



Planetary Health Report Card (Physiotherapy): *Keele University*



2024-2025 Contributing Team:

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With thanks to contributions from the Keele School of Medicine & Pharmacy PHRC Teams (see their submissions for names).

Summary of Findings

Overall Grade	A-
Curriculum	C
<p>The physiotherapy curriculum incorporates local environmental health issues into case studies, lectures and practicals (1.12). The school is also currently in the process of making major improvements to ESH/planetary health education. However, several areas are still lacking or in their infancy such as climate change and increased heat affecting cardiovascular health (1.6), the carbon footprint of physiotherapy practice (1.16), and strategies to have conversations with colleagues and patients about the health effects of climate change (1.18).</p> <p>Actionable step: incorporate teaching on the health effects of climate change and extreme weather events.</p>	
Interdisciplinary Research	A
<p>The school has a faculty member who researches planetary health (2.1) and a website that centralises campus resources related to health and the environment (2.4). The university has also been a member of the PHRC since 2021 (2.6). However, there is no process to give input or make decisions about the research agenda for communities disproportionately impacted by climate change or environmental injustice (2.3).</p> <p>Actionable step: A process should be established for individuals disproportionately impacted by climate change or environmental injustice to give input or make decisions about the research agenda.</p>	
Community Outreach and Advocacy	A+
<p>The University meaningfully partners with multiple organisations to promote planetary and environmental health (3.1), offers community-facing courses and events at least once a year (3.2), and regularly receives communication updates dedicated to planetary health (3.3). However, only some affiliated hospitals have accessible educational materials for patients on environmental health exposure (3.5) and the health impacts of climate change (3.6).</p> <p>Actionable step: Increase the number of educational materials for patients on environmental health exposure and the health impacts of climate change.</p>	
Support for Student-Led Initiatives	A+
<p>The University offers support for students interested in a sustainability project/QI project (4.1) and there is a student representative who served on a decision-making council to advocate for the curriculum and sustainability best practice (4.5).</p> <p>Actionable step: Incorporate funding for research over the summer for planetary health similar to medicine</p>	
Campus Sustainability	A+
<p>The institution has a written and approved plan to achieve carbon neutrality by 2030 (5.2), has adequate sustainability requirements for food and beverages (5.7), has adequate sustainability requirements for supply procurement, and is engaged in efforts to increase the sustainability of procurement (5.8), and has programs and initiatives to assist with making lab spaces more environmentally sustainable (5.10). However, the University has only implemented some strategies to provide environmentally friendly transportation options.</p> <p>Actionable step: The institution should consider making the green delegation plan mandatory for conferences.</p>	

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, 4) community outreach centred on environmental health impacts, and 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.
- **Physiotherapy School/Department vs. Institution:** When “Physiotherapy school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of physiotherapy 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 Physiotherapy 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:** 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).

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.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

Section Overview: This section evaluates the integration of relevant planetary health topics into the physiotherapy school curriculum. Today's physiotherapy students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that physiotherapy 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 physiotherapy school's core curriculum.

Curriculum: General

1.1. Does the physiotherapy curriculum offer elective (student-selected) courses or modules specifically focused on sustainable healthcare practices or environmental physiotherapy?	
Yes, the physiotherapy school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the physiotherapy school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The physiotherapy school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 point)	
No, the physiotherapy school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
<p><i>Score explanation: Within the physiotherapy school, there is a free-standing elective module “Health and the Environment” (PTY-20020, 15 credits) which covers how the home, work or immediate environment may affect a person's health. The module has the following learning outcomes:</i></p> <ol style="list-style-type: none"> <i>1. demonstrate knowledge, understanding and the ability to critically evaluate the effects differing environmental factors can have on human mental and physical health</i> <i>2. understand the effect the changing environment may have on human mental and physical health and to demonstrate knowledge and the ability to critically evaluate these changes</i> <p><i>There is key content around the impact of the environment on respiratory conditions, disease transmission but also how it can impact exercise tolerance – a fundamental area of Physiotherapy practice.</i></p> <p><i>There is an additional elective module “Global Healthcare Matters” (PTY-30037, 15 credits) which introduces students to different aspects of health and social care with an international lens. There are seven learning outcomes in total, which cover elements such as appraising different healthcare structures, justifying measures of global health and their application to a population, global healthcare challenges, priorities and initiatives and health inequalities.</i></p> <p><i>Although these modules are not electives within the two Physiotherapy programmes – students could register to complete as a stand-alone module(s) and it is housed within the School of Allied</i></p>	

Health Professions and Pharmacy (which includes Physiotherapy) and are partially delivered by Physiotherapists.

1.2. Does the curriculum address the health risks of extreme heat from climate change on patient care, particularly for vulnerable populations that physiotherapists commonly treat (e.g. children, elderly, athletes)?

