ZSL Environmental Sustainability Report 2020-21

About this report

ZSL is one of the world's largest conservation organisations. We're working to achieve our vision of a world where wildlife thrives, by: fostering sustainable relationships between wildlife and people through our zoos and through public, media and policy influence; through our scientific research finding solutions to global conservation challenges, ensuring the health of wildlife, improving the health of people and the environment; and by transforming conservation outcomes on the ground through our work bringing the most threatened species back from the brink of extinction.

We recognise our responsibility does not end with influencing others to build a world where wildlife thrives – we know we need to ensure we use natural resources more efficiently in our own operations to limit the impacts from our activities. Acting sustainably in all we do is a key priority of our organisational strategy ZSL200.

This report, our first Environmental Sustainability Report, summarises our environmental performance for our two UK sites at Regents Park and Whipsnade during our financial year, 1 May 2020 to 30 April 2021. We acknowledge that due to the disruption from the COVID-19 pandemic and closure of our two zoos during lockdown, we cannot truly compare performance with previous years, and some of our energy and water use will have been displaced elsewhere, e.g. houses of our staff working from home. Our performance this year is unlikely to be reflective of 'normal' trends, although even with a shift to homeworking the requirement to provide heat, water and food for our many animals did not disappear. To address this for future reporting, we will use 2019-20 as the baseline year for measuring progress against our next set of targets so as to have a more accurate comparison.

Environmental sustainability targets to April 2021

This is the final year for which we measure ourselves against the targets we have had in place for a number of years as part of our Environmental Management System. These are summarised below, and data has not been adjusted to remove the impact of disruption from COVID-19, which we acknowledge has significantly impacted our operations and hence consumption. Consumption data are based on a mix of billed amounts and direct meter readings and may be subject to future adjustments.

Target Status: TARGET ACHIEVED/ON TRACK PROGRESS TOWARDS TARGET TARGET NOT ACHIEVED

	Target	Progress	
Energy	Reduce our energy use by 15% by Apr 21, based on a 2014 baseline	-28.4%	
Water	20% reduction in water use at London by Apr 21, based on 2015 baseline	-51.3%	
	10% reduction in water use at Whipsnade by Apr 21, based on 2015 baseline	-24%	
Waste	Maintain 98% landfill diversion rate	Achieved	
Responsible Procurement	100% of new suppliers to sign up to ZSL Code of Conduct as part of procurement process by 2020	Progress towards target	

	100% of palm oil sold in products at ZSL to be CSPO certified by 2020		
Site Biodiversity	Site biodiversity policy to be in place by March 2020	Achieved	
	Regular meetings of biodiversity working group to be held from April 2020 onwards	Not achieved	
Awareness and Engagement	Ensure all staff have sight of our sustainability strategy and are aware of the actions they can take to help achieve our targets	Progress towards target	
	Develop staff awareness of the EMS and how this is relevant to their day to day activities	Progress towards target	

Environmental Management

ZSL has an overarching Environmental Policy. This sets out our key environmental commitments, including a framework for setting environmental objectives and targets. As the policy is due to be reviewed in 2021, we will update it to reflect our enhanced ambition to be a leader in our sector in embedding sustainability in our operations. A new Environmental Sustainability Policy will be published in 2021-22.

To effectively manage our environmental impacts, we operate an Environmental Management System (EMS) covering all areas of management and operation at our Regents Park and Whipsnade sites. Our EMS was recertified to the ISO 14001:2015 standard following an external audit in March 2021, and we have held the certification since 2009. A key element of achieving ISO 14001:2015 certification is showing continual improvement in our environmental management system. We are proud to have demonstrated that we continue to meet the requirements of the standard, and to have completed a successful re-certification audit during the pandemic lockdown.

