Planetary Health Report Card (Veterinary Medicine) 2026:

University of Surrey

2025-2026 Contributing Team:

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Summary of Findings

Overall Grade	B

Curriculum	B+

Our overall evaluation of the planetary health teaching within Surrey University BVMSci curriculum is that there is robust planetary health teaching within the curriculum, particularly accentuated with the 4th year One Health module (VMS4009) relevant to the majority of the metric points. Integrated longitudinally throughout the spiral curriculum ensure that there are many different topics of planetary health embedded alongside the lecture and practical teaching to encourage students to consider the environmental impacts of veterinary care and to encourage sustainable practice, within a clinical and global context. The majority of the planetary health teaching is concentrated within the One Health Module (VMS4009) and the Zoo Medicine Module (VSM4007). One area that is not credited heavily within this metric but was addressed persistently and thoroughly throughout the curriculum was responsible use of antimicrobials and anthelmintics, signposting resources such as the BSAVA's PROTECT ME framework; Sustainable Control Of Parasites in Sheep (SCOPS) principles and The CANTER guidelines to empower students to evaluate and justify their prescribing decisions. Within the scope of One Health the vet school provides excellent teaching into the interplay of human and animal health and welfare, with extensive consideration to environmental health with issues such as emerging and zoonotic disease, public health and food safety; antimicrobial resistance and food security highlighted. Opportunities to further tie in the impact of major environmental threats to public health such as climate change, resource depletion, biodiversity loss and anthropogenic toxins should be further consolidated. Due to the design of Surrey's Veterinary Medicine Curriculum all teaching modules are compulsory meaning all students receive the same caliber of sustainability teaching within the core curriculum, however Surrey additionally provides an university-wide optional extra-credit elective module *ENGL001 - Sustainability is a Global Graduate Award (GGA),* which allows students to delve deeper into the core principles of sustainability, key environmental issues and the societal factors that underpin them, and strategies to begin addressing these.

Our overall recommendations regarding how to highlight the excellent sustainability teaching within the curriculum is to more clearly signpost sustainability in the module, lecture and practical learning outcomes and aims, as exemplified in modules VMS4009, VMS4007, VMS2008, VMS3011. This would enable easier identification and evidencing of such teaching for future projects and encourages staff to actively consider and integrate environmental concerns when creating teaching content. We would recommend greater consideration is given to the link between planetary health and public health further and provide tools for students to implement when communicating planetary health issues within clinical practice to clients and colleagues. There is space for further exploration of the disproportionate effects of global issues on marginalized communities within the curriculum, which could complement existing teaching within the VMS4009, VMS4007 and VMS2008 modules. We also believe there is room for the planetary health report card metric to integrate more key One Health considerations such as food security, biodiversity loss, public health threats, emerging and zoonotic disease and sustainable use of antimicrobials and other pharmaceuticals.

Recommendations:

- Signposting in module handbook, module aims and learning objectives. Often planetary health teaching is verbally mentioned in lectures and practical teaching, but this is not reflected in the lecture's slides and learning objectives.
- Role of indigenous stakeholders and the disproportionate effect on marginalized groups is not detailed within the curriculum, and it might be helpful to incorporate this in the future.
- For continuity use the EMA antimicrobial categorisation and BSAVA PROTECTME guidelines longitudinally into fourth year Veterinary Medicine 3 lectures - to integrate AMR considerations into prescribing choices.

- Involve planetary health further when discussing public health concerns, solutions and stakeholders. Greater linking of sustainability concerns and impacts when discussing VetCare, public health concerns, One Health and zoonoses.
- Evaluate the role played by environmental threats (i.e. climate change) to public health and one health.
- Try to integrate planetary health teaching so it is distributed more equitably throughout the course of the degree.
- Address the disconnect between Manor Park and Stag Hill campuses, all students receive the same sustainability information.

Interdisciplinary Research | B

The University supports cross-disciplinary research groups through the Institute for Sustainability that conduct research on topics related to planetary health and sustainability. Their 'Plastics in the Environment' group conducts research into the environmental impacts of plastic on human and animal health. The Veterinary School is involved in planetary health research as well, such as the African Livestock Productivity and Health Advancement (ALPHA) initiative, aiming to make a meaningful development in livestock productivity and improve access to vetcare in sub-Saharan Africa. Additionally the University holds multiple Sustainability Assemblies a year; open to university staff and students to discuss the active improvements that it is undertaking to improve its sustainability and consider areas of improvement. Additionally the Vet School hosted a One Health Showcase in 2024 open to faculty and students, giving talks on sustainable practice and to discuss sustainable initiatives on campus.

Recommendations:

- The University of Surrey Veterinary Medicines School should organise or offer to host more sustainability conferences where possible and focus on delivering more Planetary Health related talks. The university involve VetSoc further to enable and prioritise more sustainability talks. The University could also join the Planetary Health Alliance and continue working with Vet Sustain.

Community Outreach and Advocacy | C+

The University of Surrey has many partnerships including the Wildlife Trust and Guildford Borough Council which focuses on the nature and green spaces around campus and the local community. Furthermore there are more research specific partnerships focusing on One Health, One Medicine as part of the One Health European Joint Programme which funds PhD projects and focuses on research dedicated to One Health topics and challenges.
The University of Surrey organises a yearly 'Sustainability Week' that have student specific activities, for example the activities that VetSoc organise, but there are also community outreach activities that Surrey Sustainability organise. For example offering EV test drives and organising a collaboration with CloSH app. There are some educational posts on the VetSoc eco club instagram account to raise awareness, but there could be more frequent uploads on these critical One Health, planetary health and sustainability topics.
There are some CPD opportunities available to students/staff, for example the One Health showcase.
The University of Surrey School of Veterinary Medicine does not have its own teaching hospital. Surrey uses a distributive model for final year teaching where students are assigned partner practices across the UK for their final year rotations. There are approximately over 90 partner practices that host final year students for rotations. Surrey has influence on the partner practices when they have training to become clinical mentors, however it is noted that planetary health is not incorporated in the partner practice training. For the purposes of the PHRC it has been quite difficult to assess the planetary health education available to clients from Surrey's partner practices.

Recommendations:

- Advertise community outreach related to planetary health more widely for post-graduate students and students from other health science degrees.
- Broadening the scope of individuals within the University who receive information on Planetary Health in the future, by utilizing the main University social media and newsletters, rather than the Sustainability Newsletter and social media which require student/staff signing up for, could be very helpful moving forward
- Provide resources for partner practices and their clients on environmental health exposure, the impacts of

climate change, and responsible pharmaceutical use and disposal.

- Incorporate planetary health education during partner practice training for clinical mentors
- Assess the disconnect between Manor Park and Stag Hill campuses so all information is shared to all students.
- Increase the frequency of educational posts on the VetSoc eco club account page
- If the University has the capacity it should look into holding planetary health related CPD courses or events to support its postgraduates keep up to date with sustainable practice.

Support for Student-Led Initiatives | B

The University of Surrey School of Veterinary Medicine has a departmental student led society called Vet Soc, within the society there is a dedicated Eco club for vet soc. The main events that Eco Club run are gardening sessions in the dedicated VetSoc garden, nature walks and litter picks on campus. These events goals are to encourage an awareness of One Health and the importance of looking after the environment on campus. These are supplemented with some educational posts on instagram, which include reducing single use plastic consumption in open access spaces, environmental impact of flea treatment and highlighting important One Health topics that are relevant to vet students. It is noted that this is a fairly new account, with plans to expand on topics and frequency of these posts.

The Eco rep of VetSoc is a part of the Surrey vet school Sustainability Working Group which is a faculty led group which seeks to improve sustainability initiatives to improve the vet schools sustainability footprint. The Vet School Sustainability Working Group has achieved both the Bronze and Silver Green Impact awards.

The One Health showcase was an opportunity for students to explain to faculty and other students the student-led initiatives involved to explain student-led One health and planetary health activities that VetSoc offers.

There are also other SU societies including the Sustainability Society that offer other student-led initiatives.

Recommendations:

- Improve the current disconnect between the Manor Park and Stag Hill campuses so that there is more connectivity between vet students and the rest of the University of Surrey, so sustainability events and information reaches all students.
- Encourage more engagement for sustainability events both VetSoc and Institution wide so that more students attend these events and improve student access about the information regarding Surrey Sustainability events that are taking place
- Improve the access and signpost educational resources for planetary health and One Health resources for vet and health sciences students to access
- Increase the frequency and consistency of VetSoc eco club meet ups, events and posts on instagram, and greater emphasis within university societies in general.
- The university should promote more cultural art events based on planetary health, to encourage a wider variety of student engagement.
- The university should include members of a local environmental justice community in talks about the climate and environmental challenges they face.
- Support more student lead research by providing sustainability/One Health grants.

Campus Sustainability | B+

- The University of Surrey has numerous Sustainability Policies (Sustainability policies | University of Surrey), which detail past, present and future implementations of campus sustainability at the establishment. In particular, the University has made great progress in moving towards sustainable transportation throughout and between the 2 campuses and making conscious decisions about the campus food and beverage selections. Additionally, they have a written and approved plan to achieve carbon neutrality by 2030. The University being fully divested from fossil fuel companies is significant.
- Recommendations:
    - There is still much to improve within campus sustainability, particularly in terms of retrofitting buildings and waste management.
    - There are no written guidelines for sustainability requirements in the Surrey Events Policy, and this may be worth revising.
    - The University's waste management has much to be addressed, which will hopefully be implemented as part of the Operational Waste Management Plan. For instance, the different categories of waste need to be separated and disposed of in a more efficient manner, including separating recycling waste from general waste in accommodation and university buildings.
    - For sustainability building practices, the University has BREEAM excellent ratings on most of the new buildings that belong to it, but a large number of the University's older buildings tend to have poorer energy performance, and whilst there are written plans to retrofit more buildings, most currently remain this way.
    - The University should invest further in renewable energy sources and Power Purchase Agreements (PPAs) for Renewable Energy.
    - The university should also be transparent and publish what percentage of their energy usage is from renewable energy sources, and although they stated divestment from fossil fuels in 2017, they need to make it clearer whether they invest in fossil fuel companies within its portfolio.
    - Some of the information required for the PHRC was hard to locate or not publicly available, so the university should more clearly signpost these.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as "a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change "the greatest threat to global health in the 21st century," many health professional school's institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients' health. This preparation is in the hands of the institutions providing our health professional training. It is imperative that we hold our institutions accountable for educating health professional students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) school campus sustainability.

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as "the health of human civilisation and the state of the natural systems on which it depends." For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional 'environmental health' examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of health professional education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.

- **Sustainable vetcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimizes use of healthcare services. For this veterinary specific assessment, we have modified this language to 'sustainable vetcare'.

- **Education for Sustainable Vetcare (ESV):** is defined as the process of equipping current and future veterinary professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous overall environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable vetcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESV is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3. For veterinary medicine these have been expanded to include both domestic and wild animal species:

    1. Describe how the environment and health interact at different levels.

    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.

    3. Discuss how the duty of a veterinarian to protect and promote health is shaped by the dependence of health on the local and global environment.

- **Veterinary School/Department vs. Institution:** When "Veterinary School" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Veterinary Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population

Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by Veterinary Medicine students, no matter where in the institution the resource comes from or if it is specifically targeted for Veterinary Medicine students, can meet this metric.

- **Environmental history (Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.

- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.

- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.

- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).

- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.

- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.

- **Extractivism:** The removal of natural resources typically in large quantities. Within

anthropology this term is often used in the context of colonialism to refer to the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.

- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.

- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.

- **Anthropogenic:** Created through human activity

- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Veterinary Medicine Scoring Matrix

- Elective coursework (1 point): This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
- Brief coverage in the core curriculum (1 point): This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. At minimum brief inclusion would qualify as inclusion in a single lecture slide in a single year.
- Moderate coverage in the core curriculum (2 points): This score applies where a topic is taught in moderate detail or repeatedly brought up in different years, but may not be consistently linked to planetary health.
- In depth coverage in the core curriculum (3 points): This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years while consistently making connections to planetary health. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats, or inclusion as a learning outcome in a syllabus.

Other considerations:

- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Updated in 2025, a complete literature review by metric is available for the 2024/25 Medicine Report Card Template. This largely translates across disciplines although we are hoping to expand this process across all of our covered disciplines. A link to the 2025 literature review by metric is available here.

