 0.002          |
| R003062BS                        | R008594BS | 0              |
| R005539BS                        | R008594BS | 0.0002         |
| R005818BS                        | R008594BS | 0              |
| R006428BS                        | R008594BS | 0              |
| R006465BS                        | R008594BS | 0.0166         |
| R007629BS                        | R008594BS | 0.0007         |
| R007701BS                        | R008594BS | 0.0025         |
| R008089BS                        | R008594BS | 0.0045         |

This boar is almost ideal. He reduces the overall inbreeding in the tank from 0.01380 to 0.0122. There is a slight relationship to the Walter boar but it is at very low level.

The final boar in the programme was from the Guardsman line.

| Table 20 – Group inbreeding                                    |                           |            |          |             |             |
|--|---------------------------|------------|----------|-------------|-------------|
| HB Reg No  | Line                      | DOB        | Ear No   | IB coeff. 1 | IB coeff. 2 |
| BUK/157  | Edenboro Rajah 6          | 06/08/1992 | BUK/157  | 0.0074      | 0.0069      |
| BZG/218  | Bellevue Grand Duke 5     | 06/10/1999 | BZG/218  | 0.0126      | 0.0118      |
| BZG/226  | Bellevue Dictator         | 07/10/1999 | BZG/226  | 0.0255      | 0.0238      |
| R001024BS  | Victoria Golden Arrow 165 | 02/02/2005 | WMC/165  | 0.0137      | 0.013       |
| R002552BS  | Blewett Prefect 86        | 23/01/2008 | SGX/86   | 0.0106      | 0.0101      |
| R002792BS  | Forthill Rajah 466        | 03/10/2007 | GJB/466  | 0.0228      | 0.0212      |
| R003062BS  | Forthill Dictator 11A     | 15/05/2008 | GJB/11A  | 0.0273      | 0.0256      |
| R005539BS  | Forthill Stockbroker 278B | 12/05/2010 | GJB/278B | 0.0085      | 0.008       |
| R005818BS  | Chapel General            | 09/01/2012 | BSX/115E | 0.0097      | 0.0091      |
| R006428BS  | Chapel Viscount 6         | 02/07/2013 | BSX/255E | 0.004       | 0.0041      |
| R006465BS  | Framfield Walter 48       | 25/07/2013 | NMA/48   | 0.0094      | 0.0108      |
| R007629BS  | Tudor Dominator 5         | 09/03/2017 | NPR/71   | 0.0067      | 0.0172      |
| R007701BS  | Framfield Consort 110     | 01/08/2017 | NMA/110  | 0.0129      | 0.014       |
| R008089BS  | Kajii Earl Simon          | 01/02/2019 | SDU/39A  | 0.0102      | 0.0102      |
| R008594BS  | Blackthorn Carl 325       | 07/05/2021 | SXD/325  | 0.0019      | 0.007       |
| Average inbreeding of British Saddleback boars in the genebank |                           |            |          | 0.0122      |             |
| R008604BS  | Tudor Guardsman 2         | 18/09/2021 | NPR/120A |             | 0.013       |
| Average inbreeding of British Saddleback boars in the genebank |                           |            |          |             | 0.0129      |

| Table 21- Individual inbreeding |           |                |
|---------------------------------|-----------|----------------|
| Current Boar                    | New Boar  | IB coefficient |
| BUK/157                         | R008604BS | 0              |
| BZG/218                         | R008604BS | 0              |
| BZG/226                         | R008604BS | 0              |
| R001024BS                       | R008604BS | 0              |
| R002552BS                       | R008604BS | 0.002          |
| R002792BS                       | R008604BS | 0              |
| R003062BS                       | R008604BS | 0              |
| R005539BS                       | R008604BS | 0              |
| R005818BS                       | R008604BS | 0              |
| R006428BS                       | R008604BS | 0.0039         |
| R006465BS                       | R008604BS | 0.005          |
| R007629BS                       | R008604BS | 0.1479         |
| R007658BS                       | R008604BS | 0.0164         |
| R008089BS                       | R008604BS | 0.0066         |
| R008593BS                       | R008604BS | 0.0128         |

In this case we were not able to continue the downward trend in the group average which had fallen from 0.0143 to 0.0122 but the increase was only marginal. There was also an issue with relationship to the Dominator boar on the female side as well as common ancestor at Great Grandparent level. Unfortunately the pressing need to secure these lines into the programme meant that compromises had to be made. Overall the breed is very well placed as it has 16 boars in the genebank, more than any other breed, of which 3 were born in the last century.