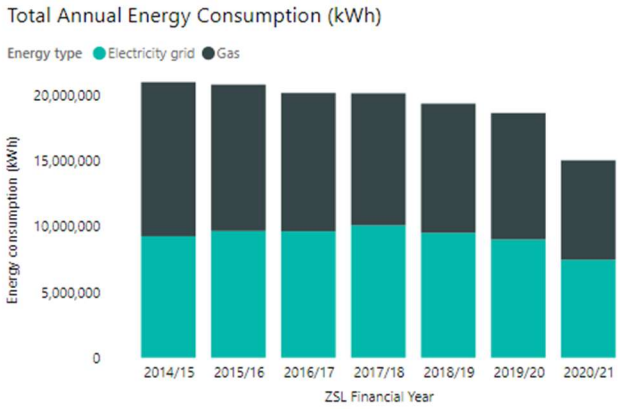
During 2020/21 ZSL has developed a new Environmental Sustainability Plan, setting out our ambitious targets to 2030 to improve sustainability of our operations, including science-aligned emission reduction targets and a commitment to become net-zero carbon. Our environmental sustainability targets for 2021-2030 are summarised at the end of this report. We have based targets on current guidance, but as emerging best practice develops for example on the most credible way to define net zero and to account for carbon removals, we will review our plans and will update our targets and metrics.

Carbon and Energy

Target and Policy: ZSL is committed to reducing our energy use and associated carbon emissions through the Environmental Policy. We had a target during this reporting period to reduce our energy use by 15%, compared to a 2014 baseline.

Progress: We have now reduced our energy use by 28.4% compared to the 2014 baseline. This includes gas and electricity only, as data on other fuels used for heating was not available for the whole of the reporting period nor included in the baseline.

ZSL Energy Consumption (kWh) per Financial Year							
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Electricity grid (kWh)	9,268,018	9,674,089	9,641,231	10,103,708	9,530,543	9,025,433	7,469,564
Gas (kWh)	11,761,574	11,167,805	10,563,698	10,073,749	9,860,871	9,648,804	7,594,683
Total energy (kWh)	21,029,592	20,841,894	20,204,929	20,177,457	19,391,414	18,674,237	15,064,247



This reduction was in part due to the impact of lockdown of our Zoos during 2020/21, and we acknowledge that some of the consumption has been displaced elsewhere e.g. houses of staff working from home. However it was also achieved as a result of energy efficiency measures introduced during 2019 and 2020. We continue to work on energy efficiency upgrades, for example: pipework insulation to lag hot water pipes, replacing lights in basement stores with LEDs and motion sensors, installing timers on electric heaters and point-of-use water heaters to switch off at night, upgrading London Zoo gift shop to LEDs with appropriate controls, and reviewing heating thermostat set-points on boilers.

We have been trialling several plug-in hybrid electric vehicles capable of running on electric-only power giving off zero emissions, replacing our old diesel vans. This is a great step for our plan of working towards an entirely electric or electric-hybrid fleet.

Carbon footprint estimation:

We have estimated our carbon footprint for the 2019/20 baseline year, shown below, although work remains underway to validate the figures. Our indirect, or scope 3, estimated carbon emissions continue to form a significant part of our overall footprint. We have limited control over scope 3 emissions and their calculation can be complex, making them more difficult to tackle. We will work on improving how we measure these more accurately in 2021/22, in order to establish our accurate baseline and include scope 3 emissions in our future targets.

As work remains underway to validate our carbon footprint data, this baseline information may be subject to future adjustment.

Scope 2 emission accounting:

For a number of years, all electricity we purchase for our Zoos has been sourced from 100% renewable sources, backed by Renewable Energy Guarantees of Origin (REGO) certificates.