Planetary Health Curriculum

Section Overview: ***This section evaluates the integration of relevant planetary health topics into the veterinary school curriculum.*** *Today's veterinary students will be on the frontlines of tackling the animal and public health effects of climate and other environmental changes. Therefore, it is critical that veterinary students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the seven exposure pathways (i.e., air, temperature, extreme events/ disasters, food, water, vector-borne diseases, and animal welfare), environmental health inequities, and disaster response principles must be part of every veterinary school's core curriculum.*

Curriculum: General

1.1. Did your veterinary school offer elective courses (student selected modules) to engage students in Education for Sustainable Vetcare or Planetary Health in the last year?	
Yes, the veterinary school has offered **more than one** elective whose primary focus is ESV/planetary health in the past year. (3 points)	
Yes, the veterinary school has offered **one** elective whose primary focus is ESV/planetary health in the past year. (2 points)	
The veterinary school does **not** have any electives whose primary focus is ESV/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 point)	
No, the veterinary school has **not** offered any electives on planetary health or electives that include ESV/planetary health topics in the past year. (0 points)	
Score Assigned:	2
Score explanation: There is a single elective course offered to all University of Surrey students. ENGL001 - Sustainability is a Global Graduate Award (GGA) optional extra-credit course provided by the School of Engineering. As described by the module descriptors This course provides students with insights into the “three pillars” of sustainability: environmental, economic, and social issues. Environmental issues include the problems of climate change and biodiversity loss, and resource management including water, food and energy provision. Economic issues include how economic instruments such as taxes and subsidies can be used to encourage more sustainable practices, the dilemma of economic growth, and how and why companies engage in corporate social responsibility. Social issues include the sociology and psychology of sustainability, and sustainable tourism - through these, students are introduced to how individuals, and society as a whole, might move towards more sustainable behaviours.	

Curriculum: Health Effects of Climate Change

1.2. Does your veterinary school curriculum address the relationship between increasing temperatures and animal health?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation:
As with the nature of Surrey's spiral curriculum, the relationship of increasing temperatures impacting animal health are revisited throughout the course. The mainstay of this is taught in the One Health Module in fourth year, (VMS4009). The 'Epidemiological Modelling' & 'Biosurveillance' lectures cover the impacts of emerging zoonotic diseases due to climate change and increasing temperatures impacting animal welfare and health. There are many case studies mentioned in these teaching sessions, including vector borne diseases becoming more prominent in the UK due to climate change and increasing temperatures. These lectures also discuss how data analysis can inform public health policy to mitigate the health effects caused by climate change and increasing temperatures.
The 'Emerging Disease in Companion Animal' and 'Emerging Equine Infectious Diseases' lecture (4008) focuses on emerging disease due to climate change and increasing temperatures leading to changing vectors which is affecting many species but these lecture specifically focuses on companion animal and equine species.
There are additional lectures which focus on health economics to promote sustainability and manage the impacts of increasing temperatures affecting animal health, including international safe trade of animals and animal products which is in the 'Health Economics' and 'International Animal Trade Regulations and Role of WTO & WOAH' lectures.
The One Health module (VMS4009) also has specific teaching focused on providing veterinary care in response to disasters including those caused by climate change in the 'Disaster Management & Emergency Preparedness' lecture. In addition, students can apply these concepts learnt in the 'BARTA' large animal rescue simulations. Both the 'Disaster Management & Emergency Preparedness' and 'BARTA' lectures and practicals make the connection of increasing temperatures negatively affecting animal health and welfare. Additionally in the 'Environmental Impacts of Intensive Livestock' lecture the link between global warming, biodiversity loss and animal health and welfare is explained.

Additionally, the course addresses the relationship between temperature and animal welfare in the Zoological Medicine (VMS4007) module, in the 'Conservation Biology' lecture which discusses marine heatwaves in the North Pacific and how these have been correlated with biodiversity loss in South America. In the Veterinary Medicine 3 (VMS4008) module, this is expanded upon in the 'Intensive Fish Production' lecture, which discusses warming seas and the unprecedented impact this has had upon the health and welfare of fish.

Furthermore, in the Structure and Function 4 (VMS2004), 'Parasites of the Cardiovascular System' increasing global temperatures and the subsequent spread of mosquitoes and therefore the parasites that they carry, such as *Dirofilaria immitis* is considered.

1.3. Does your veterinary school curriculum address the impacts of extreme weather on animal health and veterinary systems?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation:
The impact of extreme weather on animal health and welfare is addressed in the Zoological Medicine module (VMS4007), in a lecture on 'Ecosystem Health' which discusses wildfires and other extreme weather events and their impacts on ecosystems. Additionally this concept is expanded upon in the 'Conservation Biology' lecture, which discusses how environmental stochasticity such as extreme weather events can contribute to extinction vortexes under the small population paradigm, as well as in the 'Population Ecology' lecture, which details how density independent factors, including extreme weather conditions, can impact survivorship of a species.
The One Health module (VMS4009) also discusses the impacts of extreme weather on animal health and veterinary systems as a critical recurring theme throughout the module. A couple of key points that this is specifically mentioned in the 'Health Economics' lecture students are taught about key sustainability concepts that can be applied to help manage and adapt to the impacts of extreme weather events on animal health. In addition the 'One Health: Systems and Stakeholders' lecture encourages to think holistically and apply systems thinking which helps students to understand the impacts of extreme weather events on animal health and veterinary care.
Furthermore the 'Epidemiological Modelling' lecture explores mathematically modelling infectious diseases and environmental impacts on infectious disease outbreaks with particular reference to vector borne diseases.
Additionally both the 'Disaster Management & Emergency Preparedness' and 'BARTA' lecture and practicals address how veterinary surgeons should respond to provide veterinary care in environmental disasters, including those caused by extreme weather events. These lectures address providing care to several different species affected by extreme weather events

1.4. Does your veterinary school curriculum address the management of animals during climate associated disasters?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation:
In the compulsory One Health module (VMS4009), there is a series of lectures focusing on providing veterinary care in disasters and emergencies. The 'Disaster Management & Emergency Preparedness' lecture and 'BARTA' practical aims to build confidence in students to develop both community and personal level response plans to disasters covering a wide range of species. These teaching sessions also cover the role of veterinary surgeons within a multidisciplinary team involving emergency services and maintaining a safe working environment. The link between managing animal cases due to climate related disasters and One Health is made in both the 'Disaster Management & Emergency Preparedness' lecture and the 'BARTA' practical. Climate change associated disasters are explicitly stated in these lectures and the negative effects of the climate related disasters on animal health and management.
Additionally the 'Notifiable Disease Simulation' in VMS4009 also develops student's confidence in communicating and managing when faced with notifiable infectious disease outbreaks with the skills developed in this teaching session transferrable and applicable to protecting animals against environmental harm.

1.5. Does your veterinary school curriculum address the impact of climate change on the changing patterns (e.g., distribution and prevalence) of vector-borne diseases*?*	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation:
The link between climate change and patterns of vector-borne diseases (in particular Orbiviruses) was explored in depth within second year lecture Orbiviruses (VMS2005), which includes several slides explaining the dependence of different arthropod life stages and virus replication rates on environmental temperature and the resultant changing global epidemiological patterns. The clinical implications of Vector borne diseases is exemplified in the lecture Parasites of the Cardiovascular System (VMS2004) where the link between climate change and the Northern spread of *Dirofilaria immitis* cases across Europe is explored as an emerging disease to the UK.
Other lectures covering this include: Respiratory Parasites 1 (VMS2004) with the link between *Angiostrongylus vaporum* epidemiological distribution and climate change; and *Leishmania spp.* (VMS2006) with 1 slide on climate change affecting geographical spread of the sandfly vector.
Within the fourth year compulsory One Health module (VMS4009) there is a lecture covering epidemiological modelling with the following learning objective: To understand some simple models to study impact of environment on infectious diseases with application to vector borne diseases. This teaching is reinforced with an Epidemiology Workshop practical. Similarly the lecture: Emerging Diseases in Companion Animals (VMS4009) includes the learning objective: To recognise the effect of increased travel & global worming in relation to emerging 'exotic' diseases.
However, opportunities were missed to link the changing epidemiological patterns of significant social and economically significant viruses to the changing climate. An example is in our fourth year lecture Managing Viral Diseases of Poultry (VMS4008) the epidemiological influence of the migration patterns of wild birds (acting as a natural viral reservoir) and the ideal environmental conditions for Avian Influenza Virus are discussed without link to the significant influence of

climate change on these factors. In the fourth year lecture 'Equine Emerging Infectious Diseases' (VMS4008), one of the learning objectives includes:' To understand the role that vectors and climate change play in the spread of infectious disease'.

In the compulsory One Health module (VMS4009) in fourth year, the 'Epidemiological Modelling' lecture aims to get students to understand simple models to study the impact of changing environmental patterns on infectious diseases, with application to vector borne diseases. This teaching is reinforced with the 'Epidemiology workshop'. Additionally in VMS4009 the 'Emerging Disease in Companion Animals' lecture and engagement session discusses the changing prevalence and distribution of emerging exotic infectious diseases affecting companion animals is changing partly due to increased travel and climate change. This knowledge in 'Emerging Disease in Companion Animals' can be applied during an engagement session focussing on importing and exporting companion animals in the UK and the responsibilities of biosecurity. There is also specific teaching focusing on neglected tropical diseases in 'Introduction to Neglected Tropical Diseases', in particular the lifecycles and how climate change is affecting them.
The 'APHA & Surveillance' lecture and 'One Health: Systems & Stakeholders' lecture seeks to solidify understanding the links between identifying the changing patterns impacting vector borne diseases using surveillance and applying the systems thinking taught in 'One Health: Systems & Stakeholders'.

1.6. Does your veterinary school curriculum address the health effects of climate change and air pollution?

This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	3

Score explanation:
The course addresses the health impacts of air pollution with inhalational anaesthetic agents in the Veterinary Medicine 1 (VMS3010) module, which details some of the symptoms of long term exposure to anaesthetic gases such as isoflurane and sevoflurane.
As per the nature of Surrey's spiral curriculum, the negative environmental and health impacts of inhalational anaesthetics agents is discussed in the 'Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia' in the One Health module (VMS4009).
Furthermore, the impacts of climate change upon health are analysed in the 'Ecosystem Health' lecture in the Zoological Medicine (VMS4007) module, which considers that mental health is significantly impacted by poor ecosystem health as a result of climate change and other human factors.
Furthermore in the compulsory One Health module (VMS4009), there are numerous lectures and other teaching sessions where the health consequences of climate change and air pollution is discussed. Specifically the 'One Health: Systems & Stakeholders' encourages students to implement systems thinking to One Health challenges, including the vet's role in tackling One

Health and planetary health issues, including the negative impacts of climate change and air pollution on health.
Additionally there are more lectures in the One Health module (VMS4009), the 'Environmental Impact of Intensive Livestock' encourages students to consider the UN Sustainability Development Goals as a critical framework to reduce the environmental impact of intensive farming. Therefore introducing the circular notion by reducing the environmental impact of intensive farming, lessens the impact of climate change which in turn protects animal health. 'Sustainability in Veterinary Practice' in VMS4009 allows students to develop skills to perform a sustainability audit which can be applied to numerous disciplines.
'One Health, One Welfare' in VMS4009 encourages students to advocate for animal welfare, especially when animals act as sentinels for human health in critical One Health issues in the lecture 'Introduction to One Health' in VMS4009.
The teaching session 'Day One Zoonoses' in VMS4009 focuses on the importance of animal companionship and also poses anthropogenic risks to pets & animals in humans' care, including indoor air pollution from smoking and the negative health effects in animals and people.

1.7. Does your veterinary school curriculum address the relationship between animal welfare and the effects of environmental degradation and climate change?

This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	3

Score explanation:
In the compulsory fourth year module - Zoological Medicine (VMS4007), habitat degradation, fragmentation and deforestation are discussed in detail, along with climate change and other human factors such as direct and indirect pollution as to their direct impact on biodiversity loss worldwide in the lecture 'Conservation Biology'. Furthermore, in the 'Biodiversity and Ecosystem Health' lecture in this module, climate change's impact on ecosystem functionality, productivity, resistance and resilience is clearly defined, and how this in turn impacts the food chain at both an individual and population level.

