



GOODWOOD

# GOODWOOD SUSTAINABILITY



2022 REPORT

# FOREWORD

At Goodwood we recognise that our future is entwined with authenticity, sustainability, and the protection of our natural capital. As part of delivering Goodwood's strategic purpose to grow our social, environmental, and economic contribution, we are proudly committed to several long-term sustainability projects, driven by a pressing ambition to become a carbon positive estate. This year, across all our business areas, we planned and delivered further initiatives to move us towards our goal.

In 2022 Goodwood were delighted to extend our long-standing partnership with Rolls-Royce Motor Cars as we join forces in a new collaboration focussed on sustainability projects. This new venture will enable us to work together for many years to come in preserving and enhancing biodiversity across the estate, as well as supporting projects that benefit the local community, especially regarding access to and enjoyment of the natural environment. Our new partnership with Rolls-Royce has already nurtured successful initiatives such as native wildflower seed harvesting and tree planting schemes. This collaboration is key to increasing biodiversity and using nature-based solutions that benefit the whole estate.

We understand the environmental challenges of running a commercial estate, balancing the need of reaching our carbon neutral goals and commercial targets. Climate change has undoubtedly highlighted some challenges, we continue to adapt as expectation and the environment continues to change and this allows us to prioritise what is important to us and our rural communities.

Everyone at Goodwood is focussed on sustainability actions, as well as helping to action current initiatives and lead the way for 2023 and beyond. We have been working closely with both local and international experts within their fields of expertise which included; One Carbon World, South Downs National Park, Sussex Wildlife Trust, Natural Capital Research, Natural England, Forestry England and Historic England.

Ours is a holistic approach to sustainability, focused on protecting the social and ecological value of the estate, and reducing our carbon footprint. The estate will continue to meet the challenges of climate change with creativity and innovation and by pursuing bold ambitions around sustainability and eco-friendly processes, we are ensuring that future generations can cherish Goodwood as we all do.

**The Duke and Duchess of Richmond and Gordon**





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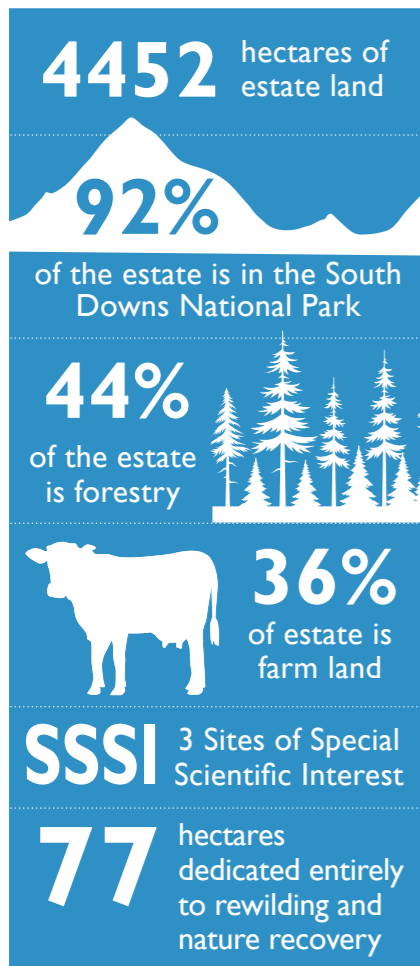
2023 and Beyond

# EXECUTIVE SUMMARY

## THE ESTATE'S ASSETS

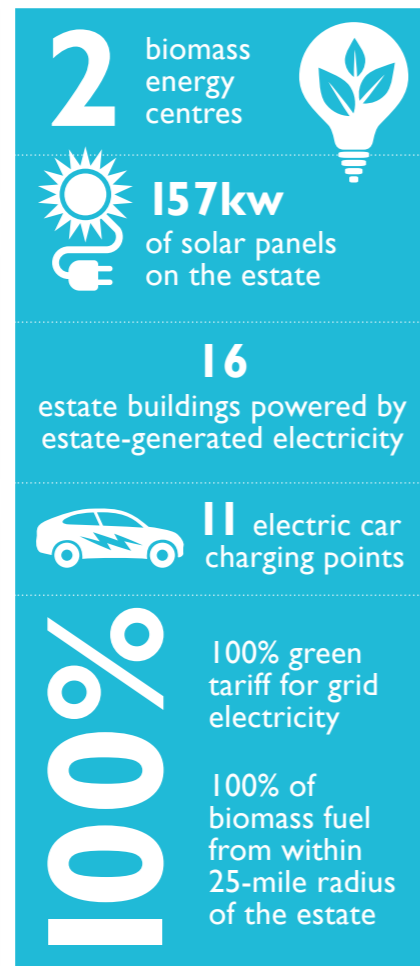
### Natural Capital

the resources and environmental features of the estate include plant and animal life.



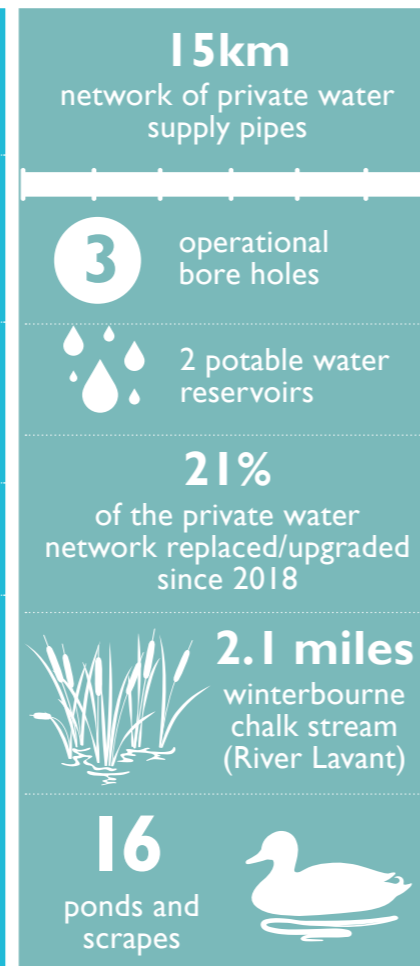
### Carbon

the measurement of our emissions and carbon footprint in addition to our use of green energy.



### Water

the natural water features of the landscape as well as our manmade supply and irrigation systems.



*This annual sustainability report covers six key aspects of the estate. The table below illustrates in each area the estate's key assets, which are the bedrock of our sustainable operations and underpin the annual sustainability initiatives and improvements summarised overleaf and in the chapters that follow.*

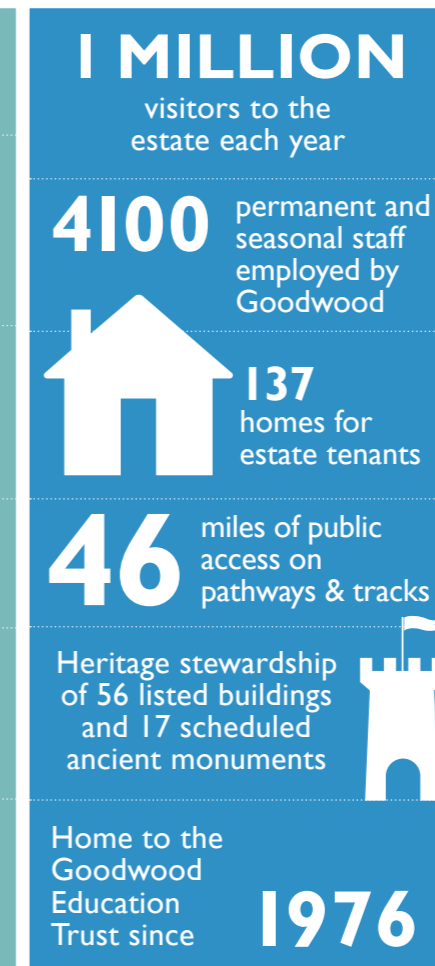
### Business

the relationship between the individual business units and the estate as a whole as well as supply chains and procurement.



### Social

community and charity collaboration including fundraising and local educational and social projects.



### Waste

considers resource management and the ways of prolonging the life cycle of materials we use.





**ISO20121** sustainability accreditation for all major events

# EXECUTIVE SUMMARY HIGHLIGHTS AND ACHIEVEMENTS 2022




## Natural Capital


36,550 trees planted across the estate 

Evidence found of rare cetti's warbler nesting 

18 new bird and bat boxes installed


82 new botanical species identified at Hound Lodge 

Botanical survey carried out at SSSI


Monitoring of bat movements and habitats – 13 species found on the estate 


Increased use of homegrown produce in kitchens

## Carbon


2,382,000 KWh of electricity was generated at the biomass plant 

Biomass power has now been connected to 13 new locations


5800 waste straw bales recycled into renewable electricity 

4,000 hours of charging time for electric vehicles 

65% of event generator fuel is HVO

Event generator fuel usage decreased by 24% from 2021 

Trials of futuristic synthetic fuels at the major events

Increased use of all-electric vehicles on the estate and at events 

## Water

Replacement of 3.2km of trunk mains (21% of private network supply) 

Introduction of drought-responsive watering initiatives across the estate during summer

Goodwood Racecourse installed a new, more efficient irrigation system for the course

Our events increased their number of complimentary water fountains across all sites

## Business

New sustainability partnership with Rolls-Royce Motor Cars 

Goodwood Hotel won 'Most Sustainable Business' award 

Racecourse Grounds Team won 'The Professional Racecourse Grounds Team of the Year' 

Goodwood Motor Circuit is sustainability 'sector leader' across all UK circuits

4 awards won for Goodwood's own Farm Shop produce 

Hosted 30 apprenticeship and work experience placements

3000 local people visited Goodwood Home Farm Open Day

## Social

1693 students accessing Goodwood Education Trust

Charity total raised by Goodwood **£880,292**

Community projects for local schools and interest groups including collaborative planting 