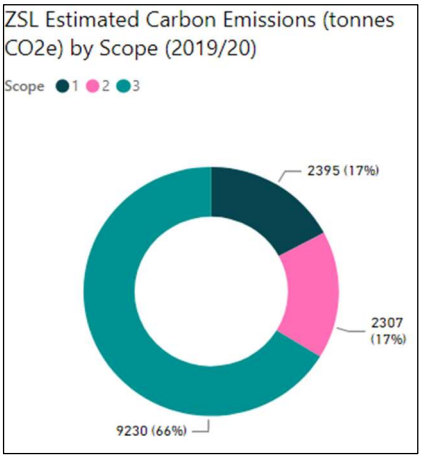
Following Greenhouse Gas Protocol guidance, there are two methods for calculating our carbon footprint relating to scope 2 emissions from electricity. The location-based method uses grid-average carbon emissions factors for each kWh of electricity we use, regardless of its origin or tariff. Market-based method takes into account the green tariff and assigns it zero emissions. Our carbon footprint is lower when using a market-based calculation method and taking into account our renewable energy purchasing. As is best practice we will report on both methods, since this ensures we continue our focus on efficiency measures to reduce electricity consumption within our direct control.

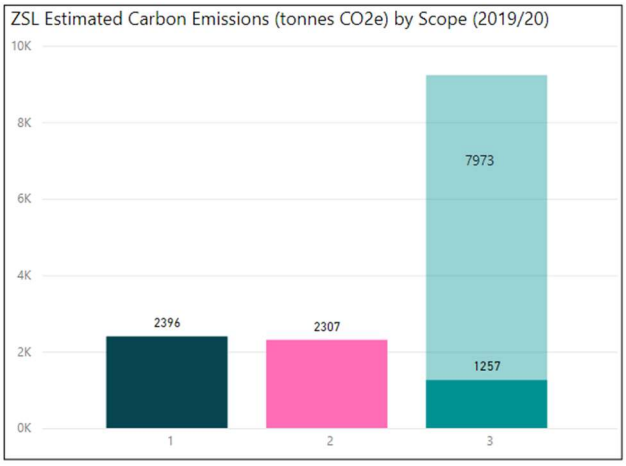
Exclusions from the carbon footprint:

Data from our international activities is not yet included, apart from flights and other travel captured in our travel authorisations database. Where possible we will work on estimating the emissions from these activities for our main country offices to improve the completeness of the total carbon footprint.

No deduction is made for energy and fuel used by third-parties onsite in the outsourced catering provision at either Regents Park or Whipsnade, because the activity and associated emissions are considered to be wholly in service of ZSL's visitors, staff and volunteers.

ZSL Estimated baseline GHG emissions for 1 May 2019 to 30 April 2020	
	Tonnes of CO2e
Scope 1 – gas, kerosene, other fossil fuels	2,395
Scope 2 - electricity	2,307
Scope 3 - Purchased goods & services **estimation only, further validation work required to confirm*	7,973*
Scope 3 - Other indirect	1,257
Total annual emissions: Location-based	**13,933**
Carbon offsets purchased	0
REGO-backed renewable electricity tariff	2,307
Total annual emissions: Market-based	**11,626**





Challenges and Opportunities: Our historic buildings and animal exhibits present some of our most complicated challenges for reducing energy and carbon emissions. Many of our animals require tightly controlled environmental parameters such as heating, lighting, humidity, and salinity that

demand very energy hungry processes. Maintaining these conditions will always be our top priority to ensure we provide high animal welfare standards that keep our animals healthy and happy.

We will continue to focus on energy efficiency projects in 2021-22. For example, at London Zoo we are installing automatic-meter read (AMR) meters on energy and gas supplies in key buildings, allowing us to identify and address inefficiencies. We are also progressing a phased upgrade to our Building Management System (BMS) to ensure we can control energy use appropriately, and are trialling replacement of radiant heaters in animal dens at Whipsnade Zoo with more efficient short-wave units.

Our plan is to switch to greener, low and zero-carbon technologies, look at how we can upgrade our existing buildings to improved standards of energy efficiency, and to prioritise sustainable design for any new buildings, so that we can achieve the outcomes our animals and people need in a more efficient way.