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:

1

Score explanation: This topic is covered in elective coursework in the “Health and the Environment” module. This module explores the impacts of extreme heat on respiratory conditions such as asthma. The module also includes a teaching session on “How the environmental temperature may influence physical activity”.

Curriculum: Health Effects of Climate Change

1.3. Is there content on how extreme weather events affect physiotherapy practice and service delivery, for example, disaster response and rehabilitation following these events?

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

Score explanation: This is not covered in the curriculum.

1.4. Does the curriculum cover how changing patterns of infectious diseases due to climate change might impact physiotherapy practice and patient management?

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:	1
<i>Score explanation: The impact of climate change on infectious diseases is covered in the elective module "Health in the environment". This session is taught by a senior lecturer in infectious diseases.</i>	

1.5. Does the program address the relationship between climate change, air pollution, respiratory health, and physiotherapy interventions?	
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: Within the MSci Physiotherapy programme there is a core module entitled "Physiotherapy Practice: Cardiovascular and Respiratory". This module covers a range of respiratory conditions such as asthma, COPD, bronchiectasis etc. Students were required to complete work packages which cover the pathophysiology and potential exacerbations of such conditions, and the impact of pollution is discussed. Within the MSc Physiotherapy programme, there is a core module entitled "Foundations of Physiotherapy Management" (PTY-40070, 15 credits). This module also includes the pathophysiology and potential exacerbations of common respiratory conditions.</i>	

1.6. Is there content on how climate change and increased heat affect cardiovascular health, and how this impacts physiotherapy assessment and treatment planning?	
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
<i>Score explanation: This topic is not covered within the school curriculum.</i>	

1.7. Does the curriculum address climate change's potential mental health impacts on patients and how this might affect physiotherapy outcomes?	
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: Mental health, wellbeing and behaviour change are regularly visited throughout both the core curricula and in elective modules. For example, there are modules called “Health and Wellbeing” and “Health Behaviour Change”, as well as modules such as “Principles of Rehabilitation” and “Practice in Specific Populations” which introduce mental health conditions such as anxiety and depression. Within all of the above modules, psychological wellbeing is discussed, however, environmental changes are not explicitly covered as part of this. Within the elective module “Health and the Environment”, there was a session entitled “How can the environment affect mental health”.</i>	

1.8. Does the program integrate discussions on the importance of food and water security and environmental factors in patient care and recovery addressing how these could be impacted by 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:	0
<i>Score explanation: This topic is not covered within the school curriculum.</i>	

1.9. Does your physiotherapy school curriculum address how patterns of colonialism, extractivism, economic exploitation and marginalization are responsible for producing climate change resulting in an outsized impact on marginalized populations (e.g. low SES,	
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women, communities of color, Indigenous communities, children, homeless populations, and older adults)?	
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
<i>Score explanation: This topic is not covered within the school curriculum.</i>	

1.10. Does your physiotherapy school curriculum address how global climate change impacts might affect physiotherapy practice in different regions, including potential changes in patient demographics due to climate migration?	
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
<i>Score explanation: This topic is not covered within the school curriculum.</i>	

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

1.11. Does the curriculum address the potential impacts of environmental toxins on patient health and rehabilitation, particularly in pediatric or neurological physiotherapy?	
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 school curriculum briefly explores the impacts of exposure to pesticides and other occupational-related exposures on the development of neurological conditions such as Parkinson's Disease. Examples of modules that cover these topics include "Physiotherapy Practice: Neurology (MSci, 2nd year core module), "Practice in Specific Populations" (MSci, 2nd year core module), Enhanced Practice: Neurology (MSci 4th year elective module). Similarly on the MSc degree, this is covered in "Foundations of Physiotherapy Management".

1.12. Does your physiotherapy school curriculum incorporate local environmental health issues into case studies, lectures or practical sessions?

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: Local industry-related toxins are discussed within the curriculum. These are centred around the industries of coal mines and pottery factories, which were common forms of employment in the region surrounding Keele University. The impacts of this local history are particularly explored within the "Physiotherapy Practice: CVR" module with teaching and examination case studies being based on respiratory conditions which can be linked with industry-related health issues such as Bronchiectasis and COPD. On the MSc programme, this is covered in the "Foundations of Physiotherapy Management" module.

1.13. To what extent does your physiotherapy school 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 physiotherapy school's planetary health education (3 points)

Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum. (2 points)

Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework. (1 point)

This topic was not covered. (0 points)

Score Assigned:

0

Score explanation: This topic is not covered within the school curriculum.

1.14. Does your physiotherapy school curriculum address how environmental factors

disproportionately affect marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults, and how physiotherapists can address this in their practice?

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 “Health and Wellbeing” module in Year 1 MSci route and its sister module “Health, Wellbeing & Behaviour Change” on the MSc cover the socio-economic profile of Stoke-On-Trent. Stoke-on-Trent is the nearest city to Keele University is the 25th most income-deprived area in England (as per the [Office for National Statistics, 2021](#)). As such, the combination of the two is intertwined in case scenario learning across multiple modules. There is also content in the “Health Behaviour Change” (MSci Year 3) and MSc module “Health, Wellbeing and Behaviour Change”.