The connection between animal welfare and the effects of environmental degradation and climate change is a critical concept throughout the compulsory One Health module (VMS4009).
There are a several key topics that are incorporated throughout the module, the first is an overarching theme, encouraging students to think holistically in the 'One Health: Systems & Stakeholders' lecture engages students to think systematically and debate issues with a strong scientific evidence basis, which is critical to give students the ability to apply this to animal welfare negatively impacted by the deteriorating environment.
There are many lectures and practicals which discuss the environmental impact of veterinary care in VMS4009. A couple key lectures to note is the 'Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia' discussing the negative impact of chlorofluorocarbons (CFCs) entering the atmosphere depleting the ozone layer. Furthermore inhalational anaesthetic gases are potent greenhouse gases contributing to climate change, which in turn has a negative impact on

animal health and welfare. The impacts of administering medications via different routes contaminating the environment by pharmaceutical pollution is also discussed.
The 'Environmental Impact of Intensive Livestock' lecture discusses the carbon footprint of intensive farming, for example emitting greenhouse gases like methane and carbon dioxide from livestock, contributing to climate change. This lecture explicitly mentions the effects of global warming on animal health and welfare. Additional environmental effects of intensive livestock are also discussed like slurry management, water pollution and eutrophication and the effects on biodiversity.
There are numerous lectures in VMS4009 which discuss the consequences of environmental degradation on animal welfare, a couple of important ones to note. The 'Emerging Disease in Companion Animals', 'Introduction to Neglected Tropical Diseases' and 'Parasitic Neglected Tropical Diseases - with a focus of soil transmitted helminths' highlight the emergence of novel pathogens in several species including companion animals. The lectures discuss the increased emergence of tropical diseases due to climate change and environmental degradation, amongst other factors. The 'Notifiable Disease Simulation' and 'Outbreak Workshop' allows students to practically apply this teaching to mitigate environmental contamination in the face of an infectious disease outbreak.
There are many lectures that incorporate promoting sustainability practices into clinical practice. The 'Sustainability in Practice' lecture highlights the importance of conducting sustainability audits to improve a clinics' carbon footprint because it recognises the relationship between climate change and environmental degradation negatively impacting animal welfare. The 'Health Economics' lecture encourages students to investigate incorporating sustainability into clinical practice to help adapt to managing negative effects of climate change on animal health.
Furthermore the 'Disaster Management & Emergency Preparedness' and 'BARTA large animal rescue' lectures and practical in VMS4009, develops students' approaches to manage animals' welfare negatively impacted by climate related disasters and environmental degradation in a clinical context.
The 'One Health, One Welfare' in VMS4009's entire focus is to empower students to advocate to improve animal welfare, including the effects of climate change and environmental degradation. The focus of numerous VMS4009 teaching sessions is to develop students' ability to recognise the relationship between climate change and environmental degradation negatively impacting animal health and welfare and how to provide veterinary care in many clinical and non-clinical contexts.
In the VMS4008 module, the lecture on 'Integrated Parasite Management' discusses the impact of animal medicine residues excreted into the environment and how these medicine residues have a negative impact on land and aquatic ecosystems, which in turn impact the animals farmed on that land.

This metric is a critical recurring theme in the fourth year One Health module VMS4009, that is consistently highlighted in teaching across this module. However the connection between animal welfare and the effects of environmental degradation and climate change is not made consistently throughout the rest of the veterinary school curriculum.

1.8. Does your veterinary school curriculum address how animal health is impacted by climate-related changes in water availability and quality?

This subject was addressed **in depth** by the **core** curriculum. (3 points)

This subject was **moderately** addressed by the **core** curriculum. (2 points)

This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)

This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation:
In the VMS4007 module lecture 'Biodiversity and Ecosystem Health', the emergence of ecological dead zones in the ocean is explained, in which increasing carbon dioxide in the atmosphere is converted to carbonic acid, making the quality of the water so acidic it is essentially unlivable. In the same module, the lecture 'Conservation Biology' considers the pollution of the River Wye with phosphates, and the subsequent impact on the local aquatic population via decreased water quality.

In the compulsory One Health module (VMS4009) the 'Environmental Impact of Intensive Livestock' lecture discusses the environmental impacts of intensive farming can have on waterways and water quality which can impact animal health. The lecture also discusses implementing the UN Sustainability Development goals to mitigate the environmental impact of intensive livestock.
Furthermore the 'Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia' in the core One Health module (VMS4009) discusses how pharmaceutical pollution can impact water quality especially highlighting the legal obligations veterinary surgeons have when disposing medications to protect waterways and the environment.
In the VMS4008 module, the lecture on 'Integrated Parasite Management' discusses the impact of animal medicine residues excreted into the environment and how these medicine residues have a negative impact on land and aquatic ecosystems, which in turn impact the animals farmed on that land.

1.9. Does your veterinary school curriculum address how climate change can threaten the production, quality, and access to food for animals?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation:
The Zoological Medicine (VMS4008) module addresses how climate change can threaten the production, quality, and access to food for animals. Climate change and biodiversity loss impacts the functionality and productivity of an ecosystem, such that the biomass available to it decreases, and top-up and bottom-down control cannot occur effectively, leaving apex predators, mesopredators and herbivores with improper resources to sustain their populations.

In the compulsory One Health module (VMS4009), a key lecture is the 'Food Security' session. It focuses on the effects of globalisation and has on the food chain and food supply. It also explores the limitations of current systems supplying food in a One Health context, linking how climate change threatens food supply for animals.
Additionally the 'Environmental Impact of Intensive Livestock' explores sustainable food production which minimally impacts the environment, which can be linked to climate change impacting the availability of food to animals.
The 'Disaster Management & Emergency Preparedness' lecture in VMS4009 also links the impact of climate change related disasters and events impacting safe access of food for animals and people.
The 'International Animal Trade Regulations of the World Trade Organisation and World Organisation for Animal Health' explores legislation, regulations and implementing frameworks to ensure safe trade of animal and animal products including food for animals.
In the VMS4008 module, the lecture on 'Integrated Parasite Management' discusses the impact of animal medicine residues excreted into the environment and how these medicine residues have a negative impact on land and aquatic ecosystems, which in turn impact the animals farmed on that land.

1.10. Does your veterinary school curriculum address the outsized impact of *climate change* on marginalized populations (e.g., low SES, women, communities of color, Indigenous communities, children, unhoused populations, and older adults) and indirectly the animals in their care?

This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	1

Score explanation:
In the One Health module (VMS4009), the impacts of climate change is an important recurring topic in the module. However this specific metric is not explicitly stated in the VMS4009 module handbook and learning objectives. However there is a series of lectures in VMS4009 that helps to develop students' cultural humility.
The 'Equality Act of 2010', 'Faith & Cultural Humility' and 'Active Allyship' in VMS4009 highlights the biases, prejudices and discrimination as well as other factors like faith and culture that can impact animals under their care that can access veterinary care. This teaching also aims to develop students' humility and cultural awareness to improve access to veterinary care but this is not directly connected to the negative impact climate change can have on access to veterinary care of marginalized communities.

In the elective Global Graduate Award Sustainability module (ENGL001), in a lecture titled 'The Politics of Sustainability', the rising sea levels resulting from climate change, and their outsized impact on small island states such as Vanuatu is considered. In the same lecture, the the gender-specific impacts of climate change, in that it disproportionately impacts women and girls due to existing gender inequalities, leading to increased burdens like water/food collection.

1.11. Does your veterinary school curriculum address the unequal regional health impacts of climate change globally?

This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	2

Score explanation:
In the compulsory One Health module VMS4009, the concept of unequal regional health impacts affecting both animals and people is first introduced in the 'Introduction to One Health' lecture with several additional lectures exploring it including 'Epidemiological Modelling' and 'Biosurveillance' lectures both use mathematical modelling to analyse how the changing patterns of climate change can impact disease outbreaks in certain areas, often in areas that are low income countries, thus linking the unequal regional health impacts due to climate change.
Additionally the 'One Health: Systems & Stakeholders' lecture discusses processes to identify stakeholders affected by One Health challenges, like the unequal regional health effects caused by climate change and explores the veterinary surgeons' role in these One Health challenges.
Furthermore the 'One Health & One Welfare' lecture explores how veterinary surgeons can advocate for animal welfare, which can also be applied to the unequal health effects of climate change.
Additionally the 'Introduction to Tropical Neglected Diseases' and 'Parasitic Neglected Tropical Diseases' also explore the epidemiology and lifecycles of these diseases and students are required to understand several case examples from around the globe.
The 'Food Security' lecture in VMS4009 explores the causes of food security, including climate change, other environmental related factors and the effects of globalisation which creates an equality gap on access to food thus negatively impacting health. It also discusses the limitations of the current limitations of current systems.
The 'Environmental Impact of Intensive Livestock' lecture explains the unequal regional impacts of climate change globally where an IPCC video is played demonstrating this point and showing that those who have emitted the least amount of GHG are paying the greatest price.

1.12. Does your veterinary school curriculum address how climate change can affect inherently vulnerable animal populations (e.g., endangered species, immunocompromised species, fragmented wildlife populations)?

This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	2

Score explanation:
This topic is discussed in the Zoological Medicine Module in Year 4 (VMS4007). It is covered in the 'Conservation Biology'and 'Population Ecology' lectures. There is in depth teaching on the 'small population paradigm', and how environmental and genetic stochasticity, in conjunction with density dependent and independent factors, impact endangered species. In particular, those under the minimum viable population number of under 5000. These groups are more susceptible to inbreeding depressions and loss of genetic diversity, decreasing populations further and further in an extinction vortex, until the Allee effect occurs, where individuals cannot find each other to reproduce, and inevitably, the population is wiped out completely. These lectures also discuss potential mitigation options available to avoid this, such as improving connectivity.

Furthermore in the One Health module (VMS4009), the 'Epidemiological Modelling' and 'Biosurveillance' lectures help students understand the use of mathematical modelling to understand how climate change is increasing the number of infectious diseases outbreaks which can therefore impact vulnerable animal populations. The 'Disaster Management & Emergency Preparedness' and 'BARTA' teaching sessions in VMS4009 also touch on how climate change related disasters will affect inherently vulnerable animal populations.
Furthermore this is repeatedly touched on in the final year Veterinary Pathology & Public Health (VPPH) rotation, building upon students' existing knowledge. However it is not thoroughly discussed in the VPPH rotation.

Curriculum: Environmental Health & the Effects of Anthropogenic Toxins on Animal Health

1.13. Does your veterinary school curriculum address the health effects of anthropogenic toxins (e.g., pollution, pesticides) on animal health?
This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	3

Score explanation:
This topic is covered in the Veterinary Medicine 3 (VMS4008) module in Year 4. Specifically, it is discussed in the 'Small Animal Toxicities' lecture, which goes into detail about rodenticides,

pesticides and ethyl glycol toxicity from exposure to anti-freeze agents, and more on their impact on small animal welfare.
Additionally, this topic is expanded upon in the Zoological Medicine (VMS4007) module as well. The lecture 'Conservation Biology' describes direct pollution such as phosphates from agriculture and sewage in the River Wye and the consequences of this upon local fish populations, as well as indirect light pollution with regards to the migration of sea turtle hatchlings navigating to artificial street light as opposed to the moon.
Furthermore, this topic is touched upon in the third year VMS3011 module, by which the 'Therapeutics of haematopoietic system immunosuppression' discusses rodenticide poisoning.

A critical lecture in the One Health module (VMS4009) the 'Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia' covering many topics including the health effects of anthropogenic toxins like, inhalational anaesthetic gases causing climate change and concerns over staff safety. Pharmaceutical pollution is also discussed, including the routes the veterinary medicines can contaminate the environment. It also discusses conducting environmental risk assessments for any new VMP and includes sustainability in research and development.
Additionally the 'Introduction to One Health' lecture in VMS4009, connects the link of animals acting as sentinels which can be applied to the health effects of anthropogenic toxins.

In the VMS4008 module, the lecture on 'Integrated Parasite Management' discusses the impact of animal medicine residues excreted into the environment and how these medicine residues have a negative impact on land and aquatic ecosystems, namely dung beetle populations, fish and aquatic life, butterflies and pollinator species.

1.14. Does your <u>veterinary school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation:
This topic is discussed in detail throughout the course. For instance, in the compulsory Animals in Society 1 module (VMS1001) the lectures 'Cattle Production Systems' and 'Beef Cattle', discuss the methane footprint of intensive management systems and the impact of beef farming on local landscapes respectively on a national level.
This topic is also covered in depth in the core Zoological Medicine (VMS4007) module. For instance, in 'Conservation Biology', the devastating effects that invasive species such as domestic cats have had across the UK is scrutinised, as well as the impact of phosphate pollution in the River Wye upon fish populations.
In the 'Marine Mammal Stranding' lecture of the same module, multiple anthropogenic threats are discussed in regards to their correlation with native UK marine mammal species becoming stranded in increasing numbers. The range of different potential toxic effects caused by chemical pollutant exposure is also analysed, such as polychlorinated biphenyls.

In the compulsory One Health module (VMS4009), the 'One Health: Systems & Stakeholders' lecture encourages students to think systematically on One Health issues, for example the impacts of human caused environmental threats and how to identify key stakeholders, including the university's community. This is highlighted particularly in the 'Introduction to One Health' lecture connecting animals can act as sentinels to human health warning of environmental damage from anthropogenic activities.
Additionally the 'Environmental Impact of Intensive Livestock' and 'Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia' are critical lectures in VMS4009 which address anthropogenic caused environmental threats. This includes the environmental impact of intensive farming, pharmaceutical pollution and the greenhouse effect of inhalational anaesthetic gases. These lectures also address potential control strategies to reduce the environmental impact of veterinary pharmaceuticals and intensive farming.
Furthermore the 'Sustainability in Veterinary Practice' and 'Sustainability Seminar & Audit' explore control measures that can be applied in clinical practice that can reduce the environmental threats caused by anthropogenic activities. The 'Sustainability Seminar & Audit' is a compulsory coursework assessment in the One Health module VMS4009 where students perform a sustainability audit on the University of Surrey's partner vet practices (which are considered an extension of the University of Surrey's campus) to help students incorporate sustainability thinking in everyday clinical practice.