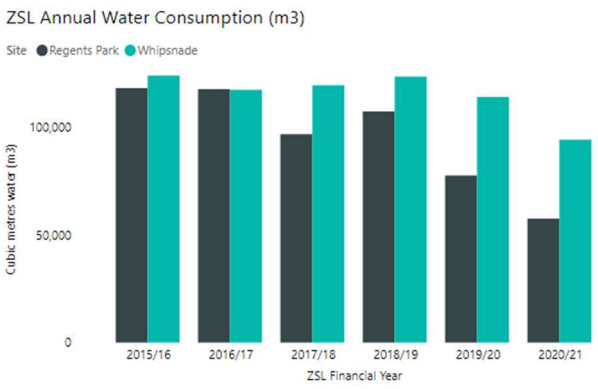
Water

Target and Policy: In our Environmental Policy, we commit to improving efficiency in the use of raw materials and utilities, including water. We had the following targets during this reporting period:

- Reduce water use at London by 20% by Apr 21, based on 2015 baseline
- Reduce water use at Whipsnade by 10% by Apr 21, based on 2015 baseline

Progress: We continue to make sustained progress in reducing our water use at both sites. We have now reduced water use by 51.3% at London, and by 24% at Whipsnade against the 2015 baseline.

ZSL Water Consumption (m3) per Financial Year						
	2015/16	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
Regents Park – (m3) Total (Mains only)	**118,272**	**117,779**	**96,854**	**107,421**	**77,657**	**57,610**
Whipsnade - (m3) Total	**124,103**	**117,471**	**119,577**	**123,633**	**114,141**	**94,281**
Whipsnade – (m3) Mains water	-	-	-	***59,761***	***47,910***	***18,996***
Whipsnade – (m3) Borehole abstraction	-	-	-	***63,872***	***66,231***	***75,285***
Total water (m3)	**242,375**	**235,250**	**216,431**	**231,054**	**191,798**	**151,891**



Whilst there has been a drop in 2020 due to limited service at our restaurants and visitor toilets during lockdown, and we acknowledge some of the use has been displaced to houses of staff working from home, the reduction was also achieved as a result of water efficiency measures introduced during 2019 and 2020.

At Whipsnade we have identified and resolved several leaks from animal exhibits, as well as identified areas for increased capacity for rainwater storage to be reused around site. We provided keepers at our Elephant Care Centre with a new pump and hose, to transfer cleaner water from the elephants' bathing pool to a secondary pool then to a mud wallow. This replaces weekly topping up the pools from fresh supply. At London we have limited the high-pressure water main to only certain areas of the site, reducing water losses and risk of leaks. An 8,000m3 burst on the main in March 2019 was repaired promptly but affects the annual comparison. We are underway with a phased project to install smart meter valves at both sites, to establish baseline overnight consumption, and better identify leaks and wastage.

Whipsnade was 100% water self-sufficient for 96 days using only the borehole supply between March & June. This helps reduce pressure on the mains supply network as well as reducing our carbon footprint.

Challenges and Opportunities: Due to issues with some of the water meters on site at certain points during 2019/20, we will use the previous year 2018/19 as the baseline for future comparison.

The aging pipework across our estate means many of our water pipes are vulnerable to bursting and leaks, and for this reason we have focussed on infrastructure improvements to prevent large, expensive water leaks from occurring. Through 2021 and coming years we are planning a phased programme to upgrade the oldest sections, reducing chances of future bursts.

Now we will focus on managing water consumption in buildings and enclosures, aiming to improve sub-metering to identify realistic baselines for water use at building level. Many of our animal exhibits have moats and pools which require frequent topping up. Fitting more meters will allow us to detect where unidentified leaks are occurring, and we will continue to seek ways to implement grey water systems like rainwater collection and water recycling.

Waste

Target and Policy: In our Environmental Policy, we commit to managing waste in accordance with the waste hierarchy. We had a target during this reporting period to maintain a 98% landfill diversion rate.

Progress: We have worked with our waste broker to maintain our 98% landfill diversion rate, and during the reporting period sent zero non-hazardous waste to landfill.