Curriculum: Sustainability

1.15. Does the curriculum promote the co-benefits of sustainable lifestyle choices (e.g. active transport, green exercise and Healthy Plant-Based Diets) as part of patient education and treatment plans?

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 benefits of green exercise are briefly covered across the curriculum, with a focus on the mental health benefits of exercise and being outdoors. Examples can be seen in modules such as “Health and Wellbeing” and “Health Behaviour Change” in the MSci degree and “Health, Wellbeing & Behaviour Change” in the MSc course. Areas of improvement can include more explicit mention of active transport and Plant-Based diets within these modules.

1.16. Does your physiotherapy school curriculum cover the carbon footprint of physiotherapy practice and strategies to reduce it?	
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: Within the placement modules of both the MSci and MSc Physiotherapy programmes students are required to complete an online module available through the NHS e-learning for health called “carbon literacy for healthcare”.</i>	

1.17. Does your physiotherapy school curriculum cover these components of sustainable clinical practice in the core curriculum (e.g., musculoskeletal, neurological, cardiorespiratory)? (1 point each)	Score
Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room. (1 point)	1
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
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 fulfill 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. (1 point)	1
The health and environmental co-benefits of avoiding excessive physiotherapy treatment and over-investigation. (1 point)	0
<i>Score explanation: The above topics are covered within the e-learning for healthcare module. In addition, social prescribing is a key component of the MSc core module “Health, Wellbeing and Behaviour Change” and the MSci core module “Health Behaviour Change”. The sister modules</i>	

discuss in-depth public health and health promotion. They also include a key lecture entitled “Psychological, socioeconomic and environmental factors that impact on health, wellbeing, and health behaviour change” as well as workshops to discuss how to apply different strategies for health promotion in specific populations.

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your physiotherapy school’s curriculum introduce strategies to have conversations with colleagues and patients about the health effects of climate change?

Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. (1 point)

No, there are not strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned:

0

Score explanation: This topic is not covered within the school curriculum.

1.19. In training for patient encounters, does your physiotherapy school’s curriculum introduce strategies for taking an environmental history or exposure history?

Yes, the core curriculum includes strategies for taking an environmental history. (2 points)

Only elective coursework includes strategies for taking an environmental history. (1 point)

No, the curriculum does not include strategies for taking an environmental history. (0 points)

Score Assigned:

2

Score explanation: As previously mentioned, modules of “Health and Wellbeing”, “Physiotherapy Practice: Neurology” and “Physiotherapy Practice: Cardiovascular and Respiratory” explore the multiple potential environmental/work-based hazards that can manifest in the local population. As a result, students are well versed in exploring patients’ risk of exposure through work/recreation/location whilst conducting a subjective assessment. This is further developed during placement opportunities due to the local population having multiple potential environmental/work-based hazards.

Curriculum: Administrative Support for Planetary Health

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

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

Yes, the physiotherapy 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:

4

Score explanation: The school has several staff members who are certified as Carbon Literate through the Carbon Literacy Trust. They are now planning a large roll-out programme of Carbon Literacy training for all staff and students. Staff have also actively sought student views through questionnaires and there is a research project ongoing (with staff and students) to explore how we can make positive changes to our curricula to reflect ESH/planetary health education.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?

Planetary health/ESH topics are well integrated into the core physiotherapy school curriculum. (6 points)

Some planetary health/ESH topics are appropriately integrated into the core physiotherapy student curriculum. (4 points)

Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s). (2 point)

There is minimal/no education for sustainable healthcare. (0 points)

Score Assigned:

4

Score explanation: The school addresses "1. Describe how the environment and human health interact at different levels" most effectively across the three specified learning outcomes. It is felt that there are suggestions within the curriculum that promote Physiotherapy's role in planetary health and how to be sustainable in practice, however, these need more attention and depth.

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

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

No, the physiotherapy 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 school has a specific faculty member (Dr Szu Shen Wong) who is responsible for curricular integration of Planetary Health and has engaged with the creation of PHRC reports across Medical, Pharmaceutical and Physiotherapy schools.

Section Total (35 out of 69)

50.72%

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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 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:

3

Score explanation:

There are staff within the school, as well as a postgraduate researcher who are writing up research related to the carbon footprint of physiotherapy programmes.

Although not specific to the healthcare schools, Laura Rhodes is the appointed head of net zero delivery & sustainability at Keele University. Whereby she directs individuals to conduct research and supports schemes working on sustainable resolutions. As seen by Smart Energy Network Demonstrator, which is the largest project in Europe dedicated to reducing carbon emission and tackling climate change. In response to managing both campus and local business energy distribution. As well as through the implementation of interdisciplinary themes that challenge research expertise, and, to highlight their strengths when they make a difference.

