



Planetary Health Report Card (Pharmacy) 2026: Aston Pharmacy School



2025-2026 Contributing Team:

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Summary of Findings

Overall Grade	B-
Curriculum	B-
<ul style="list-style-type: none"> Summary: It is encouraging to see that many core elements of environmental sustainability are already in the MPharm curriculum. Topic covered included extreme weather, environmental impact of medicines, healthcare carbon footprint, air pollution, respiratory health, waste disposal and dosage-form sustainability. Other topics such as cardiovascular risk, allergies and health inequalities could be covered in more depth. Topics such as plant-based diets, social prescribing, civic engagement and communication with patients about climate change are not well covered in relation to environmental sustainability. <p>The PHRC will enable a targeted review of the gaps so this can be strengthened and coverage of topics widened and deepened where needed. It was noted that current teaching in many areas was separated out and a more integrated approach should be considered so students can appreciate this as an integrated part of pharmacy not something standalone.</p> <ul style="list-style-type: none"> Recommendations: The Pharmacy School should further review the curriculum to identify ways that environmental sustainability can be incorporated into existing teaching. Key areas to focus on include prescribing decisions, deprescribing, polypharmacy, nutrition and experiences on clinical placements. 	
Interdisciplinary Research	B
<ul style="list-style-type: none"> Summary: There are some clear examples of research related to environmental sustainability at Aston that have and will have real life positive impact on communities. There is a strong focus in areas such as 'Clean Tech'. The University has recently hosted events related to environmental sustainability. The Pharmacy School itself could lead or collaborate more on research in this area. Recommendations: The School should aim to better coordinate existing sustainability-related research by creating a clearer focus on planetary health. Encouraging collaboration between different departments and involving external partners, as well as involving the public as stakeholders, could help strengthen this area also. It would also be beneficial to increase opportunities for students to engage with research. 	
Community Outreach and Advocacy	C
<ul style="list-style-type: none"> Summary: There are some good opportunities available but these should be more widely promoted to students and the local community. Several placement partner hospital trust offer patient-facing information around health topics related to environmental sustainability. Recommendations: Aston should be developing more collaborations with a wider range of community organisations. There should also be greater student involvement, for example through outreach or project work. Students should receive regular updates about planetary health and environmental sustainability. In addition, improving awareness of these opportunities within the Pharmacy School would help increase engagement and impact. 	
Support for Student-Led Initiatives	C
<ul style="list-style-type: none"> Summary: Aston offers some good sustainability opportunities, such as Go Green Aston and project work. There is an active student society. There is no designated environmental sustainability student liaison within the Pharmacy School. 	

- **Recommendations:** To build on this, it could provide more structured support and improve communication to students to encourage wider participation. Within the Pharmacy School engagement with the PHRC should continue next year and the School should take the lead on promoting and supporting opportunities for students. A role for a student liaison representative for environmental sustainability could be created.

Campus Sustainability

B+

- **Summary:** Aston University has shown a clear and dedicated commitment to environmental sustainability and climate action through the 2030 strategy. Current work is predicted to allow Aston to achieve its net zero targets for scopes 1 and 2 earlier than originally anticipated by 2028. Aston has dedicated sustainability staff. University buildings utilise renewable energy and the University has divested from fossil fuels. Recycling and composting systems are in place on campus. There are laboratory sustainability initiatives in place.
- **Recommendations:** Sustainability guidelines for events held at the University could be co-created by students, staff and the local community, and implemented. More initiatives could be implemented, such as meat free days on campus. Although vegetarian and vegan food options are available on campus these are limited and could be improved. Although sustainable travel options are available these could be more widely promoted to students and to staff.

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 & Other Considerations

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 Healthcare:** 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 minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous 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 healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH 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:
 1. Describe how the environment and human 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 doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Pharmacy School/Department vs. Institution:** When “Pharmacy school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of Pharmacy 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 Pharmacy students, no matter where in the institution the resource

comes from or if it is specifically targeted for medical 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).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **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).

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 (2 points): 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.
- 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. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats.

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 Pharmacy school curriculum. Today's health professional students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1.1 Does your pharmacy school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>An ‘Introduction to environmental sustainability in healthcare’ lecture has been newly introduced to Stage 1 pharmacy students in academic year 2025/26 and delivered as a live online lecture as part of the core curriculum of PH1423 in The Professional strand. The lecture slides were created by the Sustainability in Pharmacy Education group.</p> <p>The learning outcomes of the lecture were:</p> <ol style="list-style-type: none"> 1. Describe the links between planetary and human health 2. Outline the principles of sustainable healthcare 3. Recognise the role of healthcare professionals in protecting and promoting health <p>Each slides contains the following themes below:</p> <ul style="list-style-type: none"> · Human and Planetary Health Quiz · Climate and ecological crises: Burning fossil fuels releases carbon dioxide, warms the atmosphere, destabilises climate. Pollution destroys habitats, harms human health, toxic effect on wildlife e.g. oil spills, air pollution, microplastics everywhere ○ Deforestation, industrial agriculture- destroys habitats, destroys soil, pollutes waterways · Planetary and human health 	