The final batch of boars have been delivered to Northern Ireland for collection and the phase of the project will be completed by November 1<sup>st</sup> 2024.

| Breed                     | Line          | Name                      | Reg       | Ear #    | DOB        |
|---------------------------|---------------|---------------------------|-----------|----------|------------|
| Berkshire                 | Freight Train | Scholebrook Freight Train | R005591BK | VZF/136  | 06/03/2024 |
| Gloucestershire Old Spots | Sam (EOP)     | Balsham Sam 13            |           | KMM/1548 | 11/10/2023 |
| Middle White              | Mischief      | Pinehurst Mischief 7      | R003642MW | MBR/462  | 10/01/2022 |
| Middle White              | Mischief      | Huntsham Mischief 13      |           | VMR/1548 | 23/11/2023 |
| Oxford Sandy & Black      | Clarence      | Tan Clarence 7            | R005635OS |          | 30/01/2024 |
| Oxford Sandy & Black      | Clarence      | Brookhall Clarence 7      | R005595OS | KBG/314  | 01/09/2023 |

The final Berkshire boar is Scholebrook Freight Train

| HB Reg No   | Name                       | DOB        | Ear no   | IB coeff. 1 | IB coeff. 2 |
|---|----------------------------|------------|----------|-------------|-------------|
| HAL/16  | Hollybrook Freight Train 2 | 12/08/1998 | HAL/16   | 0.0091      | 0.0081      |
| TMM/783   | Smallicombe Namatjira 6    | 22/03/2002 | TMM/783  | 0.0059      | 0.0053      |
| R000682BK   | Applegarth Nama Abel 142   | 02/06/2005 | NAE/142  | 0.0134      | 0.0136      |
| R001566BK   | Gracebank Orlando 2        | 12/02/2008 | BTS/130  | 0.0136      | 0.0125      |
| R001801BK   | Fairoaks Peter Lad 4       | 15/04/2008 | CIM/292A | 0.0261      | 0.0241      |
| R002609BK   | Barlings Lassetter 707     | 08/09/2009 | ASY/707  | 0.0121      | 0.0117      |
| R003217BK   | Fairoaks Ambassador 9      | 06/11/2011 | CIM/463  | 0.0192      | 0.0177      |
| R004928BK   | Cobtree Peter Lad 2        | 25/07/2020 | VFJ/9    | 0.0060      | 0.0066      |
| R005273BK   | Fairoaks Namatjira 6       | 06/07/2021 | CIM/1229 | 0.0106      | 0.0106      |
| Inbreeding of the Berkshire boars in the Genebank |                            |            |          | 0.0129      |             |
| R005591BK   | Scholebrook Freight Train  | 06/03/2024 | VZF/136  |             | 0.0070      |
| Inbreeding of the Berkshire boars in the Genebank |                            |            |          |             | 0.0117      |

| Current Boar | New Boar  | IB coefficient |
|--------------|-----------|----------------|
| HAL/16       | R005591BK | 0              |
| TMM/783      | R005591BK | 0              |
| R000682BK    | R005591BK | 0.0156         |
| R001566BK    | R005591BK | 0.0034         |
| R001801BK    | R005591BK | 0.0078         |
| R002609BK    | R005591BK | 0.0085         |
| R003217BK    | R005591BK | 0.0053         |
| R004928BK    | R005591BK | 0.0119         |
| R005273BK    | R005591BK | 0.0109         |