The institution's School of Medicine has been highly ranked globally for sustainability and planetary health integration into medical education. Faculty are engaged in research through the Institute for Sustainable Futures, which supports interdisciplinary studies addressing health and environmental issues.

References:

https://keele.ac.uk/sharepoint.com/search/Pages/people/results.aspx?k=%2A#k=*sustainability#l=1033

https://keele.ac.uk/sharepoint.com/search/Pages/people/results.aspx?k=%2A#k=*sustainability#l=1033
<https://www.keele.ac.uk/sustainable-futures/ourchallenge/themes/providingcleanenergyreducingcarbonemissions/send/>
<https://www.keele.ac.uk/sustainable-futures/>

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 points)

There is **no** dedicated department or institute. (0 points)

Score Assigned:

3

Score explanation:

There is an [Institute for Sustainable Futures \(ISF\)](#), which connects different departments within the university and companies together to work towards common goals. They have six challenge themes – with “[creating healthy societies](#)” being most relevant to physiotherapy practice.

Additional References:

<https://www.keele.ac.uk/health/facultynews/2024/june/health-schools/planetary-health-report-card.php>

<https://www.keele.ac.uk/medicine/aboutus/sustainabilityandplanetaryhealth/education/>

<https://www.keele.ac.uk/occupational-health-safety/healthandsafety/>

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 points)	
There is no process, and no efforts to create such a process. (0 points)	
Score Assigned:	2
<i>Score explanation: There is evidence of patient and public engagement within the Primary Care Research Centre and that community members have influence over this research agenda. The ISF partners with different local organisations (see bottom of this webpage) and focuses on providing sustainable governance and community living.</i>	

2.4. Does your <u>institution</u> 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
<i>Score explanation: Our university has a main sustainability page. This is a comprehensive website which includes research, education, business support, news, student and staff sustainability, information about the campus and such like. Our student union also has a dedicated page aimed towards student sustainability projects and sustainable volunteering opportunities.</i>	

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></p> <p><i>The Institute for Sustainable Futures at Keele University regularly holds symposiums and events. Examples include: Keele Deal Health Sustainability Forum held on 4th June 2024. The programme of events can be seen via this website</i></p> <p>https://www.keele.ac.uk/sustainable-futures/newsandevents/events/</p>	

2.6. Is your <u>institution</u> 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 points)	
No, the institution is not a member of such an organisation. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p><i>Keele University is a member of the Nature Positive Universities Alliance this is a global network of universities prioritising nature restoration. Launched by the United Nations Environment Programme. Nature Positive University - Keele University</i></p> <p><i>Keele School of Medicine is a member of the Planetary Health Alliance (PHA), a global organisation focused on addressing planetary health challenges. However, the institution is not a member of this organisation.</i></p>	

Section Total (16 out of 17)	94.12%
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Community Outreach and Advocacy

Section Overview: *This section evaluates institutional 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 <u>institution</u> 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 has participating in community focused events relating to planetary health. (1 point)	
No, there is no such meaningful community partnership. (0 points)	
Score Assigned:	3
<p><i>Score explanation: Keele University has a Sustainability Strategy which receives input from Trade Union Environmental Representatives.</i></p> <p><i>Keele's Students' Union has collaborated with the National Union of Students to create an initiative called 'Student Eats' which allows students to grow their own food on campus. https://www.keele.ac.uk/about/sustainability/studentandstaffsustainabilityprojects/sustainablefoodprojects/</i></p> <p><i>Keele University works with the Carbon Literacy Project to provide students and staff with the opportunity to gain knowledge and awareness of the impacts of carbon dioxide and become certified as carbon literate https://www.keele.ac.uk/about/sustainability/studentandstaffsustainabilityprojects/educationforsustainabilityprojects/carbonliteracyproject/</i></p> <p><i>The Keele Wildlife Society has received bronze accreditation from the Hedgehog Friendly Campus, a scheme funded by the British Hedgehog Preservation Society, for their efforts in turning our campus into a safe habitat for Hedgehogs to thrive https://www.keele.ac.uk/about/sustainability/greencampus/biodiversity/hedgehogfriendlycampus/</i></p> <p><i>Keele partners with the Trussell Trust, a local food bank, to donate non-perishable food items from students living in Keele's Halls of Residence at the end of each term. Keele University uses Warp-it to exchange unwanted furniture with other staff members, this reduces waste and waste disposal</i></p>	

costs. <https://www.keele.ac.uk/about/sustainability/ouroperations/recyclingandwaste/whatwehavedone/>

Keele University works with the Soil Association to implement the Food For Life Catering Mark, an initiative that improves the sustainability of the catering at the University campus. <https://www.keele.ac.uk/study/campuslife/foodanddrink/oursocialandethicalpolicies/sustainablefoodpolicy/>