- Health Impacts (UK) - Increased risk of mental health conditions, increased risk of heat-related deaths and Risk to food security
- Respiratory care – move to lower Global Warming Potential (GWP) inhalers (dry powder inhalers) and propellants
- Impact of Health Services on the Planet
- NHS Targets Towards Net Zero
- Pharmacy and Planetary Health
- Principles of Sustainable Healthcare
- Case Study: Air Pollution and its impacts on health – focusing on the impact on children.
- Sustainable Pharmacy Practice: Low carbon alternatives, prevention, physical activity, patient empowerment and self-care
- Sustainable prescribing

‘**Climate Change, Pharmacy and Public Health**’ is a self-directed learning lecture delivered to Stage 2 as part of the core curriculum in PH2523 in the Population and Public Health theme. It highlights how extreme weather, such as heat, can pose a risk to certain medications and the public/patients. The session emphasises the pharmacist’s role in disaster planning, minimising medicine shortages and patient education.

‘**The Pharmacy Profession and the Climate Crisis**’ is a self-directed learning lecture that has been delivered to Stage 3 as part of the core curriculum in PH3523 in the Delivery of Care theme. It highlights how pharmacy professionals can support climate mitigation through sustainable procurement, reducing high-emission medicines (such as certain inhalers and anaesthetic gases), improving supply chains, lowering plastic use, and optimising pharmacy operations.

All pharmacy students have core lectures on “Stability of pharmaceuticals” to identify the shelf-life of specific dosage forms. Hence, the understanding of extreme weather will have big impact on the healthcare system, particularly the manufacture, storage, and delivery of medicines from the professionals to the patients.

1.2 Does your pharmacy school curriculum address the environmental impact of medicines in terms of their pollution, ecological impact and contamination of water systems?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

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

Score Assigned:

3

Score explanation:

- ‘Introduction to Environmental Sustainability in Healthcare’, ‘The Pharmacy Profession and the Climate Crisis’ and ‘The Pharmacy Profession and Public health’ lectures as described in 1.1 are all part of the core curriculum.
- There are series of Enteral Drug Delivery Lectures and Laboratory Practicals for stage 1, as part of the Enteral Drug Delivery theme, where the students will learn about different types of pharmaceutical formulations such as “Solutions”, “Suppositories”, “Suspensions”, “Creams & Ointments” etc. The role of water as well as relevant pollution, environmental impacts, contamination of water systems have been highlighted throughout those core lectures and practicals.

1.3 Does your pharmacy school curriculum address the health effects of pharmaceutical industry- and manufacturing-related environmental toxins?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

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

Score Assigned:

3

Score explanation:

‘The Pharmacy Profession and the Climate Crisis’ is a self-directed learning lecture (as described in 1.1) that is delivered as part of the core curriculum in stage 2.

Slides contains the following themes below:

- Supply chain management – Packaging and Pollution: this refers to environmental impact from packaging and logistics (e.g., waste, plastics, emissions).
- Sustainable Procurement / Reduced Plastic / Waste Management” – These slides address strategies to lower environmental harm through resource use and waste reduction.
- “Role of pharmaceuticals” – This slide quantifies how much pharmaceuticals contribute to healthcare greenhouse gas emissions.

Pharmacy students in all stages are requested to complete the COSHH Assessment to investigate the hazardous substances and control measures before attending the Laboratory Practicals and/or carrying out lab-based project in their final years. After that, the staff will check and verify the students’ inputs. This includes (but not limited to):

+ Chemicals: for each chemical, student will need to mark the relevant hazards and control measures.

+ Experimental Procedure: student will identify the risk of biological hazards and other significant hazards (e.g. heat / environmental hazards) as well as the people that will be exposed to the hazards. Then, the students need to evaluate the control measures.

+ Waste Disposal: the students need to provide details on disposal of chemical and/or biological waste during the Practical sessions.

Also refer to 1.1 for topics covered in the 'Introduction to Environmental Sustainability in Healthcare' lecture in stage 1.

1.4. Does your pharmacy school curriculum address the carbon footprint of healthcare systems?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

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

Score Assigned:

3

Score explanation:

- Before each Laboratory Practical sessions, the students will receive the briefing about the chemicals and instruments that they are going to use, and the staff also reminds the carbon footprint related to pharmaceutical manufacture at the pilot scale in lab.
- 'Introduction to Environmental Sustainability in Healthcare' (stage 1), 'The Pharmacy Profession and the Climate Crisis' (stage 3) and 'Climate Change, Pharmacy and Public Health' (stage 2) lectures as described in 1.1 are all part of the core curriculum and cover this topic.