89% of the temporary and casual staff employed at the events came from within a 25-mile radius

Discovery of a Romano-British Temple complex including two rare Neolithic oval barrows 

Fruit and nut orchard planted in 2020 in Westerton was a fruiting success 

4174 members of seasonal staff helping at events

## Waste


Events have removed disposable plastic drinks cups from bars and concessions 

Motor Circuit installed 1500sqm tarmac patches made from recycled plastic bottles

Number of plastic bottles given out at events has decreased by 10% from 2021 to 2022

Events have reduced overall use of plastic water bottles by 20%

8,977tCO2e saved via WEEE recycling

The hotel and restaurant collect all cooking oil for HVO conversion 

4452 hectares of estate land

92%

of the estate is in the South Downs National Park

44%

of the estate is forestry



36% of estate is farm land

SSSI 3 Sites of Special Scientific Interest

77 hectares dedicated entirely to rewilding and nature recovery



# 1 NATURAL CAPITAL

## Wildlife

- In the summer, we supported a wildlife research project conducted in the south of the estate. The headline finding was the discovery of evidence that a cetti's warbler had been nesting. The cetti's warbler is a small brown bush warbler that typically nests in the interface between scrub and reeds near water. It is a scarce UK breeding bird with an unconfirmed UK breeding population.
- The research project also found breeding evidence of the following: grey wagtail (adults feeding two fledglings), whitethroat, greenfinch, goldfinch, chaffinch, linnets and yellowhammer. The linnets, yellowhammer and greenfinch are all classified as red in the Birds of Conservation Concern listing.
- There have been a number of important bird sightings elsewhere on the estate. At the beginning of the year, our Forestry Manager witnessed a spotted flycatcher near Home Farm and a honey buzzard flying over the trees of Redvins woodland. Additionally, two of the white-tailed eagles from the Isle of Wight reintroduction programme were seen together at Molecomb, exhibiting early signs of pairing behaviour. Whilst they have set up a feeding territory in the nearby Arun Valley, it is hoped that they may consider the more secluded forests at Goodwood for their first nesting site in due course. We know from tracking data that the birds sometimes roost on the estate.
- For many years, Goodwood has been working together with Brent Lodge Bird and Wildlife Trust in nearby Sidlesham, providing a slow-release programme for injured or orphaned young birds. The estate provides the last step of the recovery process, housing the birds in a secure enclosure in the woods for a few days while they slowly adjust to their surroundings before being released into the wild. We have released a number of birds of prey – four tawny owls, two barn owls and one kestrel – along with smaller birds such as three blackbirds, three robins, nine blue tits, six great tits and one starling.

*Goodwood's natural capital is the foundation of both the estate's wildlife and all the activities that take place here. Our natural capital encompasses many forms: wildlife, trees, plants, and soil. The sustainability of Goodwood's diverse landscape – farmland, woodland, waterways, managed gardens and recreational areas – is vital to preserve and protect it for future generations.*

*It is encouraging that we continue to see rare species on the estate. With our land management plans in place, we can continue to provide, enhance, and protect these special habitats for better biodiversity.*



Photo: Daniel Whitby

- 13 different bat species have been identified at Goodwood, including lesser horseshoe bat (*Rhinolophus hipposideros*), Grey long-eared bat, (*Plecotus austriacus*), Leisler's bat, (*Nyctalus leisleri*) and the rare Barbastelle bat (*Rhinolophus ferrumequinum*). We hope that by tracking these bats we will better understand their movements across the estate allowing us to encourage more species and greater biodiversity.
- Goodwood, with support from Rolls-Royce Motor Cars, is working together with a local ecologist and Chichester District Council to analyse the Barbastelle bat's flight patterns from their maternity roosts on the estate to their feeding grounds towards Chichester Harbour in the south. Studying the habitat use and movement of bats at Goodwood and the surrounding areas has helped us to better understand the wildlife corridors and core areas they are using. This, in turn, enables us to reinforce and improve these habitats so that bats continue to use them for years to come. Data from this study has enabled Chichester District Council to formally adjust its protected wildlife corridor near the Motor Circuit/Rolls-Royce Motor Cars facility to align with the proven movements of the studied bats. This conservation project will be continued in to 2023 with further results to follow.
- Due to changes in our woodland management plan, we have noticed an increased number of rare purple emperor butterfly sightings by various staff members interested in ecology during the summer months. Making woodland management improvements such as widening the woodland ride edges allows more light to reach the forest floor and creates a more diverse and dynamic habitat, enhancing biodiversity. The purple emperor is particularly notable because it is protected in the UK under the Wildlife and Countryside Act, 1981.

- As part of our Woodland Management Plan we have created log piles for insects, wildflower areas and installed around 18 new bird and bat boxes across the estate.
- Over recent years we have observed that the health of the deer population on the estate is declining. This is largely due to over-population where there are no natural predators. With such large deer numbers on the estate, the damage across different business areas is substantial – grazing pressures are seen to be negatively affecting Forestry, Golf, the Shoot and the Farm. In response to this, a deer management strategy has been implemented and we have employed a deer stalker, who closely monitors and regulates the rising population of deer across the estate, whilst also providing a steady flow of wild, sustainable venison for our Farm Shop and kitchens. All of the meat from the carcass is used in the process and becomes a sustainable source of produce allowing us to invest back into the deer management programme. Management of these mammals is not only essential for the protection of the ancient woodlands but it also reduces the negative impacts these animals have on the ecosystem as a whole and ultimately improves the health and welfare of the local deer population. Effective and consistent management means that the animals do not suffer health problems such as malnutrition, high incidence of death from exposure to cold in winter and low body fat. By the end of 2022, we culled 235 deer and have since noticed an improvement in the health of the remaining population.
- The estate is supporting a student at the University of Brighton with their research project on badger sett disturbance. The research aims to validate the existing mitigation measures relating to the avoidance of 'disturbance' when badgers are occupying a sett. The research is taking place across the estate currently and over the coming months; we expect findings to be reported in 2023.
- The Golf at Goodwood Team created a new 'hibernaculum': a type of shelter used by many kinds of animals, including insects, toads, lizards, snakes, bats and rodents. A hibernaculum is beneficial to an ecosystem in providing a hub for insects and smaller species, offering both protection from the elements and encouraging them to reside on the estate. Our Motor Circuit Team also built a series of bug hotels for the insects there to shelter, lay their eggs and protect themselves from predators.
- Goodwood is home to a total of 16 bee hives; six are managed by Rolls-Royce Motor Cars at their headquarters, the estate manages four and the remainder are looked after by local enthusiasts. This means that, during the summer months, almost a million bees are resident in the hives at Goodwood and are busily pollinating the wild flowers, fruit trees and organic crops across the estate and local area.
- The bees provide our hotel and in-house kitchens with all the local honey they need. Whilst, the produce from the Rolls-Royce Motor Cars hives is perhaps the most exclusive honey in the world, being supplied only to owners of Rolls-Royce cars on the occasions when they visit the factory.
- Shortly before the Festival of Speed, our dedicated estate beekeeper managed to successfully relocate a swarm of bees that had taken up residence in a tree near to Goodwood House. They were moved to an empty hive in a more suitable and secluded location before 200k unsuspecting visitors descended on Goodwood Park for our biggest event of the year.

*The bees had settled in a tree by the Supercar Paddock. Obviously, they needed removing before Festival of Speed so I went up the tree in a cherry picker as it was about 20ft high and collected the swarm in my skep. I was able to put them in a portable hive at the bottom of the tree and leave them to fly all day before going back and picking them up in the dark. They are now happily settled in my garden!”*

*Jo Ambrose, Goodwood Beekeeper*

## Trees

- In partnership with Rolls-Royce Motor Cars, the first phase of a new tree planting scheme from Halnaker village in the east of the estate to Lavant village in the west has taken place, with a total of 21,000 trees planted in a 20m wide rue along the northern edge of New Road. This planting scheme follows the boundary of the South Downs National Park and links together the wildlife corridors heading north from Chichester Harbour, an Area of Outstanding Natural Beauty. The scheme has been delivered to enhance the south of the estate for the benefit of both wildlife and the local community.
- The trees are mainly native broadleaf species including, oak, beech, hornbeam, field maple, sweet chestnut, small-leaf lime and wild service, with understory planting of hazel, spindle, box, holly and privet. We also have a handful of non-native curiosities such as zelkova, london plane and disease-resistant elms. We carried out the planting without any tree guards in order to minimise waste from single-use plastics. This does put the trees at much greater risk from deer browsing, so we are trialling the effectiveness of a few non-plastic guards as well as deer repellent sprays.
- Staff participation is always a fundamental part of our major planting projects and this one was no different, with staff from all across the estate taking a turn, some even bringing their young families to learn more about this exciting project.
- Phase 2 of this scheme will see another 50,000 trees planted in the winter of 2023, making it the second 75k-tree planting scheme delivered in this part of the estate since 2019.
- As each phase of scheme is completed, a new permissive path will be opened through the plantation, improving access to the countryside for the local community.
- In addition to the Halnaker-Lavant scheme, Goodwood has worked on two further tree planting schemes in conjunction with DEFRA, The Tree Council, the Ministry of Housing, Communities and Local Government, Forestry Commission, Natural England, Highways England, Network Rail and Chichester District Council. The first scheme, The Subsidised Tree Planting pilot, looks to tackle climate change and boost biodiversity by establishing novel ways to increase tree planting in cities, towns, and the countryside. We used this scheme specifically to increase the number of trees within our farmland, planting 3,500 trees in fields in the south of the estate.
- The second project – the Promotion of Trees Outside of Woodlands Project 2020-2023, run by the Chichester District Council – enabled us to create a wildlife corridor along the public footpath from Church Farm to Summersdale, with hedges either side of the path and standard trees every 15 metres. This comprised a native hedge mix of predominantly hawthorn and blackthorn, plus five other native species. The standards are a mixture of locally grown fruit trees, beech, hornbeam, oak and small-leaf lime. The aim is to provide extra shade and a shelterbelt for the livestock within the fields, plus greater protection for the livestock from loose dogs, which has resulted in cases of spooked cattle breaking out of the field.