1.15. Does your <u>veterinary school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults and indirectly the animals in their care?

This subject was addressed **in depth** by the **core** curriculum. (3 points)

This subject was **moderately** addressed by the **core** curriculum. (2 points)

This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)

This topic was **not** covered. (0 points)

Score Assigned:	1

Score explanation:
This topic is not explicitly taught in the core curriculum, however in the One Health module (VMS4009) there is a series of lectures and seminars that serve to increase students' cultural humility. 'Equality Act 2010: the society & community we live in & veterinary workplace', 'Active Allyship' and 'Faith & Cultural Humility' although it might not directly link the outsized impact of anthropogenic environmental toxins on marginalized communities it does highlight the UK's Equality Act of 2010 giving insights into personal biases, protected characteristics and ensuring the workplace is supportive. The 'Faith & Cultural Humility' and 'Active Allyship' teaching is essential for students being open and not judgmental of their clients' beliefs. Therefore these lectures may provide students tools for similar issues for example the outsized impact of anthropogenic environmental toxins on marginalised populations. In the VMS4009 disaster management lecture, the concept of inequity with regard to risk of disasters and environmental justice is discussed, with specific note to indigenous communities and communities of colour.

In the elective Glocal Graduate Award Sustainability module (ENG001), the lecture 'Sustainability in Everyday Life' brings to light the inequalities in carbon footprints, such that the footprint of the top 1% households is >10x footprint of the bottom 50% in the EU, despite suffering from the effects of climate change just as those with higher SES, if not more.

Curriculum: Sustainability

1.16. Does your <u>veterinary school</u> curriculum address educating clients on environmental and health co-benefits of a healthy animal's diet (e.g., seaweed in ruminant diets to reduce methane emissions, the difference between CO_2 emissions in production of dry vs. wet dog food)?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: Within the Animals in Society 1 Module (VMS 1001) The Pet Food Industry lecture clearly outlines the link between different companion animal food formulation choices and their environmental impacts with mention of greenhouse emissions, deforestation and nutrient degradation (i.e the sustainability of raw food and freshly cooked diets versus commercially formulated diets using animal by-products) and addresses advising clients on sustainable food choices. Environmentally sustainable grazing options for horses is considered in the lecture Practical Application of Equine Nutrition: Advising a New Horse Owner. There is limited explicit reference to the environmental impact of diet modification of production animals as staff indicate this is not required as part of the RCVS day 1 competencies. However, The Environmental Impact of Intensive Livestock in VMS4009, highlights the UN Sustainable Development Goals of sustainable food production so providing client education on animal feed that co-benefits sustainability and animal health is key to help decrease the environmental impact of intensive livestock whilst upholding animal welfare. The One Health module (VMS4009) discusses incorporating sustainability and adaptability into clinical veterinary practice in the 'Health Economics' lecture. The One Health: Systems & Stakeholders session helps students gain experience in professionally debating health issues using evidence based veterinary medicine (EVBM). A seminar in VMS4009 titled 'Day One Zoonoses' discusses the human-animal bond, including potential negative impacts on animal and human health, including diet - raw meat and bones diet, vegan diet and obesity in animals. Both of these teaching sessions can help students learn to educate clients about the co-benefits of improving the sustainability of animal food and improving animal health using EVBM.	

1.17. Does your <u>veterinary school</u> curriculum address the carbon footprint of vetcare systems?
This subject was addressed **in depth** by the **core** curriculum. (3 points)

This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, <u>or</u> in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation:
In the core One Health module (VMS4009), this metric is a recurring concept throughout the module. The 'Health Economics' lecture introduces the notion of applying sustainability and adaptability into clinical veterinary practice everyday whilst the 'One Health: Systems & Stakeholders' highlights the One Health issues linked with a veterinary practice's carbon footprint and addresses the need for applying a systems thinking approach.
Furthermore this theme is covered in more teaching in the core One Health module, in the 'Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia' lecture discusses the need to utilise TIVA anaesthetic protocols to reduce the carbon footprint has by minimising the use of inhalational anaesthetic agents.
The 'Environmental Impact of Intensive Livestock' lecture in VMS4009 discusses the environmental impact of intensive livestock, including the carbon emissions of intensive livestock production. Consequently these intensive livestock systems will require veterinary care which has an additional environmental impact, including the 'cost' of carbon emissions.
The 'Sustainability in Veterinary Practice' lecture in VMS4009, teaches students about sustainability frameworks (involving reducing carbon emissions) and performing sustainability audits in vet practices to improve the sustainability of a veterinary clinic's operations, including reducing the practice's carbon footprint. This teaching is further reinforced in VMS4009 in the 'Sustainability Seminar & Audit'
Furthermore, in the Veterinary Medicine 3 (VMS4008) module 'Advanced Imaging' lecture, the impact of Magnetic Resonance Imaging (MRI) on the environment is touched upon. The magnet is always on, and must be cooled with a vast amount of the atmosphere's Helium sources.
There are several brief references made throughout the course, for example in the Wellbeing Clinic practical in Veterinary Medicine 3 (VMS4008), where single-use plastics and other equipment such as drapes is addressed as an issue in veterinary practices, but these are not necessarily reflected in the learning objectives in the module handbook, however this teaching about improving the carbon footprint of vet care is specifically focused in teaching in the One Health module (VMS4009). Also in Veterinary Medicine 1 (VMS3010) the Inhalational Anaesthesic Agents lecture, the global warming effects of desoflurane, sevoflurane and isoflurane are considered, as well as the ozone degradation properties of nitrous oxide, halothane and isoflurane. In Animals in Society 1 (VMS1001) the carbon footprint of the cattle industry is considered but the opportunity to link this back to vetcare was missed.

1.18. Does your <u>veterinary school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalization, over-investigation and/or over-treatment. (2 points)	2
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points)	2

The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise, physical therapy, mental stimulus, and enrichment. (1 point)	1
Environmental impact of **surgical** vetcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of **anesthetic** gases on the vetcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anesthesia or choosing less environmentally harmful anesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of **veterinary-medicine-produced toxins** on the environment (e.g., barbiturates from buried animals, drugs used in food animals). (1 point)	1
Waste production within vetcare **clinics** and strategies for reducing waste in clinical activities (e.g., single use items in the inpatient or outpatient setting). (1 point)	1
Total Score Assigned:	9

Score explanation:
In the compulsory One Health module (VMS4009) there are many lectures and practical sessions which incorporate teaching sustainable clinical practice.
1: The ‘Outbreak workshop’ develops students' ability to accurately interpret diagnostic tests which highlight the importance of diagnostic tests specificity and sensitivity to not over-interpret and diagnose conditions. Additionally the ‘Antimicrobial Stewardship in Veterinary Practice’ and ‘AMR: Alternatives to Antibiotics’ highlight the importance of judiciously using antibiotics and appropriate antimicrobial alternatives available in veterinary medicine, incorporating clinical factors, dosing and practicalities of administering antibiotics to promote good antimicrobial stewardship in veterinary practice. Furthermore the ‘One Health: Systems and Stakeholders’ lecture encourages students to apply systems thinking when decision making which could be connected to the health and environmental co-benefits of promoting sustainable clinical practice using a strong evidence base

2: The ‘Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia’ is a key lecture highlighting many examples of the negative impacts of pharmaceutical pollution on the environment. The lecture also covers discussing regulations regarding creating environmental risk assessments for veterinary medicinal products. It also incorporates sustainability within prescribing decisions in a clinical context. The ‘AMR: Alternatives to Antibiotics’ and ‘Antimicrobial Stewardship in Veterinary Practice’ lectures in VMS4009 also discuses the importance of judiciously prescribing antimicrobials, including using culture and sensitivity. Furthermore critical antimicrobials and the responsible antimicrobial use, culture and sensitivity and antimicrobial stewardship are introduced in ‘Antimicrobials 1 and 2’in VMS3001 is taught the in 3rd year building the foundations for VMS4009 as per the spiral curriculum. Anecdotally during the VMS4008 Wellbeing Clinic Practical a risk-based approach to antiparasitic treatment prescribing was discussed with clinicians and encouraged to be implemented within our consultation, to mitigate health-related and environmental side-effects.

3: The ‘An Introduction to Physiotherapy’ lecture of Veterinary Medicine 3 (VMS4008), the vast health benefits of non-pharmaceutical therapy are discussed, and furthermore in ‘Avoidance and management of stress-related disease’ of the same module, non-pharmaceutical therapy such as behavioural and environmental management are explored in terms of their relationship with physical and emotional health in the companion animal. In contrast, the Zoological Medicine module of year 4 (VMS4007), in the ‘Ecosystem Health’ lecture, the correlation between

environmental/ecosystem health and decreased stress/anxiety as well as increased mental stimulation and immune health in pets is detailed.

4: The ‘Sustainability in Veterinary Practice’ in VMS4009 incorporates sustainability frameworks in practice audits and this can be applied to improving the sustainability of surgical veterinary care. This is reinforced by the ‘Sustainability Seminar and Audit Session’. The ‘Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia’ lecture in VMS4009 addresses the environmental impact of inhalational anaesthetic gases on the ozone layer and the greenhouse gas effect. Furthermore the lecture Inhalation Anaesthetic Agents within VMS3001 the environmental effects of different inhalational anaesthetic agents is outlined and the use of total intravenous anaesthesia (TIVA) in surgical cases to mitigate this is considered.

5: As discussed above ‘Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia’ in VMS4009 and Inhalational anaesthesic agent lecture in VMS3001 explores the greenhouse and ozone effects of different inhalational anaesthetic agents and explores the use of TIVA to mitigate this. This teaching and incorporating sustainability in clinical practice is reinforced by the ‘Sustainability in Veterinary Practice’ and the ‘Sustainability Seminar and Audit’ in VMS4009.

6: The ‘Environmental Impact of Veterinary Pharmaceuticals & Anaesthesia’ lecture in VMS4009 discusses the routes of which veterinary pharmaceuticals, including barbiturates from buried animals can contaminate the environment.
Furthermore, in the Zoological Medicine module of year 4 (VMS4007), a lecture titled ‘Principles of Anaesthesia and Euthanasia of Wildlife’, the potential effect that barbiturates can have on contaminating the environment if euthanised deer are not properly disposed of, and left in the wild. In the same module, ‘Introduction to UK Wildlife Rehabilitation’, specific medicine regulations regarding wildlife food producing species such as Wood Pigeons are discussed, in that certain medications cannot be used, and those that are must have maximum residue limits.

Additionally the UK veterinary medicine prescribing cascade is usually mentioned in many lectures, particularly regarding farm animal medicine but this is considered from a food safety approach rather than explicitly linked to the environmental impacts. For example in ‘Antimicrobials 2’ in VMS3001, mentions metronidazole should never be given to food producing animals due to toxic carcinogenic metabolites produced in ruminants but there is no reference to the environment.

7: The ‘Sustainability in Veterinary Practice’ and ‘Sustainability Seminar & Audit’ both teaching sessions are in the One Health module VMS4009 which encourage students to utilise sustainability frameworks and audits in clinical practice which is applied to reducing waste in a clinical context. Additionally at the fourth year neuter clinic lecturers advocated students to ensure materials that can be recycled should be placed in the recycling bin to minimise the amount of waste going to landfill.
Additionally there is also a student-led campaign to ‘reuse’ single use consumable items like syringes in university clinical skills spaces where students practice skills on models.

1.19. To what extent does your <u>veterinary school</u> emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?

Indigenous knowledge and value systems are **integrated throughout** the veterinary school’s planetary health education. (3 points)

Indigenous knowledge and value systems as essential components of planetary health solutions are included at **a moderate depth** in the core curriculum. (2 points)
Indigenous knowledge and value systems as essential components of planetary health solutions are included **briefly** in the core curriculum or in any depth in **elective** coursework. (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	0

Score explanation:
Overall there is limited explicit teaching of the role of indigenous communities as components of planetary health solutions. In the compulsory core fourth year module - Zoological Medicine (VMS4007), 'Ecosystem Health' lecture, the lecturer notes the essential importance of indigenous populations and their understanding of ecosystem health and how to maintain it throughout centuries. This is in the recording, but not reflected in the slides or learning objectives.
In the Animals in Society II: Concepts in Epidemiology and Public Health Module (VMS 2008) there is reference to local and indigenous communities as stakeholders in the approach to addressing One Health problems within the 'One Health' lecture.