1.5. Does your pharmacy school curriculum address the impact of climate change on the changing patterns of infectious diseases and increased antimicrobial resistance?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

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

Score Assigned:

2

Score explanation:

- The topic of climate change and changing patterns of infectious diseases is covered in the 'Climate Change, Pharmacy and Public Health' lecture (PH2523 stage 2) and 'The Pharmacy

Profession and the Climate Crisis’ lecture (PH3623 stage 3). Antimicrobial resistance is covered in the core curriculum but there is not a direct focus on climate change. Therefore we have rated this as 2, rather than a 3.

There are a variety of options for pharmacy students in Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors on the manufacture of (new) medicines targeting the infectious diseases as well as its direct and indirect relationship to the increased antimicrobial resistance. For example, one research project is “Formulation and characterisation of new flucloxacillin mini-tablets”.

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

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

Score Assigned:

3

Score explanation:

The ‘Introduction to Environmental Sustainability in Healthcare’ lecture discusses this topic and also includes an interactive case study on asthma and air pollution

‘The Pharmacy Profession and the Climate Crisis’ and ‘Climate Change, Pharmacy and Public Health’ include slides on the following:

- Climate adaptation: impact on comorbidities – With respiratory illnesses, there’s an impact on asthma and COPD
- Impact of Climate Change on Human Health: Air pollution and increasing allergens can impact Asthma and respiratory allergies

There are a variety of options for pharmacy student Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors on the manufacture of medicines related to respiratory symptoms. For example, one research project is “The treatment of Interstitial Lung Disease”

1.7. Does your pharmacy school curriculum address the cardiovascular health effects of climate change, including increased heat?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> ‘The Pharmacy Profession and the Climate Crisis’ and ‘Climate Change, Pharmacy and Public Health’ both include slides on the following:</p> <ul style="list-style-type: none"> · Climate adaptation: impact of increased heat on comorbidities – including cardiovascular disease · Impact of climate change on Human Health: extreme heat causing cardiovascular failure <p>There are a variety of options for pharmacy student Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors related to cardiovascular diseases and populations. For example, one research project is “Cardiovascular risks in different populations”.</p>	

1.8. Does your pharmacy school curriculum address the relationship between climate change and allergies?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> ‘The Pharmacy Profession and the Climate Crisis’ and ‘The pharmacy profession and Public health’ delivered to stage 2 and 3 mentioned climate change impacting respiratory allergies. However, it is not further explored or elaborated upon.</p> <p>There are a variety of options for pharmacy student Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors on the manufacture of (new) medicines targeting the allergies. For example, one research project is “Formulations and characterisation of new loratadine mini-tablets”.</p>	

1.9. Does your pharmacy school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	

This topic was not covered. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> 'Introduction to Environmental Sustainability in Healthcare' and 'Climate Change, Pharmacy and Public Health' lectures as described in 1.1 are all part of the core curriculum and cover this topic briefly. However there could be further elaborated and also integration within the core curriculum mental health teaching.	

1.10. Does your pharmacy school curriculum address the unequal regional health impacts of climate change nationally and globally, including the impact of social inequality?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> 'Introduction to Environmental Sustainability in Healthcare' lecture as described in 1.1 is part of the core curriculum and cover this topic, but only briefly. This could be further explored within the curriculum.	

1.11 Does your pharmacy school curriculum address the relationship between climate change and social determinants of health (e.g., reduced nutritional value of food)?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> 'Introduction to Environmental Sustainability in Healthcare' lecture as described in 1.1 is part of the core curriculum and cover this topic, but only briefly. This could be further explored within the curriculum.	

1.12. Does your pharmacy school curriculum address the environmental and health co-benefits of a plant-based diet?

This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i> This topic was very briefly covered in the ‘Introduction to Environmental Sustainability in Healthcare’ lecture as described in 1.1. Although nutrition is covered in the core curriculum it is not covered in a way to meet this standard.</p>	

1.13. Does your pharmacy school curriculum cover these components of sustainable clinical practice? (1 point each)	Score
Waste production within the healthcare system and strategies for reducing waste in clinical activities such as single use plastic and packaging. (1 point)	1
Patient counselling on safe disposal of medications. For example, what can be disposed of and how to locate recycling schemes, in addition to certain drugs or drug classes that are most important to dispose of properly (e.g. hormonal contraceptives, drugs that are excreted unchanged/active metabolites). (1 point)	1
The impact of extreme heat, on patients on medications which can interfere with thermoregulation. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint. (1 point)	1
The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively, teaching on de-prescribing where clinically appropriate and its environmental and health co-benefits would fulfil this metric. (1 point)	0
The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK. (1 point)	0
The impact and benefits of benign by design pharmaceuticals through exploring medicinal chemistry concepts and/or discussing implications of excretion of active metabolites/unchanged drug products on ecological system. (1 point)	1
<p><i>Score explanation:</i></p>	

‘Introduction to Environmental Sustainability in Healthcare’, ‘The Pharmacy Profession and the Climate Crisis’ and ‘Climate Change, Pharmacy and Public Health’ lectures as described in 1.1 are all part of the core curriculum and cover some of the topics scored above.