Scholebrook Freight Train

We have also been able to add the final two Middle White boars Pinehurst Mischief 7 and Huntsham Mischief 13

| HB Reg No   | Name                        | DOB        | Ear No  | IB coeff. 1 | IB coeff. 2 |
|---|-----------------------------|------------|---------|-------------|-------------|
| CSC/1   | Slievenalargy Revival       | 10/10/1999 | CSC/1   | 0.0034      | 0.003       |
| CVM/297   | Westham Captain 297         | 24/02/2002 | CVM/297 | 0.0286      | 0.025       |
| R000472MW   | Degiorgio Rajah 15          | 30/04/2005 | MTE/015 | 0.0301      | 0.0273      |
| R000702MW   | Westham Mischief 567        | 20/08/2006 | CVM/567 | 0.0302      | 0.0264      |
| R000937MW   | Lakeview Captain 1          | 05/11/2005 | TBH/1   | 0.0229      | 0.0201      |
| R002187MW   | Solitaire Sovereign         | 06/02/2012 | YFA/16  | 0.021       | 0.0186      |
| R003274MW   | Tatton Captain              | 12/08/2018 | TDF/17  | 0.0128      | 0.0129      |
| R003537MW   | Junior Rajah 2              | 14/01/2021 | LXF/120 | 0.0162      | 0.0159      |
| Average in breeding of Middle White Boars in the Genebank |                             |            |         | 0.0207      |             |
| R003642MW   | <b>Pinehurst Mischief 7</b> | 10/01/2022 | MBR/462 |             | 0.0047      |
| Average in breeding of Middle White Boars in the Genebank |                             |            |         |             | 0.0171      |

| Current Boar | New Boar  | IB coefficient |
|--------------|-----------|----------------|
| CSC/1        | R003642MW | 0              |
| CVM/297      | R003642MW | 0              |
| R000472MW    | R003642MW | 0.0078         |
| R000702MW    | R003642MW | 0              |
| R000937MW    | R003642MW | 0              |
| R002187MW    | R003642MW | 0.002          |
| R003274MW    | R003642MW | 0.0137         |
| R003537MW    | R003642MW | 0.0137         |

| HB Reg No   | Name                        | DOB        | Ear No   | IB coeff. 1 | IB coeff. 2 |
|---|-----------------------------|------------|----------|-------------|-------------|
| CSC/1   | Slievenalargy Revival       | 10/10/1999 | CSC/1    | 0.003       | 0.0026      |
| CVM/297   | Westham Captain 297         | 24/02/2002 | CVM/297  | 0.025       | 0.0241      |
| R000472MW   | Degiorgio Rajah 15          | 30/04/2005 | MTE/015  | 0.0273      | 0.0251      |
| R000702MW   | Westham Mischief 567        | 20/08/2006 | CVM/567  | 0.0264      | 0.0235      |
| R000937MW   | Lakeview Captain 1          | 05/11/2005 | TBH/1    | 0.0201      | 0.0178      |
| R002187MW   | Solitaire Sovereign         | 06/02/2012 | YFA/16   | 0.0186      | 0.0172      |
| R003274MW   | Tatton Captain              | 12/08/2018 | TDF/17   | 0.0129      | 0.0123      |
| R003537MW   | Junior Rajah 2              | 14/01/2021 | LXF/120  | 0.0159      | 0.0164      |
| R003642MW   | Pinehurst Mischief 7        | 10/01/2022 | MBR/462  | 0.0047      | 0.0053      |
| Average in breeding of Middle White Boars in the Genebank |                             |            |          | 0.0171      |             |
| R003896MW   | <b>Huntsham Mischief 13</b> | 23/11/2023 | VMR/5148 |             | 0.0076      |
| Average in breeding of Middle White Boars in the Genebank |                             |            |          |             | 0.0152      |

| Current Boar | New Boar  | IB coefficient |
|--------------|-----------|----------------|
| CSC/1        | R003896MW | 0              |
| CVM/297      | R003896MW | 0.0166         |
| R000472MW    | R003896MW | 0.0078         |
| R000702MW    | R003896MW | 0              |
| R000937MW    | R003896MW | 0              |
| R002187MW    | R003896MW | 0.0056         |
| R003274MW    | R003896MW | 0.0073         |
| R003537MW    | R003896MW | 0.0198         |
| R003642MW    | R003896MW | 0.0109         |