- In collaboration with Chichester District Council, a further 55 trees of mainly fruit species were planted for local community projects in Lavant and Westerton to provide future foraging. These trees are protected with fencing as well as tree guards and mulch. The estate particularly values being involved with these community projects, working in collaboration with local stakeholders to enhance the surrounding environment.
- To help with future planting projects, we have harvested a bumper crop of acorns this autumn from mature trees. With help from the Goodwood Education Trust, attendees are going to grow acorns in pots so that seeds found on the estate are grown on with care to be planted in areas where they are most needed. We have discovered that whips grown from estate trees are best suited to the local environment and grow more successfully than those brought in. We therefore grow as many as we can with the resources available.
- To finalise our tree planting projects in 2022, Goodwood planted 1,000 trees along the new water pipe to the Racecourse reservoir to reinstate the original tree line.
- Unfortunately, in 2022 the estate was informed by the Forestry Commission that there was an immediate risk identified to our non-native commercial spruce trees in the form of a European beetle (*Ips typographus*) which has been making its way north and west from Dover for the last three years. In recent months, the Forestry Commission has introduced a demarcated area around the confirmed outbreak sites, restricting the movement and methods of forest operations. As the estate is deemed a future risk area our estate Forestry Team is implementing a mitigation plan. We have approximately 40 hectares of spruce trees in single species compartments and a further 20 hectares of spruce in mixed compartments where the spruce was a nursery crop for the Beech. To reduce the risk of infestation, we have embarked on a phased felling of our spruce trees, beginning with the mixed compartments. To ensure that the wood is not wasted, it is being used to provide green energy for the estate via our biomass energy centre. The felled trees will create light and space for natural regeneration from the seed bank in the ground, ensuring new trees are native to the local area and promoting a resilient woodland in the future.
- The estate implements a rolling programme of traditional hedge laying each year, with a further 250 metres laid in autumn 2022 by a local artisan hedge layer. This is an ongoing strategic management plan of the estate's traditional hedgerows, which are important wildlife habitat. The flailing of hedges over time with machinery thins and weakens the hedges, so by laying the hedge is thickened at the base, making it stock proof for grazing animals and improving biodiversity. Laid hedges also act as barriers to windborne pests, and insects in the hedgerow pollinate crops, particularly bumblebees, which need hedge banks. The estate is also proud to support a group of retired countrymen called the Crumbles Conservation Volunteers, who have been laying hedges on the estate for many years, their most recent one being a hedge in Halnaker.
- Volunteers from the Rolls-Royce staff also turned their hand to some hedge-laying in the Rolls-Royce Motor Cars wildlife garden, following the guidance of Chichester District Council's Wildlife Corridor Project Officer. This traditional intervention will help the 20-year old hedge to mature into a dense habitat for the resident wildlife as well as a valuable food source for those passing along the wildlife corridor.



### Plants and Soil

- Following on from our 2021 collaboration with One Carbon World, we have spent 2022 assessing our farming practices to better understand the baseline assessment, with a soil sampling methodology to calculate the amount of carbon captured in our soils. This, partnered with consultancy support from One Carbon World, will increase our knowledge and improve our current practices to maximise carbon capture. The last phase of the project is to monitor carbon levels over several years through satellite assessment.
- In July, we conducted a botanical survey at one of the estate's SSSIs (Site of Special Scientific Interest). The survey concluded that the condition of this former chalkpit site was very positive, supporting a good range of calcicoles characteristic of a thin soil overlying chalk. Natural England-endorsed management activity, including carefully controlled leisure off-road driving and riding, has been employed at the site for decades, as many of the rare plants specialise in disturbed or bare soil or chalk. The strips made by the vehicle tracks offer the sort of periodic disturbance required to maintain a viable population of the extremely threatened Broad-leaved Cudweed (*Filago pyramidata*), for which this site is perhaps the most important in mainland Britain. In addition, a cordoned off area preserves suitable habitat for a range of notable calcicoles.
- Our expert botanist stated that 'There is only one other site in Great Britain which supports a comparable population of Broad-leaved Cudweed; and there are currently no other sites in Sussex. The species is historically a weed of arable land, but modern agricultural practices have virtually eliminated it. The environment of the Chalkpit evidently mimics to some degree an arable margin through its open aspect on a light, thin soil that is subject to some disturbance'.


- The estate's chalkpit is also host to several other noteworthy species of vascular plant, although none is as rare as the Broad-leaved Cudweed: Large Thyme (*Thymus pulegioides*), Basil-thyme (*Clinopodium acinos*), Lesser Centaury (*Centarium pulchellum*) and Blue Fleabane (*Erigeron acer*).
- Our band of keen orchid spotters have confirmed the presence of 10 species of rare orchids scattered across the estate, some of which are growing in abundance. The species list comprises of: Fly Orchid (*Ophrys insectifera*), Bee Orchid (*Ophrys apifera*), Green-winged Orchid (*Orchis morio*), Early Purple Orchid (*Orchis mascula*), Pyramid Orchid (*Anacamptis pyramidalis*), Common Spotted (*Dactylorhiza majalis*), Common Twayblade (*Listera ovata*), White Helleborine (*Cephalanthera damasonium*), Autumn Lady's Tresses (*Spiranthes spiralis*), Birdsnest Orchid (*Neottia nidus-avis*). We will continue to protect the species we already have and hope to see new species in the protected chalk meadows as a result of careful management.
- Earlier in the year, our Gardens Team took steps to become self-sufficient in the collection of our own wildflower seed, to make wild grassland improvement easier in future. During the summer, we collected by hand a stock of wildflower seed, focusing especially on Yellow Rattle (*Rhinanthus minor*). This is a semi-parasitic plant that can be used to restore monocultures of planted grassland back into a rich natural meadow by feeding off the stronger commercial 'sports turf' grasses, depriving them of nutrients and allowing more delicate native species to compete, which in turn supports a greater variety of wildflower species. Once established, Yellow Rattle will propagate naturally without assistance, which we hope will lead to exponential improvement of our verges and unmanaged grass areas.
- Our partnership with Rolls-Royce Motor Cars has allowed us to expand on our seed harvesting initiative through investment of a mechanised wildflower seed harvester, built to order in the autumn and due to arrive in time for Spring 2023. This tow-along harvester will help to increase efficiency of collection and will allow us to gather a wider variety of species from around the estate, to be planted in our lowland calcareous grassland as well as around the Rolls-Royce site. A few of the seed plugs may even find their way onto the Rolls-Royce factory's famous living roof in due course...


- Our Gardens Team also undertook a survey of plants in the grounds at Hound Lodge, our 10-bedroom country retreat with a mature landscape scheme including many native plants by the renowned designer Tom Stuart-Smith. The study revealed 82 flora species thriving in the landscape, which is excellent for biodiversity in both the immediate and surrounding area given that many of these species having wide-ranging seed dispersal strategies.
- Since 2020, we have followed a "no-mow" policy for our verges and open spaces where appropriate, which reduces carbon emissions from machinery and increases biodiversity along the roadsides. We have already seen increases in the number of wildflowers, insects and nesting birds in these areas.
- The Herb Garden and Agroforestry Area are in full operation supporting our field-to-fork restaurant – Farmer, Butcher, Chef. The hotel chef used kefir from Home Farm and honey from the estate's hives to make ice-cream for The Goodwood Health Programme. Goodwood's own Levin Down Gin is the standard gin served at the hotel and Farmer, Butcher, Chef.
- This year has seen the introduction of a system called 'bale grazing' for our Manor Farm and Charlton cows. It is a technique popular in regenerative farming and originates from New Zealand. Hay bales are placed all across the field in rows in the autumn, and the cattle are initially restricted to one end, with a water supply and a copse as shelter. The cows are then given access to 15 new hay bales every 3 days, slowly increasing their range across the field over the winter months until spring. They eat about 80% of the hay and the other 20% is trampled into the ground, along with lots of fertilising manure. Beneficial organisms such as protozoa are stimulated by the organic matter and increase the nutrient cycling process. Soil health is improved, resulting in decreased compaction, increased water infiltration, reduced runoff, increased worm numbers and improved soil structure. As well as the environmental benefits, there are economic benefits too: bale grazing can reduce the costs of labour, machinery and fossil fuels, relative to the strawing up and manure handling needed when cattle overwinter in sheds.



## Summary

- 36,550 trees planted across the estate
- Evidence found of rare cetti's warbler nesting
- 29 birds released in junction with local wildlife conservationists
- Botanical survey found 82 new species identified at Hound Lodge
- Botanical survey carried out at SSSI
- Monitoring of bat movements and habitats – 13 species found on the estate
- 235 deer used for venison in new deer management programme
- Increased use of homegrown produce in kitchens
- 18 new bird and bat boxes installed

**2** biomass energy centres 

**157kw** of solar panels on the estate 

**16** estate buildings powered by estate-generated electricity

**11** electric car charging points 

**100%** 100% green tariff for grid electricity

**100%** 100% of biomass fuel from within 25-mile radius of the estate



# 2 CARBON

We established our carbon footprint scope 1 & 2 and completed the SECR compliance documents for the 2021 financial accounts. The 2021 carbon numbers can be found in table 1.

Table 1: Streamlined Energy & Carbon Reporting 2021

Energy consumed (Gwh)	Total
UK Operations	5,357
Outside UK Operations	
Scope 1 and 2 emissions (000 tCO2e)2	Total
UK Operations	5,052
Outside UK Operations	
Intensity Ratio (tCO2e per £m revenue)	Total
	51.52

### On-Estate Operations

- In 2021, the estate introduced a new on-site biomass energy centre that uses straw bales left over from events and woodchip from the estate. The centre provides carbon neutral heat and power to many venues across the estate including the hotel, Goodwood House and a proportion of the Festival of Speed site. 2022 is the first full year that the system has been operational.
- Throughout the year, 13 additional properties have been connected to the private power network, making 16 buildings in total now powered by electricity from the energy centre, with most of those also provided with hot water.