In the One Health module (VMS4009), this metric isn't reflected in the module handbook by explicitly stating the importance of Indigenous knowledge and value systems as a key component of planetary health. However there are lectures that focus on the importance of humility in veterinary surgeons. The lecture on the Equality Act of 2010, focuses on UK law exploring biases, prejudice and discrimination of communities in the workplace and affect ability to access veterinary care. The Faith & Cultural Humility and Active Allyship sessions focuses on understanding these biases and prejudices to protect characteristics that are protected in the Equality Act of 2010 whilst understanding the impact of clients' faith and culture can have in accessing veterinary care and teaching students the importance of humility.

1.20. Does your veterinary school curriculum address/demonstrate how to be environmentally sustainable in your hospital operations?
This subject was addressed **in depth** by the **core** curriculum. (3 points)
This subject was **moderately** addressed by the **core** curriculum. (2 points)
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	2

Score explanation:
Overall this is covered within some key lectures within the curriculum but we believe there to be opportunities to further empower students regarding communicating and implementing this within clinical practice. The Surgical Site Infections 1 lecture in VMS3001 discusses the advantages and disadvantages of disposable compared to reusable cloth surgical gowns, both practically, financially and considering reducing environmental impacts.

Anecdotally, this is reinforced at the compulsory 4th year neuter clinic and well-being clinic, where lecturers verbally raised awareness and encouraged students about plastic usage and correct waste disposal and what can be safely recycled. Therefore minimising the amount of waste going to landfill, showing students a simple practical measure to reduce a veterinary practice's carbon footprint.

Additionally, within the Inhalational Anaesthesic Agents lecture within VMS3010 the greenhouse gas and ozone effects of different inhalational anaesthetic gas choices was considered, although opportunities were missed to discuss how this would inform surgical planning.

There are several lectures in the One Health module (VMS4009) that promote practices becoming more sustainable. The 'Sustainability in Veterinary Practice' lecture is a key lecture in this metric. Students are taught to perform sustainability audits, to reflect on practices' carbon footprint and use the findings to implement methods to make the practice more environmentally friendly. The frameworks taught in this lecture are those by the RCVS, Investors in the Environment and VetSustain. This teaching is reinforced by 'Sustainability Audit & Seminar' where students carry out a sustainability audit on the University of Surrey's partner vet practices and suggest potential recommendations to improve operations to encourage sustainability.

Additionally the 'Health Economics' explores incorporating sustainability and adaptability in clinical practice, including hospital operations, and the 'One Health: Systems & Stakeholders' lecture helps students to develop systems thinking to complicated One Health challenges, this can be applied to improving a hospital's operations to become more sustainable. In the Zoological Medicine (VMS4007) module, 'Biodiversity and Ecosystem Health' lecture, some ways of decreasing a practice's carbon footprint are discussed. For instance, making the conscious choice to use more sustainable materials such as gowns and drapes, as well as building practices on derelict buildings over building from scratch.

1.21. Does your veterinary school curriculum address the impact of climate change on access to veterinary care?	
This subject was addressed **in depth** by the **core** curriculum. (3 points)	
This subject was **moderately** addressed by the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation:
There are many teaching sessions in the compulsory One Health module VMS4009 that link climate change impacts and accessibility of veterinary care, however opportunities to highlight the correlation should be explored further. The 'Health Economics' lecture explores economic evaluation and decision making which impacts access to care. Furthermore in 'One Health: Systems & Stakeholders' lecture explores applying systems thinking to One Health challenges, like the impacts of climate change with particular focus on the veterinary surgeon's role which is especially important if climate change events impact access to veterinary care. Additionally there is a series of lectures in VMS4009 which specifically connect climate change events impacting access to veterinary care; for example 'Disaster Management & Emergency Preparedness' and

'BARTA' lectures and practicals directly connect climate change related incidents negatively impacting access to veterinary care. Furthermore the 'Introduction to Neglected Tropical Diseases' and 'Parasitic Neglected Tropical Diseases' both in VMS4009 explore the epidemiology of neglected tropical diseases, with particular reference to the lifecycles. Although not explicitly linked, other teaching on the effects of climate change on these lifecycles and the knock on effect of accessing both human medical care and veterinary care is considered.

Curriculum: Client Communication Applications

1.22. Does your veterinary school's curriculum introduce strategies to have conversations with clients about the health effects of climate change?	
Yes, a **comprehensive list of strategies** are introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, some strategies are introduced for having conversations with patients about climate change in the core coursework, or at any depth in elective coursework. (1 point)	
No strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	2

Score explanation:
Surrey's spiral curriculum involves many client simulations throughout the course.
In the compulsory One Health module (VMS4009), the 'Emerging Disease in Companion Animals' lectures key learning objectives is to educate owners about emerging diseases in companion animals in a One Health context, including the health implications of climate change. This lecture is reinforced by 'Import/Export of Companion Animals' in VMS4009 which specifically has cases regarding animal travel to and from the UK and addresses the emerging infectious diseases that are increasing due to climate change.
Furthermore the 'Notifiable Disease Simulation' helps students practice client communications as well as contacting the APHA if a notifiable disease is suspected, these aspects of difficult conversations can also be applied to discussing the health effects of climate change with clients.
Additionally the 'Day One Zoonoses' seminar in VMS4009 focuses on the One Health effects, like climate change, has on increasingly more zoonotic diseases affecting companion animals and their owners. The lecture also discusses how vets can educate owners to mitigate the risks of zoonosis to protect both their pets and themselves.

The VMS4009 module in general spends a great deal of time exploring sustainability, climate change and the impacts on the veterinary sector. While there is no explicit session devoted to simulated client discussion, there is opportunity to apply systems thinking to sustainability-related topics in groups as well as lecture content in 'One Health for the Veterinary Practitioner' lecture about how to communicate with clients about One Health issues, one of which is climate change.

The 'Equality Act 2010' and 'Faith and Cultural' humility lectures help students develop humility which is crucial for client communication and help understand how cultural and social beliefs can impact veterinary decisions and this can be applied to client conversations regarding the health implications of climate change. However the link specially between strategies with client conversation regarding the health effects of climate change is not explicitly stated in the module handbook or the learning objectives in the One Health module, (VMS4009).

1.23. In training for client encounters, does your veterinary school's curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes a **comprehensive** exploration of strategies for taking an environmental history. (2 points)	
Yes, the **core** curriculum includes **some strategies** for taking an environmental history (or in any depth in the elective curriculum). (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2

Score explanation:
Surrey provides students practical experience with client simulations throughout the curriculum as well as many clinical reasoning sessions in case based learning to practice developing history taking. In the compulsory One Health module VMS4009 the 'Disaster Management & Emergency Preparedness' lecture discusses phases of disaster management, including taking an environmental or exposure history for many species. Additionally the 'Emerging Disease in Companion Animals' and'Import/Export of Companion Animals' in VMS4009 and 'Canine Infectious Diseases' and 'Feline Infectious Diseases' in VMS4008 discusses history taking regarding travel and vaccinations for diseases like Brucellosis, Adenovirus, Distemper and Feline Immunodeficiency Virus and Feline Leukaemia Virus in dogs and cats respectively, 'Notifiable Disease Simulation' and 'Outbreak Workshop' immerses students into the context of an infectious disease outbreak which could also be applied to exposure history taking to narrow down differentials. Furthermore the exploration of zoonotic diseases and history taking is further discussed in the 'Day One Zoonoses' seminar where a One Health approach is discussed not only from a veterinary perspective but a human doctor also discusses the presentation of common zoonotic diseases in humans. Additionally the toxicology and emergency and critical care lectures both discuss the importance of exposure history taking. The 'Fundamentorals of Toxicology' in Veterinary Medicine 1 VMS3010 and 'Small Animal Toxicities' in Veterinary Medicine 3 VMS4008 lectures both highlight the various environmental toxins that can affect companion animals and show the importance of questioning owners regarding environmental toxicology cases. The Emergency Critical Care lectures in VMS3010 and VMS4008 explore taking an emergency capsule history which could also be applied to acute environmental and exposure cases, however this link was not directly made.

1.24. Does your veterinary school's curriculum introduce strategies to discuss protection of animals from environmental harms? (e.g., disaster planning preparedness, animal management during smoke events)
Yes, the **core** curriculum includes a **comprehensive** exploration of strategies for discussing protection of animals from environmental harms. (2 points)
Yes, the **core** curriculum includes **some strategies** for discussing protection of animals from environmental harms. (1 point)
No, the curriculum does **not** include strategies for discussing protection of animals from environmental harms. (0 points)

Score Assigned:	2

Score explanation:
In the compulsory One Health Module (VMS4009) there are key teaching sessions which cover the approaches of protecting animals from environmental harm. The 'Disaster Management & Emergency Preparedness' and 'BARTA' lectures provide students a cornerstone approach of the vet's role in responding to disasters both on an individual and community level to advocate for animal health and welfare. Providing a framework for students to be confident in approaching disasters and emergencies involving different species, including responding to climate change and weather related disasters as well as managing cases of animals affected by environmental harm. These lectures also include how to perform situational triage and working with emergency services involving a number of different species.
This teaching can be applied in the BARTA practical students have exposure and practice in approaching large animal rescue, including approaches in providing emergency treatment in the field.
The One Health module (VMS4009) has teaching in responding to zoonotic and infectious disease outbreaks. The 'Biosecurity' lecture teaches students to conduct dynamic risk assessments and downing and doffing PPE and the correct way to dispose of infectious waste to minimise contamination. The 'Notifiable Disease Simulation' and 'Outbreak Workshop' practicals help students develop an understanding of how to approach the APHA and DEFRA if they suspect a notifiable disease and how to minimise outbreaks spreading. Furthermore the exploration of zoonotic diseases and history taking is further discussed in the 'Day One Zoonoses' seminar where a One Health approach is discussed not only from a veterinary perspective but a human doctor also discusses the presentation of common zoonotic diseases in humans,

In the 4th year Veterinary Medicine 3 module (VMS4008), in the Companion Animal Practice Unit, there is a lecture in 'Common Toxicities in Small Animals', aiming to get students to develop an approach in managing poison cases. The lecture mentions common household and environmental toxins to dogs and cats and how to approach decontaminate. The spiral curriculum builds on teaching from the 'Fundamentals of Toxicology' lecture in Veterinary Medicine 1 (VMS3010) from 3rd year. This lecture highlights toxins sources, including environmental toxins animals can be exposed to.

Curriculum: Administrative Support for Planetary Health

1.25. Is your veterinary school currently in the process of implementing or improving Education for Sustainable Vetcare (ESV)/planetary health education?
Yes, the veterinary school is currently in the process of making **major** improvements to ESV/planetary health education. (4 points)
Yes, the veterinary school is currently in the process of making **minor** improvements to ESV/planetary health education. (2 points)
No, there are **no** improvements to planetary health education in progress. (0 points)

Score Assigned:	2

Score explanation:
The vet school curriculum is constantly under review to ensure sustainability is incorporated into the curriculum. There is a university wide commitment to incorporate the United Nations

Sustainable Development Goals, furthermore the University of Surrey has signed the Sustainable Development Goals Accord and the Concordat for the Environmental Sustainability of Research and Innovation Practice.
There was a curriculum design review to incorporate sustainability teaching throughout the vet school curriculum to align with the University of Surrey vision, to integrate the UN Sustainable Development Goals across teaching, research and daily life at Surrey. All faculties including the vet school are encouraged to link the UN SDGs into teaching however 'ESV' isn't explicitly mentioned but it is a part of ESD. As a result of the curriculum design review the compulsory One Health module (VMS4009) was introduced into fourth year teaching.
The One Health module dedicates teaching time to many core One Health / planetary health concepts including, promoting sustainable veterinary care. For example the lectures on 'Sustainability in Veterinary Practice', the 'Environmental Impact of Intensive Livestock' and 'Environmental Impact of Veterinary Pharmaceuticals', 'Antimicrobial Stewardship in Veterinary Practice'and 'One Health, One Welfare'. Furthermore this teaching is reinforced by the 'Sustainability Seminar & Audit'.
Throughout this report card it is noted that the majority of One Health and planetary health teaching is concentrated specifically in the One Health module, with links and references to planetary health made throughout the rest of the course. However there is evidence of other modules reviewing the curriculum, for example the nutrition lecturers have pushed to incorporate sustainability into this teaching over the last couple of years.