Huntsham Mischief 13

and the final two Oxford Sandy & Black boars **Tan Clarence 7** and **Brookhall Clarence 7**

| HB Reg No                      | Name                      | DOB        | Ear No  | IB coeff. 1 | IB coeff. 2 |
|--------------------------------|---------------------------|------------|---------|-------------|-------------|
| R001363OS                      | Macnean Jack 227          | 07/08/2009 | GGs/227 | 0.0253      | 0.0232      |
| R001469OS                      | Bissettdown Alistair 11   | 18/10/2009 | RHE/346 | 0.0374      | 0.0338      |
| R003639OS                      | Hope cottage Clarence 337 | 02/03/2015 | MZJ/337 | 0.038       | 0.0366      |
| R003866OS                      | St Piers Alexander 253    | 26/08/2016 | NCY/253 | 0.0234      | 0.0212      |
| R004599OS                      | Scrubditch Alexander 54   | 11/08/2018 | KLv/54  | 0.0391      | 0.036       |
| R004693OS                      | Manorfields Jack 771      | 18/03/2019 | CGH/771 | 0.049       | 0.044       |
| R004885OS                      | Waywood Alexander 23      | 16/04/2020 | WDW/23  | 0.0281      | 0.0297      |
| R005283OS                      | Fenny Alistair            | 07/11/2021 | VKF/1   | 0.0266      | 0.0292      |
| Average inbreeding in the tank |                           |            |         | 0.0333      |             |
| R005635OS                      | Tan Clarence 7            | 30/01/2024 | FNG/603 |             | 0.0201      |
| Average inbreeding in the tank |                           |            |         |             | 0.0304      |

| Current Boar | New Boar  | IB coefficient |
|--------------|-----------|----------------|
| R001363OS    | R005635OS | 0.0083         |
| R001469OS    | R005635OS | 0.0083         |
| R003639OS    | R005635OS | 0.0264         |
| R003866OS    | R005635OS | 0.0061         |
| R004599OS    | R005635OS | 0.0146         |
| R004693OS    | R005635OS | 0.0085         |
| R004885OS    | R005635OS | 0.0413         |
| R005283OS    | R005635OS | 0.0474         |



| HB Reg No                      | Name                        | DOB        | Ear No  | IB coeff. 1 | IB coeff. 2 |
|--------------------------------|-----------------------------|------------|---------|-------------|-------------|
| R001363OS                      | Macnean Jack 227            | 07/08/2009 | GGs/227 | 0.0232      | 0.0211      |
| R001469OS                      | Bissettdown Alistair 11     | 18/10/2009 | RHE/346 | 0.0338      | 0.03        |
| R003639OS                      | Hopecottage Clarence 337    | 02/03/2015 | MZJ/337 | 0.0366      | 0.0377      |
| R003866OS                      | St Piers Alexander 253      | 26/08/2016 | NCY/253 | 0.0212      | 0.0223      |
| R004599OS                      | Scrubditch Alexander 54     | 11/08/2018 | KLv/54  | 0.036       | 0.0334      |
| R004693OS                      | Manorfields Jack 771        | 18/03/2019 | CGH/771 | 0.044       | 0.0399      |
| R004885OS                      | Waywood Alexander 23        | 16/04/2020 | WDW/23  | 0.0297      | 0.0282      |
| R005283OS                      | Fenny Alistair              | 07/11/2021 | VKF/1   | 0.0292      | 0.0283      |
| R005635OS                      | Tan Clarence 7              | 30/01/2024 |         | 0.0201      | 0.0203      |
| Average inbreeding in the tank |                             |            |         | 0.0304      |             |
| R005595OS                      | <b>Brookhall Clarence 7</b> | 01/09/2023 | KBG/314 |             | 0.018       |
| Average inbreeding in the tank |                             |            |         |             | 0.0279      |

| Current Boar | New Boar  | IB coefficient |
|--------------|-----------|----------------|
| R001363OS    | R005595OS | 0.0046         |
| R001469OS    | R005595OS | 0              |
| R003639OS    | R005595OS | 0.0469         |
| R003866OS    | R005595OS | 0.0313         |
| R004599OS    | R005595OS | 0.012          |
| R004693OS    | R005595OS | 0.0071         |
| R004885OS    | R005595OS | 0.0163         |
| R005283OS    | R005595OS | 0.0215         |
| R005595OS    | R005635OS | 0.0222         |



Brookhall Clarence 7

We have also added the last of four boars that were saved when the Earl Of Plymouth herd was dispersed. This herd represented a unique pool of genetics and we felt it was important to secure a boar of each line for the genebank.