There are series of Enteral Drug Delivery Lectures and Laboratory Practicals for stage 1 where the students will learn about different types of pharmaceutical formulations such as “Solutions”, “Suppositories”, “Suspensions”, “Creams & Ointments” etc. The role of water as well as relevant pollution, environmental impacts, contamination of water systems have been highlighted throughout those core lectures and practicals.

Planetary Health: Disposal of Medicines lecture:

Learning Objectives

- Understand expiry dates
- Legislation covering Waste Management
- Duty Of Care
- What can be returned
- Storage

Slides contains the following themes below:

- Legislation: Environment and Waste Legislation and Waste Regulations 2011 Enforcer: Environment Agency
- Duty of Care: The statutory requirements covering duty of care in waste management
- What can be returned: Tablets, Creams, Liquid medicines, Powders, Inhalers, Ampoules, Ointments and Capsules
- Hazardous Waste
- Sharps – Additional Service
- Controlled drugs
- Waste Containers – General Rule

All pharmacy students have core lectures on “Stability of pharmaceuticals” to identify the shelf-life of specific dosage forms. Hence, the understanding of extreme weather will have big impact on the healthcare system, particularly the manufacture, storage, and delivery of medicines from the professionals to the patients.

Although appropriate prescribing, deprescribing and social prescribing are all covered in the core curriculum, environmentally sustainability is not clearly mentioned or integrated.

1.14. Does your pharmacy school curriculum discuss the environmental implications of various dosage forms, medication delivery devices, and/or excipients?

This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> 'Person Centred Care - Inhaled Therapies and Smoking Cessation' delivered to stage 2. Pre-workshop tasks contained pharmaceutical journal articles on waste management and how 'dry powder inhalers could halve carbon footprint' and environmental sustainability is incorporated into the workshop.</p> <p>The Introduction to environmental sustainability in healthcare lecture newly introduced to Stage 1 pharmacy students covers this topic.</p> <p>There are a variety of options for pharmacy student Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors on the manufacture of (new) medicines. Students will discuss with their supervisors about the environmental implications of various dosage forms, medication delivery devices, and/or excipients before filling in the COSSH and Risk Assessment for doing experiments in laboratories.</p>	

1.15. In training for patient communication, does your pharmacy school's curriculum introduce strategies for having conversations with patients about the health effects of climate change?	
Yes, there are clear and detailed strategies introduced for having conversations with patients about climate change in the core curriculum (3 points)	
Yes, having conversations with patients about climate change is briefly mentioned in the core curriculum. (2 points)	
Yes, there are some examples of having conversations with patients about climate change in elective coursework. (1 point)	
No, there are no strategies or examples for having conversations with patients about climate change (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i> This topic is not currently covered within the communication teaching on the MPharm. However students do develop strategies that could be applied in this context and scenarios could be incorporated in future delivery.</p>	

1.16. Does your pharmacy school curriculum guide students to consider the environmental impact of medications as a factor in addition to safety, efficacy, cost, and pill burden when comparing equivalent therapies?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

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

Score Assigned:

2

Score explanation:

Throughout MPharm appropriate prescribing is constantly discussed as there is an impact on the environment and the NHS financially, as well as patient outcomes and safety. It is also discussed in polypharmacy lectures. Although these topics are covered in depth, the team felt the environmental impact was only briefly covered.

Choice of more environmentally greener inhaler is discussed as part of a Stage 2 PH2523 workshop - Person Centred Care in Inhaled Therapies.

1.17. Is your pharmacy school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?

Yes, the school is currently in the process of making major improvements to ESH/planetary health education. (4 points)

Yes, the school is currently in the process of making minor improvements to ESH/planetary health education. (2 points)

No, there are no improvements to planetary health education in progress. (0 points)

Score Assigned:

2

Score explanation:

The 'Introduction to Environmental Sustainability in Healthcare' has been introduced this academic year.

Students are taking part for the first time in the PHRC to help evaluate the curriculum and make recommendations for improvement.