Keele University helping prepare Staffordshire for net zero future: working alongside Staffordshire County Council to help the county prepare for the opportunities of the transition to net zero future. This will be used to inform future decision making for investment and resource allocation to secure a skilled supply chain, ensuring that all stakeholders can make the most of the economic benefits of the

transition. <https://www.keele.ac.uk/about/sustainability/studentandstaffsustainabilityprojects/educationforsustainabilityprojects/carbonliteracyproject/>

Keele university, researchers have started a new project with Unilever, maker of a few worlds' leading home care brands, to help decarbonise its portfolio of product such as cleaning products. (sustainability, no date). This year's Green Festival will be a mixture of in-person and online activities in celebration of sustainability, people leading in embedding sustainability across the university, and the key projects based on campus that are in efforts to engage the population with sustainability and reduce carbon emissions that have impact locally and nationally. <https://www.keele.ac.uk/about/sustainability/studentandstaffsustainabilityprojects/sustainablefoodprojects/>

The library contributes with healthcare sustainability communication/updates by displaying a stand in the foyer of the library.

As aforementioned, we also have the Institute for Sustainable Futures which hosts many events to engage organisations in sustainability-focused activity.

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:

3

Score explanation: Keele university holds events annually every year with the Keele green festival which is a two weeklong event at Keele open to the public. [Keele Green Festival - Keele University](#)

Keele university also gives students the opportunity to do placements with business, schools, charities/non-profits and community groups in order to teach about climate change but also interact with the public and see how Keele can help them. [Student placement opportunities - Keele University](#)

Keele is also the West Midlands regional hub for climate ambassadors that focuses on making sustainable education and climate change into early years, schools and colleges and regularly holds conferences for the teachers and schools within Keele hall. [Climate Ambassadors - Keele University](#)

Keele also holds smaller events outside of the green festival such as the Earth Stories Film Festival which went on the 22nd of April 2024, Young voices for Nature- our beautiful wild 21st of April 2024, Sustainability and climate change photo exhibit 5th December 2023-23rd April, Keele future thinking event on the 16th February 2024 Talk on sustainability 21st of April 2024, Guided walk energy park tour 21st of April 2024 and What on earth 20th -21st of April for further information on all of these events please see <https://www.keele.ac.uk/sustainability/newsandevents/events/>

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:

2

Score explanation: Within the sustainability section on the university website, there is a News and Events page which contains communications on sustainability achievements across the university and frequently highlights advancements in sustainable healthcare achievements. Our sustainability staff utilise social media for most of their communications, including the Life at Keele Facebook page, Student Union pages and Green Keele accounts to advertise sustainable events, green festival and volunteering opportunities. The Sustainability Bungalow pages provide practical advice for students to live more eco-friendly. In terms of email newsletter, sustainable issues often feature on the SU newsletter, KPA newsletter and the central university communications from the Vice Chancellor. In addition to this, the SU Activities does frequent blog posts and podcasts on tips for sustainable living.

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 provider. (1 point)	
There are no such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> <i>The University Hospital of North Midlands (UHM) is a Keele University Teaching Trust and hosts the largest number of Keele students. It requires all professionals to complete e-learning modules on sustainable healthcare as part of their induction training.</i></p>	

3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> 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 hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> <i>There are two NHS trusts which have Keele University teaching status – University Hospitals of North Midlands (UHM) and Midlands Partnership University NHS Foundation Trust (MPFT). UHM has several patient information leaflets regarding air pollution and respiratory health, accessible in paper format from the respiratory outpatient's department and via the staff intranet. There are also a few web articles referencing different environmental health exposures, relevant to specific diseases, e.g. explaining daily air quality index via Asthma Triggers, as well as highlighting their own role in mitigating environmental health exposures. MPFT has a Health & Wellbeing Resources page which has a plethora of resources, however does not have anything specifically related to environmental health exposure. Other local hospitals also include resources such as: Shrewsbury And Telford Hospital (SATH) trust does provide accessible online patient information leaflets regarding the impact of smoking & exposure to the sun, in an easy read format as well as a webpage format, as well as printed leaflets in outpatient departments. Leighton hospital has a section on there website that is dedicated to winter wellbeing which includes exposure to weather and viruses during winter.</i></p>	

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:

2

Score explanation:

Both the University Hospitals of North Midlands (UHNM) and Midlands Partnership University NHS Foundation Trust (MPFT) have publicly available materials about the health impacts of climate change and their sustainability agendas.

[Our 2025 Vision: Our Sustainable Future](#), published by the UHNM, outlines the importance of sustainability in healthcare, its impact on climate change, and their 5-year strategic approach to deliver excellence in sustainability performance.

MPFT has a [Carbon Reduction Plan and a Green Plan & Green Strategy](#). Both are extensive, and they have a high presence on social media (@GreenTeamMPFT on X) to provide easily accessible information.