*Carbon is a critical focal point of our sustainability strategy. Goodwood recognises its responsibility for the consumption of fossil fuels in both year-round estate operations and its world-class events. As a result, we are constantly reviewing ways to limit carbon emissions and mitigate the impact of changing climatic conditions.*

*From pioneering technological advances, to the movement of our visitors on site, our success depends on considering all aspects of energy use.*

*We encourage all event visitors to offset their journeys through our carbon offsetting scheme at the point of purchase. This year, we have used the carbon offsetting funds to plant and restore hedgerows on the estate, which will ensure long-term biodiversity gain and provide wildlife corridors between blocks of woodland.*

- The biomass facility generated 2,382,000 KWh of electricity in total over the year. This system helps the estate to be less reliant on the grid, and also reduces the estate's CO2 emissions by around 5,000 tonnes per year.
- In 2022, 5,800 leftover straw bales from the Festival of Speed were recycled into renewable energy at the biomass facility. A further 3,000 tonnes of woodchip fuel the boiler, half of which has been supplied direct from Goodwood's own forests, with the remainder coming from neighbouring farms and estates to support local businesses and keep road haulage miles to a minimum.
- The system produces about 10% waste in the form of ash, which we are able to use on the farmland as an organic alternative to chemical fertiliser.
- The 150kw of solar panels installed at the Motor Circuit produced 100,000kwh of green electricity in 2022, reducing our reliance on grid electricity and saved a spend of £30,000.
- The solar panels at the Kennels generated 5,000kwh, which is more than enough to power the fleet of electric golf buggies based there.
- When the estate renewed its grid electricity supply contract again for 2022, we once more took up a 100% green tariff. We expect to see our total consumption of grid electricity reduce over the next few years as a consequence of producing more renewable electricity from biomass and solar sources, as well as through efficiencies such as the phased replacement of the private water network to reduce pumping costs.
- Goodwood also introduced a revised energy conservation policy so that all staff are able to recognise and action energy saving initiatives, reducing individual utility usage and lowering greenhouse gas emissions.
- 2022 is the first full year of operation for our 11 electric vehicle chargers, which are based at the Motor Circuit and Goodwood Hotel. These chargers were in use for a total of 4,000 hours, delivering 41,788kWh of recharging. Goodwood is exploring further installations across the estate to encourage green and accessible usage for both staff and visitors.  
We have invested in two new electric vans for our maintenance teams. These vans are part of an 'electric first' procurement policy for vehicles and machinery as we seek to lessen our reliance on fossil fuels wherever a comparable alternative is available. In addition to the vans, the estate team also invested in battery-powered buggies, chainsaws, strimmers, leaf blowers, an electric mower and a hedge cutter to replace worn-out petrol and diesel equipment. While,

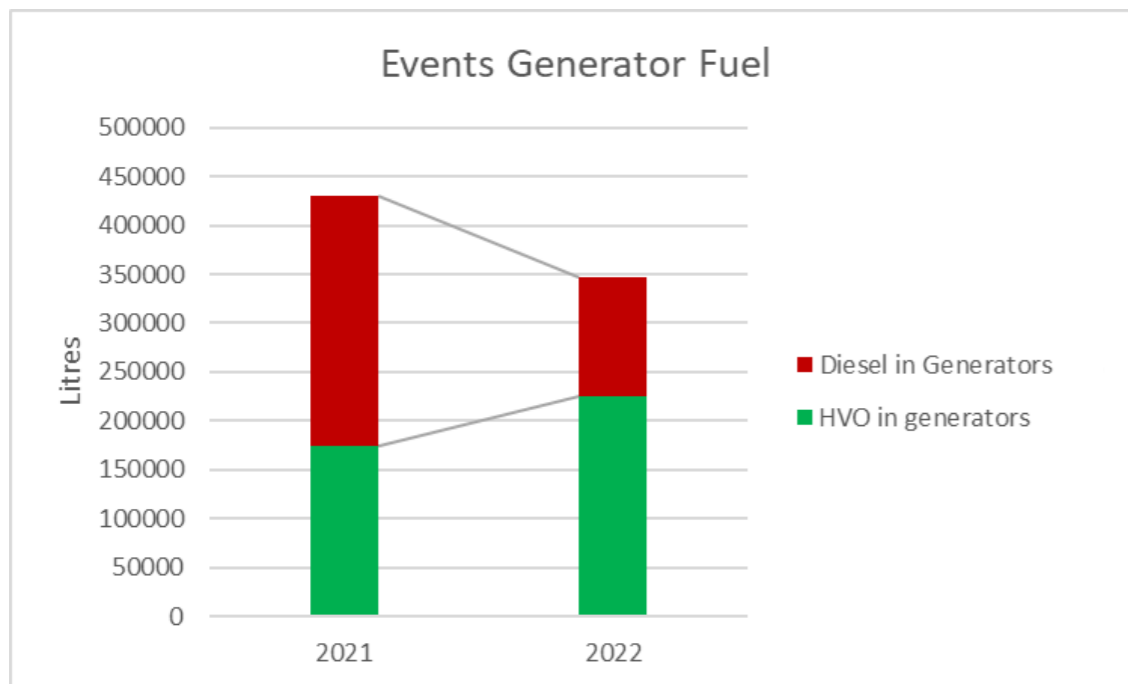
Golf at Goodwood has replaced a further three diesel triple mowers with five fully electric triple mowers, their original four hydraulic fairway mowers have been replaced with four diesel-hybrid mowers and eight diesel workman trucks were replaced with eight fully electric workman trucks. They also bought four battery powered blowers which have been used throughout the year.

- The Motor Circuit has been trialling an all-electric BMW saloon car for transporting guests, as well as two electric trials motorcycles for guest experiences on our off-road course. The two trials bikes have been loaned by Inch Perfect Trials for evaluation, and we plan to launch a range of self-ride experiences in 2023.
- Following a successful trial in 2021, a further 1,500sqm of the motor circuit's paddock has been resurfaced during 2022 using a unique tarmac made with recycled plastic. The plastic is used in place of refined crude oil as the binding agent to glue together the loose aggregate. This new surface recycled 1,101kg of waste plastics, which is the equivalent of 167,000 single use plastic grocery bags, offsetting 1,423kg of CO2 emissions.
- To reduce the use of carbon intensive machinery to keep the grass levels down, we have trialled the introduction of sheep in areas that are more difficult to reach with machines. Our first trial was done on The Duke and Duchess' private gardens. It was deemed very effective and as a secondary benefit sheep have recycled nutrients back into the soil.

### At Events

- At the 2022 Festival of Speed, a stunning new all-time hill record was set by an all-electric car, breaking a 24-year-old record by a petrol F1 car. Former F1 and IndyCar driver Max Chilton piloted the 1000bhp/tonne McMurtry electric fan car up the 1.16-mile course in 39.06 seconds, taking a scarcely believable 2.54 seconds from the previous best time.
- Setting a more sedentary pace was The Duke of Richmond's off-road motorcycle, which powered him around the event site all weekend using fully synthetic petrol made entirely from chemical reactions energised by renewable electricity. This new synthetic fuel was trialled in collaboration with Zero Petroleum, the first British energy company to make whole-blend synthetic fuel. Zero Petroleum uses air, water and lots of electricity to obtain CO2 and hydrogen, which it then processes into synthetic hydrocarbons such as petrol. The technology is still at an early stage but is looking to offer a genuinely renewable solution for historic cars, as well as the aviation and sea freight industries for whom battery electric power is not yet viable.
- The Festival of Speed was also delighted to debut the Lightyear 0, the world's first long-range, production ready solar electric vehicle. This ground-breaking design is a technological trailblazer, enabling the car to recharge from the sun's energy while parked up or on the move. A more affordable new model, Lightyear 2, is already planned.
- Sustainable synthetic petrol also featured at the Goodwood Revival this year, with ARAMCO trialling a synthetic petrol blend described as '70% sustainable' in two pre-war race cars. Oxygen is removed from agricultural waste to create ethanol, which is then used to create methanol that can ultimately be turned in to gasoline. It was great to have trialled this new fuel in precious historic racing machinery under the testing conditions of a competitive race.

- The Events Team moved over to category 5 generators at the major events in 2022, which are the most efficient current specification. Generally, these produce around 40% less CO2 emissions and require up to 40% less fuel. This move coincided with a review of generator locations and connections, enabling us to reduce both the total number of generators on-site and reduce the size of those remaining by making more efficient use of their output. Where larger generators were needed for the busy event days, even these were replaced with smaller ones during build-up and breakdown.
- We were able to remove seven generators from the Festival of Speed completely by connecting infrastructure near the cricket pitch and Gate 1 headquarters to our biomass-powered private electricity network.



- Overall in 2022, our generator fuel usage decreased by 24% from 2021.
- Over the past two years, the events team have focussed their efforts on using a more sustainable fuel in their generators with an increase of 22% in overall HVO (hydrotreated vegetable oil) use. Overall, 65% of the generator fuel used at Festival of Speed and Revival was renewable HVO. However, the Members' Meeting became our first major event to run 100% of generators on HVO, setting a benchmark we are determined to match at the other motorsport events in 2023.
- We encourage all event visitors to offset their journeys through our carbon offsetting scheme at the point of purchase. This year, we have used the carbon offsetting funds to plant and restore hedgerows on the estate, which will ensure long-term biodiversity gain and provide wildlife corridors between blocks of woodland.
- The Festival of Speed used a fleet of all-electric shuttle vehicles to ferry guests to and from the Aerodrome.



