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# Planetary Health Report Card (Dentistry) 2026: University of Sheffield

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University of  
Sheffield

2025-2026 Contributing Team:

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## Summary of Findings

<b>Overall Grade</b>	<b>B+</b>
<b>Curriculum</b>	<b>A</b>
<ul style="list-style-type: none"> <li>The University of Sheffield School of Clinical Dentistry has made significant improvements in teaching environmental sustainability and its relevance to dentistry. Compared to previous years, lecture slides are now clearly signposted and include dedicated content on sustainability, which is integrated throughout the degree programme. These developments reflect the considerable efforts of staff members, who have not only introduced this content but have also undertaken research to ensure it is embedded effectively. As a result, students demonstrate improved awareness, attitudes, and knowledge regarding sustainability in dentistry.</li> <li><b>Recommendations:</b> Sheffield Dental School could further enhance the curriculum by incorporating more in-depth teaching on the impact of sustainability on patient health, including its influence on infectious disease patterns. Additionally, the curriculum does not currently address the effects of climate change on patients' general health, and this could be included to provide a more comprehensive understanding of the topic.</li> </ul>	
<b>Interdisciplinary Research</b>	<b>B+</b>
<ul style="list-style-type: none"> <li>There are currently several staff members at Sheffield Dental School who are actively engaged in research within dentistry, as well as across the wider University. With an interdisciplinary research centre dedicated to planetary health, the institution has demonstrated a strong commitment to advancing research in environmental sustainability and its broader health implications. These initiatives reflect the University's efforts to position sustainability and planetary health as key priorities within both academic and clinical research.</li> <li><b>Recommendations:</b> At present, there appears to be limited community involvement in guiding the University of Sheffield's research into environmental sustainability. In particular, there is minimal input from communities that are disproportionately affected by climate change. Strengthening community engagement and incorporating perspectives from these groups could help ensure that research priorities are more inclusive, representative, and socially responsive.</li> </ul>	
<b>Community Outreach and Advocacy</b>	<b>C+</b>
<ul style="list-style-type: none"> <li>Each year, the University holds a sustainability symposium that actively involves members of the community, encouraging engagement with sustainability-related content and research. In addition, a monthly newsletter provides updates for those interested, outlining the University's ongoing initiatives and progress within the wider sustainability movement. These efforts demonstrate a commitment not only to advancing sustainability internally, but also to maintaining transparency and fostering community awareness.</li> <li><b>Recommendations:</b> Currently, there is no patient-facing education in the form of leaflets or online resources explaining the effects of climate change on health. Integrating this information within the teaching hospitals could help patients better understand their active role in addressing these challenges. By providing accessible education, patients may become more aware of how they can protect both their own health and the environment.</li> </ul>	
<b>Support for Student-Led Initiatives</b>	<b>A-</b>
<ul style="list-style-type: none"> <li>At the Dental School, sustainability support is available to interested students through designated staff members who hold specific sustainability roles; however, this is not actively promoted. Additionally, with a</li> </ul>	

student led society dedicated to sustainability, the Sheffield Environmental Science Society, it is evident that students who are interested in the topic have opportunities to become actively involved.

- **Recommendations:** Currently, there are no structured events in which students learn directly from members of local environmental justice communities about the climate and environmental challenges they face. Greater integration of community involvement could provide students with valuable lived perspectives and help ensure that sustainability efforts are guided by those most affected. With faculty support, student societies may also be empowered to drive more meaningful and coordinated change in this area.

**Campus Sustainability**

**B**

- With a dedicated Sustainability Officer and several sustainability targets established across Sheffield’s sites, the University is working to operate as sustainably as possible in many areas. The institution has set ambitious goals, including achieving carbon neutrality for campus operations by 2030 and reaching net zero emissions across all affiliated activities by 2038. These commitments demonstrate that the University is making significant progress towards reducing its environmental impact. Furthermore, new buildings at the University of Sheffield are designed with sustainability as a priority, with The Wave having received an award in recognition of its sustainable design and construction.
- **Recommendations:** As the University frequently hosts events, it would be beneficial for sustainability to move beyond being a recommendation and instead become a set of clear standards or requirements for event organisation. This approach could help to reduce waste, promote responsible resource use, and educate visitors about the importance of environmental sustainability. It would also further highlight the role that the University of Sheffield is playing in improving its environmental footprint.

# 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 the use of healthcare services.
- **Sustainable Oral Healthcare:** As adopted at the FDI World Dental Federation, in its Sustainability in Dentistry Statement (2017), sustainable oral healthcare is the provision of equitable, ethical, high-quality, inclusive and safe care with appropriate, effective and efficient use of resources. Through this, the healthcare opportunities of current and future generations are respected and protected by actively minimising negative environmental impacts. (*Martin, N., Mulligan, S., Shellard, I.J. and Hatton, P.V., 2022. Consensus on Environmentally Sustainable Oral Healthcare: A Joint Stakeholder Statement. Pp. 7–10. York: White Rose University Press. DOI: <https://doi.org/10.22599/OralHealth.c>. CC BY 4.0*)
- **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.

- **Environmental Sustainability in Dentistry (ESD).** Learning outcomes for Environmental Sustainability in Dentistry (ESD) have been proposed by Joury et al. (2021) based on a review of the literature and adaptation of current learning outcomes in medical education:
  1. Describe concepts and definitions of climate change, carbon footprint and sustainability
  2. Discuss the importance of environmental sustainability for the health of patients
  3. Discuss the carbon hotspots of dentistry and how these can be modified
  4. Evaluate the overall environmental impact of clinical dentistry and how this can be improved through innovation.
  5. Appraise how future healthcare professionals can help shape a sustainable healthcare system, and the knowledge and skills (such as leadership), change management and co-production that they will require.
  6. Evaluate current literature and participate in research on sustainability in dentistry.
- **Dentistry School/Department vs. Institution:** When “Dentistry School” is specified in the report card, this only refers to curriculum and resources offered by the School/Department of Dentistry 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 Dental 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 dental 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

<b>1.1. Did your <u>dental school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare (ESH) / Environmental Sustainability in Dentistry (ESD) or Planetary Health in the last year?</b>	
Yes, the dental school has offered <b>more than one</b> elective whose primary focus is ESH/ESD/planetary health in the past year. (3 points)	
Yes, the dental school has offered <b>one</b> elective whose primary focus is ESH/ESD/planetary health in the past year. (2 points)	
The dental school does <b>not</b> have any electives whose primary focus is ESH/ESD/planetary health, but there is one or more electives that include a <b>lecture</b> on planetary health. (1 point)	
No, the dental school has <b>not</b> offered any electives on planetary health or electives that include ESH/ESD/planetary health topics in the past year. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p><i>At the University of Sheffield School of Clinical Dentistry, all students complete the same modules throughout both the Bachelor of Dental Surgery and the Dental Hygiene and Dental Therapy Higher Education Diploma. This means that students are not able to choose a subject related to environmental sustainability that would contribute to their final grade, unless a BDS student chose to base their elective project on the subject.</i></p> <p><i>However, sustainability remains an important part of the dental school curriculum. Considerable effort is made to raise awareness of the environmental impact of dentistry and to teach students practical ways to reduce their carbon footprint in clinical practice. On Thursdays, lunchtime seminars are held on a range of topics being researched by staff and postgraduate students. In the past, some of these seminars have focused on environmental sustainability in dentistry. Attendance at these sessions is entirely voluntary and based on student interest.</i></p> <p><i>The FDI World Dental Federation Sustainability in Dentistry MOOC is now compulsory for first and third year students and is also offered to second year BDS students on an optional basis. Although it does not contribute towards progression for second year students, it provides an opportunity for those who are interested to complete the course if they were not previously required to do so due to curriculum changes. The MOOC aims to help students develop a better understanding of the environmental impact of clinical practice and to recognise the importance of</i></p>	