Power Skills have also been introduced at the University into every undergraduate degree from 2025/26. In the MPharm students undertake the 'Environmental Sustainability' Power Skill in Stage 1. More information about Power Skills is available here: [Aston Power Skills](#)

1.18. Does your pharmacy school have a member of faculty to incorporate planetary health and sustainable healthcare as a theme throughout the curriculum?

Yes, there is/are a member(s) of faculty whose role is directly responsible for the incorporation of planetary health and sustainable healthcare as a theme throughout the curriculum (4 points)

Yes, there is/are member(s) of faculty who are incorporating planetary health and sustainable healthcare as a theme throughout the curriculum as well as doing their principle role (2 points)

There are no members of faculty who are incorporating planetary health and sustainable healthcare as a theme throughout the curriculum (0 points)

Score Assigned:

2

Score explanation: There are some members of staff incorporating planetary health and sustainable healthcare in teaching as well as encouraging and supporting others to do so but this is not a defined part of their principle role, nor are they allocated specific time in their workload to complete this.

1.19. Does your pharmacy school curriculum offer clinical practice experiences (for example, IPPE/APPE rotations in the U.S. or placement opportunities in the UK) that allow for the exploration of planetary health topics?

There are multiple clinical practice experiences/placements that allow for direct exposure to planetary health topics. (3 points)

There is one available clinical practice experience/placement that allows for direct exposure to planetary health topics. (2 points)

There are available clinical practice experiences/placements that allow for indirect exposure to planetary health topics. (1 point)

No, there are no such clinical practice experiences/placements available through the pharmacy school. (0 points)

Score Assigned:

2

Score explanation:

Community pharmacy placement workbook for Stage 1, PH1423 includes activities on waste management and sustainability including recycling and reducing carbon footprint.

There are also opportunities for students to discuss appropriate waste management/return of medication, deprescribing etc. to include the link to environmental sustainability with teacher practitioners but these are not pre-defined as part of the placement activities currently.

1.20. Does your pharmacy school curriculum acknowledge a disparity in the effects of climate change? Specifically, does your curriculum address groups more vulnerable to environmental impacts, such as BIPOC, immigrant groups, low income populations, children, elderly, persons with disabilities, persons with pre-existing or chronic medical conditions?

This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> This topic is broadly covered in the ‘Introduction to Environmental Sustainability in Healthcare’ lecture in stage 1 (details in 1.1). There is a focus on children as this is covered as part of an interactive case study. This needs to be covered more in depth for other vulnerable groups.</p>	

1.21. 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 briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i> This is not currently covered in the MPharm curriculum in the context of environmental sustainability.</p>	

Section Total (44 out of 69)	63.77%
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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 <u>institution</u>?	
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:	3
<p><i>Score explanation:</i> ‘Clean Tech’ is one of the key research themes at the University - Cleantech Aston University</p> <p>The Energy and Bioproducts Research Institute – their goal is to use sustainable resources to deliver an affordable, resilient, low-carbon energy future.</p> <p>The Aston Centre to Circular Economy and Advances Sustainability researches and addresses global pressing challenges due to climate change, growth of the world population, degradation of ecosystems and availability of natural resources - Centre for Circular Economy and Advanced Sustainability Aston University</p> <p>The University also has a number of academics whose research has a focus on sustainability - Our sustainability experts Aston University</p> <p>Research is also included in Aston University’s 2030 Sustainability Strategy.</p> <p>Within the Pharmacy School Dr Tien Quach also supervised different MPharm students to meet the United Nations Sustainability Goals. For example, one research project that she supervised is “Formulation and characterisation of new-chewable tablets targeting vegan/vegetarian patient groups”.</p>	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

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:

0

Score explanation:

There is not currently a department that would meet this criteria.

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 institution?

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:

The public are key stakeholders in research at the University and the University is committed to [reducing inequalities](#). However there is not a process specific to environmental sustainability research that could be identified. [The Aston University 2030 Sustainability Strategy](#) does have a focus on all people and our community and so alongside there already being established public involvement in research, it is likely that if this is not already in place it is in development.

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
<p><i>Score explanation:</i> The university has a comprehensive central webpage related to environmental health, with links to further information including the sustainability team, sustainable travel, the university rankings, student initiatives. There are separate webpages linked about sustainability research, these are able to be found but could be more prominent. Sustainable Development at Aston University Aston University</p>	

2.5. Has your <u>institution</u> 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:	4
<p><i>Score explanation:</i> Aston University has annual forums to discuss about Sustainability, for example: Global Conversation on Sustainability 2025 Global Conversation on Sustainability 2025 (GCS25) Global Conversation on Sustainability 2024 (GCS24)</p>	

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:

1

Score explanation:

The Pharmacy School is a member of the [Sustainability in Pharmacy Education](#) group. Aston University also has Responsible Futures accreditation through SOS-UK (Students Organising Sustainability)

Section Total (12 out of 17)