## Summary

- 2,382,000 KWh of electricity was generated at the biomass plant
- Biomass power has now been connected to 13 new locations
- 5800 waste straw bales recycled into renewable electricity
- 4000 hours of charging time for electric vehicles
- 65% of event generator fuel is HVO
- Trials of futuristic synthetic fuels at the major events
- Increased use of all-electric vehicles on the estate and at events
- Event generator fuel usage decreased by 24% from 2021

**15km**

network of private water supply pipes

**3**

operational bore holes



2 potable water reservoirs

**21%**

of the private water network replaced/upgraded since 2018

**2.1 miles** winterbourne chalk stream (River Lavant)**16**

ponds and scrapes



# 3 WATER

- The estate faced a variety of challenges due to the prolonged drought as the country experienced the joint-hottest summer on record. The impacts were severe and wide-ranging, with the team working around the clock to prevent as much damage as possible. The Forestry Team spent early mornings repeatedly watering more than 100,000 recently-planted trees in a bid to protect our significant long-term investment in new trees; our Golf Team watered only the greens overnight to reduce the amount of water lost in the day due to evapotranspiration; water was saved by reducing irrigation to a minimum in all managed garden areas and using an overnight timing system where some watering was essential; and estate-wide we continue to use tougher drought-resistant grass seed at our sporting venues to minimise the need for irrigation in future.
- Following the extraordinarily hot summer, our Forestry Team created a series of scrapes (seasonally occurring ephemeral small ponds) within a recently-established rewilding area in the south-west of the estate. These scrapes allow rainwater to collect on the land rather than immediately run off, increasing percolation into the soil and ultimately the aquifer. These shallow-edged depressions are also extremely attractive to wildlife, providing habitat for invertebrates and feeding/drinking opportunities for birds and mammals.
- We also took action to improve groundwater water quality and reduce the flow of nitrates and other pollutants by placing a major tree-planting scheme across a known underground water course. This woodland, when established, will play a vital role in intercepting nitrates and sediment in its roots. The planting was supported by Forestry England as it will help to reduce nitrates flowing towards Chichester Harbour, a conservation area where nitrate levels are a growing concern.
- As part of an ongoing strategy of reducing water leaks across the estate's private water network, in the early months of 2022 we replaced 3,200m of trunk main piping

*Water management remains a fundamental aspect of maintaining the estate. Changing climatic conditions and new developments on the land mean that the demand and availability of water must be sustainable. Our aim is to achieve water neutrality: for every new development, total water use must be equal or less than before the development. The ongoing improvement of the estate's private water network allows better management of water waste.*

*90% of our water provision is from our own ground water sources, eliminating the 2,100 tonnes of carbon emissions were it supplied by mains.*

from The Kennels borehole to the reservoir at The Trundle. This work completed the first phase of a five-phase plan that began in winter 2018, meaning that 21% of the private network has now been replaced and upgraded for long-term benefit. Phase 2 will commence in spring 2023 when we plan to replace a further 1km of pipework supplying the reservoir in Goodwood Park.

- Alongside the water main project, the Racecourse installed a new irrigation system to improve water efficiency whilst maintaining its award-winning racing surface. This system comprises a new ring main around the track, plus two new water holding tanks.
- Another benefit of the investment in the water network is a considerable saving in electrical energy at the pumphouse. Aside from needing to pump less water due to reduced losses from leakage, the new pipe network has been redesigned to optimise flow, reducing turbulence and improving the pumps' energy efficiency.
- At our major events, we have increased the number of complimentary water fountains across the sites to encourage the use of refillable water bottles, thereby reducing waste plastic and delivery haulage of bottled water.
- Our Golf at Goodwood Team now uses only recycled water to wash their machines and equipment.

## Summary

- Replacement of 3.2km of trunk mains (21% of private network supply)
- Introduction of drought-responsive watering initiatives across the estate during summer
- Goodwood Racecourse installed a new, more efficient irrigation system for the course
- Our events increased their number of complimentary water fountains across the sites



Portfolio of **29**  
Goodwood businesses



**35,000**  
members of  
Goodwood Clubs

**107**

commercial event  
partnerships

**10**

leisure and  
recreation  
venues



**7**  
sports  
venues

**24**

local businesses as  
commercial tenants



# 4 BUSINESS

## On-Estate Operations

- In 2022 Goodwood were delighted to expand our long-standing relationship with Rolls-Royce Motor Cars as we join forces in a new collaboration focussed on sustainability projects. This new extension to our long-term partnership will enable us to work together for many years to come in preserving and enhancing biodiversity across the estate, as well as supporting projects that benefit the local community, especially regarding access to and enjoyment of the natural environment. In year one we have worked collaboratively to deliver a major tree-planting scheme; an ecological study of bats and their movement across the estate; an increase to the healthy population of pollinating bees; and investment in a wildflower seed harvesting programme to enable better propagation onto suitable wild grassland.
- Following one of the estate's biggest-ever business investments in 2021, our new biomass energy centre has now been completed, undergoing a 'shakedown' year of testing and refinement as we learn to optimise this complex system. The energy centre has been providing renewable electricity throughout the year, as well as hot water and room heating, allowing the estate to become more energy efficient and less reliant on both mains electricity and fossil fuel heat sources. A total of 16 properties have been linked up to and powered by the biomass system.
- Our property team has been investing in energy efficiency measures to improve the EPC ratings in residential properties across the estate. Works include additional insulation, improved windows, boiler upgrades and more energy efficient fixtures. 84% of the portfolio meets the current government requirement of an E rating or above – the remainder are older cottages currently with a historic exemption. We intend to explore more complex tailored solutions for these buildings for 2023.
- The Motor Circuit has added an environmentally friendly new offering in the form of guided pedal cycling tours as a corporate experience, using both traditional bicycles and e-bikes.
- In May, Goodwood Home Farm promoted its low intensity organic ethos to around 3,000 local visitors, including many children, as part of the LEAF Open Farm Sunday scheme. Goodwood Education Trust had some great feedback from the day: 'We had a great family afternoon out at Home Farm in Goodwood. It was great to meet the livestock and see how well they were looked after. Also lucky enough to meet a local beekeeper and take part in some great forest school activities. Love our local farmers' dedication to welfare for their animals and the environment.'

*The ability of Goodwood to be not just self-sustaining, but thriving is dependent on holistic business practices. It is imperative to make business decisions with both the preservation of the estate's heritage and the wellbeing of its teams at the forefront. We choose to work with sustainable local businesses wherever practical; from catering supplies to event equipment and services sourced via local suppliers. This includes our own Home Farm, which supplies most of the meat, milk, cheese and beer consumed at the estate's venues. As well as the reduced road miles, we believe in reinvesting back into the community by supporting and working with nearby businesses as much as we can to generate revenue for the local economy. Alongside the sustainability programme run by the Goodwood Senior Leadership Team, supported by both The Duke and Duchess of Richmond, career development and a major wellbeing programme are seen as a fundamental part of the business. The One Goodwood staff wellness scheme continues to benefit over 600 permanent staff members.*





- A new business opportunity beckons for Goodwood following the return of 330-acres of previously tenanted farm and buildings in the north of the estate. This land has been farmed non-organically by the same family for around 100 years, but with the tenant farmer electing to retire the land will now undergo organic conversion and the buildings renovated over the next few years for short-term holiday accommodation. Part of the holding will be allowed to rewild, with only low-intensity periodic grazing – this site is already used seasonally as a campsite and the estate hopes that a more nature-focussed environment will enhance the visitor experience. The holding returning to the estate’s stewardship is a great opportunity for Goodwood to maintain and restore the function of natural resources such as air, land, water, and biodiversity across the land.

#### At Events

- Thanks to an ongoing partnership with official water supplier, South Downs Water, all Goodwood events now use 100% recycled PET water bottles where bottled water is necessary, as this delivers a lower carbon footprint than recycled aluminium cans.
- The Revive & Thrive Village at this year’s Revival hosted workshops, demonstrations, exhibitions and talks that celebrated the joys of vintage and showcased the post-war skills used to refresh and revive pre-loved belongings. Crafting cabins explored a fresh take on heritage skills, alongside sewing workshops where people learned to ‘Make Do and Mend’.

#### Awards and Achievements

- Following its connection to the new biomass energy centre, Goodwood Hotel was delighted to win the ‘Most Sustainable Business’ award at the hospitality industry’s Catey Awards in London, which celebrate the best and brightest businesses and individuals in hospitality across the UK. Judges of the hospitality industry’s Catey Awards said The Goodwood Hotel was a “shining example of how to work towards becoming a green business” and praised its impressive 10-year sustainability strategy.
- The hotel was also shortlisted for the ‘AA Sustainable Award’ at the 2022 AA Hospitality Awards.
- Golf at Goodwood has been GEO certified for the fourth year running. To be eligible for certification, the Greenkeeping Team had to submit an extensive application that evidenced work in nature, water, energy, supply chain, pollution control and community. For the last two years, the team has not flailed a natural rough area or natural grass next to a woodland edge to see what comes out of the ground and as a succession experiment. As a result, 20 different tree shoots have come up; mainly beech, hawthorn and lime. The team also created bug hotels to protect and provide homes to some of the most valuable insect residents of the golf course.

- The Grounds Team at the Racecourse won ‘The Professional Racecourse Grounds Team of the Year’ at the Grounds Management Association Awards. The award recognised the exceptional work of the team over the previous year; especially in preparing the course for Qatar Goodwood Festival during such an exceptionally dry summer alongside their ongoing professional excellence. It also recognised the team’s continued internal development and commitment to sustainability and biodiversity.
- In a sustainability audit by Motorsport UK of all UK motor racing venues, Goodwood Motor Circuit was the overall top scorer and ‘sector leader’ for UK venues. Particular merit was attributed to sustainability being demonstrably engrained into everyday decision making, as well as the link to the wider estate’s sustainability programme and how it influences circuit-specific actions.
- Goodwood’s newly-launched Levin Down Gin, which is made using juniper and gorse collected from the estate, has won three awards in the Gin Masters Awards. It was awarded a Gold Medal in the London Dry Gin category, a further Gold Medal for the Contemporary Gin category and a Silver Medal for the Ultra-Premium Gin category. This year, we have produced 6,500 bottles and it has been a great success in the Farm Shop.
- The Goodwood Dairy’s Charlton Cheese has also been awarded a 2-star award from Great Taste Awards.