*sustainable practices, as well as their own role in promoting environmental responsibility within dentistry.*

*In addition, during the fourth year of the BDS programme, students complete an Elective block. The aim of this block is to enable students to undertake a planned independent project in a field of dentistry of their choice, as outlined in the Elective Theme Workbook. This project may focus on sustainability, for example through a laboratory based study, although this is not explicitly stated. The Elective block takes place during semesters two and three of fourth year and is introduced during semester one through elective preparation lectures.*

**Curriculum: Environmental Threats to the Planet**

**1.2. Does your dental school address the concept of climate change, its causes and its impacts on humankind and biodiversity?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of climate change and its impacts is covered in depth in the core curriculum at Sheffield at the following points of study:*

- *2nd BDS:*
  - *The lecture titled 'Environmental Sustainability in Dentistry' briefly mentions how climate change increases inequality and how those from lower socio-economic backgrounds will experience the greatest impact of this.*
- *Compulsory 1st and 3rd BDS and optional 2nd BDS study:*
  - *FDI 'Sustainability in Dentistry' MOOC. All students complete this course, but at varying points throughout their degree. This covers:*
    - *The concept of climate change*
    - *The causes of climate change and the role of greenhouse gases*
    - *The impact on biodiversity*
    - *The impact on human health*
      - *This course checks understanding and engagement with a quiz, which tests the basic understanding of sustainability and its role within dentistry.*
- *4th BDS:*
  - *The lecture titled 'Water Fluoridation,' delivered within the Dental Public Health theme of the Integrated Clinical Practice Module, ensures that students understand the argument of the environmental impacts of community water fluoridation. This lecture includes understanding the life-cycle analysis of different fluoridation programmes and highlighted that the use of community fluoridation showed the*

lowest environmental impact (Duane et al 2022). This session also mentioned the reduced CO2 emission associated with preventative interventions.

**1.3. Does your dental school address the concept of pollution, its causes and its impacts on humankind and biodiversity?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of pollution and its impacts on humankind and biodiversity are covered in depth in the core curriculum at Sheffield at the following points of study:*

- *2nd BDS:*
  - *The lecture titled 'Environmental Sustainability in Dentistry' in the Basic Oral and Dental Care module, briefly introduces the idea that nitrous oxide is a pollutant in dentistry. This is then developed in the later years of study to improve students' understanding further.*
  - *The lecture titled 'Use and Hazards of Amalgam' in the Basic Oral and Dental Care module, discusses that mercury waste can pollute rivers and lakes, and that the tin and silver found in amalgam are also pollutants in the environment.*
- *3rd BDS:*
  - *The lecture titled 'Advanced Restorative Dentistry', in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines that a need for fewer appointments will result in reduced waste and pollution. This is because prevention of disease leads to reduced manufacturing, distribution and need for waste disposal services as well as the reduction in travel for patients. Ultimately, these all contribute to reduced pollution in relation to dentistry. The lecture also teaches students the potential pollutants in resin-based composites. This includes the resin components methacrylates and BPA, as well as the micro and nano-scale particulates produced.*
  - *The lecture titled 'Advanced use of Resin Based Composite', in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines that high quality operative care with the correct materials reduces the need for repair and therefore reduces waste production from replacement.*
- *4th BDS:*
  - *The lecture titled 'Amalgam vs Composite', in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, outlines that an important aspect of care is communicating effective and evidence-based prevention. This includes increasing patient awareness of the impact good oral hygiene has on not only them, but their society and the environment.*

**1.4. Does your dental school curriculum address environmental citizenship, the impact of human choices and current and emerging environmental actions?**

This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The topic of environmental citizenship and the importance of human choices are covered in depth in the core curriculum at Sheffield at the following points of study:</i></p> <ul style="list-style-type: none"> <li>● <i>3rd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled ‘Advanced Restorative Dentistry’, in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines the importance for professionals to take ownership of care by continuing to learn in order to deliver high quality clinical outcomes. This can be via continued professional development, which should lead to more advanced care and treatment that reflects newer findings in research. As well, professionals are expected to engage in practice based research. We are taught the importance of understanding the restorative cycle, which outlines that patients' awareness and engagement is vital for successful treatment. It is also outlined that as professionals, that our selection of a fit for purpose dental material is vital, as this will lead to longevity, and where possible alterations can be made to care to reduce our environmental footprint, for example the use of digital scanning and fabrication to avoid the need for impressions and gypsum casts.</i></li> </ul> </li> <li>● <i>4th BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled ‘Amalgam vs Composite’ in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, outlines the importance to influence and educate the public via information leaflets and promotion via social media to improve their oral hygiene to avoid the restorative cycle. We are also taught how as dental professionals we can manage amalgam waste through safe practices, such as the use of high-volume aspiration when removing amalgam restorations and to avoid the use of hypochlorite cleaners as they can increase dissolution of mercury.</i></li> </ul> </li> <li>● <i>Throughout the degree we are taught that prevention is key, and taking ownership of care is important. Therefore this is a recurring theme that comes up in more than just the lectures mentioned above.</i></li> </ul>	

**Curriculum: Health Effects of Climate Change**

<b>1.5. Does your <u>dental school</u> curriculum address the impacts of climate change, air pollution and extreme weather events (extreme heat) on <u>individuals’ general health</u>?</b>
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)
This topic was <b>not</b> covered. (0 points)

Score Assigned:	2
<p><i>Score explanation:</i>  <i>The topic of climate change, air pollution and extreme weather events on individuals general health is covered briefly in the core curriculum at Sheffield at the following points of study:</i></p> <ul style="list-style-type: none"> <li>● <i>2nd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled 'Environmental Sustainability in Dentistry' in the Basic Oral and Dental Care module in semester 1, briefly mentions the effects of climate change on human health including an increase in cardiovascular, pulmonary, and infectious disease, as well as mental illness. It is also mentioned that climate change can result in loss of life due to extreme weather events. Despite this, this lecture mainly focused on the effects of dentistry on the environment and therefore the effect on human health was not covered in depth.</i></li> </ul> </li> <li>● <i>4th BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled 'Inhalation Sedation' in the Pain and Anxiety theme of the Integrated Clinical Practice module, outlined the risks of use of nitrous oxide as an air pollutant. This included the risk of miscarriage being twice as likely if scavenging is not provided, and that there was found to be reduced fertility in dental assistants working in unscavenged offices for over 5 hours per week (Rowland et al, 1992). Furthermore, the neurological and haematological effects of the air pollutant were also mentioned including causing vitamin B12 deficiency mimicking pernicious anemia and peripheral neuropathy. However, these latter two were associated more with recreational use.</i></li> </ul> </li> </ul>	

<b>1.6. Does your <u>dental school</u> curriculum explore potential links or associations between <u>oral health</u> outcomes and climate change?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The topic of oral health outcomes and its links to climate change is covered in depth within the core curriculum at Sheffield. This is mentioned in multiple lectures with the main message being prevention is the key element to reduce the need for intervention and in turn this reduces the environmental burden. Below are some of the key lectures where the topic is explored in more detail:</i></p> <ul style="list-style-type: none"> <li>● <i>Compulsory 1st and 3rd BDS and optional 2nd BDS study:</i> <ul style="list-style-type: none"> <li>○ <i>FDI 'Sustainability in Dentistry' MOOC. All students complete this course, but at varying points throughout their degree. This covers the effects of climate change on oral health.</i></li> </ul> </li> <li>● <i>3rd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled 'Advanced Restorative Dentistry', in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines that it is</i></li> </ul> </li> </ul>	