| HB Reg No   | Name                           | DOB        | Ear No   | Mean 1 | Mean 2 |
|---|--------------------------------|------------|----------|--------|--------|
| BSM/484   | Kilcot Rufus 4                 | 07/01/2002 | BSM/484  | 0.038  | 0.0351 |
| EXE/30  | Greenan Sambo                  | 01/12/2000 | EXE/30   | 0.0442 | 0.0408 |
| R001153GS   | Alsa Gerald 451                | 01/01/2005 | KCE/451  | 0.0132 | 0.0122 |
| R001685GS   | Greenan Rufus 4                | 20/05/2004 | EXE/160  | 0.0346 | 0.0319 |
| R003320GS   | Windmill Patrick 6             | 25/01/2007 | HCR/1348 | 0.019  | 0.0177 |
| R004202GS   | Deerpark Patrick 2             | 31/10/2007 | ROA/2    | 0.0183 | 0.0169 |
| R009570GS   | Donagheragh Sambo 13           | 15/02/2014 | KBB/13   | 0.0312 | 0.0288 |
| R009840GS   | Pebblesford Gerald 722         | 05/07/2014 | LHC/722  | 0.0086 | 0.0079 |
| R010731GS   | Winterwood Patrick 16          | 16/01/2017 | SJA/1491 | 0.0107 | 0.0098 |
| SSG/80  | Whinneyhill Sambo 3            | 06/02/2003 | SSG/80   | 0.0286 | 0.0264 |
| R012758GS   | <b>Felton Gerald 6458</b>      | 31/03/2022 | EOP/6458 | 0.0074 | 0.0107 |
| R012887GS   | <b>Donagheragh Patrick 110</b> | 16/05/2023 | KBB/110  | 0.0083 | 0.0097 |
| R012888GS   | <b>Donagheragh Rufus 153</b>   | 22/05/2023 | KBB/153  | 0.0097 | 0.0111 |
| Average inbreeding of Gloucestershire Old Spots boars in the genebank |                                |            |          | 0.0209 |        |
| R013039GS   | <b>Balsham Sam 13</b>          | 11/10/23   | KMM/1548 |        | 0.008  |
| Average inbreeding of Gloucestershire Old Spots boars in the genebank |                                |            |          |        | 0.0191 |

| Current Boar | New Boar  | IB coefficient |
|--------------|-----------|----------------|
| BSM/484      | R013039GS | 0              |
| EXE/30       | R013039GS | 0              |
| R001153GS    | R013039GS | 0              |
| R001685GS    | R013039GS | 0              |
| R003320GS    | R013039GS | 0.0015         |
| R004202GS    | R013039GS | 0              |
| R009570GS    | R013039GS | 0              |
| R009840GS    | R013039GS | 0              |
| R010731GS    | R013039GS | 0              |
| SSG/80       | R013039GS | 0              |
| R012758GS    | R013039GS | 0.0493         |
| R012887GS    | R013039GS | 0.0262         |
| R012888GS    | R013039GS | 0.0274         |



**Balsham Sam 13**

Table 22 shows the latest version of Table 9 above

| Table 22 – Completion of initial phase of the programme in 2024 |       |             |                  |                  |
|---|-------|-------------|------------------|------------------|
| Breed   | Boars | Total Lines | Lines to Collect | Boars to collect |
| Total BK  | 10    | 7           | 0                | 0                |
| Total BL  | 11    | 11          | 0                | 0                |
| Total BS  | 16    | 14          | 0                | 0                |
| Total GS  | 14    | 4           | 0                | 0                |
| Total LB  | 10    | 6           | 0                | 0                |
| Total LW  | 12    | 10          | 0                | 0                |
| Total MW  | 10    | 5           | 0                | 0                |
| Total OSB   | 10    | 4           | 0                | 0                |
| Total TW  | 10    | 8           | 0                | 0                |
| Total WE  | 11    | 11          | 0                | 0                |
| Total Collected   | 114   | 80          | 0                | 0                |

More than 7500 straws of semen each containing approximately 6 billion sperm cells have been frozen and stored from 114 boars.

Our target is to freeze 60 straws from each boar. On average we find that we need 6 collections from the more improved breeds such as the British Landrace, the Large White and the Welsh. This figure increases to 10 to 12 collections for the traditional breeds such as Berkshire, Oxford Sandy & Black and Tamworth.