Other hospitals that we have connections with (without university teaching trust status) also have a series of useful resources.

[SATH trust website](#) contains a sustainability section, outlining their 'Green plan' which is targeting areas where progress potential has been identified so that they can become more sustainable, and highlighting their efforts to reduce carbon dioxide emissions to have a positive impact 'on climate change.

Leighton hospital has a community conversation podcast in which they discuss sustainability as well as an Environmental and Social Responsibility Plan (ESRP) 2021 - 2026 which also contains their 'Green plan'.

The Robert Jones and Agnes Hunt Orthopaedic hospital have a 'Green plan.

Section Total (14 out of 14)

100%

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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:

2

Score explanation:

There is a [Sustainability Fund](#) provides micro grants of up to £100 available to students which is supplemented by the [Great Donate](#) and the Drink, Rinse, Repeat scheme. Additionally, sustainability internships and [placement opportunities](#) have allowed for several successful students in recent years to work alongside the Education for Sustainability team and help with projects such as the Hedgehog Friendly Campus campaign, SOS-UK Students Eats campaign, Keele Green festival, Weigh To Go (a zero waste shop), Live Green webpages, and Eat, Rinse, Repeat. The [Keele Key Fund](#) is also available for students to apply for financial support in setting up projects which may improve sustainability. This is typically between £500 and £2500 for each successful application, with a total fund of around £20000.

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 these 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:	2
<p><i>Score explanation: All students must complete a research project to complete their programme. At present, the research topics are negotiated between the student and the supervisor and therefore could include planetary health and/or sustainable healthcare.</i></p> <p><i>Students are encouraged to speak to their academic mentors for information about additional planetary health/sustainable healthcare research but there isn't a specific research programme dedicated to this.</i></p> <p><i>Additionally, the Medicine school have access to specific research programs dedicated to planetary health research/ sustainability projects. The School of medicine has been presented with a wider variety of sustainability and planetary health projects/challenges to participate in such as:ASPIRE SCHEME, Living Laboratories and sustainable healthcare education project</i></p>	

4.3. Does the <u>institution</u> have a web page 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 Institution and/or contact of information of potential mentors.	
The institution has a web page 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 web page 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 web page for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)	
Score Assigned:	2
<p><i>Score explanation: There is a web page on sustainability, which tells students how much green energy the university has produced so far and awards that have been won. This is slightly out of date as the last one was won in 2021. This website has links to other pages describing what the university does for planetary health. These pages tell us the projects that have been completed and who is involved with planetary health. It also gives contact details of staff who can act as mentors. Dr Laura Rhodes being head of Net Zero delivery and sustainability, Professor Zoe Robinson who is a professor of sustainability in higher education and Dr Szu Shen Wong who is deputy director</i></p>	

for sustainable futures and faculty lead for sustainability. They all serve the entire university and host sustainability events and conferences. [Sustainability research - Keele University](#)

There is also another page describing future goals such as: [Carbon Literacy Project](#). Which is hoped to be achieved by 2030. On this page there is also a video from 2024 showing the page is up to date on what is being done right now, along with comments from Carbon Literacy Project Learners.

There is also another page which talks about a 16 week course called [Skills Bootcamp in Net Zero and Smart Energy Transition](#) which is commencing on 20th January 2025. This shows there is sufficient information that is up-to-date for students to find and attend themselves. There are also catch ups available on this course. Below that information on the same page it describes what the student would learn throughout the course and also who the mentors are providing the course.

There is another webpage which mentions all the [Keele Green Festivals](#) that have been done, which is again up to date, the last one being in 2024. This has a link on it which sends the student to a page with a timetable on it allowing the student to know when and where these sustainability events are occurring.

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: The school has student voice representatives with one of these students dedicated to bringing up sustainability issues and solutions.

The institution as a whole has the sustainability community and network Teams group, and we also contribute to the campus garden project (edible campus and allotment). These are all done with faculty support and there are opportunities to become carbon literacy facilitators and teach this content to other students with the help of faculty. Additionally, Pharmacy have a Sustainability Representative, as the role was introduced this year by the Pharmacy Director of Education as a result of the Pharmacy PHRC that was held last year.

[Sustainability engagement - Keele University](#)

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 that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
<i>Score explanation: There are student representatives in each year of study who regularly feedback to staff about curriculum, sustainability and any other concerns, which are taken into consideration in decision-making councils. They liaise between all students in their cohort and staff.</i>	

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.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
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
<i>Score explanation:</i> <ol style="list-style-type: none"> 1. On campus, there are eleven raised beds, of which nine are tended to by staff, student and community allotment holders to grow food in a more sustainable way. Herbs are also available from the Quadrangle, and a number of fruit trees in planters. A small number of students live in the Sustainability Bungalow, and they use the polytunnel and raised beds to grow their own food and educate others about sustainability. 2. The Grand Challenges lecture series has seen talks about the environment and nature-based solutions. Staffordshire Wildlife Trust also gave talks and workshops. 	