*important to understand that effective preventive regimes have a lower environmental impact than disease driven treatment, and therefore to promote oral health is to reduce CO2 emissions and waste generation in turn. It is explained to us that prevention of dental caries, periodontal disease, pulpal disease, tooth surface loss and oral cancers can be guided by evidence based guidelines for oral health promotion, for example the NICE guidelines for recall intervals, Delivering Better Oral Health guidelines for preventative care and advice and the EFP guidelines on the clinical management of stage I-III periodontitis. Part of this teaching also includes outlining that effective preventative treatment is tailored to the patient in regards to age and needs. We are taught that promotion of toothbrushing and fluoride are not the only preventative measures but also the reduction in alcohol and tobacco cessation. Dental mayer*

- *4th BDS:*
  - *The lecture titled 'Water Fluoridation', delivered within the Dental Public Health theme of the Integrated Clinical Practice Module, clearly outlines that education in caries prevalence minimises the requirement for operative interventions, reducing the environmental burden associated with dental materials, clinical waste, and resource use. In addition, water fluoridation schemes enhance long term oral health outcomes, supporting sustainable, prevention focused care at a population level.*

**1.7. Does your dental school curriculum address the impact of climate change on the changing patterns of infectious diseases?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

2

*Score explanation:*

*The topic of climate change and the topic of changing patterns of infectious disease are covered within the curriculum, however an explicit link between the two is only mentioned within the FDI Sustainability MOOC course.*

- *Compulsory 1st and 3rd BDS and optional 2nd BDS study:*
  - *FDI 'Sustainability in Dentistry' MOOC. All students complete this course, but at varying points throughout their degree. This covers the impact of climate change on the changing patterns of infectious disease.*
- *As part of the 4th BDS teaching we are taught to engage in effective antibiotic stewardship in relation to changing patterns of infectious disease, however this is not linked back to climate change and therefore cannot be awarded more points.*

**1.8. Does your dental school curriculum address the impact of anthropogenic and/or industry-related environmental toxins on human health?**

This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The topic of impact of anthropogenic and industry related environmental toxins on human health is covered in depth in the core curriculum at Sheffield at the following points of study:</i></p> <ul style="list-style-type: none"> <li>● <i>2nd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled 'Indications for the Use and Hazards of Amalgam' in the Basic Oral Dental Care module, discusses the dangers of mercury released during amalgam polishing and how it is considered a neurotoxin, adversely affecting renal function. It is also mentioned that it should not be used in pregnant patients and children, but did not explicitly say as to why.</i></li> </ul> </li> <li>● <i>3rd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled 'Advanced Restorative Dentistry', in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, teaches students the potential pollutants in resin-based composites. This includes the resin components methacrylates and BPA, as well as the micro and nano-scale particulates produced.</i></li> </ul> </li> <li>● <i>4th BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled 'Amalgam Safety Debate', in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, outlines that mercury is a toxic metal and should be treated as such. The lecture states that it is normal for the body to carry a mercury burden and that there is no evidence that widespread disease can be caused by the release of mercury from amalgam restorations. It is outlined that as dental professionals we should be able to reassure patients about the safety of amalgam restorations.</i></li> <li>○ <i>The lecture titled 'Amalgam vs Composite' in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, teaches us the relevant information for toxic mitigation which includes:</i> <ul style="list-style-type: none"> <li>■ <i>Using high volume aspiration during amalgam removal</i></li> <li>■ <i>Use ISO 11143 compliant separators</i></li> <li>■ <i>Avoid hypochlorite cleaners that increase mercury dissolution</i></li> <li>■ <i>Use amalgam spill kits to manage elemental mercury</i></li> <li>■ <i>Recycle waste amalgam with effective collection, separation and recovery of mercury and silver through approved biological waste management companies.</i></li> </ul> </li> <li>○ <i>The lecture titled 'Inhalation Sedation', in the Pain and Anxiety theme of the Integrated Clinical Practice module, outlines the effects of nitrous oxide on the body which include, miscarriage, pernicious anaemia, and peripheral neuropathy.</i></li> </ul> </li> </ul>	

**1.9. Does your dental school curriculum address the outsized impact of climate change, pollution & anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?**

This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i>  <i>The topic of the outsized impact of climate change, pollution and industry related environmental toxins on marginalised populations is covered in briefly in the core curriculum at Sheffield at the following points of study:</i></p> <ul style="list-style-type: none"> <li>● <i>2nd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled “Environmental Sustainability in Dentistry’ in the Basic Oral Dental Care module, briefly mentions how climate change increases inequality and how those from lower socio-economic backgrounds will experience the greatest impacts of climate change. However, this isn’t covered in detail.</i></li> </ul> </li> <li>● <i>4th BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled ‘Special Care Dentistry’ in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, does outline the effects of marginalised populations in reaching dental care, highlighting access to healthcare issues, however this has no link to climate change. This addition to the curriculum could help improve the score in this metric.</i></li> </ul> </li> </ul>	

### **Curriculum: Sustainability**

<b>1.10. Does your <u>dental school</u> curriculum address the concept of environmental sustainability?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The topic of environmental sustainability is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are the main mentions of this topic:</i></p> <ul style="list-style-type: none"> <li>● <i>Compulsory 1st and 3rd BDS and optional 2nd BDS study:</i> <ul style="list-style-type: none"> <li>○ <i>FDI ‘Sustainability in Dentistry’ MOOC. All students complete this course, but at varying points throughout their degree. This covers the concept of environmental sustainability in great detail including topics such as circular economy and the importance of environmental sustainability in oral healthcare.</i></li> </ul> </li> <li>● <i>2nd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>The lecture titled ‘Environmental Sustainability in Dentistry’ in the Basic Oral and Dental Care module, addressed the concept of environmental sustainability and the</i></li> </ul> </li> </ul>	

*impact of healthcare on the environment. In particular there was a focus on environmental sustainability in dental clinical practice, including the main contributors to environmental impact in this sector. This also included different strategies for acting sustainably during different elements of dental care.*

- **3rd BDS:**
  - *The lecture titled ‘Advanced Restorative Dentistry’, in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines several factors of environmental sustainability in dentistry, including the annual carbon footprint of dental services in England, how disease prevention leads to lower environmental burden and the average single use plastic waste generation per procedure in the average dental clinic, just to name a few.*
- **4th BDS:**
  - *It is highlighted in the Elective Handbook that our electives should aim to be sustainable, with a link to how we can calculate the carbon footprint of our travel.*

**1.11. Does your dental school curriculum address the concept & importance of sustainable healthcare?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of sustainable healthcare is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are the main mentions of this topic:*

- *Compulsory 1st and 3rd BDS and optional 2nd BDS study:*
  - *FDI ‘Sustainability in Dentistry’ MOOC. All students complete this course, but at varying points throughout their degree. This covers the concept of environmental sustainability in great detail including topics such as circular economy and the importance of environmental sustainability in oral healthcare.*
- **3rd BDS:**
  - *The lecture titled ‘Advanced Restorative Dentistry,’ in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines that reducing the need to treat, reduces the need for resources, energy consumption, and waste generation in the healthcare supply chain.*
  - *The lecture titled ‘Digital Dentistry for Indirect Restorations’, in the Intermediate Clinical Skills theme of the Intermediate Oral Dental Care module, outlines the importance for more biodegradable options in healthcare and the use of digital technologies to reduce the number of appointments needed and laboratory transportation.*
  - *The lecture titled ‘Advanced Use of Resin Based Composite’ in the Intermediate Clinical Skills theme of the Intermediate Oral Dental Care module, explains the need for high quality materials and placement to reduce the need for replacement, and that all material selection and use should be inline with the Directions for Use (DFUs).*