### Apprenticeships

- Over the course of 2022, Goodwood took on a diverse range of skilled students across the estate, including six Chef Apprentices, a Painter & Decorator Apprentice and two Motor Circuit Workshop Apprentices.
- The Motor Circuit had also taken on eight students for work experience placements from Wiltshire, Sussex and Hampshire. Two of the students who were here on work placement have now become casual workers for Goodwood.
- The Aerodrome separately hosted 13 work experience placements on the front desk, as well as two engineering apprentices. Goodwood believes it is important to allow individuals to have hands-on experience, learning a new skill set in a working environment whilst still earning an income.



## Summary

- Development of Goodwood Estate and Rolls-Royce Motor Cars long term sustainability partnership
- The Goodwood Hotel received industry awards and recognition for commitment to sustainability
- The Grounds Team won an industry award and recognition for commitment to sustainable practices and biodiversity
- Goodwood Motor Circuit is sustainability ‘sector leader’ across all UK venues
- 4 awards won for Goodwood’s own produce sold at the Farm Shop
- 30 apprenticeship and work experience placements were hosted across the estate
- 3000 local people visited Goodwood Home Farm Sunday

**1 MILLION**visitors to the  
estate each year**4100** permanent and  
seasonal staff  
employed by  
Goodwood **137**  
homes for  
estate tenants**46** miles of public  
access on  
pathways & tracksHeritage stewardship  
of 56 listed buildings  
and 17 scheduled  
ancient monumentsHome to the  
Goodwood  
Education  
Trust since**1976**

*Goodwood plays a vital role in our local West Sussex community and is able to have impact further afield. It remains a priority for us to be able to provide access to events and facilities to a diverse range of groups while also being a supportive client to local businesses and services. We carefully manage the impact of our yearly events; neighbours and tenants are continually engaged in the delivery plans where events may adversely impact individuals.*

*It is estimated that 1 million people visit the estate annually, for the major festivals as well as weekly events and recreational pursuits, generating a significant economic impact on the local area.*

# 5 SOCIAL

Social sustainability for Goodwood comes in three central channels. Firstly, there is Goodwood's own registered charity, the Goodwood Education Trust, which promotes public understanding of the countryside, its traditional heritage and modern-day management, especially to young people. Secondly, the estate undertakes substantial ongoing fundraising activity on behalf of several nominated charities each year, both at the major events and throughout the year. Thirdly, the estate collaborates with local community groups and educational institutions to work together on a broad range of projects. In 2022, this included permissive pathways, hedge-laying and archaeological digs.

## Goodwood Education Trust

- Sustainability education is at the heart of the Trust's learning programmes, which cater mainly for visitors from schools, colleges and community groups across the South East. The Goodwood Education Trust aim to demonstrate sustainability in action in a non-classroom environment, whether this is by exploring our organic farm and its sustainable food production, or by understanding the conservation of the natural world through exploring the estate's woodland and grassland habitats. Even the Education Trust building itself is a physical manifestation of sustainability in action: constructed from larch panelling and cedar shingles sourced entirely from the Goodwood Estate, and heated by an air source heat pump powered by electricity from the biomass energy centre.
- The Goodwood Education Trust welcomed a total of 1693 students in 2022. Of these, 7.3% were from inner city London, 9.8% were identified with Special Educational Needs and 7.5% received free school meals. The Trust is growing its expertise at working with children with Social, Emotional and Mental Health needs.
- 359 of these students visited the Forest School, in addition to our weekly sessions with The March School (60 children weekly), St Anthony's Special School and West Sussex Alternative Provision College (APC).
- The Trust saw 878 children attend farm visits and we further hosted 9 residential visits for 446 children.
- January 2022 saw the start of a new Forest School Alternative Provision programme for seven KS1 students from the Chichester Unit of West Sussex Alternative Provision College

(WSAPC). This is a statutory school in West Sussex for children excluded, or at risk of exclusion, from mainstream education. There is clear evidence of successful child engagement, emotional management and improvement in interpersonal relationships between children, both in the woods and back at school. Behaviour and engagement are evaluated and monitored by APC and Trust staff after each session. This programme has funding to continue for the next three years.

- The Trust is growing its presence at Goodwood events, raising awareness of the Trust and providing family-friendly, nature-based activities for attendees. Weekly Forest School sessions for children of Goodwood staff now run during half-terms and holidays.
- Additional activities include hosting sessions run by Primal Warriors, a group focussing on Men’s mental health as well as providing spaces for groups such as the Cadets and students from Chichester University to use the woodland.



### Estate Fundraising

Event	Charity	Amount raised
79th Members’ Meeting	DEC Ukraine Appeal	£150,000
Qatar Goodwood Festival / Magnolia Cup	The Prince’s Trust / Brilliant Breakfast	£317,351
Festival of Speed	Race Against Dementia	£218,504
Revival	The Aldingbourne Trust	£122,803
Goodwoof	The Dogs Trust	£31,000
Estate	The Stroke Association	£19,374
Non-event specific	Other	£21,260
Total:		£880,292

- The final total raised by the estate over the year for nominated charities was £880,292. Goodwood’s ambition is to exceed this number year on year.
- Individually, the 2022 Magnolia Cup raised £317,351 for The Brilliant Breakfast in aid of The Prince’s Trust. This marks a new fundraising milestone for the annual charity race conceived more than a decade ago, which takes place on Ladies’ Day at the Qatar Goodwood Festival.
- Goodwoof raised £31,000 for the Dogs Trust, mainly through the Barkitecture auction. Goodwoof’s new charity for 2023 is Pets As Therapy and we raised £200 for them during a very wet and windy charity dog walk in November.
- At the Members’ Meeting, as well as supporting the estate charity, the decision was made to also raise money for the Disasters Emergency Committee’s Ukraine appeal. With Ukrainian flags on the pit lane, Ukrainian flag car stickers for the drivers and significant support from all at the event, in excess of £83,000 was raised over the two days. This total was added to by Goodwood to make the final donation £150,000.
- The 2022 Festival of Speed and Goodwood Revival also raised record-breaking sums for their chosen charities. The Festival of Speed selected Sir Jackie Stewart’s charity, Race Against Dementia, as its nominated charity, raising a total of £218,504 to help fund the pioneering research into finding a cure for dementia. The Goodwood Revival raised £122,803 for The Aldingbourne Trust, which supports people in Sussex with learning disabilities and/or autism to live independent lives.

- Goodwood worked to aid Bear Us in Mind: a charity supplying ordinary adults with psychological tools to support children (especially those displaced by the war in Ukraine) experiencing separation, loss and, in some cases, bereavement. The estate has funded 500 physical toolkits, which include eight core tools, alongside comprehensive guidelines, worksheets and training videos to equip adults with the ability to support children at home. Although the project was conceived out of the crisis in Ukraine, the aim is to ensure that these tools can be used by families displaced from a multitude of locations.
- The estate was also able to offer housing to a Ukrainian family who had to leave their home in February due to the conflict. The family has been allocated a two-bedroom terraced bungalow with garden for 12 months, with all rent and utility costs covered. Goodwood staff donated all the items from beds to sofas, from pans to towels so that the house was ready and fully functioning for their arrival. The family was due to arrive in the autumn but, due to delayed visas, their arrival has been postponed until March 2023.
- Goodwood has also helped the ‘Young People’s Shop’, which is a charity supporting mental health, offering free counselling, emotional support, advice and guidance to any young person aged between 11 and 25 years. Goodwood helped to enable Young People’s Shop to work with new young people that perhaps wouldn’t have accessed their services before, improved access via new premises and transition to a new blended way of working online or face to face. The funding also helped to deliver training to professionals and volunteers to increase the number of sessions offered and the range of times available.
- The Rob Wildeboer Memorial Fund was set up to remember and honour Rob, the Goodwood Flying School Manager, who sadly passed away in 2021. Rob had joined Goodwood straight from school aged 16, initially as an aircraft engineering apprentice, and worked his entire career in Goodwood aviation, making his way to Aviation General Manager before managing the Goodwood Flying School. The fund raised over £19,000 in 2021 which was used in 2022 to fund an annual flying scholarship. The Aerodrome was kindly gifted a flying jacket by Sarah Hanna of the Old Flying Machine Company, which we raffled to raise further funds for the scholarship. The jacket was commissioned by Mark, Sarah’s brother, for their father Ray Hanna, who famously flew a Spitfire low along the start/finish straight at the Motor Circuit back at the first Revival in 1998.
- In September 2022, after over a year of training and fundraising, Zoe Mann, our Farm Shop Manager and Lisa Moore, a Goodwood Project Manager, went to Tanzania, to climb Mount Kilimanjaro, a lofty 5,895m high. They were inspired to give back to the amazing team at Mountbatten Hospice on the Isle of Wight, who cared for Zoe’s mum, Jill, in 2021 and provided love and hope at such a dark time. Walking six to seven hours a day, the climb took five and a half days to summit and raised an incredible £31,242.