Three Mangalitza boars have also been included in the programme but as they are not a UK native breed they are not included in the joint BPA / RBST programme. Semen from these boars has been exported to Canada and used successfully we hope that in future it may be possible to share Genebanking resources for this breed with other European countries. We have noticed that the Mangalitza boars in our programme have produced relatively low volumes of sperm rich ejaculate with lower semen density than most other breeds.

Quality control is vital. The cost of long-term storage in liquid nitrogen is one of the biggest burdens that NGO's undertake in building genebanks without government support. They must be sure that the material they are paying to store will be viable if and when it is needed. The quality control programme at Deerpark requires that one straw from each collection is sampled after a minimum of 48 hours. The semen when thawed must have at least 60% to 70% motility. If it does not meet this target a second straw will be thawed after 7 days. If this second straw also fails to meet the standard the whole collection will be discarded. Experience has shown that boars will freeze well one day and poorly on another occasion. For this reason the selected boars remain in the AI centre until 60 viable straws have been frozen. Observation of the traditional native breeds suggests that the Berkshire breed always freezes well whereas the Tamworth breed can be less reliable.

Exports have played a key role in funding the project. Although BPA and RBST do not benefit from exports they are an important consideration for Deerpark as part of their commercial business and help to underwrite the cost of keeping boars in the AI centre for which there is little day to day demand. In some cases there have been specific orders for traditional breed boars which have tied in with the collections of boars for the UK genebank. In 2015 the Livestock Conservancy in the USA had a project to import semen

from Gloucestershire Old Spots and Large Blacks. We were able to bring boars into Deerpark for this export project and at the same time collect the semen for the UK genebank. Spreading the quarantine and collection costs across two projects was a win for all parties.

We have recycled semen from the genebank to field test the process. Litters have been produced from two of the original boars frozen in September 2001. The Large Black Ardymargh Super 5<sup>th</sup> and the Gloucestershire Old Spots boar Greenan Sambo 30<sup>th</sup> (NB the name of this boar line has been changed to Sam in the modern herdbooks.)

|  |   |
|--|---|
|   |   |
| Progeny born in 2013 from Large Black semen frozen in 2001                         | Progeny born in 2013 from Gloucestershire Old Spots semen frozen in 2001            |
|  |  |
| Progeny born in 2013 from Large Black semen frozen in 2001 winning prizes in 2014  | Progeny born in 2013 from Gloucestershire Old Spots frozen semen prizes in 2014     |

Boars from these matings were subsequently collected and frozen for the genebank and straws were exported to the USA.

Frozen semen is not currently used in the UK for breeding programmes but the export business developed by Deerpark provides great reassurance on the viability of the stored semen. To date Deerpark have exported more than 20,000 straws of frozen porcine semen to China most of which has been used in breeding programmes. Table 23 lists the countries that have had successful imports

| Table 23 - Countries where Deerpark frozen has been used successfully |       |          |              |          |
|---|-------|----------|--------------|----------|
| Canada  | India | Malaysia | Philippines  | Thailand |
| China   | Japan | Nepal    | Rwanda       | USA      |
| Falkland Islands  | Kenya | Nigeria  | South Africa | Zimbabwe |
| Ghana   |       |          |              |          |



One farm in the Philippines only imports Berkshire semen and they achieve conception rates of 75% to 80%.

One of the potential flaws in the funding model used for this project is the sale of fresh semen. Sales of fresh semen to breeders helps to underwrite the costs of collections but is also means that the boars in the genebank will be used in the live population and produce progeny. This will mean that they may be more closely related to the in-situ population than boars which might be collected only for the core collection of a national genebank.

There are 114 boars in the genebank of which 5 have not yet been made available for fresh semen sales. Of the 109 that could have produced registered progeny in the herdbook there are 80 with male progeny and 84 with female progeny. 21 out of the 109 have no male or female progeny. There are 9 boars that have over 50 registered progeny in the herd book shown in Table 24. In some cases this is the only boar from this bloodline and so it could be considered a priority to add another boar from that bloodline.