- *4th BDS:*
  - *The lecture titled ‘Quality in Dental Services,’ in the Outreach theme of the Integrated Clinical Practice Module, outlines that a dimension of quality oral health services is sustainability, and that practices should provide an environmentally sustainable service, using sustainable materials and that longevity is an important aspect of treatment as well as prevention.*

**1.12. Does your dental 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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of carbon footprint and the importance of human choices are covered in depth in the core curriculum at Sheffield at the following points of study:*

- *Compulsory 1st and 3rd BDS and optional 2nd BDS study:*
  - *FDI ‘Sustainability in Dentistry’ MOOC. All students complete this course, but at varying points throughout their degree. This covers the topic of carbon footprint within the healthcare system.*
- *2nd BDS:*
  - *The lecture titled ‘Environmental Sustainability in Dentistry’ in the Basic Oral and Dental Care module, mentions how healthcare contributes to ~4% of global emissions. As well as this, it mentions the major contributors to carbon footprint in the dental services and how individual dental patients can have varying carbon footprints depending on the types of care they need.*
- *3rd BDS:*
  - *The lectured titled ‘Advanced Restorative Dentistry,’ in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines that the total mass of single use plastic waste from UK dental practices in a year equals 14.4 tonnes (approximately 2 billion items) (Martin et al., 2022). It also outlined that the total annual carbon footprint of NHS dental services in England was estimated as 675,706 tonnes of carbon dioxide equivalents in 2013/2014 (Carbon modelling within dentistry Towards a sustainable future, 2018). Furthermore, we were also shown an infographic created by the FDI outlining the average greenhouse gas emissions per dental intervention, for example for dentures this was 58.7 kg and for relative analgesia with nitrous oxide this was 119 kg (FDI, 2018).*

**1.13. Does your dental school curriculum address the concept & importance of sustainable oral healthcare?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of sustainable oral healthcare is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are some of the main mentions of this topic:*

- *Compulsory 1st and 3rd BDS and optional 2nd BDS study:*
  - *FDI 'Sustainability in Dentistry' MOOC. All students complete this course, but at varying points throughout their degree. This outlines an important basis of knowledge, including definitions and helpful infographics, which then allows for students to build on this knowledge in later years.*
- *2nd BDS:*
  - *The impact of patient travel is mentioned throughout the Basic Oral and Dental Care module, and focuses on the importance for fewer but longer appointments are more sustainable.*
- *3rd, 4th and 5th BDS:*
  - *Across most lectures in relation to treatment strategy, new materials and digital dentistry, the topic of sustainable oral healthcare is mentioned. The general theme of the message is that prevention is the best way to be more sustainable within dentistry, with treatment longevity, minimal intervention, continued skill progression and patient co-management in their care all leading to a more sustainable healthcare system.*

**1.14. Does your dental school curriculum address the environmental impact of oral healthcare systems and 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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

The topic of environmental impact of oral healthcare systems and interventions is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are some of the main mentions of this topic:

- **Compulsory 1st and 3rd BDS and optional 2nd BDS study:**
  - FDI 'Sustainability in Dentistry' MOOC. All students complete this course, but at varying points throughout their degree. This course covers how dental care contributes towards carbon emissions, pollution and waste.
- **2nd BDS:**
  - The 'Environmental Sustainability in Dentistry' lecture in the Basic Oral and Dental Care module discusses the main contributors to the environmental impact of dental care and its associated systems in terms of travel, procurement, and energy use. It also discusses strategies for reducing the impact of each of these elements.
- **3rd BDS:**
  - The lecture titled 'Advanced Restorative Dentistry', in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, quantifies the use of single use plastics in dental practices, with the average dental procedure producing 254g of single use plastics (Martin et al., 2022). These statistics help to quantify the environmental burden of the oral healthcare system. As well as this, the lecture also outlined that in a research study comparing amalgam and resin based composite materials, the highest sources of environmental impact in their use, for amalgam came from material use and for resin based composites this came from material production and packaging (Smith et al., 2022). Furthermore, we were also shown an infographic created by the FDI outlining the average greenhouse gas emissions per dental intervention (FDI, 2018).
  - The lecture titled 'Digital Dentistry for Indirect Restorations', in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlined that use of systems such as CAD-CAM could reduce the need for laboratory transport and cast productions. This in turn would reduce the use of materials like gypsum.
- **4th BDS:**
  - The lecture titled 'Cementation of Fixed Protheses' in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, describes the need for surgery zoning to separate contaminated and non-contaminated waste and facilitate recycling of these items where possible.
  - The lecture titled 'Inhalation Sedation' in the Pain and Anxiety theme of the Integrated Clinical Practice module, outlines the role of nitrous oxide as a sedation method as well as a greenhouse gas.

**1.15. Does your dental school curriculum address the importance of measuring the environmental impact of oral healthcare to identify & reduce contributing factors?**

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** or **other learning experiences** (1 point)

This topic was <b>not</b> covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i>  The topic of measuring the environmental impact of oral healthcare in order to identify and reduce contributing factors is mentioned briefly in the core curriculum at Sheffield at the following points of study:</p> <ul style="list-style-type: none"> <li>● <i>Compulsory 1st and 3rd BDS and optional 2nd BDS study:</i> <ul style="list-style-type: none"> <li>○ <i>FDI ‘Sustainability in Dentistry’ MOOC. All students complete this course, but at varying points throughout their degree. This course mentions the measuring of the environmental impact of oral health care.</i></li> </ul> </li> <li>● <i>3rd BDS:</i> <ul style="list-style-type: none"> <li>○ <i>As previously mentioned, the lecture titled ‘Advanced Restorative Dentistry’, in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, quantifies the use of single use plastics in dental practices (Martin et al., 2022). These statistics help to quantify the environmental burden of the oral healthcare system. Furthermore, we were also shown an infographic created by the FDI outlining the average greenhouse gas emissions per dental intervention (FDI, 2018).</i></li> </ul> </li> <li>● <i>Further to this teaching, throughout all years of the BDS programme we are taught the importance of combining treatment where necessary and that a reduction in the need for interventions results in immediate sustainable outcomes due to the decrease in use of the above SUP and materials, and need for transport and waste management.</i></li> </ul>	

***Curriculum: Sustainability through Good Oral Healthcare***

<b>1.16. Does your <u>dental school</u> curriculum address the importance of promoting <u>good oral health</u> and <u>preventive care</u> in the delivery of <u>sustainable oral healthcare</u>?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  The topic of promoting good oral health and preventative care in order to provide more sustainable oral healthcare is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are some of the main mentions of this topic:</p> <ul style="list-style-type: none"> <li>● <i>Compulsory 1st and 3rd BDS and optional 2nd BDS study:</i> <ul style="list-style-type: none"> <li>○ <i>FDI ‘Sustainability in Dentistry’ MOOC. All students complete this course, but at varying points throughout their degree. This course mentions that good oral hygiene and preventative care are cornerstones in delivering sustainable oral healthcare.</i></li> </ul> </li> </ul>	