3. *Earth Day 2024 and Keele Green Festival 2024 welcomed RSK Group on campus to interact with students about interdisciplinary sustainability solutions. The SDG Teach In campaign about putting sustainability at the heart of education was available on campus. Students also got to know the Transforming the Trent Valley scheme.*
4. *Earth Stories film festival invited young filmmakers to produce short films about sustainability and the environment. The sustainability and climate change photo exhibition is on display in Chapters Café.*
5. *The campus green team are a group of students and staff who carry out litter picks, monitor biodiversity and reduce invasive species amongst other conservation tasks.*
6. *There have been a large number of guided walks around campus. There is also a range of clubs and societies that organise outdoor activities such as climbing, hiking and sailing.*

<https://www.keele.ac.uk/sustainability/sustainabilityeducationandoutreach/sustainabilityengagement/#food-and-growing-students-organising-for-sustainability-network>

Section Total (15 out of 15)

100%

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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></p> <p>Keele University has three strategic leads of sustainability and an engagement officer (profiles available here). In addition, Keele has a student voice representative for sustainability as well as a range of programmes, climate ambassadors, and climate commission. Alongside programmes projects, and events held such as Keele Green Festival and a Skill Bootcamp in Net Zero and Smart Energy Transition for students wanting to partake in sustainable efforts. As well as funding supplied by the Drink, Rinse, Repeat scheme for society and volunteering schemes.</p> <p>At our two university teaching trusts, University Hospitals of North Midlands (UHNM) has a sustainability team which is part of the Estates & Facilities team. Midlands Partnership NHS Foundation Trust (MPFT) has key individuals such as they employ an “Energy Manager”.</p> <p>References:</p> <p>https://www.keele.ac.uk/sustainability/sustainabilityeducationandoutreach/studentandstaffrepresentation/</p> <p>https://www.keele.ac.uk/sustainability/sustainabilityeducationandoutreach/studentsocietiesandvolunteering/</p>	

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: Score explanation: [Keele has declared that they are aiming to be carbon neutral by 2030](https://keele-conference.com/about-us-keele-university-events-and-conferencing/sustainability-at-keele/) with a focus on their carbon footprint and emissions. With a successful step in the right direction by attaining the Green Gown Awards Institution of the Year Awards. As seen by the implementation of campus wind turbines, SEND Laboratories, smart charging hubs, catering programmes in relation to production and waste management; and, accreditations for wildlife and partnerships with local councils to work towards a greener future in accordance with NHS principles.

References:

- <https://keele-conference.com/about-us-keele-university-events-and-conferencing/sustainability-at-keele/>
- <https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2022/07/B1728-delivering-a-net-zero-nhs-july-2022.pdf>

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:

3

Score explanation: The on-site Low Carbon Energy Generation Park generates up to 50% of Keele University's electricity requirements. The park consists of 12,500 solar PV arrays, two wind

turbines and large-scale battery storage. Outside of term-time, surplus power is fed into the national grid, therefore contributing to the renewable energy capacity in the UK.

Low Carbon Energy Generation Park - Keele University

Keele university also buys all of its energy that is not produced at Keele off grid from renewable sources making it 100% run on renewable energy

Keele University Deploys Ultra Efficient Data Centre Power Protection that Supports Its Sustainability Goals

<https://www.keele.ac.uk/sustainability/ourgreencampus/lowcarbonenergygenerationpark/>
<https://www.keele.ac.uk/video-transcripts/courses/keeleslowcarbonenergygenerationpark/#:~:text=What%20we%27ve%20developed%20includes.we%27re%20striving%20to%20achieve.>

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:

3

Score explanation: Keele University uses BREEAM as the primary standard to achieve sustainability aims in new builds and refurbishments. Several buildings have been built on campus over the last few years that have reached the Excellent BREEAM standard, including the Lennard Jones Wet Labs and Barnes Halls of Residence. The University also has produced a campus masterplan setting out the vision and framework for future developments over the next 10 years. Aims of this masterplan include improvement of energy efficiency, increased renewable energy supplies and sustainable transport.