ZSL Waste (tonnes) for Financial Year 2020/21 *N.B. includes only data from ACM broker. Excludes some ICT, liquid and construction waste.* *We are reviewing the disposal categories applied to each waste stream to ensure these are accurate and best practice*					
	Landfill	**Reuse**	**Recycle**	**Recovery (Energy-from-waste)**	**Total**
Regents Park (tonnes)	**0**	**434.52**	**186.17**	**173.31**	**794**
Regents Park (%)	**0%**	**54.73%**	**23.45%**	**21.83%**	
Whipsnade (tonnes)	**0**	**1,233.79**	**130.97**	**74.34**	**1,439.11**
Whipsnade (%)	**0%**	**85.73%**	**9.10%**	**5.17%**	
Total waste (tonnes)	**0**	**1,668.31**	**317.14**	**247.65**	**2,233.11**

Our focus has been on improving data analysis in relation to waste management so that we can better target areas for improvement. Our broker now provides an 'end point disposal report', meaning we will be better able to track our recycling rate, and identify issues and improvements as they come up. This will help us understand where more of our waste can be recycled, and where we could avoid waste being generated in the first place by reviewing our supply chain.

At Whipsnade we have moved away from providing paper maps and inserts listing events, instead making better use of event boards around the site and QR codes. This will avoid the printing and disposal of over 240,000 maps each year. We still provide a small number of laminated maps at the Visitor Centre for any visitors who do not have a smart phone or who may have accessibility needs.

At both sites, we had introduced food waste bins into office kitchens as a trial. This was working well but was unfortunately disrupted by COVID-19 lockdown, as food waste collections from site were suspended while our restaurants were closed. We will look to reinstate this now our zoos have fully re-opened. Our food waste is sent to an anaerobic-digestion facility, where it is broken down into biogas and digestate used for fertiliser.

During this reporting period we produced over 1600 tonnes of bedding waste from our herbivores, *(434 tonnes at London, and 1220 tonnes at Whipsnade),* which is composted and used as fertiliser by local farmers.

Challenges and Opportunities: Our data reporting does not yet include all waste produced on site. We acknowledge that whilst the vast majority of waste streams handled by our waste broker are included, there are still omissions e.g. liquid waste from offsite disposal, some ITC waste, catering oil handled by our catering providers, construction waste from larger projects where skips may be provided directly. We will work to more accurately capture and report all waste streams in future.

We already segregate many different waste streams, and our animal keepers often find innovative ways to 'upcycle' or reuse materials in enclosures. Having successfully minimised landfill waste, we now want to move up the 'waste hierarchy' and ensure we recycle all the waste we can, and do not rely on energy-from-waste incineration as part of a landfill diversion goal.

The most significant proportion of waste produced across both sites, around two-thirds, is animal bedding. This is sent for composting off-site, but including this large volume when calculating a

recycling percentage significantly distorts the data. We will continue to improve data analysis and reporting to ensure we communicate a meaningful recycling target to visitors and staff. We plan to refer to this as 'front-of-house' waste to include the types of waste our visitors and majority of staff can influence (i.e. mixed recyclables, food, glass, general waste), but exclude construction, clinical, animal bedding etc from the percentage calculation.

A challenge remains in ensuring our visitors, as well as all staff, know how to correctly dispose of items and don't inadvertently contaminate recycling bins with the wrong items. We will work with our waste broker to review and improve convenient positioning of bins, and provide clearer signage and labelling for waste bins.

Responsible Procurement

Target:

- 100% of new suppliers to sign up to ZSL Code of Conduct as part of procurement process by 2020
- 100% of palm oil sold in products at ZSL to be CSPO certified by 2020

Policy: Our Environmental Policy makes a commitment to continued improvement in sustainable procurement processes. We have integrated ethical and environmental clauses into our Invitation to Tender for goods and services, and have set out minimum requirements in our Supplier Code of Conduct, which all suppliers sign up to when bidding for work. This is to ensure our values are reflected in the suppliers with whom we do business.

Furthermore, our commitment to certified sustainable palm oil products is set out in our publicly-available Palm Oil Position Statement.

In September 2020 we approved a new Sustainable Timber and Paper Policy, outlining our commitments to procuring timber and paper products that ensure materials are sourced from legal and sustainably managed forests, and to take account of lifecycle impacts in the use of raw materials. And in May 2021 we updated our Sustainable Seafood Policy, with updated definitions on the seafood stocks our internal experts define as being responsibly sourced.