70.59%

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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 environmental 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:	2
<i>Score explanation:</i> As Dr Tien Thuy Quach has been a Vice-Chair, Chair, and now Past-Chair of International Younger Chemists' Network (IYCN), Aston University partnered with IYCN to organise the sustainability and promote planetary and health to young generation. More details: IYCN	

3.2. Does your <u>institution</u> 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:	2
<i>Score explanation:</i>	

As part of the ‘Aston Power Skills Festival’ there are some events open to the members of the public, one of which has a topic related to environmental sustainability - [Power Skills Festival | Aston University](#)

Aston University has annual forums to discuss about Sustainability, for example, [Global Conversation on Sustainability 2025 \(GCS25\)](#)
[Global Conversation on Sustainability 2024 \(GCS24\)](#)

As Aston staff, Tien is also joining the Committee Organiser to progress other outreach events to help improve the public awareness on planetary health

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:

0

Score explanation:

Updates about planetary health aren't sent out regularly to all students.

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:

With the School of Medicines, Pharmacy and Biosciences, the Bioscience Department is affiliated to a consortia of West Midlands based hospitals for the applied Biomedical science programme. As part of the portfolio they have to consider the NHS Green agenda.

There is an e-learning module relating to sustainable healthcare, which is available to healthcare professionals across the nation, including those working at our placement provider trusts, however this is not mandatory.

[Environmentally Sustainable Healthcare - elearning for healthcare](#)

Aston staff has also led the international programme for ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career. For example, Tien has been co-leading the “IYCN-MYCN Young Chemists Program 2025 ([IYCN-MYCN Young Chemists Program](#)), which is a global capacity-building initiative co-led by the International Younger Chemists Network (IYCN) and the Malaysian Young Chemists Network (MYCN), to be held alongside the IUPAC 2025 World Chemistry Congress. The programme brings together early-career researchers from around the world through immersive workshops, panel discussions, roundtables, and professional development sessions spanning chemical safety, leadership, education, science communication, digital branding, and career planning. This initiative builds upon sustained IYCN-MYCN collaborations across previous international congresses and ongoing global efforts in safety training, leadership empowerment, and professional skill development. It is further strengthened through concurrent partnerships with IUPAC COCI, ACS, RSC, EYCN, Commonwealth Chemistry ECN, and national young scientist networks. The programme is inherently aligned with IUPAC’s mission of advancing chemistry worldwide, strengthening safe practice, fostering meaningful international collaboration, and nurturing a globally connected next generation of chemistry leaders. More details at [detailed agenda \(pdf\)](#). Note that the [Safety Training Program](#) was coordinated in collaboration with IUPAC Committee on Chemistry and Industry (COCI); contact STP coordinator [Fabián Benzo Moreira](#)

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:

We work with many different hospital trusts, mainly in the Midland region but around the UK for our pharmacy placements. The team found the following examples.

University Hospital Birmingham NHS foundation Trust, and Birmingham Women’s and Children’s NHS Foundation trust have information publicly available online that address a number of issues related to climate change. For example, the Clean Air Day page includes an explanation of air pollution’s health effects

[Clean Air Day | Birmingham Women's and Children's](#)

UHB’s sustainability page is accessible to patients and addresses topics such as how reducing emissions is important for public and patient health, through its ‘Green Plan’.

[Sustainability](#)

SWFT have brief mention of harms on their patient facing website, with additional information on trust actions to improve [Sustainability :: South Warwickshire University NHS Foundation Trust](#)

There are different resources that Aston staff collaborated with other teaching staff to develop and apply throughout the Lectures and Practicals. For instance, Tien contributed to the international project to develop and apply the (new) materials, e.g. “Thermoplastic starch-based materials: properties and characterization” ([IUPAC Project](#)), and/or (new) principle, e.g. “A review of current status of analytical chemistry education” ([A review of current status of analytical chemistry education](#))

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:

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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:

Although not a large grant, the ‘Green Skills for Green Jobs’ workshop is an opportunity encouraged by the university where students help identify the strengths and gaps in how universities are educating students to have the Green Skills needed for the Green Jobs that are part of the Green Transition. It is funded by the Quality Assurance Agency and offers the incentive for students to earn a voucher. In addition to this, Aston University’s Go Green Aston initiative promotes initiatives that demonstrate active student engagement in sustainability, including:

- Engaging in sustainability-focused dissertations
- Volunteering opportunities
- Initiatives and projects with Student Societies
- Go Green Week activities.

[Go Green Aston | Aston University](#)

There are a variety of options for pharmacy students in Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors on the manufacture of (new) medicines as well as the whole healthcare systems. For example, one research project is “Evaluating Compliance with IV to Oral Switch (IVOS) Criteria”. There have also been options for pedagogical research related to environmental sustainability in pharmacy/healthcare education.