The link to the Institute of Sustainability Development goals can be found here.
https://www.surrey.ac.uk/institute-sustainability/sustainable-development-goals?page=2

1.26. How well are the aforementioned planetary health/Education for Sustainable Vetcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESV topics are **well integrated** into the core veterinary school curriculum. (6 points)	
Some planetary health/ESV topics are appropriately integrated into the core veterinary student curriculum. (4 points)	
Planetary health/ESV is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	4

Score explanation:
The university takes a holistic integrated approach to planetary health teaching within the spiral structured curriculum, with different areas of planetary health addressed at different points of the course. Within the first year module Animals in Society 1 (VMS1001) the considerations of greenhouse gas emissions and climate impact of different animal-based industries is considered, alongside the importance of biosecurity in disease transmission prevention. Across the second year curriculum the effects of global warming and human behaviour on the epidemiology of pathogens is considered. Additionally within the 2nd Year module VMS2008 Animals in Society II: Concepts in Epidemiology and Public Health the link between human health, animal health and environmental health is explored through the One Health lecture with consideration given to the

role of indigenous communities, and further lectures mentioning the threats of agricultural intensification and climate change to food security. Within the third year teaching content there is emphasis on the impact of veterinary systems on planetary health i.e. the sustainability of surgical material choices, as well as the greenhouse effects of anaesthetic agents and responsible use of antimicrobials and sustainable parasite control.

The majority of the content relevant to the planetary health metric is concentrated in Year 4, primarily in the Zoological Medicine Module (VMS4007) and One Health Module (VMS4009). The Zoological Medicine Module (VMS4007) addresses climate change, water quality, declining biodiversity, ecosystem health and more, with a key focus on environmental impacts of planetary health concerns. The One Health Module (VMS4009) contains lectures and practical teaching covering or readdressing topics such as: zoonotic diseases, disaster management & emergency preparedness, environmental impact of livestock and pharmaceuticals and encouraging sustainability within clinical practice. A critical recurring theme within the One Health module is the negative effects of environmental degradation and climate change on animal health and welfare. With clinical competence being a priority, evenly spreading planetary health teaching throughout clinical years can present a challenge, however Surrey addresses this with explicit links to sustainability in the learning objectives for Modules VMS3011, VMS4007, VMS4009 and the Year 5 Veterinary Pathology & Public Health Rotation (VPPH).

1.27. Does your veterinary school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable vetcare as a theme throughout the course?

Yes, the **veterinary school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

No, the **veterinary school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)

Score Assigned:	1

Score explanation:
The University of Surrey School of Veterinary Medicine is constantly reviewing the vet school's curriculum to improve sustainability and planetary health teaching throughout the vet school. In the academic year 2023-2024, a new compulsory One Health module (VMS 4009) was introduced to the fourth year curriculum, following a curriculum review. The faculty member responsible for undertaking this review became, and still is, the module leader. This faculty member led a team of academics to develop bespoke teaching and assessment to align this module with the UN SDG and Education for Sustainable Development.

This dedicated One Health module includes teaching on many core concepts including but not exclusive to emerging infectious & neglected tropical diseases, global health and trade, disease surveillance, allyship in the veterinary profession, impact of intensive livestock management, environmental impact of veterinary medicines, antimicrobial resistance and using alternative treatments to antibiotics, response of veterinary care to climate related disasters.

There is also the Vet School Sustainability Working Group with many faculty members in the group as well as a couple of student representatives to help improve sustainability practice in the vet school including achieving the bronze and silver award in Green Impact (a University of Surrey wide initiative) and now are currently working towards gold. The Green Impact award

encompasses raising awareness and promoting sustainability on a number of levels, including education, research, energy consumption and student-led activities.

1.28. Does your health professional curriculum include teaching on civic engagement/advocacy to address the environmental and structural determinants of health?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **moderately** addressed in the **core** curriculum. (2 points)	
This subject was addressed **briefly** in the **core** curriculum, or in any depth by other non-core learning experiences (e.g., elective coursework). (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	1
In the compulsory fourth year One Health module (VMS4009), there is teaching on 'Equality Act of 2010', 'Faith & Cultural Humility' and 'Active Allyship' teaching which highlights protected characteristics by law in the UK and how culture and faith may impact veterinary decisions, thus highlighting the importance of humility towards colleagues and clients. However the environmental and structural determinants are not highlighted in the module handbook and learning objectives. In the compulsory third year Veterinary Medicine (VMS3011) module, there is a seminar on veterinary medicine, ethics and the law, which introduces civic engagement.	

Section Total (67 out of 89)	**75.28%**

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Additional curriculum resources:

There is excellent teaching about antimicrobial stewardship and protecting the longevity of Critically Important Antimicrobials (CIAs), explored through a variety of lectures within modules VMS2008, VMS3010, VMS301, VMS4001, VMS4008. Some resources highlighted to be utilised by students are BSAVA, SAMSoc and BEVA PROTECT ME guidelines, utilising EMA categories. Equally there is in depth consideration given to increasing levels of resistance against anthelmintics and responsible use of these drugs integrated into clinical years throughout several modules, with species specific tools such as Sustainable Control Of Parasites in Sheep (SCOPS) principles, Control Of Worms Sustainably (COWS), and The CANTER guidelines as well as using seasonal parasite forecasts such NADIS.

Key One Health issues are discussed in length throughout the curriculum such as biosecurity, food security, food safety, biodiversity loss, public health threats, trade and regulations, emerging disease and zoonotic disease. The teaching for this is mostly concentrated within

VMS2008 and VMS4009. These topics are not integrated into the metric but we believe this should be given credit.

Interdisciplinary Research

Section Overview: ***This section evaluates the quality and quantity of interdisciplinary planetary health research at the broader institution.*** *Interactions between health and the environment are complex and multifactorial. While climate change has been extensively studied from an environmental science perspective, planetary health is an emerging field. As leading health institutions with talented researchers and research resources, institutions should fund research studying the health effects of climate change and anthropogenic environmental toxins. This obligation is particularly strong because the public and policymakers are more attentive to climate change when its implications for human health are emphasised.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	2

Score explanation:
Via the Institute for Sustainability, there are many cross-disciplinary groups across the University of Surrey working collaboratively on critical areas of sustainability research. For example, the 'Plastics in the Environment' group, established in April of 2017, which last made a publication in 2020 titled - *Valuation of Marine Plastic Pollution in the European Arctic: Applying an Integrated Choice and Latent Variable Model to Contingent Valuation. Ecological Economics, 169, 106251.* Furthermore, there has been research into protecting and enhancing the environment, for example, exploration into desalination in the middle east would provide water supplies without damaging marine life.

The Veterinary Medicine School at University of Surrey is also involved in planetary health research in its own right. Through the Veterinary Health Innovation Engine (vHive), the Veterinary School is involved in the 'African Livestock Productivity and Health Advancement (ALPHA) Initiative'. In which, over the next several years, a research centre built with the collaboration of University of Surrey and Zoetis, will work to deliver specific aspects of the ALPHA initiative. Furthermore, academics at the Veterinary Medicine School are also engaged in promoting research into the link between environmental changes as a result of climate change and subsequent changes with disease transmission. As part of the One Health European Joint Programme the University receives funding for One Health related research and training activities.
https://www.surrey.ac.uk/african-livestock-productivity-and-health-advancement-alpha-initiative
https://www.surrey.ac.uk/institute-sustainability/research/plastics-environment
https://www.surrey.ac.uk/one-health-one-medicine/partnerships

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?	
There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)	
There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 point)	
There is **no** dedicated department or institute. (0 points)	
Score Assigned:	3
Score explanation: The University of Surrey has the Institute of Sustainability, which is a dedicated department which collaborates with all the faculties at the University to create a multidisciplinary team to protect social and environmental health. There are Sustainability Fellows, throughout the entire University, including the Veterinary School, engaged in planetary health research with the institute as well. The areas of special focus are to collaborate in research and implement projects to (as stated on the Institute of Sustainability University of Surrey Website): ● Protect and enhance the environment ● Ensure sustainable energy ● Create Smart Infrastructure and cities ● Reshape production and consumption ● Transform food systems ● Improve Health and wellbeing for all	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your <u>institution</u>?	
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)	
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 point)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	1

Score explanation: Whilst the University currently does not have a process by which communities disproportionately impacted by climate change and environmental injustice are able to directly give input about research agenda for the future, it is definitely doing collaborative research with these communities, and recent ideas sparked by the strategy meetings included policy cycle engagement, which would include community engagement in directing research.

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?	
There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)	
There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)	
There is **no** website. (0 points)	
Score Assigned:	3
Score explanation: The primary University of Surrey Institute for sustainability and research page can be found here: https://www.surrey.ac.uk/institute-sustainability/research The centre for environment and sustainability webpage will relevant information for students can be found here: https://www.surrey.ac.uk/centre-environment-sustainability The vet school specific research can be found here: https://www.surrey.ac.uk/school-veterinary-medicine/research	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)
Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	3
Score explanation: The University of Surrey, has held several Sustainability Assemblies, since the event's conception in October 2023. At these events, both staff and students can attend, and are educated about the Sustainability Journey the community has had so far, and then encouraged to voice their opinions on past and potential future interventions, which are susequently then fed back to the University's Napier Group - the sustainability strategic group. Some topics that have been covered in the assemblies have included: net zero carbon, embedding sustainability into University policies and inductions. So far 114 staff and students have taken part. The most recent assembly was on the 9th of February 2025. There are often staff and/or students from the vet school in attendance of these multidisciplinary sustainability events on campus. In 2022 the IVSAs Annual One Health Conference was hosted by the University of Surrey which was open to all students undertaking health and medical sciences. It included talks on: Alternatives to Antibiotics, Performance and Wellbeing Toolkit, One agriculture: Principles to sustainable livestock production. Last year (November 2024) the Vet School held the One Health Showcase open for faculty and students to attend from the vet school as well as other schools within the University of Surrey. The evening offered a collection of talks from lecturers discussing improving sustainability in clinical practice, alumni working for the APHA and students talking about environmental activities held on campus and discussing other One Health veterinary challenges. https://www.surrey.ac.uk/news/sustainability-assembly-opening-conversation-sustainability	

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 point)	
No, the institution is **not** a member of such an organisation. (0 points)	
Score Assigned:	0
Score explanation: No the University of Surrey is not a member of the Planetary Health Alliance, Global Consortium on Climate and Health Education or the UK Health Alliance on Climate Change	

Section Total (12 out of 17)	**70.59%**

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The University of Surrey Vet School also works with Vet Sustain to champion sustainability in VetCare discussions.

Community Outreach and Advocacy

Section Overview: ***This section evaluates a school's engagement in community outreach and advocacy efforts associated with planetary health.*** *Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

3.1. Does your institution partner with community organisations to promote planetary and health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The **institution** does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3

Score explanation:
The University of Surrey has collaborated with multiple community organisations, such as Surrey Wildlife Trust and Guildford Borough Council, to create a series of workshops held with the local community to understand how investing in the world's natural assets and green spaces can lead to sustainable enhancements to quality of life.
Additionally, the University collaborated with Silent Pool Gin to present an anti-stress garden at the RHS Chelsea Flower Show. This allowed for exploration into plant technologies that encourage wellbeing.
Furthermore, the University has various other Innovation Hub Partners → Pulpex, Wonderseekers, West Horsley Place, Surrey County Council, UK Health Security Agency, Frazer-Nash Consultancy, B Local Surrey, Ashford and St. Peter's Hospitals, and ESSECO UK.
Collaboration in sustainability | University of Surrey

The vet school has several 'One Health, One Medicine' partnerships which are multidisciplinary teams to perform human, animal and environmental research. These partnerships with Surrey Vet School are also part of the One Health European Joint Programme. The programme pays special attention to research on food borne diseases, antimicrobial resistance, and emerging zoonotic diseases. These One Health research focuses on multidisciplinary research with an aim to improve education. Here is a link for more information:
https://www.surrey.ac.uk/one-health-one-medicine/partnerships

3.2. Does your institution offer community-facing courses or events regarding planetary health?	
The **institution** offers community-facing courses or events at least once every year. (3 points)	
The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The **institution** has not offered such community-facing courses or events. (0 points)	
Score Assigned:	1
Score explanation: The University holds an annual Sustainability Week. Events part of this in the past have included EV test drives with Tusker, clothes swaps in collaboration with CloSh app, and sustainable career workshops run by the Economics Society. Since its start in May 2024, over 800 people have taken part in Sustainability Week activities.	

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)	
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: There are 2 main deliveries of coverage related to Sustainability offered by the University of Surrey. Both the Surrey Sustainability newsletter (a monthly email to staff and students who have signed up) and the Surrey Sustainability social media, on instagram, X and tiktok. Data from Sustainable Surrey's various media channels continues to highlight the current limited reach of sustainability messages and engagement however, and in the Staff/student Sustainability Engagement Strategy (2025-2030), a range of other communication channels are intended to be utilised in the future, such as University intranets and the University Newsletter, which are both available to all University Staff and Students. The Sustainability Working Group of the veterinary school meets monthly and then sends an email update to all staff following the meeting with three main bullet points, often highlighting new sustainability projects and the work that is being done to promote planetary health and the UN SDG at the veterinary school.	