*Staff Participating in the 2022 Tree Planting Project*

### Community Projects

- Goodwood has worked with the Lavant Lives History Project to refurbish and repurpose a vintage telephone box located in Lavant village. In July 2022, we arranged for the kiosk to be carefully lifted and relocated to the Lavant Academy for restoration by the community. It has now been decided by the Lavant Lives History Project Team, that a local restoration expert will work on this project and once complete, Goodwood shall arrange for the telephone box to be re-sited in a new location within the village. This will also incorporate an interpretation board providing information on the village and its association with Goodwood.
- In July 2022, a co-operative archaeological project between the Goodwood Estate and Mark Roberts (Principal Research Fellow, Tutor for Fieldwork, UCL Institute of Archaeology) took place. This resulted in the confirmation of a Romano-British Temple complex within the estate. The temple sits within an enclosure ditch or temenos, which delineates the sacred area, known as the fanum. At around 1.20ha or 3 acres the site is larger than any other known temple in the Sussex area; additionally, the site-complex also includes a 2.4km processional routeway that leads into the site. Further discoveries outside the curtilage of the temple include two rare Neolithic oval barrows.

- The excavations comprised five trenches, three of which took sections across the temenos ditch and two that were sited to look for evidence of the temple structure itself. The site was active during the Late Iron Age, as attested to by the pottery assemblage from a large, two-metre deep, circular pit, which contained many bones of pigs, sheep and cattle, together with rarer elements such as wolf, bear and cat. As with most temples of this date in South East England, there is then an apparently seamless transition of use after the Roman conquest and occupation. The excavations cut sections through three Roman ditches and a possible drainage pond, all of which revealed rich assemblages of pottery and faunal material, from food waste to sacrificial offerings. There was also a small quantity of hypocaust (central heating) tile, roof tile and brick, suggesting that for a period, the temple was a significant building in the landscape.
- The estate has a rolling conservation plan for its remaining Second World War infrastructure to enable us to be able to preserve the estate's recent history and showcase to others in future. Additionally, we are looking to extend these management plans to preserve other areas that may be sites of growing archaeological interest.
- Event staffing is also a key way in which the estate is able to support the local community. In 2022, we employed around 1,500 temporary staff and had 800 volunteer staff attending and working at 2022 events. 89% of these temporary and casual staff employed at the events came from within a 25-mile radius of the estate.
- The estate has been working with a not-for-profit group for over 10 years, known as the Crumblies Conservation Volunteers, and they have continued to support the estate again this year. This group of retired countryside workers and conservation lovers engage in landscape tasks such as the traditional country craft of hedge-laying, primarily as a social pastime for the benefit of their health and wellbeing, but also to continue traditional beneficial land management practices. Having laid an ancient hedge in a small residential cul-de-sac in Halnaker the year before, this October they were able to give the hedge its first 'haircut' after the bird nesting season was over before moving on to their next hedge laying project at Home Farm.
- The fruit and nut orchard planted in 2020 in Westerton was a fruiting success in 2022. We are proud to say that the new fruit trees planted in Westerton have now established themselves and have produced fruit for the first summer since being planted. We hope that this will benefit the local community through enhancement of biodiversity and opportunity for social wellbeing.
- Goodwood is constantly looking at how we can improve connectivity across the estate for our visitors and the local community. We have introduced several new permissive paths across the estate in recent years to link up key locations with local villages and points of interest. We have embarked on a project to build a new permissive path from Halnaker to Strettington which will run through a newly planted rue of woodland. This is approximately 20m wide running parallel with the South Downs National Park boundary along New Road and will be a mix of broadleaf, native trees species. This includes woodland planting as part of the Queen's Green Canopy initiative to celebrate Her Majesty's Platinum Jubilee. We are looking to introduce biodiversity enhancements within the new woodland.



*The Duke of Richmond with the CEO of The Aldingbourne Trust at Revival 2022*

- The estate's 'One Goodwood' staff wellbeing programme helped to organise workshop opportunities including sessions for the Wim Hoff method, Sunrise Yoga, Burn Fitness, Pad Boxing, Pilates and Strength, Forestry Walks with our Forestry Manager, Pound Fitness, and Resilience Workshops. In addition, we hosted a hill walk for the estate charity, for which there was a great staff turn out. These sessions are fundamental for encouraging health and wellbeing in staff members. Staff are also offered a lucky dip for theatre tickets for current plays at Chichester Festival Theatre.
- Each year the estate also helps bereaved families to commemorate their lost loved ones in a befitting way. In 2022 we helped more than 30 families to scatter ashes in parts of the estate that held particular meaning for their loved one, including at the Racecourse, Motor Circuit, Airfield, several forest sites and in Goodwood Park. Six new commemorative benches have also been sited across the estate – traditional park-style benches were used at the Motor Circuit, while our Forestry Team repurposed what was otherwise commercially unviable timber to make a beautiful natural log bench, which now sits on the Halnaker permissive path. We were delighted to help so many local families and Goodwood enthusiasts to create a special place to remember their loved ones.

## Summary

- £880,292 in total raised by Goodwood for charities
- 1693 students accessing Goodwood Education Trust
- Community projects for local schools and interest groups including collaborative tree planting
- Creation of a new permissive path incorporating Queen's Green Canopy trees
- Fruit and nut orchard planted in 2020 in Westerton was a fruiting success
- Discoveries of a Romano-British Temple complex including two rare Neolithic oval barrows

Onsite  
recycling  
centre



6 large clamps made for composting all the estate's green waste

Segregated waste bin system across all Goodwood offices



Biomass facility to turn waste wood and straw bales into usable energy

Dedicated **WEEE** (Waste Electric and Electronic Equipment) recycling scheme

**ISO20121** sustainability accreditation for all major events



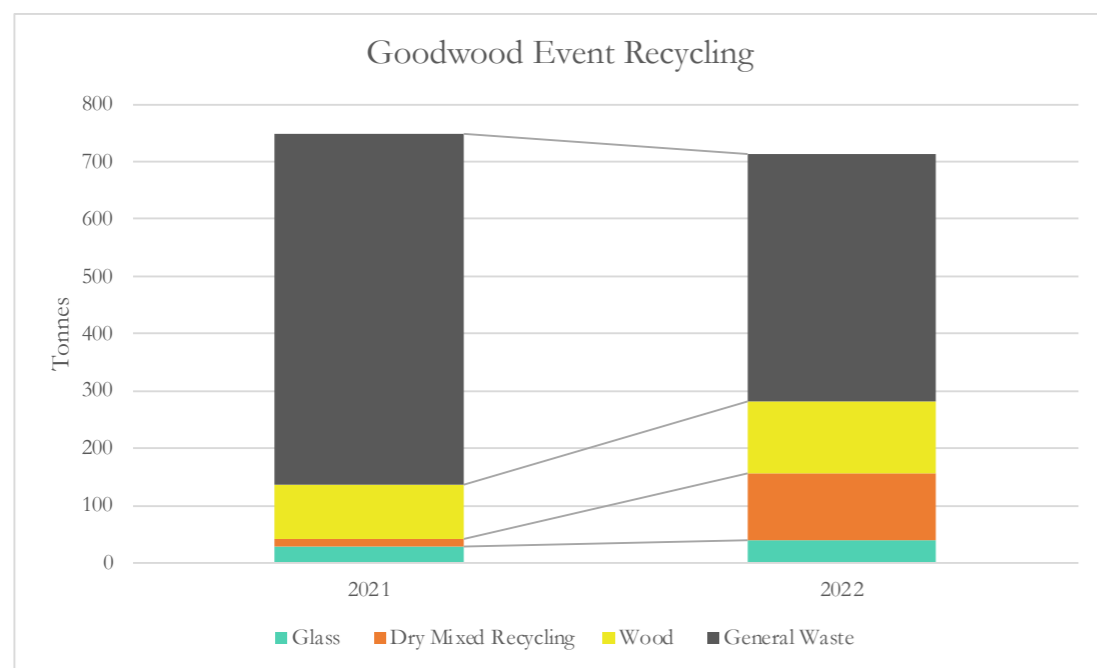
# 6 WASTE

- The estate has worked closely with our waste contractors on improving our waste streams and efficiency across the estate. We increased the amount of carbon saved from 2021 by 17% in 2022, saving a total of 76,000 tonnes of CO2 which is the equivalent of 263 trees being planted.
- In 2022, the estate engaged a new contractor to collect and recycle WEEE (Waste Electric and Electronic Equipment) which resulted in 865kg of mostly office IT equipment being recycled which equates to 8,977kg in carbon compensation. In 2023, we aim to extend this scheme to enable staff to recycle their unwanted personal WEEE.
- A new administration e-system has been rolled out across the estate in order to reduce paper waste. The I-Trent system is in place throughout business teams, allowing managers and users to communicate and store information more efficiently via a paperless platform.
- The hotel and restaurant kitchens have also improved processes to reduce their waste. All cooking oil is collected and recycled into HVO, and the hotel also takes predominantly secondary cuts from the farm for its meat and utilises other animal by-products (such as bones and offal) in cooking, thus allowing highly bioavailable proteins, amino acids and micronutrients to be recycled.
- Across the estate, green waste from our grounds (and our kitchens) is taken to a centrally located clamp for composting, allowing the nutrients to be recycled and ultimately returned to the land.
- The estate's major events maintained their certification under the ISO20121 Event Management System, which encourages sustainable procurement from local companies. For example, with the help of local partner South Downs Water, as well as reducing road miles of water deliveries we have managed to reduce our use of plastic water bottles by 20% – and where plastic continues to be used it must be recyclable and recycled. Together, we have put more drinking fountains in place at the outdoor events to encourage visitors to bring their own reusable drinking vessels. The events team have also significantly cut 'event staff' single-use plastic bottles at events by encouraging staff, volunteers and marshals to bring own reusable water bottles wherever possible. There was a 42% reduction at Festival of Speed alone.