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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:

Although not a large grant, the ‘Green Skills for Green Jobs’ workshop is an opportunity encouraged by the university where students help identify the strengths and gaps in how universities are educating students to have the Green Skills needed for the Green Jobs that are part of the Green Transition. It is funded by the Quality Assurance Agency and offers the incentive for students to earn a voucher. In addition to this, Aston University’s Go Green Aston initiative promotes initiatives that demonstrate active student engagement in sustainability, including:

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[Go Green Aston | Aston University](#)

There are a variety of options for pharmacy student Stage 4 to choose to do short-projects or long-projects to investigate the environmental factors on the manufacture of (new) medicines as well as the whole healthcare systems. For example, one research project is “Evaluating Compliance with IV to Oral Switch (IVOS) Criteria”. There have also been options for pedagogical research related to environmental sustainability in pharmacy/healthcare education.

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:

1

Score explanation:

Yes, the university has 2 relevant webpages, an up-to-date webpage that provides examples of sustainability research projects and a webpage listing sustainability experts with contact details.

[Our sustainability projects | Aston University](#)

[Our sustainability experts | Aston University](#)

However, there is currently no pharmacy specific webpage information available to students.

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:

2

Score explanation:

Yes, the 'Protect the Planet' student society is a new sustainable project group created to bring together students to lead a range of sustainability initiatives across campus. The group aims to raise awareness of sustainable living practices and encourage positive behaviour change by bringing students together to design and deliver activities that explore sustainable options for the future. Students from all backgrounds are encouraged to play an active role in building a better, more sustainable world.

The University also has 'Go Green Aston' – initiatives for students and staff. This includes a 'mother garden' co-designed with students and staff. Website: [Go Green Aston](#)

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:	0
<p><i>Score explanation:</i> The pharmacy school has student representatives who take part in student-staff committee meetings. These meetings are an opportunity for representatives to voice student concerns and advocate for changes in the curriculum, and although this could be sustainability-related, as of yet there is no specific student liaison specifically representing environmental sustainability.</p>	

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.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	0
<p><i>Score explanation:</i> Aston University has annual forums to discuss about Sustainability, for example, Global Conversation of Sustainability 2025 Global Conversation on Sustainability 2025</p> <p>Students and staff have attended the events.</p> <p>There is also the ‘Mother Garden’ on campus as previously mentioned.</p>	

Section Total (7 out of 15)	46.67%
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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 <u>institution</u> 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:	3
<p><i>Score explanation:</i> Aston has two full time sustainability staff – Environment and Sustainability Manager and Environment and Sustainability officer who sits within estates: Our Team Aston University</p> <p>There is not a University hospital, but instead several hospital trusts that the University work with for placements. For the West Midlands trusts that the School works with regularly the team were informed that they all have sustainability leads or departments.</p>	

5.2. How ambitious is your <u>institution's</u> 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:

Aston University has set an extremely ambitious carbon-reduction pathway, committing to achieve Scope 1 & 2 Net Zero by 2030 and now accelerating this target to 2028, supported by a £35.5 million decarbonisation grant. Its plan includes replacing fossil-fuel systems with a new Green Energy Centre, enabling a >90% reduction in Scope 1 & 2 emissions from the 2005/06 baseline — placing Aston among the sector’s most forward-leaning institutions

[Climate Action | Aston University](#)
[Carbon Management Plan](#)

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:

2

Score explanation:

Since 2022, Aston University has significantly expanded its renewable energy capacity through the installation of 607 photovoltaic (PV) solar panels across key campus buildings, including the Main Building, Nursery, Students’ Union, and Vision Science Building. These PV systems play a vital role in reducing carbon emissions and supporting our sustainability goals by generating clean, on-site electricity.

The image below illustrates the projected energy yield from these installations over the period 2022–2025:

- Students’ Union: 322,326.55 kWh
- Nursery: 88,501.57 kWh
- Main Building: 53,060.05 kWh
- Vision Science Building: 52,701.28 kWh

Together, these figures highlight the substantial contribution of solar energy to Aston’s low-carbon strategy. We are continuing to explore further PV expansion opportunities as part of our long-term commitment to sustainability.

[Energy | Aston University](#)

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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:

For refurbishment projects the University has adopted SKA HE (Higher Education). SKA HE Rating is a Royal Institute of Chartered Surveyors (RICS) environmental assessment method, benchmark and standard for the higher education sector. It has been designed to meet the requirements of higher education interior fit-outs and refurbishments to meet clear sustainable good practice.

The SKA HE schemes consists of more than a hundred 'good practice' measures covering energy and CO2 emissions, waste, water, materials, pollution, wellbeing, biodiversity, project delivery and transport. Aston University has a target to achieve a GOLD level SKA Rating for all refurbishment projects over £5 million.