There are frequent updates in the last couple of years on the Surrey Vet society and instagram account. Students who don't have instagram also have access to this information in the main stream vet soc emails. There is a specific VetSoc eco club account on instagram, this is where there is some educational posts on planetary health, One Health & Sustainability topics.

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post-graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)

Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:	1

Score explanation:
The University is involved in the education and training activities and the communications for the One Health European Joint Programme (EJP). The One Health EJP offers a doctoral programme that funds a total of 17 PhD projects. Furthermore, it offers an annual continuing professional development module for early career researchers, a communication and media workshop, and an annual workshop simultaneous with the One Health EJP Annual Scientific Meeting.
https://www.surrey.ac.uk/one-health-one-medicine/partnerships

There are also currently two post-doctoral research fellows and a placement student working at the Vet School on One Health joint research projects MoMIR and ARDIG.

The University's School of Sustainability, Civil and Environmental Engineers offers CPD modules and short courses, which can be taken as a standalone or part of a certificate. This is not relevant to the Veterinary School Postgraduates, however, but is relevant to students studying other subjects.
https://www.surrey.ac.uk/school-sustainability-civil-and-environmental-engineering/study/cpd-and-short-courses

Surrey does offer a PGCert in Veterinary General Practice, however there is no content on planetary health.

Last year 2023-2024 there was the One Health Showcase held at the Vet School open for faculty and students to attend from the vet school as well as other schools within the University of Surrey. The evening offered a series of talks from lecturers discussing improving sustainability in clinical practice, alumni working for the APHA and students talking about environmental activities held on campus and discussing other One Health veterinary challenges. It was an event that alumni could attend both physically or remotely - which was a great opportunity for both alumni to connect with faculty and current students to discuss One Health challenges. This was very helpful for students considering a career in One Health or other non-clinical practice roles after graduation.

There are also several sessions each year showcasing the vet school's research across numerous topics and disciplines including One Health topics like zoonoses, epidemiology and antimicrobial resistance. This is open to faculty and students in the vet school.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	1
Score explanation: On the compulsory fourth year rotations at the 'Wellbeing Clinic' there is an opportunity for fourth year vet students to discuss the environmental impacts of flea and worm medications on pets, and educating clients about a One Health approach to mitigate the environmental effects of prophylactic anti-parasitic medications. The University of Surrey doesn't have a traditional teaching hospital per se but it has a distributive final year model where final year vet students are allocated rotations to a wider network of partner practices across the UK covering all core species. It is considered that this network of partner practices is an extension of the University of Surrey campus. Surrey can influence partner practices on incorporating sustainability into everyday clinical practice when Surrey veterinary academics are teaching clinical mentors from the partner practices to include how clients are spoken to about planetary health.	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	1
Score explanation: The University of Surrey doesn't have a traditional teaching hospital per se but it has a distributive final year model where final year vet students are allocated rotations to a wider network of partner practices across the UK covering all core species. It is considered that this network of partner practices is an extension of the University of Surrey campus. Surrey can influence partner practices on incorporating sustainability into everyday clinical practice when Surrey veterinary	

academics are teaching clinical mentors from the partner practices to include how clients are spoken to about planetary health. It is noted that Surrey needs to consider the wider impact of the partner practice network so that planetary health for example climate change is incorporated more consistently throughout final year teaching across all the partner practices.

Section Total (8 out of 14)	**57.14%**

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Support for Student-Led Planetary Health Initiatives

Section Overview: ***This section evaluates institutional support for student-led planetary health initiatives, such as funding, fellowships, programming, and student groups.*** *Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.*

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
Score explanation: https://www.surrey.ac.uk/sustainability/engagement/students - Students can access the 'get involve' section of this website to see any current sustainability projects and financial support for such. The University states it helps students apply for grants although sustainability is not explicitly mentioned: https://www.surrey.ac.uk/innovation/researchers/grant-success	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek them out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	1
Score explanation:	

The University is actively involved in Green Impact & LEAF - an engagement programme organised by SOS-UK to encourage a university-wide transition towards sustainability. To find out how students can get involved, sign up to our emails.
Students can develop their own sustainability projects and get funded by the University. Recent student-led projects have included tree-planting and a community-fridge. Previous projects include 'Transforming bins into blooms' and 'Eco-labelling'.
Sustainable volunteering opportunities on-campus and in the community are available for students on the Students' Union's dedicated volunteering platform.
Students are encouraged to feedback on sustainable progression at the University through termly sustainability assemblies, and are invited to share their ideas for sustainable development in yearly Hackathons.
Sustainable events and activities are organised in collaboration with other universities to provide students with further engagement opportunities and a chance to network.
Two community gardens on our Stag Hill and Manor Park campuses provide students with a space to grow their own food. They are also invited to support our beehives based at Stag Hill. Both initiatives are run with support from staff, including the Horticulture & Landscape team and Chaplaincy.

Through the partnership, the Institute has set up Surrey CIFAL Training Centre, a training centre offering customised learning solutions to institutions and individuals from all sectors.

UNITAR - Through the partnership, the Institute has set up Surrey CIFAL Training Centre, a training centre offering customised learning solutions to institutions and individuals from all sectors.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:	2

Score explanation:
The University has a website which includes information on their recent projects achieved, current initiatives underway at the medical school and/or contact information of potential mentors.
https://www.surrey.ac.uk/institute-sustainability

Additionally, there is a dedicated Veterinary Medicine School specific webpage that details both current and previous research efforts. This can be found here: https://www.surrey.ac.uk/school-veterinary-medicine/research

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
Yes, there is a student organisation **with faculty support** at my institution dedicated to planetary health or sustainability in healthcare. (2 points)	
Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)	
No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	1
Score explanation: The University of Surrey has a student society called VetSoc. Within VetSoc there is a Eco/Garden club which organises activities like nature walks, litter picks and gardening activities. There are also some educational posts on the VetSoc Eco Club Instagram account. The VetSoc garden has run some staff sessions and there is also collaboration with the Vet School Sustainability Working Group that is run by faculty. There is also the Sustainability Society which is open for any University of Surrey student to join and advocates for sustainability on campus.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative who serves on a department or institutional decision-making council/committee. (1 point)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: Members of the University of Surrey's Students Union (SU) sabbatical team are on a number of committees that scrutinise the University's strategic planning, finances, estates operations and academic mission. The President of the SU is involved in the strategic decision making at the Council, and various of its sub-committees such as the Finance and Senate committees. Additionally, the President of the SU and the VP Activity are on the Surrey Sports Park Board, and are therefore involved in planning and finance in that aspect as well.	

On a vet school department level the eco rep for VetSoc is also on the Vet School Sustainability Working Group which feeds back to vet school faculty that can implement change.

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**Score**
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1

Score explanation:

- There is the community 'Stag Hill Garden' and Beehive held on the Stag Hill campus which offers volunteering sessions for both staff and students throughout the university.
- Additionally there is also the VetSoc garden run by the Eco / Garden club within Vet Soc which offers gardening sessions and a green space for students and vet school faculty to enjoy on the Manor Park campus. The VetSoc garden has also offered collaborative gardening sessions for faculty.
- Last year 2023-2024 there was the One Health Showcase held at the Vet School open for faculty and students to attend from the vet school as well as other schools within the University of Surrey. The evening offered a collection of talks from lecturers discussing improving sustainability in clinical practice, alumni working for the APHA and students talking about environmental activities held on campus and discussing other One Health veterinary challenges.
- VetSoc among other Surrey Union student societies held litter picking walks throughout the year, picking up litter on the Manor Park Campus. On one particular session 8 bags of litter was picked up
- The Vet School staff also organised a duck nesting sessions to build nests for ground nesting birds
- VetSoc has held nature walks around the Manor Park campus where students can identify plants, animals and bird calls which are open to both staff and students. The app Merlin is also used to identify bird calls & online field charts help identify species. However there is no formal data collection of species richness and species abundance, the goal of the sessions are to help students identify different species of flora and fauna.

Section Total (10 out of 15)	66.67%

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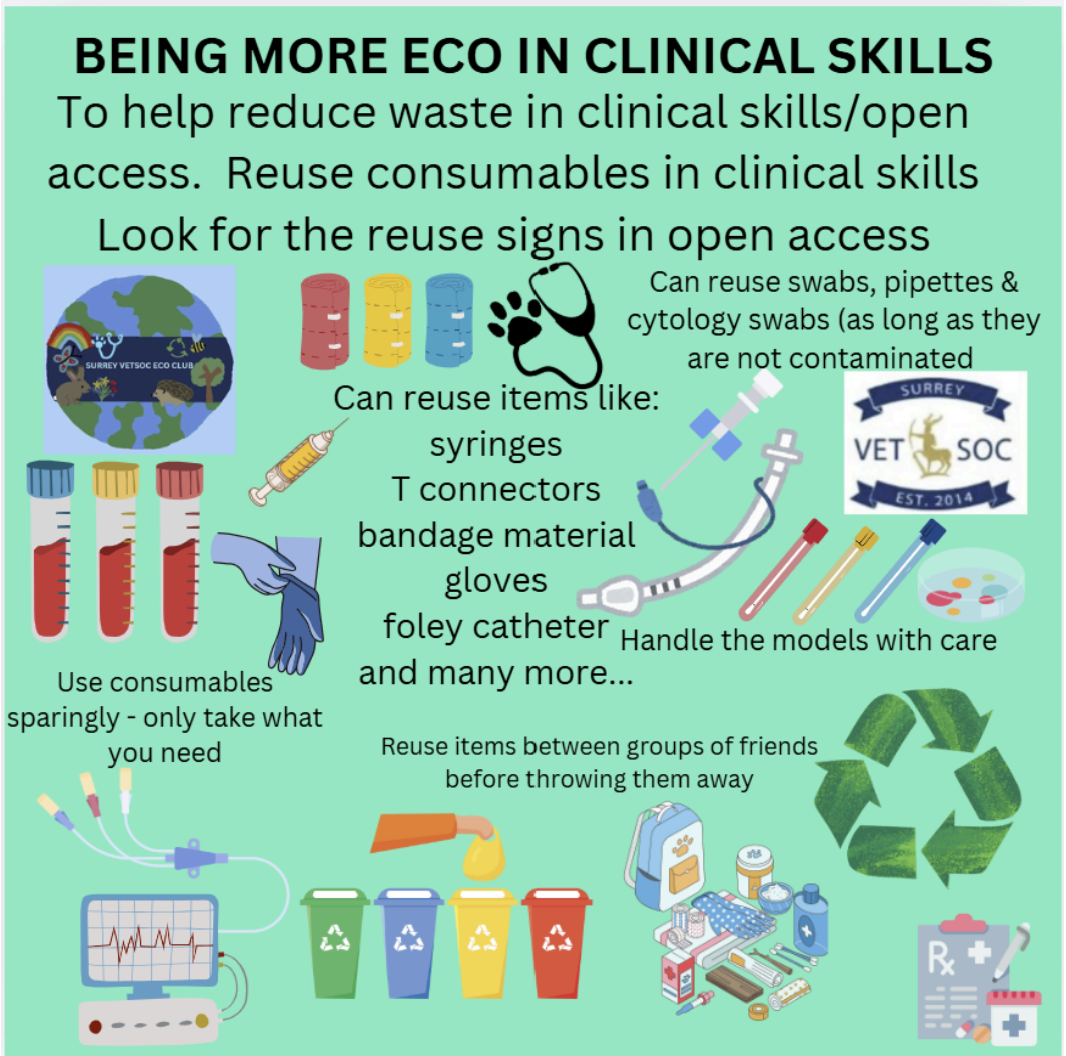
At the University of Surrey there is a student-led campaign with staff and faculty support to promote reusing single use consambles (syringes, bandaging, collection tubes, swabs) in spaces where clinical skills are practiced on models. This campaign aims to reduce single use plastic waste in the clinical skill spaces where there is no compromise to safety of animal welfare. A copy of the campaign poster to reduce single use consumables in clinical skills models within open access areas to advise students is attached below.



(Above) VetSoc EcoSoc Sustainability in Open Access Clinical Skills Lab poster

Campus Sustainability

Section Overview: ***This section evaluates the support and engagement in sustainability initiatives by the institution.*** *The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our institutions, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.*

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
Score explanation The University of Surrey has the Institute of Sustainability department, with multiple full-time staff dedicated to achieving the Universities goals for sustainability in the future. Whilst there is no dedicated Veterinary Medicine staff member, there are multiple Veterinary Medicine School faculty members that are sustainability fellows for the Institute of Sustainability. Fellows of the Institute for Sustainability | University of Surrey	

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?
The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)
The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)
The institution does **not** meet any of the requirements listed above (0 points)

Score Assigned:	5

Score explanation:
The University of Surrey, through the Institute of Sustainability, has a written and approved 8-point plan, which details that the University is committed to reaching net zero in its scope 1 & 2 carbon emissions by 2030. This plan additionally includes strategies of working towards ambitious targets for heat de-carbonisation, solar power generation and electrifying their vehicle fleet, among other projects. https://www.surrey.ac.uk/sustainability/estates-and-operations/energy

A detailed run-down of the Universities plans can be found in this informative video - https://youtu.be/WClAySBY0E8

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?