Progress: Progress has been made but there has not been enough resource during COVID-19 lockdown to report fully against the targets. These will be carried forward and a more in-depth review of suppliers' compliance against our policies will be prioritised in 2021/22.

In our catering provision, we are focused on working with our suppliers to ensure produce is sourced responsibly with as little environmental impact as possible. At Whipsnade, we continue discussions with our caterers around promoting plant-based options and development of 'grab and go' items with carbon footprint labelling. This is in addition to their ongoing commitments to reducing food waste, reducing single use plastics, sourcing responsibly, and minimising energy and water use. The kitchen team recently introduced an initiative to bake more products on site to make use of preparation offcuts that would otherwise be thrown away. Prior to COVID-19 disruption, the introduction of tablets for placing orders not only avoided printing new paper

menus when there were changes, but allowed for menu rotation to encourage ordering of surplus dishes, reducing waste.

Our new catering contract for ZSL London Zoo was mobilised in early 2020, and sustainability requirements were embedded in the tender and selection process. We will continue to work with them now our zoos are fully re-open to support our sustainability commitments.

In March 2021 we also appointed a new supplier of fresh fruit and vegetables for our animals. Sustainability formed part of the tender assessment, and this new contract includes commitments to reducing packaging waste by using reusable crates, minimising single use plastic (only unless it is shown to significantly reduce food spoilage), moving fleet to electric vehicles. They also work in partnership with Waste Knot, an organisation that rescues surplus produce that doesn't meet strict cosmetic standards for supermarkets and would otherwise be wasted. Where available, this seasonal surplus produce is supplied as a preference for fruit or veg we order. In the first three months of the contract, our animals have munched their way through 42kg celeriac, 877kg carrots, and 445kg spring greens that would otherwise be wasted.

In Retail shops, our Buying and Merchandising team have worked with their suppliers to introduce many positive initiatives, including:

- Rationalising our supply base and only retaining suppliers who match our brand ethos
- Developing a bespoke package of quality assurance checks including ZSL policies
- Soft toy suppliers ensure all stuffing used is 100% recycled plastic
- All our ZSL sweet bag packaging is now 100% fully home compostable with recyclable labels
- ZSL labels across all product categories use FSC-certified paper, and all paper products in store are from FSC-certified sources
- Extending our clothing ranges over 2 years to ensure we are not contributing to the environmental impact of 'fast fashion'
- Introducing a range of reusable bags, and new homewares such as throws and cushions, made completely from recycled water bottles
- Introduced an ECO range, to educate people through our product range, such as book titles on how to live plastic free, produce bags and reusable straws, pencils and notebooks from 100% recycled materials

Biodiversity

Target:

- Site biodiversity policy to be in place by March 2020
- Regular meetings of biodiversity working group to be held from April 2020 onwards

Progress: A new UK Site Biodiversity Policy was approved in February 2020, setting out guiding principles for the management of ZSL's UK sites to optimise their biodiversity value and function. This is in recognition that our operations have the potential to impact on biodiversity both directly and indirectly and that we have a responsibility to manage these impacts.

We have not yet been able to re-establish a biodiversity working group due to disruption from zoo closures, and we will carry this forward.

Utilising our vast onsite expertise in our horticulture team and Curator of Plants, we will continue to review and update the existing site biodiversity management plan. This outlines our processes and identifies any important biological features on site including habitats (e.g. chalk grassland), species (e.g. house sparrow) or taxa (e.g. bats). Whilst this document is a vey useful foundation, we plan to review and simplify the framework and set new simpler KPIs to ensure there are clearer steps for monitoring progress.

We will continue to implement the SSSI management plan for our Whipsnade Site, as agreed and updated with Natural England as required.