- **2nd BDS:**
  - *The ‘Environmental Sustainability in Dentistry’ lecture in Basic Oral and Dental Care introduces the idea that patients can have different environmental impacts depending on the care they require, and how the care that focuses on prevention and good oral care has a much lower environmental impact, with those patients with a high dental need producing up to 9 times more CO2 than a patient with a low dental need (Martin et al., 2024).*
- **3rd BDS:**
  - *The lecture titled ‘Advanced Restorative Dentistry’, in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines that good oral hygiene is good for the patient, good for the dentist and good for the environment. This is because fewer appointments mean reduced CO2, less waste and pollution, reduced manufacturing, reduced distribution, fewer waste disposal services, fewer material, less packaging and less clinical waste. The lecture also highlights that this advice is most effective when based off of clinical guidelines, such as the Delivering Better Oral Health Guideline.*
- **4th BDS:**
  - *The lecture titled ‘Amalgam vs Composite’ in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, further outlines that an ‘effective preventative regime carries an environmental burden that is much smaller than a disease driven interventive treatment’, this is because disease prevention leads to less need to travel to the dentist, and therefore less use of resources and less waste produced.*
  - *The lecture titled ‘Water Fluoridation’ in the Dental Public Health theme of the Integrated Clinical Practice module, further consolidates this information focusing less on advice and clinical measures to help with prevention but community programmes in fluoridation of water sources.*

<b>1.17. Does your <u>dental school</u> curriculum address the <u>environmental significance</u> of the delivery of high-quality (operative care) oral healthcare?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective coursework</b> or <b>other learning experiences</b> (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The topic of delivering high quality care in order to provide more sustainable oral healthcare is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are some of the main mentions of this topic:</i></p> <ul style="list-style-type: none"> <li>● <b>2nd BDS:</b> <ul style="list-style-type: none"> <li>○ <i>The ‘Environmental Sustainability in Dentistry’ lecture, alongside numerous reminder slides in the Basic Oral and Dental Care module, emphasises the</i></li> </ul> </li> </ul>	

importance of providing high quality oral healthcare as a cornerstone in acting sustainably in the dental setting, due to reducing waste, replacement and repair (Martin et al., 2024).

- 3rd BDS:
  - The lecture titled 'Advanced Use of Resin Based Composite', in the Intermediate Clinical Skills theme of the Integrated Oral and Dental Care module, outlines that providing high quality durable resin based composites, following protocol drive patient care, and selecting materials according to their directions for use should in turn reduce the need for repair and replacement. This leads to a more sustainable oral healthcare approach.
  - The lecture titled 'Posterior Full Coverage Crowns' in the Intermediate Clinical Skills theme of the Integrated Oral and Dental Care module, outlines the importance of delivering high quality operative care to reduce waste and the importance of once again selecting a material that is fit for purpose. In this lecture it was also outlined to students that it is important to take ownership in clinical outcomes, which includes continuing their learning after graduating to stay up to date with the best clinical methods and materials to ensure longevity.
- 4th BDS:
  - The lecture titled 'Cementation of Fixed Prosthesis', in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, also speaks on the importance of selecting correct materials and using optimum skill to ensure longevity of restorations, which results in less need for repair and replacement, creating less waste. This also would lead to the patient having to attend the dentist less.
- Across multiple lectures, the message of selecting the correct materials and ensuring ownership of care is taught, highlighting that the core curriculum covers this topic in depth.

**1.18. Does your dental school curriculum address the environmental significance of 'integrated oral care'?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of delivering integrated oral care and its environmental significance is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are some of the main mentions of this topic:*

- *Active patient involvement:*
  - 3rd BDS:
    - *The lecture titled 'Patient Assessment and Treatment in Restorative Dentistry', in the Intermediate Clinical Skills theme of the Integrated Oral and Dental Care module, teaches the importance of having patients be co-creators and co-managers of their own oral health. Hopefully with*

patients more involved in the care plan process, it will be better adapted to their needs and more likely to be carried out to completion, reducing the chance of future intervention.

- *Structured treatment plans:*
  - *3rd BDS:*
    - *The lecture titled ‘Advanced Restorative Dentistry,’ in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines the importance of having an effective preventive regime with treatment plans being oriented around evidence based research, such as the use of EFP guidelines on the clinical management of stage I-III periodontitis. This teaching also includes information on the restorative cycle, which highlights the importance of a combined preventive, operative, integrated and ownership of care is the best way of arresting the restorative cycle.*
  - *4th BDS:*
    - *In the tutorial titled ‘Primary Dental Care - Session 1’, in the Clinical Practice theme of the Integrated Clinical Practice module, we were taught the importance of determining recall intervals to ensure optimal care for patients.*
- *We have little teaching on the benefits of family appointments, however combining treatment and prioritising longer appointments over several shorter appointments is explained.*
- *Throughout several lectures the idea of integrated oral care is taught, even if not explicitly stated. The guidance is to focus on preventative care, patient engagement and good operative care to reduce overall environmental burden through unnecessary dental treatment.*

**1.19. Does your dental school curriculum address the importance, environmental & oral health outcomes of individual & dental team’s ownership of care?**

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** or **other learning experiences** (1 point)

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

Score Assigned:

3

*Score explanation:*

*The topic of taking ownership of care and how this improves both oral and environmental outcomes is covered in depth in the core curriculum at Sheffield at several points in the course. The following points of study are some of the main mentions of this topic:*

- *3rd BDS:*
  - *The lecture ‘Advanced Restorative Dentistry,’ in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, outlines the importance of continual professional development in regards to environmental sustainability. This lecture teaches the importance of maintaining high professional standards for yourself by continuing to stay up to date with research in your field, and participate in clinical governance in order to reflect and improve the quality of care we provide.*

- The lecture 'Advanced use of Resin Based Composite,' in the Intermediate Clinical Skills theme of the Intermediate Oral and Dental Care module, also teaches the importance of taking ownership of care by continuing to learn in order to deliver high quality clinical outcomes. This in turn should result in less failed treatment and less need for treatment to be repeated leading to lower environmental burden.
- These same principles are reflected in the lecture titled 'Posterior Full Coverage Crowns,' in the Intermediate Clinical Skills theme of the Integrated Oral and Dental Care module where high quality clinical outcomes is linked to skill and taking ownership to continue to improve that skill.
- 4th BDS:
  - The lecture titled 'Amalgam vs Composite' in the Advanced Clinical Skills theme of the Integrated Clinical Practice module, teaches the importance of following regulations such as the phase down of amalgam following the Minamata Convention. It is the responsibility of the professional to limit their amalgam use and manage and dispose of amalgam in line with global and environmental policy.

<b>1.20. In training for patient encounters, does your <u>dental school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?</b>	
Yes, there are strategies introduced for having conversations with patients about climate change in the <b>core</b> curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework. (1 point)	
No, there are <b>no</b> strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> Currently, there is no teaching at Sheffield in regards to talking to patients about the health effects of climate change.	

**Curriculum: Administrative Support for Planetary Health**

<b>1.21. Is your <u>dental school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/Environmental Sustainability in Dentistry (ESD)/Planetary Health education?</b>	
Yes, the dental school is currently in the process of making <b>major</b> improvements to ESH/ESD/planetary health education. (4 points)	
Yes, the dental school is currently in the process of making <b>minor</b> improvements to ESH/ESD/planetary health education. (2 points)	
No, there are <b>no</b> improvements to Planetary Health education in progress. (0 points)	
Score Assigned:	4

*Score explanation:*

*The University of Sheffield School of Clinical Dentistry is currently in the process of making major improvements to the curriculum by integrating education in sustainable healthcare and sustainability more specifically related towards dentistry throughout the BDS programme. These changes are reflected in the large improvement in score for the curriculum section of the PHRC.*

**1.22. How well are the aforementioned planetary health/Education for Sustainable Healthcare/Environmental Sustainability in Dentistry (ESD) topics integrated longitudinally into the core curriculum?**

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

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

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

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

Score Assigned:

6

*Score explanation:*

*At the University of Sheffield research has been undertaken by members of staff to best identify how to longitudinally embed environmental sustainability into the curriculum, whilst measuring the effect this has had on students perception of the subject. The research paper 'Longitudinal integration of environmental sustainability in the dental curriculum: Assessing change in student awareness, attitudes and knowledge' (Dixon et al., 2025) demonstrates the great lengths staff at Sheffield Dental School have gone to ensure sustainability becomes a key part of study throughout the course. This has included the compulsory integration of the FDI World Dental Federation Sustainability in Dentistry MOOC along with new slides in lectures highlighting how students can practice dentistry more sustainably.*

**1.23. Does your dental school appoint 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 dental school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

**No, the dental 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:*

*At the University of Sheffield School of Clinical Dentistry Dr Dixon acts as the Sustainability Lead, where their focus is to mitigate the environmental impacts in educational, clinical and research spaces.*

<b>Section Total (63 out of 70)</b>	<b>90.0%</b>
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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.*

<b>2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>institution</u>?</b>	
Yes, there are faculty members at the <b>institution</b> who have a <b>primary</b> research focus in planetary health <b>or</b> sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the <b>institution</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, <b>OR</b> 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 <b>institution</b> , but not specifically associated with healthcare/vetcare. (1 point)	
No, there are <b>no</b> planetary health and/or sustainability researchers at the <b>institution</b> at this time. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>Within the University of Sheffield School of Clinical Dentistry there are 3 faculty members with a core focus of their research being on sustainability in dentistry. Furthermore, there are lecturers within the School of Medicine and Population Health whose area of research focuses on sustainability, including Dr John Richmond who focuses on exploring “the resilience of healthcare organisations in response to extreme events. This includes... extreme weather caused by climate change”. This lecturer also founded an international network of researchers to explore <a href="#">Health System Resilience for Extreme Weather Emergencies</a>.</i></p>	

<b>2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?</b>	
There is <b>at least one</b> dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is <b>not currently</b> a department or institute for interdisciplinary planetary health research, but there are <b>plans</b> to open one in the next 3 years. (2 points)	

There is an <b>Occupational and Environmental Health department</b> , but no interdisciplinary department or institute for planetary health research. (1 point)	
There is <b>no</b> dedicated department or institute. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The Sheffield Centre for Health and Related Research is an interdisciplinary research centre. One of their research themes is '<a href="#">Global Health and Environment</a>,' which explores "health system resilience for extreme weather emergencies, the effects of climate change on physical and mental health, health system sustainability initiatives, and the inequalities and marginalisation of communities adversely affected by extreme weather."</i></p>	

<b>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?</b>	
Yes, there is a process in which community members impacted by climate and environmental injustice have <b>decision-making power</b> in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda. (2 points)	
<b>No</b> , but there are <b>current efforts</b> to establish a process for community members to advise or make decisions on the research agenda. (1 point)	
There is <b>no</b> process, and <b>no</b> efforts to create such a process. (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i>  <i>There are currently no efforts to establish a process for community members to advise or make decisions about the research agenda at the University of Sheffield.</i></p>	

<b>2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?</b>	
There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralises</b> 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 <b>attempts to centralise</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment. (1 point)	

There is <b>no</b> website. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i>  The University of Sheffield has a <a href="#">website</a> that includes information on the environmental impact of the university, its sustainability strategy, recent progress the university has made with regards to sustainability, current research into sustainability, and opportunities for students to study courses in which this is a focus. The section on research into sustainability includes some researchers studying subjects relating to health and the environment, but there is no section on the website that is specifically dedicated to this subject.</p> <p>The University of Sheffield also has a website for the <a href="#">Centre for Energy, Environment, and Sustainability (CEES)</a>, which centralises ongoing and past research relating to the environment, including educating businesses about their supply chain and upgrading houses to be more energy efficient. However, this does not include more information about research specifically relating to health and the environment.</p>	

<b>2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?</b>	
Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the <b>institution</b> has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the <b>institution</b> 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>  The University of Sheffield hosts an annual <a href="#">Sustainability Symposium</a>, which includes topics related to sustainability and health. The 2025 symposium included topics such as ‘System Change or Behaviour Change?’ The University website describes the symposium as taking “a broad approach to sustainability through diverse methodologies, practices, and perspectives engaged in climate and the environment”.</p> <p>The university also hosted the <a href="#">Healthy Lifespan Institute (HELSI) Annual Meeting</a> (18 November 2025) which covered how health and ageing are influenced by climate-related themes, such as environmental change and health inequalities.</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:*

*Sheffield Medical School is a member of the [Planetary Health Alliance](#) and the [Global Consortium on Climate and Health Education](#). The wider university and Sheffield School of Clinical Dentistry, aren't yet members of these organisations.*

**Section Total (13 out of 17)**

**76.47%**

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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.

<b>3.1. Does your <u>institution</u> partner with community organisations to promote planetary and environmental health?</b>	
Yes, the <b>institution</b> meaningfully partners with <b>multiple</b> community organisations to promote planetary and environmental health. (3 points)	
Yes, the <b>institution</b> meaningfully partners with <b>one</b> community organisation to promote planetary and environmental health. (2 points)	
The <b>institution</b> does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)	
No, there is <b>no</b> such meaningful community partnership. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  The wider university partners with multiple organisations that promote sustainability, planetary and environmental health. As part of this, the University of Sheffield has published its 'Environmental Strategy 2025-2030' which can be found as a PDF document on the <a href="#">Sustainability at Sheffield</a> website. This document outlines "achievable goals that embed sustainability in [Sheffield's] campus, operations and culture" as part of this, the report explains its partnerships with local food suppliers and commitment to spend 4.2% (2.5 million) of the university's endowments to environmental impacts.</p> <p>Although the dental school doesn't currently partner with community organisations to promote planetary and environmental health, the medical school works closely with the primary care sustainability group 'Greener Practice.' Third year medical students can choose to take part in the Greener Practice SSC, in which they use the Green Impact for Health Toolkit to promote sustainability within general practices. As well as the opportunity to work with community organisations promoting planetary and environmental health during their 4 week Social Accountability SSC. The variety of options for students to work with changed each year but a particular example this year included Heeley City Farm and Whirlow Farm. On this placement, students work to improve the observation and wildlife projects at these farms and the local communities.</p>	

**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:*

*In October 2025 University of Sheffield hosted the [Sustainability Symposium 2025](#) which featured many different panel discussions with academics, practitioners, and activists from within and outside of the University. The event approached sustainability through diverse methodologies, practices, and perspectives engaged in climate and the environment. Further to this, the Arts and Humanities departments also host [Q&A sessions](#) focussing on sustainability in their field for students to participate in. More community based events include the '[Project in a Box: Think Climate](#)', an initiative that aims to teach school children in South Yorkshire about sustainability and climate change through hands-on sessions.*

**3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?**

Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)

Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)

Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:

1

*Score explanation:*

*The University of Sheffield has an [online sustainability newsletter](#), which posts roughly once a month and includes planetary health topics such as information on recent publications from academics at the university relating to planetary health. However, this is not routinely sent to students so would require them to seek out this information. Infrequent university-wide emails will also include information on planetary health.*

**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**

<b>professional career?</b>	
Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> 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 <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers. (1 point)	
There are <b>no</b> such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i>  The University of Sheffield offers a number of <a href="#">CPD courses</a> for postgraduates. One of these, <i>Critical Reflections in Global Health</i>, aims to introduce contemporary and historical global health discourses, policies and practices relating to health challenges in the national, regional, and global context. Adopting the concept of “Think global, act local,” the module aims to explore the scope and concerns of public health, the determinants of health, and the key functions, methods, processes, and stakeholders active in the global health space. Sheffield Teaching Hospitals NHS Foundation Trust has identified that provision of <a href="#">CPD training on sustainability</a> is a priority, but as yet no further CPD courses relating to sustainability have been created.</p>	