Yes, institution buildings are **100%** powered by renewable energy. (3 points)

Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)

Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)

Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:	0

Score explanation:

- This information is not publicly available and difficult to locate, hence we have had to score this 0.
- A combined heat power plant is used to generate heat and electricity in Manor Park residences
- Photovoltaic panels are used to generate electricity for the James Clerk Maxwell building - used by the Institute for Communication Systems, The 5G/6G Innovation Centre, The Veterinary Medicine School Building, The Library and Learning Services Centre and more.
- In 2025 The University associated sports centre installed a 500kw solar array on the Surrey Sports Park. They have also outlined plans to create more renewable energy sources and solar arrays here: https://www.surrey.ac.uk/sustainability/estates-and-operations/energy.
- An evaluation of the Universities Scope 1 and 2 emissions can be found here: https://www.surrey.ac.uk/sites/default/files/2025-09/Surrey%20University%20-%20Net%20Zero%20Carbon%20scope%201%20%26%202%20delivery%20plan%20Jan%202025%20-%20Final%20revision%20%28160925%29%20%281%29.pdf . In the year 2022/2023 the emission were as following: Scope 1 (Gas): 7,926 tonnes CO2e (43,414,898 kWh) • Scope 2 (Electricity): 6,910 tonnes CO2e (33,841,148 kWh
- This document quotes that “Existing [Solar] PV installations generate 128,315kWh’s, roofs can contribute an estimated 7million kWh’s, car park arrays 5million kWh’s and a ground

mounted solar farm 13million kWh's." and they are investing in more on-site renewable with an aim by 2029 of a 30% reduction in carbon emissions.
- An evaluation of the Universities Scope 3 emission can be found here: https://www.surrey.ac.uk/sites/default/files/2025-07/Scope%203%20Final%20Report.pdf In the year 2022/2023 Scope 3 emissions were at 77%
- The university is also looking into Power Purchase Agreements (PPAs) for Renewable Energy.

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2

Score explanation:
The University follows a set of Sustainable Construction Principles which can be found amongst the Universities other Sustainability Policies (Sustainability policies | University of Surrey), and has committed to achieving BREEAM 'Excellent' in all new buildings and major refurbishment projects and uses this as the basis for any audits it needs to do during the design process.
For instance, the Manor Park campus residences were awarded a BREEAM 'Excellent' rating and incorporate technologies such as energy-efficient lighting, occupancy sensors, high levels of insulation, combined heat and power technology and weather-compensated controls.

The Surrey Sports Park, which opened in 2010, is rated BREEAM 'Very Good' and is heated by a biomass boiler using woodchips sourced from locally managed woodlands. Newly installed pool covers help conserve overnight heat by reducing evaporative losses.

In the University of Surrey Net Zero Carbon Plan (NZC) for Scope 1 & 2 Emissions: 2025-2030 (Surrey University - Net Zero Carbon scope 1 & 2 delivery plan Jan 2025 - Final revision (160925) (1).pdf), plans for retrofitting inefficient buildings with the latest energy-efficient technologies. Some targets to this goal include 20% carbon emissions reduction by 2030 from retrofits, and complete implementation of major energy efficiency measures by 2028. Some actions the University plans to take to achieve these goals are an audit the top 20 carbon-emitting buildings by 2026, covering 70% of emissions, and identify cost-effective energy-saving measures (e.g., LED lighting, HVAC upgrades).
Furthermore prioritisation of the installation of LED lighting, insulation, HVAC system upgrades, and smart controls across campus by 2028. And finally, potentially replacing inefficient laboratory equipment from 2025 onwards.

Whilst the University has retrofitted a few different buildings such as the Kate Granger building for the School of Health Sciences, and installed roof-mounted solar photovoltaic panels across a series of buildings including the 5G/6G Innovation Centre, the James Clerk Maxwell building used by the Institute for Communication Systems, the Advanced Technology Institute, the Innovation for Health building, the Veterinary School Main building and the Library and Learning Centre, and has plans to retrofit more, the majority of old buildings remain unchanged.

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)

The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:	2

Score explanation:
The University has an E-bike scheme, in which it has partnered with the company Beryl, so that rental bikes have been spread throughout the campus, and cycling routes between the Manor Park and Stag Hill campuses as well as the Guildford town centre. A 25% student discount is available to ensure the scheme is accessible. Personal bike storage facilities are available for staff and students to utilise on Stag Hill campus, Manor Park campus, Hazel Farm campus and the Surrey Research Park.

Additionally, the University has a Stagecoach bus service that runs from the manor park campus, to the stag hill campus, and into the main body of Guildford town. These buses are 100% electric, with zero-emissions, and provide discounted bus passes to University staff and students.
Recently a night bus service for the University and north-west Guildford has been introduced as well.

All staff have access to an electric vehicle salary sacrifice scheme, as well as a cycle to work scheme. And, electric vehicle charging units have been installed on Stag Hill campus, with a discounted charging rate available for staff and students.

All of these implementations encourage a more sustainable commute to and from the institution.

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the institution. (0 points)	
Score Assigned:	2

Score explanation:
The University has an Operational Waste Management Plan (University of Surrey Waste Management Plan July 2025.pdf) that aims to divert 100% of waste from landfill and turn waste into a resource. Currently, the University measures the amount of waste sent to landfill and recycled, working with the waste contractor 'Chambers' and their sustainability policy.

The idea is for segregation across four waste streams - glass, food waste, mixed recycling and all other waste. This then undergoes further segregation off site so as each material is recovered separately and sent for further processing. In practice though, at the Veterinary School VSM building for example, there are 2 separate slots for rubbish in the bins of this building, one for recycling and one for general waste, but these both empty into the same bin bag, so there is no separation at this level between the 2 types of waste.

There is an active effort in trying to encourage the members of the University to put food waste in food bins, as all food waste put in normal bins contaminates those bins and results in the material needing to be burnt. Thus, the introduction of food waste bins in residences has resulted in 60 per cent of additional food waste being separated and composted.

The university collects data on waste segregated on a monthly basis - this has led to the university separating out as much food waste as possible so as to avoid contamination of recycling. As well as this data, the University carries out spot checks to ensure segregation at the waste contractors' site is being undertaken.

Moreover, a pledge was made to stop providing single-use plastic cups across campus and replace these with compostable cups which are 100% vegetable derived. The introduction of Vegware compostable cutlery, plates and cups has significantly reduced the use of single-use plastics across our campus. In addition to this, green waste including leaves, grass clippings, hedge cuttings and prunings are composted and the compost is re-used around the University.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)
There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:	3

Score explanation:
Sustainable and Ethical Food Plan (2024) and (2025) (Sustainability Policy V3) has been created for the University of Surrey, and some key successes from this plan include that all catering units now offer plant-based alternatives. Moreover, reusable coffee cups and lunch boxes are now sold across all catering outlets and customers are given a 15p discount when using a reusable cup, as well as a 10p cup charge for disposable coffee cups was also brought in, which has diverted over 100,000 cups from waste. The funds from the charge are ring-fenced for investment in sustainability initiatives.

There have been 11 water refill points introduced on campus to reduce single-use plastic and encourage the transition to reusable water bottles. Staff and students have also set up beehives on campus. They not only provide an opportunity to produce local honey, but the bees also provide important pollinators needed to grow food, as well as wild flowers, on campus.

In July 2019, Lakeside Restaurant and Coffee Shop created a garden on their premises, where food and vegetables are being grown to be used on their menu. And during 2024 and 2025 the Stag Hill community garden has been growing a range of fruit and vegetables: from apples and gooseberries, to potatoes, tomatoes, and beans.

This year the SU president has introduced using reusable cup scheme on campus, using Cauli cups. These are reusable cups that campus cafes use for hot drinks which users need to return otherwise there will be a £5 fee. This campaign is reduce plastic waste on campus. More information on Cauli cups can be found here:
https://my.surrey.ac.uk/news/introducing-cauli-cups-sustainable-solution-your-morning-coffee

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)
There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:	2

Score explanation:
The University's Procurement Policy (responsible-investment-procedure (1).pdf) states the University's commitment to ensuring sustainability, modern slavery, socially responsible procurement issues and equality/diversity factors are considered in purchasing decisions. Sustainable procurement principles for tendering processes with external partners are incorporated in the policy, including those related to food purchasing.

Additionally to provide local food on campus, there is a farmers' market every Thursday, which features various produce and street food from local producers.

The University audits its supply chain using the NetPositive Futures tools 'Supplier Engagement Tool' and ' Net Zero tool'. The University has over 3,000 suppliers providing products and services as diverse as IT support, furniture, lab equipment and uniforms. The University has reviewed its 3000 suppliers, focussing on the top 70% of spend and carbon emissions. During the period 2024 to 2026 the Procurement team is engaging with the 40 main companies that are critically important to the University to understand their carbon footprint and to work with them to reduce both their carbon emissions and their wider sustainability impact, using the two tool kits provided by NetPositive Futures.

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution **must** abide by sustainability criteria. (2 points)	
The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)	
There are **no** sustainability guidelines for institution events. (0 points)	
Score Assigned:	1

Score explanation:
In the Universities Events Policy (Events-policy.pdf), guidelines are mostly focused on safety and compliance, and there is no reference or guidelines for sustainability.

Surrey Sustainability and the SU encourages clubs and societies to achieve the Sustainability Mark Award. This scheme encourages SU clubs and societies to make sustainable actions to off set negative environmental impacts and make positive contributions on campus and the local community. This includes incorporating sustainability when societies are planning and running events. More information can be found here: https://my.surrey.ac.uk/news/take-sustainability-mark

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)

There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
Score explanation: The University adopts the Laboratory Assessment Framework (LEAF), that is mandatory for all University labs to take part in. This is a certification tool designed to help lab users improve lab efficiency and minimise environmental impacts. Whilst completing LEAF, teams are supported by the University's Sustainability Team and are also encouraged to join the Sustainable Labs teams channel in order to gain access to useful resources. Some of the benefits of taking part in LEAF include reduced utility costs, increased research efficiency and assurance of health and safety compliance within the lab. Some key performance indicators have been set for the the future regarding LEAF, such as that all labs are to have achieved LEAF bronze award by 26/27, and that an increased number of labs should have LEAF silver + gold awards by end of 25/26	

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	3
Score explanation: According to the information below, in 2017 the university became the 8th University in the UK to fully divest from fossil fuel companies. It is not stated where that divested money was invested. https://web.archive.org/web/20160212140301/http://blog.peopleandplanet.org/blog/2015/10/20/university-of-surrey-first-to-divest-this-academic-year-press-release/ https://www.businessgreen.com/news/2431046/university-of-surrey-set-to-divest-from-fossil-fuels#:~:text=Surrey%20becomes%20first%20university%20to,table%20by%20divesting%20before%20Paris.%22 https://www.surrey.ac.uk/sites/default/files/2024-12/UoS-Annual-Report-2324.pdf https://divestmentdatabase.org/	

Section Total (24 out of 32)	**75%**

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Grading

Section Overview
This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

Letter Grade*	Percentage
A	80% - 100%
B	60% - 79%
C	40% - 59%
D	20% - 39%
F	0% - 19%

**Within each grade bracket, a score in the top 5% (_5 to_9%), receives a "+", and a score in the bottom 5% (_0-_4%) receives a "--". For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the University of Surrey School of Veterinary Medicine
The following table presents the individual section grades and overall institutional grade for the University of Surrey School of Veterinary Medicine on this Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(64/89) x 100 = 71.91%	B
Interdisciplinary Research (17.5%)	(12/17) x 100 = 70.59%	B
Community Outreach and Advocacy (17.5%)	(8/14) x 100 = 57.14%	C+
Support for Student-led Planetary Health Initiatives (17.5%)	(10/15) x 100= 66.67%	B
Campus Sustainability (17.5%)	(24/32) x 100 = 75%	B+
Institutional Grade	**(71.91x0.3 + 70.59x0.175 + 57.14x0.175 + 66.67x0.175 + 75x0.175) = 68.72%**	**B**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which The University of Surrey has participated in the Planetary Health Report Card initiative. This is the first year the University of Surrey has participated in the PHRC initiative. We look forward to participating in subsequent years and hope to establish trends at that point.