The Capital Development Team have a Building Refurbishment Specification that uses the SKA HE methodology for projects under £5million.

All building between 2010-2015 have obtained a BREEAM Excellent Rating. In 2017 the University decided that BREEAM was not the best option for Aston due to its high costs and poor energy performance when a building became occupied. [sustainable-construction-specification.pdf](#) was written for all new buildings that embedded areas of BREEAM, SKA HE and existing University Specifications. Using this document with the design and build process means Aston will gain more sustainable and energy efficient buildings within budget.

Read More: [Responsible Consumption and Production | Aston University](#)

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:	1
<p><i>Score explanation:</i></p> <p>Yes, Aston University is committed to promoting sustainable travel and supports Birmingham’s 2030 net-zero target by encouraging a reduction in car usage within the city centre.. They have implemented some strategies such as e-scooter stands, which are available on the university website, and promoting free travel wherever they can. More could be done to improve on this and make information more accessible to students in the university.</p> <p>Sustainable Travel Aston University</p>	

5.6. Does your <u>institution</u> 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
<p><i>Score explanation:</i></p> <p>Aston University operates both an organics (food waste) recycling system and a conventional recycling system across campus.</p> <p>The university’s waste-segregation standards include a clearly defined Food Waste stream, collected separately from general residual waste, demonstrating the presence of an organics recycling programme. In addition, Aston has established multiple conventional recycling streams, including dry mixed recycling, paper and cardboard, and glass recycling, all of which are available for routine use by students and staff. Waste and Recycling Aston University</p>	

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 **adequate** sustainability 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:

2

Score explanation:

As part of the sustainable food action plan, there are a number of ways that the university applies sustainability criteria when purchasing food and beverages, including working with their meat supplier to ensure all meat, meets a minimum of Red Tractor /farm assured standard, ensuring that all fish bought for Aston catering is accredited by the Marine Stewardship Council. More can be read here: [Sustainable Food Action Plan.pdf](#) . More initiatives could be implemented, such as meat free days. Although vegetarian and vegan food options are available on campus these are seen as limited and could be improved.

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:

3

Score explanation:

Aston uses The Flexible Framework as a tool to embed sustainability into its procurement processes and to work toward reducing the environmental impact associated with its supply chains. Aston University can demonstrate achievement at Level 4. This activity is scrutinised internally by members of procurement and the sustainability team. The NETpositive Supplier Engagement Tool is a free online platform that enables suppliers to develop a bespoke Sustainability Action Plan in line with Aston's environmental, sustainability, and institutional objectives. The Tool is used in collaboration with other Universities and Higher Education organisations. The Tool allows Aston to support its Suppliers to go beyond a commitment to sustainability and help plan Supplier

engagement activities on sustainability, gather evidence of good practice, and use the action plan developed to provide a clear and measurable focus for contract management discussions.
[Responsible Consumption and Production | Aston University](#)

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:	0
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Score explanation:
 There are no sustainability guidelines yet for institution events.

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
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Score explanation:
 By signing the [Concordat for the Environmental Sustainability of Research and Innovation Practice](#) an initiative developed by the UK research and innovation (R&I) sector the university joins a collective effort by academic institutions, research bodies, and funding organisations to ensure that cutting-edge research is conducted in a more environmentally responsible and sustainable manner. This commitment also reflects Aston University’s alignment with the UK’s national climate goals and the United Nations Sustainable Development Goals (UN SDGs). Aston has also signed for LEAF for Labs. .

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
<p><i>Score explanation:</i> The university has taken the decision not to invest directly in fossil fuel companies with immediate effect. It follows a review of the university's Ethical Investment Policy, concerns of staff and students and a decision to support the Student Union campaign to divest from fossil fuels. There is not much information on whether funds have been diverted into renewable energy companies.</p> <p>Responsible Consumption and Production Aston University</p>	

Section Total (25 out of 32)	78.13%
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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 Aston University School of Pharmacy The following table presents the individual section grades and overall institutional grade for the Aston University School of Pharmacy on this Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(43/69) \times 100 = 63.77\%$	B-
Interdisciplinary Research (17.5%)	$(12/17) \times 100 = 70.59\%$	B
Community Outreach and Advocacy (17.5%)	$(7/14) \times 100 = 50\%$	C
Support for Student-led Planetary Health Initiatives (17.5%)	$(7/15) \times 100 = 46.67\%$	C
Campus Sustainability (17.5%)	$(25/32) \times 100 = 78.13\%$	B+
Institutional Grade	$(63.77 \times 0.3 + 70.59 \times 0.175 + 50 \times 0.175 + 46.67 \times 0.175 + 78.13 \times 0.175) = 62.07\%$	B-