<b>3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?</b>	
Yes, the <b>institution</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i>  The Sheffield Health and Social Care NHS Foundation Trust had produced their first document on their <a href="#">Green Plan and Sustainability Strategy from 2021-2025</a>. This document has been renewed until 2028. It outlines that climate change and pollution ‘will exacerbate existing health inequalities’ with the effects of air pollution being ‘linked to 500 deaths a year in Sheffield.’ However, this document isn’t aimed at patients, so cannot be considered to be an educational resource for them. It would be useful to have a shortened document for patients with information summarised about environmental health exposures. There is however, no evidence of any plans in this document about further education to patients about climate change.</p>	

<b>3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?</b>
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Yes, the <b>institution</b> or <b>all affiliated hospitals</b> 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:	0
<p><i>Score explanation:</i>  There are currently no specific materials produced for patients about the health impacts of climate change by the University of Sheffield or Sheffield Teaching Hospitals. As with metric 3.5, The Sheffield Health and Social Care NHS Foundation Trust have produced a document on their <a href="#">Green Plan and Sustainability Strategy</a>, however this document is more tailored as a mission statement rather than a piece of patient education material. If this information was adapted into patient leaflets this would provide for more accessible education on this subject.</p>	

<b>Section Total (8 out of 14)</b>	<b>57.1%</b>
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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:*

*At the University of Sheffield School of Clinical Dentistry, there are currently no grants for students aiming to enact a sustainability initiative or QI projects integrated into the core curriculum, however if students were interested in starting an initiative this would be likely supported by the relevant staff that undergo research into sustainable dentistry. On the contrary, sustainable QI is a part of the core curriculum of Sheffield Medical School. During the medical students 3rd year of study all students must perform a QI audit project within a GP practice. As part of this, students are required to consider the sustainability impacts of their recommendations, and this forms part of the marking criteria for this project. There are also opportunities for medical students to take part in further sustainable QI projects, such as the Greener Practice SSC, in which students use the Green Impact for Health Toolkit to enact sustainable QI within general practices. It is also likely that if students in the wider institution were interested in enacting a sustainability initiative this could be supported by the [Students' Union Sustainability Team](#).*

## 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:

2

*Score explanation:*

*The University of Sheffield offers opportunities for students (in particular PhD researchers) to conduct interdisciplinary research related to sustainability through the [Grantham Centre for Sustainable Futures](#). Recently, the [University received £3.5 million from the Grantham Foundation](#), this funding will allow the Grantham Centre for Sustainable Futures to continue to support sustainability research for students interested in this field.*

*Further to this, Sheffield Medical School offers research opportunities to students in their fourth year wishing to intercalate. This can include planetary health topics, such as climate change as a public health issue, the link between climate change and human nutrition, and climate change in the context of international development. However, these are unfunded and not necessarily the primary focus of the research.*

**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 information of potential mentors.**

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

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

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

Score Assigned:

2

*Score explanation:*

*There is a page on the University of Sheffield School of Clinical Dentistry website dedicated to [Sustainable Dentistry](#) and lists the relevant researchers within the department with their contact details.*

**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 <b>lacks faculty support</b> . (1 point)	
No, there is <b>not</b> a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i>  <a href="#">Sheffield Environmental Science Society</a> was re-launched on the 16th September 2024. They regularly hold climate cafes to discuss the environment and climate change. They produce newsletters on current environmental news and maintain an <a href="#">Instagram page</a> with information; however, due to the lack of faculty support, this is scored as 1 point.</p>	

<b>4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?</b>	
Yes, there is a student representative who serves on a department or institutional decision-making council/committee. (1 point)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i>  The University of Sheffield has a <a href="#">Welfare and Sustainability Officer</a>, whose role includes advocating for sustainability best practices within the university.</p>	

<b>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)</b>	<b>Score</b>
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1

Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)

1

*Score explanation:*

*The University of Sheffield's Students Union continues to provide a plethora of societies with some targeting skills in organic agriculture and sustainable food systems. The Beekeeping Society continues to play a vital role in teaching students and local residents about the importance of wildlife and the importance of bees in pollination, whilst 'also campaigning for their conservation'. As of 2025, the society now owns three bee hives. Furthermore, the Allotment Society continues to teach students the skills of 'grow[ing] food, herbs and flowers'. They have weekly allotmenting tasks including planting potatoes and planting out seedlings. Both societies are welcoming to people of all levels of experience in the field of organic agriculture and sustainable food systems, and are either free or of very low entrance costs making them more accessible for all.*

*In 2025 (8th October) the University of Sheffield hosted a sustainability symposium, where a range of lecturers and professors gave talks. A recording of the whole event can be found on the [Grantham Centre for Sustainable Futures webpage](#) that gives a summary of topics covered.*

*The Sheffield University Conservation Society offers regular volunteering opportunities such as litter picking along rivers and tree planting. As a group they are continually open to new suggestions from members on what else they can do to reduce the impacts of anthropogenic actions on the environment. More information on the society can be found on the Student's Union website or their instagram account.*

*Furthermore, there are numerous societies whose main activities include outdoor pursuits. Some examples include the Sheffield University Walking Club and the University of Sheffield Canoe Club. Within the medical school specifically, Wilderness Medicine Society conducts multiple weekends away hiking and teaching students about provision of healthcare in remote settings.*

**Section Total (12 out of 15)**

**80.0%**

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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.*

<b>5.1. Does your <u>institution</u> have an Office of Sustainability?</b>	
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 <b>at least one designated staff member</b> 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 <b>no specific staff member</b> in charge of hospital sustainability. (2 points)	
There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee. (1 point)	
There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>  <i>The university has a large team of sustainability personnel whose work is embedded across the university. Roles cover a range of different areas, such as communications and projects, energy, waste, and transport. Each sub group within the sustainability team has at least one lead manager, for example, there is a Sustainable Labs Manager and a Car Parking and Sustainable Travel Manager. All roles and contacts of the staff involved can be found on a website on the <a href="#">Sustainability at Sheffield Website</a>.</i></p>	

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

Score Assigned:	3
<p><i>Score explanation:</i>  The University of Sheffield continues to work towards their targets of being a carbon neutral campus by 2030 and to be completely net zero in all affiliated activities by 2038. The University outlines that “[they] aim to become one of the most sustainable research-intensive universities in the country and reach net-zero carbon emissions as quickly as possible.” This is all outlined on the ‘Sustainability at Sheffield’ Targets website and progress on specific actions is marked on the <a href="#">Sustainability Action Plan</a>.</p>	

<b>5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?</b>	
Yes, institution buildings are <b>100%</b> powered by renewable energy. (3 points)	
Institution buildings source <b>&gt;80%</b> of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source <b>&gt;20%</b> of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source <b>&lt;20%</b> of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i>  The University of Sheffield purchases its electricity from Bryt Energy, a 100% renewable energy supplier. Furthermore, there are also a number of on-site renewable energy sources, including solar panels and a wind turbine. The medical school building itself is attached to the Royal Hallamshire Hospital, which is run by the Sheffield Teaching Hospitals Trust. As a result of this, the medical school facilities - including energy - are all rented from the hospital. While electricity (and other non-hospital university buildings) is supplied by 100% renewable energy sources, heating (for spaces &amp; water) relies on natural gas, so a substantial portion of overall energy demand remains fossil-gas dependent.</p>	

<b>5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution’s</u> campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?</b>	
Yes, sustainable building practices are utilised for new buildings on the institution’s campus and the <b>majority</b> of old buildings <b>have been retrofitted</b> to be more sustainable. (3 points)	