*The diversity of the businesses and wider landscape of the Goodwood Estate means that the sustainable production and consumption of materials is a key part of resource management. Both during the Goodwood events calendar and in the day-to-day running of the estate, we must be mindful of prolonging the life of materials through reuse and recycling while both reducing overall creation of waste.*

*Goodwood continues to lead the discussion on how we are able to diminish waste with partners and suppliers alongside repurposing useable material for local community projects.*

- The Events team has removed all disposable plastic drinking cups from bars and concessions, instead partnering with One Cup to rely solely on reusable cups that are washed and sanitised onsite.
- Event food concessions use paper or compostable packaging to reduce the overall amount of non-recyclable waste and the events team has also doubled the number of customer bins to improve recycling on site.



- The events department have worked hard to increase the amount of recycling done across the events. The graph most notably demonstrates an 88% increase in dry mixed recycling and an overall general waste decrease of 42%.
- The events division purchased stillages and created a new strategic approach to the ways in which the chestnut paling and bamboo screening is deployed at each event saving multiple trips with a tractor and trailer to get to site, reducing costs and resources.
- Scrap metal from all events was taken by a scrap metal merchant from the event operations yard and is reused elsewhere, allowing us to reduce the amount of metal going to landfill. Due to the project's success, this will now be the process used for all teams within the wider estate in 2023.
- Bins used at events were previously stored outside until the next event season. In 2022, we moved all of the oil drum bins so that they are stored undercover, protecting the bins from the elements reducing the need for refurbishment and a new coat of paint for each event.

- Two 750 sqm areas of tarmac made from recycled plastic bottles were installed at the Motor Circuit to reduce our reliance on temporary metal trackway at major events and lessen the need for post-event ground repairs.
- In 2022 the Revive & Thrive Village was introduced to the event, bringing together a community of experts and influencers who demonstrated sustainable fashion and crafts, sharing their wisdom for circular consumption. Open fronted crafting cabins featured artisans and makers working on their crafts in real time. We had experts demonstrate the upcycling of second-hand mid-century furniture, reupholstery of pre-loved pieces, embroidering of second-hand linens and the repurposing of scrap metal into furniture. We also had professionals show visitors how to create a new patchwork quilt from hand-printed off-cuts and thrifted shirts; and a retro way to freshen up old sneakers, bags and even plant pots, and finally, a revive and thrive project saw over 1,124 knots tied by visitors, using material scraps. Sewing workshops encouraging the 'Make Do and Mend' theme, looked at how to repurpose clothes, homewares and furniture. There was also a full schedule of talks and demonstrations featured on the Revive & Thrive Stage with many well-known speakers and lastly, the Restoration Yard, featured stories of restoring second hand and vintage cars, motorbikes and bicycles to Revival.
- The Revival event restored and reused many of its period set-dressing props, including previous materials for the Dig for Victory installation. The vegetables planted in the Dig for Victory allotment were harvested over the event weekend to create soup and chutney for UK Harvest, a charity specialising in redistributing surplus food. This food was then sent to Stone Pillow, a local charity supporting homeless and vulnerable people.

## Summary

- 8,977tCO2e saved via WEEE recycling
- The hotel and restaurants collect all cooking oil for HVO conversion
- Events have removed disposable plastic drinks cups from bars and concessions
- Number of plastic bottles given out at events has decreased by 10% from 2021 to 2022
- Events have reduced overall use of plastic water bottles by 20%
- Two 750 sqm tarmac patches made from recycled plastic bottles were put in place at the Motor Circuit



# 2023 AND BEYOND

The Goodwood Estate has made significant strides this year in all areas to reach our long-term ambition of carbon-neutrality, while also encouraging biodiversity and protecting the landscape. As we move into 2023, we have a number of new and developing initiatives to bring us even closer to these goals.

Our planting and seeding programmes continue as phase two of the Halnaker-Lavant tree planting project gets underway, with a further 50k trees in the south of the estate near Lavant village. Once this project is completed, there will be a permissive path running through the area, improving connectivity for the local community. Goodwood has also co-invested with our sustainability partner Rolls-Royce Motor Cars in a wild flower seed collecting machine so that we can increase the native wildflower populations to help maintain healthy eco-systems across the estate. The investment will also save on labour that would have been spent on manual seed collection. The golf courses and motor circuit/aerodrome in particular are working with the Gardens Team to plant wildflower areas among the more managed grass areas. Goodwoof 2023 also has plans to develop a wildflower seed meadow on the event site.

We are pleased to be working with Rewilding Britain, which is providing us with rewilding advice and guidance for our Valdoe rewilding area, as well as the land at Newhouse Farm. The estate is keen to develop its rewilding projects and to be able to gain expert advice from a leading pioneer in rewilding is invaluable.

We are excited to be welcoming a new tenant, Built By Artizans, to the forestry yard from January. This company specialises in building sustainably using traditional natural timber framing techniques, and has moved to Goodwood in order to work more closely with our Forestry team in providing the raw building materials needed. Built By Artizans assisted in the construction of the Goodwood Education Trust building, and will also be helping the estate with projects in the future.

In 2023 the estate will deliver phase two of the private supply pipe renewals. 1km of pipework from The Kennels to Carne's Seat Reservoir will be replaced, along with more efficient pumps installed in The Kennels borehole. The estate is also looking into rain water harvesting initiatives in various business areas where it might be appropriate to collect water to be repurposed.

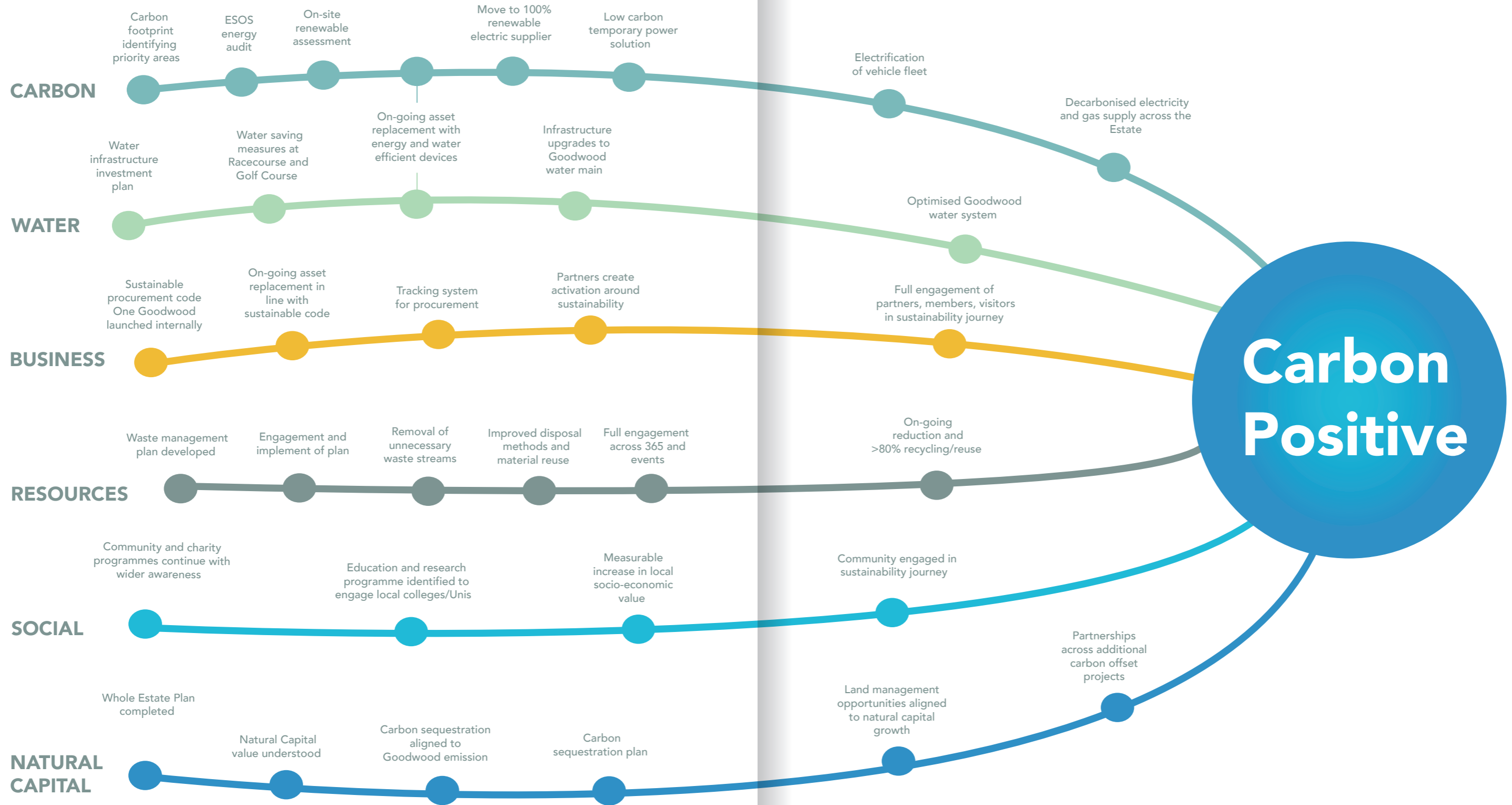
Within our business units we will focus on efficiency, particularly in terms of energy usage. An estate-wide review of the heating systems in buildings is already underway, with a roadmap being drawn up of phased replacement with new systems using renewable energy. We will review the energy consumption of the equipment teams use and fast-track replacement with more energy-efficient new equipment where possible. For example, our IT team is looking to reduce the number of monitor screens in use across our business, using one 'smart' screen to replace two or more where possible and procuring more energy efficient devices. Goodwood is also exploring the scope of introducing a lift share initiative with staff members.

In 2023 the Goodwood Road Racing Club (GRRRC) celebrates its 25th anniversary. Having evolved from the original supporters' group that helped re-open Goodwood Motor Circuit in 1998, the GRRRC has now grown to a community of over 20,000 people across two different membership tiers and spread over more than 60 countries worldwide. Annual renewal rates are over 95%, and the club organises a social calendar of more than 50 events per year.



*Embroidery Workshops at Revival 2022*

Goodwood sustainability journey Roadmap 2019 – 2030





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