<https://www.keele.ac.uk/sustainability/ourgreencampus/sustainablecampusoperations/#construction-and-refurbishment>

<https://www.keele.ac.uk/estates/projects/futureprojects/universitymasterplan/keele-masterplan.pdf>

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
<p><i>Score explanation:</i></p> <p><i>The campus and physiotherapy school have several strategies to make environmentally friendly transport accessible for students:</i></p> <ul style="list-style-type: none"> - <i>The main university campus and hospital campus is easily accessible via reliable bus connections and is the most utilised option by students. To incentivize the use of this system, Keele university has partnered with the transport provider to provide student discount on travel cards.</i> - <i>The university campus has a very good biking infrastructure with dedicated cycling lanes spread all over the campus. Lockable bike stores are available for all students who live on campus.</i> - <i>The introduction of an electric scooter rental system has provided another environmentally friendly transportation option.</i> - <i>The physiotherapy school runs a system where they try to group students with a car with those without a car so that they can car-share to shared placements.</i> - <i>The physiotherapy school ensures that all placements within the community should be easily reachable via public transport.</i> - <i>Most recently the university has expanded on the previous electric car charging ports it developed by adding more ports to the student union parking lot. They are free to students and thus encourage the use of cars that are much more environmentally friendly</i> <p>https://www.keele.ac.uk/sustainability/ourgreencampus/sustainablecampusoperations/#sustainable-travel</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: A full waste and recycling scheme was introduced in 2010 which has seen the recycling rate at Keele increase. The university's waste contractor collects dry mixed recyclable from bins on campus and are sent for processing and sorting. The Great Donate Scheme collects useable items that students cannot take. The British Heart Foundation has donation points at each halls of residence where students can donate clothes, shoes and accessories. There are designated dry mixed recycling bins in every building. In food areas (such as the canteen) there are dedicated food waste bins to promote composting.</i></p> <p>https://www.keele.ac.uk/sustainability/ourgreencampus/sustainablecampusoperations/#recycling-and-waste</p>	

5.7. Does the <u>institution</u> 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:	3
<p><i>Score explanation:</i></p> <p><i>The Sustainability in Food Code of Practice at Keele covers all outlets and food, including food served within the Institution, served by the University and managed by Catering and Retail Services, Commercial and Facilities Management Directorate. This includes the inclusion of more plant-based options, the use of local produce, seasonal vegetables and reduction of water and energy usage. This provides a framework for continual improvement in providing sustainable food for customers. Multiple plant-based and vegan options are available at every food vendor on campus every day of the week for every meal. Meat products are sourced through Red Tractor to ensure the welfare of the animals and to combat animal cruelty and environmental damage. The Kitchen Table operates on electric-only appliances to reduce the carbon footprint. It also:</i></p> <ul style="list-style-type: none"> <i>- Repurposes oil waste into biofuel</i> <i>- At 2:30 pm hot food is reduced to combat food waste and also reduce near end date food significantly</i> <i>- Charges a levy for disposable cups</i> 	

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: Keele University has a [responsible procurement policy](#). They have used the NETpositive Supplier Engagement Tool since 2017.

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: Keele University has a Green Conferencing and Event guidelines and the events team has certification using the ISO20121 system and have been awarded [Gold status](#) through the Green Meetings Gold Accreditation. The university also has its own system for ensuring that events held are as sustainable as possible. This includes things such as making sure the menus for events held on site utilise local produce and farming/fishing. There is also encouragement for visitors to events to have sustainable practices, e.g bringing a refillable water bottle. This applies for all external events and events run by staff. The events team also offer "[green delegate](#)" rates to incentivise but this is not compulsory.

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: Keele University's lab spaces are monitored over the course of the year to ensure they are as sustainable as possible. Recent initiatives have included adaptations to taps to save water; signs around the labs that promote switching electricity and taps off when not in use, increasing the use of LED lighting equipment and replacing single use plastic items with items that can be cleaned and reused.

The Lennard Jones Wet labs and the Smart Innovation Hub have achieved the BREEAM Excellent standard.

<https://www.keele.ac.uk/sustainability/ourgreencampus/sustainablecampusoperations/#construction-and-refurbishment>

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:

4

Score explanation: Keele University is ensuring that financial investments are ethical and reflect the mission and values of the University. To support this commitment an Ethical Investment Code of Practice has been in place and reviewed annually for a number of years. Keele University has made a commitment to increasingly focus its investments in companies with a positive

environmental and/or societal impact, in particular in areas of clean energy and technology. The University's investments will be in line with its strategic aims and its environmental, social and ethical values. The university has made a commitment [to divest from fossil fuel](#) extraction companies as they have never had investments with fossil-fuel companies and have stated that they will never do so.

Section Total (31 out of 32)

96.88%

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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%

Planetary Health Grades for the Keele University School of Physiotherapy

The following table presents the individual section grades and overall institutional grade for the Keele University School of Physiotherapy on this physiotherapy-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(35/69) \times 100 = 50.72\%$	C
Interdisciplinary Research (17.5%)	$(16/17) \times 100 = 94.12\%$	A
Community Outreach and Advocacy (17.5%)	$(14/14) \times 100 = 100\%$	A+
Support for Student-led Planetary Health Initiatives (17.5%)	$(15/15) \times 100 = 100\%$	A+
Campus Sustainability (17.5%)	$(31/32) \times 100 = 96.88\%$	A+
Institutional Grade	83.64%	A-

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which **Keele University** has participated in the Planetary Health Report Card initiative.