Sustainable building practices are utilised for new buildings on the institution’s campus, but most old buildings have <b>not been retrofitted</b> . (2 points)	
Sustainable building practices are <b>inadequately or incompletely</b> implemented for new buildings. (1 point)	
Sustainability is <b>not considered</b> in the construction of new buildings. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i>  The University of Sheffield’s new building called the Wave was recently awarded an <a href="#">Outstanding BREEAM accreditation</a>, which is the highest sustainability accreditation awarded. This is due to several factors including the use of sustainable materials, and all operations relating to the building being designed to be net-zero. As from previous years, the University’s <a href="#">Sustainability Action Plan</a> continues to include metrics related to the construction and retrofitting of buildings, including embedding sustainability criteria into the decision making for new buildings and major refurbishments. Currently, only some of the University’s older buildings have been retrofitted, with “some existing buildings with suitable structures have been retrofitted with <a href="#">green roofs</a>”. More information on the topic of sustainable building practices can be found on the <a href="#">Sustainability at Sheffield - Buildings and Infrastructure website</a>.</p>	

<b>5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?</b>	
Yes, the institution has implemented strategies to encourage and provide <b>environmentally-friendly transportation options</b> 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 <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised. (1 point)	
The institution has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i>  The University is embedded within the city of Sheffield rather than being a remote campus, meaning most teaching buildings and student accommodation are accessible by walking, cycling, bus, or tram. Public transport links, including the city bus network and Supertram system, are well established and widely used by students. The University promotes active travel through schemes such as <a href="#">Better Points</a> and supports car-sharing by facilitating connections between students with and without access to cars, particularly for placements. For the majority of students based within the city, sustainable transport options are accessible and commonly utilised.</p>	

*The medical school and dental school also supports sustainable travel with the H1 bus, which runs between the two major hospitals within Sheffield, the Royal Hallamshire Hospital (where the medical school is based, with the dental school in close walking distance) and the Northern General Hospital. This bus is free for NHS staff and University of Sheffield students, so it is frequently used by students who have placements or teaching at the Northern General Hospital. This service is used less by dental students, as teaching at the Northern General Hospital has reduced to being taught mainly at the dental school itself.*

*While reliance on private cars remains an issue for some external placements at the dental school, the Outreach committee aims to place students who could car share at the same practices.*

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

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the institution. (0 points)

Score Assigned:

2

*Score explanation:*

*At an institution-wide level the University of Sheffield has both a conventional recycling programme and an organics (food waste) recycling system in place. The University operates a [comprehensive waste management](#) approach with segregated collection of multiple recyclable streams (paper, plastics, glass, metals, batteries, textiles and more) across campus buildings and residences, supported by its waste contractor and internal policies to maximise recycling and minimise landfill. Food and other organic waste is also separately collected and diverted from general waste for composting or anaerobic digestion, with the recent phased roll-out of enhanced food waste collection in kitchens, cafés and communal areas to ensure organic material is handled sustainably. These systems, combined with student-focused reuse and redistribution initiatives such as [Community Fridges and the Donate, Don't Waste scheme](#), demonstrate that both conventional recycling and organics recycling are implemented at the University of Sheffield.*

**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:*

*The [Sustainability Action Plan](#), outlined by the University of Sheffield, states how unused food is directed to community fridges for students and community food charities in order to reduce food waste. (2021). Measures have been put in place as of 2023 to discourage the use of packaging and cutlery from catering outlets and introduced incentives for this. However, there are currently no mandatory rules for this. The campus also has a zero-waste shop in the Students' Union. However, there is still much progress to be made, as many of the metrics relating to food and within the University's Sustainability Action Plan have yet to be completed.*

*Sheffield Teaching Hospitals has an NHS Sustainability Plan for 2022-2025 with a section on 'Food and Nutrition'. This details short and longer term goals towards sustainable food within the hospitals and sustainable options to eliminate single use plastics associated with this. It shows commitment to applying sustainability criteria to food, but is at the stage of encouraging this as opposed to mandatory rules. The Medical School continues to use the University's sustainability criteria to direct what food and beverages to source, this includes continuing to promote sales of sustainable foods through nudge mechanisms.*

#### 5.8. Does the **institution** apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

2

*Score explanation: The University of Sheffield has all suppliers follow a code of conduct to ensure that procurement is 'an environmentally, socially, ethically and economically responsible' practice. The standards set out by the University follow guidelines advised at global conventions, an example of a rule that must be followed by procurers is that they must 'take active steps towards the elimination of excessive packaging and single use plastics'. The [code of conduct](#) outlined by the University was due for an update in early 2024, however as of 2026 this couldn't be found on the institute's website page. Using the University's [Sustainability Action Plan](#), it seems many goals still*

remain incomplete. Over half of the sustainability metrics relating to procurement remain to be incomplete, a statistic similar to the previous year.

**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: As part of the University of Sheffield's [sustainability strategy](#), a review has been conducted on the sustainability plans of venues used for events in order to encourage best sustainable practice. Sustainability guidelines for events are available to staff but not currently available to students, and sustainability requirements are not included in the guidelines for selecting a venue.*

**5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?**

Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)

There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)

There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)

Score Assigned:

2

*Score explanation: The University of Sheffield [has piloted](#) the Laboratory Efficiency Assessment Framework (LEAF) across various faculties and has now begun to implement it more broadly across the University. This framework provides practical actions to labs to increase the efficiency of their resource use, resulting in lower use of lab consumables, electricity, and water, as well as safer lab practices. Furthermore, the Green Impact scheme includes a lab-specific section. As a result, some departments include their own Green Impact Teams, which provide regular updates with practical information to enable staff and students to reduce their lab's impact.*

**5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?**

The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is <b>entirely divested</b> from fossil fuels. (3 points)	
The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments. (2 points)	
The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organised advocacy</b> for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that. (0 points)	
Score Assigned:	4
<p><i>Score explanation: The University of Sheffield's endowment portfolio <a href="#">does not include fossil-fuel</a> companies. The University completed full divestment from all fossil fuel company shares in 2019 and, according to its current investment policy, holds no shares in companies involved in the extraction or processing of fossil fuels such as oil or gas producers. Its Endowment Investment Policy explicitly excludes these industries and also prohibits investments in areas like armaments and tobacco. The University expects its appointed investment managers to screen and engage on environmental, social and governance criteria in line with these commitments.</i></p> <p><i>This approach is reflected in the University's <a href="#">Sustainability and Divestment materials</a> and confirmed in its endowment disclosures, showing £0 invested in fossil fuel companies, along with ongoing work to <a href="#">direct funds</a> toward positive social and environmental impact investments, including renewable energy infrastructure.</i></p>	

<b>Section Total (24 out of 32)</b>	<b>75.0%</b>
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Back to Summary Page [here](#)

# 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 Sheffield School of Dentistry** The following table presents the individual section grades and overall institutional grade for the Sheffield School of Dentistry on this Planetary Health Report Card.

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(63/70) \times 100 = 90.0\%$	A
<b>Interdisciplinary Research (17.5%)</b>	$(13/17) \times 100 = 76.6\%$	B+
<b>Community Outreach and Advocacy (17.5%)</b>	$(8/14) \times 100 = 57.1\%$	C+
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(12/15) \times 100 = 80.0\%$	A-
<b>Campus Sustainability (17.5%)</b>	$(24/32) \times 100 = 75.0\%$	B
<b>Institutional Grade</b>	$(90.0 \times 0.3 + 76.6 \times 0.175 + 57.1 \times 0.175 + 80.0 \times 0.175 + 75.0 \times 0.175) = 77.5\%$	<b>B+</b>

# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which the University of Sheffield Dental School has participated in the Planetary Health Report Card initiative.

## Planetary Health Report Card Trends for the University of Sheffield School of Clinical Dentistry