| Table 25 - Boars in the genebank with more than 50 registered progeny in the herdbook |                |                            |            |    |     |       |
|---|----------------|----------------------------|------------|----|-----|-------|
| Breed   | Line           | Name                       | DOB        | M  | F   | total |
| B. Saddleback   | Rajah          | Edenboro Rajah 6           | 06/08/1992 | 9  | 65  | 74    |
| B. Saddleback   | Golden Arrow   | Victoria Golden Arrow 165  | 02/02/2005 | 10 | 48  | 58    |
| B. Saddleback   | Prefect        | Blewett Prefect 86         | 23/01/2008 | 28 | 117 | 145   |
| G. Old Spots  | Gerald         | Alsa Gerald 451            | 01/01/2005 | 20 | 42  | 62    |
| G. Old Spots  | Patrick        | Windmill Patrick 6         | 25/01/2007 | 31 | 79  | 110   |
| G. Old Spots  | Patrick        | Winterwood Patrick 16      | 16/01/2017 | 14 | 36  | 50    |
| Large White   | Champion Boy   | Trepaze Champion Boy 14    | 29/10/2011 | 17 | 49  | 66    |
| Middle White  | Mischief       | Westham Mischief 567       | 20/08/2006 | 22 | 49  | 71    |
| Tamworth  | Royal Standard | Stonemoor Royal Standard 6 | 26/02/2005 | 18 | 82  | 100   |
| Welsh   | Emperor        | Birdcombe Emperor 45       | 14/10/2006 | 19 | 64  | 83    |

### What next for the UK native pig breeds genebank

The first consideration for the project will be how to fund the long-term storage of the semen that has already been collected. A project of this scale cannot afford the economies of scale that large scale government funded genebanks enjoy. Semen is typically stored in 35 litre liquid nitrogen tanks with a maximum static holding time of 130 days. The cost of storing more than 7500 2.5ml straws will be in the region of £10,000. In addition the UK Genebank contains several tanks containing tubes of pelleted frozen semen dating back to the early 1980's which will add another £2,000 per year. The portable storage tanks being used by the project have a life expectancy of 10 years. This means that the at least one tank will have to be replaced every year at a cost of £2,000. This brings the estimated annual costs for storage to around £14,000 per year. To generate this amount of income a charity in the UK would have to have an investment fund of approximately £350,000.

The next consideration would be what to keep. The 7500 straws from the new project are obviously a priority but the long-term storage of pelleted semen which may have limited viability is a decision that must be addressed.

Finally the project must consider what should be the next steps.

- Should we continue to work towards 25 unrelated sires as recommended by FAO guidelines?
- Can in-situ conservation measures reduce the risk of losing the entire population of a breed and if so how can this be incorporated ~~calculated~~?
- If we continue to add to the genebank what material should we be adding and how should we select the candidate animals?
- Can we collect embryos? Recent work at the University of Murcia in Spain has shown promise for frozen porcine embryos.
- Could we collect oocytes for future in vitro fertilisation and maturation? Recent work at the University of Canterbury in England has been developing these techniques.
- If we continue to collect gametes how should we select the candidates?
- Having secured the bloodlines should we move to selection process based on DNA profiles to capture the maximum genetic diversity? If so what would be a reasonable target for each breed and how could this be calculated?

## Conclusions

The UK is almost unique in major European countries in that it has no state supported Genebanking for native livestock breeds.

NGO's first attempted to fill this gap in the 1980's but problems were encountered and the technology was for freezing porcine semen was still being developed.

In 2001 the threat of Foot and Mouth disease coupled with improvements in the technology for Genebanking persuaded the Not-for-Profit sector in the UK to try again and create a genebank for native pig breeds based on semen frozen in 2.5ml straws.

A unique partnership between two NGO's, the British Pig Association and the Rare Breeds Survival Trust and a commercial AI centre Deerpark Pedigree Pig was formed.

Various funding models were explored but in the end the project relied on the goodwill of the commercial partner to take almost all of the commercial risk.

Between 2001 and 2024 the partnership succeeded in collecting over 7500 straws of frozen semen from 114 boars across 10 native breeds.

Long term storage costs remain a challenge for the NGO's.

A range of future options for the project need to be explored but without government support it is unlikely that many of the more ambitious aims for the genebank can be undertaken by small not for profit charities.

Twenty-five years ago the British Pig Association was reconstituted as independent organisation responsible for the conservation of ten of the UK native pig breeds. Thanks to the vision of our former Chairman, Robert Overend MBE and the support of his family we have, in partnership with the RBST, been able to build a genebank that will serve as a lasting legacy to his work. We have also provided a degree of security for our native breeds that we could only have dreamed of in the dark days of 2001.