Awareness and Engagement

Progress: as part of developing our new environmental sustainability plan, we have increased staff and volunteer engagement, resulting in more staff being aware of our sustainability strategy, the EMS, and the actions they can take to help achieve our targets. All UK staff and volunteers were invited to one of two online presentations as part of consultation on the new plan, and a total of 137 people attended. A video recording was made available on our intranet, and comments were encouraged via an online feedback form open for four weeks.

We have delivered sustainability training sessions to Apprentices on ZSL's Zoo Keeper and Aquarist Apprenticeship programme, and continue to include sustainability information in our new starter induction.

Environmental sustainability targets from 2021-22

Objectives	Targets	ZSL200 Impact Priority	UN SDG
Carbon and Energy: Reduce absolute greenhouse gas emissions in line with limiting global average temperature increase to 1.5ºc, and aim to achieve net zero for all residual GHG emissions by 2035	Reduce electricity emissions by 50% by end of FY2030/31, based on FY2019/20 baseline	Wildlife and People	7.2 9.4 13.3
	Reduce gas and other fossil fuel emissions by 50% by end of FY2030/31, based on FY2019/20 baseline		
	Reduce business travel emissions from air, road and rail by 50% by end of FY2030/31, based on FY2019/20 baseline		
	Install large-scale solar photo-voltaic array of minimum 1.0MWp size at Whipsnade Zoo by end of FY2021/22		
	Set a science-based Scope 3 target for significant value chain emissions by Dec 2022		
Waste and Materials Efficiency: Promote responsible consumption, minimise the amount of waste produced, and assess all remaining significant waste streams for alternatives that support a circular economy	Recycle 70% of office and visitor (front-of-house) waste by end of FY2025/26	Wildlife and People	12.2 12.5 12.6
	Maintain zero non-hazardous waste to landfill		
	Treat 30% of waste onsite by 2030 via composting or anaerobic digestion		
Water Management: Reduce total water consumption through design and maintenance of the estate, and implementation of water efficiency measures	Reduce total mains water consumption by 30% by end of FY2030/31, based on FY2018/19 baseline	Wildlife and People	6.3 6.4
	Achieve 100% compliance with effluent discharge consent limits by Dec 2021		
Responsible Procurement: Integrate sustainability within all procurement activities and throughout our supply chain, in line with the guidelines of ISO 20400:2017 standard	100% of food products sold by ZSL that contain palm oil to be RSPO certified sustainable by Dec 2022	Wildlife and People Wildlife Back from the Brink	8.4 8.7 12.6 12.7
	100% of seafood products served in catering to be from certified sustainable sources by Dec 2021		
	100% of timber and paper-based products to be certified as sustainable (FSC or other approved certification) by Dec 2022		
	100% of suppliers signed up to ZSL's code of conduct by Dec 2022		
Onsite Biodiversity: Optimise the biodiversity value and function of land managed by ZSL in the UK, to complement national biodiversity strategies	Implement the principles of ZSL's UK Site Biodiversity Policy in all relevant operational and capital development activities at Whipsnade and Regents Park	Wildlife and People Wildlife Health	15.5 15.8 15.9
	Review and update ZSL's Site Biodiversity Management Plan framework by Dec 2022		
Sustainable Buildings and Exhibits: Manage the design and construction of new exhibits, and refurbishment of our existing estate, to minimise environmental impact and embed sustainability principles from the outset	All new-build exhibits to consider lifecycle value, include initiatives to reduce energy and water consumption, reduce construction waste, and to source materials responsibly in line with ZSL policies	Wildlife and People	6.4 9.4 11.a 12.2 12.5 13.3
	All projects to include sustainability targets in the project brief and confirm a sustainability assessment method with ZSL Sustainability Manager at earliest design stage		
Food and Catering: Provide nutritious, sustainable food options for our staff, visitors and animals with as little environmental impact as possible	Out-sourced caterers Benugo (London Zoo) and RA Venues (Whipsnade) to reduce energy and water consumption, increase recycling, and source produce sustainably in line with ZSL targets	Wildlife and People	2.4 12.3 13.3
	By Dec 2022 agree additional sustainable catering targets to address: food waste; promotion of plant-based meals; visitor engagement campaigns related to food		