



Centre for Sustainable Healthcare

Annual Review 2022

INSPIRE EMPOWER TRANSFORM

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About the Centre for Sustainable Healthcare

INSPIRE | EMPOWER | TRANSFORM

Since 2008, our organisation has been dedicated to engaging healthcare professionals, patients, and communities to better understand the vital connections between health and the environment.

We aim to reduce healthcare's resource footprint and support the sector to lead the way in modelling climate action. This includes rapid decarbonisation of the health system and developing climate-resilient health services with improved connections to green space.

We have two primary programmes, Clinical Transformation and Green Space for Health, which are both guided by the principles of sustainable clinical practice:

- Prevention
- Patient empowerment and self-care
- Lean systems
- Low carbon alternatives

Our Mission

- Make sustainability an integral part of clinical culture and healthcare service provision.
- Improve the sustainable management and use of NHS land for biodiversity and health, and improve community access to green space.

Message from our Chair

Gill Manning

I am delighted to present our annual review and celebrate the remarkable achievements of the past year. Together, we have continued to advance sustainable healthcare practices, driving positive change within the field.

In 2022, we achieved significant growth and progress across our programmes and initiatives.

Here are some key highlights:

- Empowered professionals from diverse healthcare sectors by creating opportunities for fellowships and scholarships, enabling them to champion sustainability in their respective fields.
- Demonstrated our commitment to education and innovation by expanding our range of courses and implementing bespoke training opportunities.
- Fostered collaboration and integrated sustainability principles into healthcare education, supporting the next generation of healthcare professionals to be equipped with the knowledge and skills to drive positive change.
- Played a crucial role in supporting Green Plans, assisting organisations in their journey towards achieving net-zero goals.
- Recognised the potential of NHS green spaces as valuable assets for resilient healthcare, harnessing their benefits and promoting their use within healthcare settings.

Looking ahead, we are excited to amplify our impact. We will cultivate partnerships within and outside the UK, leveraging our networks to lay the foundation for a sustainable future driven by collaboration and innovation.

Thank you for your support and commitment to sustainable healthcare and we hope you enjoy reading about our successes in 2022.



Our Impact

1 January 2022 - 31 December 2022

Clinical Transformation

Integrating sustainability into clinical culture and healthcare service provision.

Sustainable Specialties

Our Sustainable Specialties programme has been successful in developing our fellow and scholarship programmes over the past year, increasing the number of programmes from four in December 2021 and rising to a peak of thirty-two in October 2022.

Highlights include:

- **Successful sustainability fellowships:** All four fellowships which commenced in September 2021 have continued throughout 2022/23. Three of these fellows remained employed in their health board/trust and worked half-time alongside their clinical duties. The Education Fellow worked full-time for CSH. These fellowships have resulted in impactful outputs, such as:

- ▶ Publication of the **Position Statement** on reducing the environmental footprint of gastrointestinal endoscopy
- ▶ Setting up of **Green Health Wales**
- ▶ Publication of the **Anaesthetic Gas Scavenging System project tool**
- ▶ Creation of an **open-access teaching SusQI video**



- **New sustainability fellowships:** Five new fellows started in August 2022, all remaining with their current employers. Specialties covered include Paediatrics, Oncology, Anaesthetics/ICU, Dental Clinical Leadership and Value-based Health Care. Each fellowship lasts 12 months, apart from the value-based healthcare fellow, which was a 7-month programme.
- **New sustainability scholarships:** Two new individual scholarship programmes started in March 2022 with scholars from backgrounds in child health and ophthalmology. Individual scholar programmes last 12 months, and scholars remain with their current employer, but with up to one day per week devoted to sustainable healthcare work.
- **Group scholar programme:** 21 scholars joined one of our three group scholar programmes, while still remaining with their existing employer. These programmes covered geographical areas (Cardiff and Vale and Cwm Taf Morgannwg University Health Boards) and one covered a specialty, Kidney Care, alongside the national kidney care professional and patient organisation, UK Kidney Care Association. Our scholarship programmes this year have included sustainable quality improvement projects in ENT surgery (reducing the need for general anaesthetic for patients undergoing nasal surgery) and reduction in the inappropriate use of inhalers for patients in primary care.

Sustainability in Quality Improvement (SusQI)

In 2022, the [SusQI programme](#), generously funded by Health Education England, The Health Foundation, and King's College London, successfully recruited 14 beacon sites across the UK, representing a diverse range of specialties and education levels. These sites included undergraduate and postgraduate education in medicine, nursing, midwifery, and allied health professions training.

Highlights include:

- **Training and mentorship of SusQI Leads:** Key educators from beacon sites became SusQI Leads and received training and ongoing mentorship from the SusQI team.
- **Development of an open-access educator pack:** A new educator pack was launched on the SusQI website, providing essential resources for SusQI education delivery, including lesson plans, preparatory materials, workshop slide decks, group activities, facilitator guides, and assessment criteria guidance.

- **Delivering conference presentations:** The SusQI Education project findings were disseminated at prominent conferences, including the Royal College of Nursing Education Conference, SHARE Conference and AMEE Conference.
- **Evaluation and future publications:** Evaluation data was collected from trained SusQI Leads through surveys and semi-structured interviews, with the aim of publishing the results in 2023.
- **Expansion of the Beacon Site Programme:** The programme now offers ‘Aspiring’ and ‘Established’ Beacon Site Recognition and enhanced support packages to SusQI Leads through the SusQI Academy.
- **Securing the SBRI healthcare contract:** The contract is providing critical funding for the SusQI Beacon Site Programme and SusQI Academy to stimulate the intensive spread phase of SusQI initiatives.

- **Multi-centre and multi-professional student feedback data was analysed and published:** This highlighted that SusQI education had a **transformational impact on students**. Students developed a ‘sustainable’ lens, and SusQI education was proved to increase motivation to do Quality Improvement in itself and provided students with **‘concrete ways to make a difference’**.



- **Delivering seven Green Team Competitions:** Thirty-five teams from diverse specialties and departments implemented SusQI projects in real healthcare settings in England and Wales. Improving patient care and staff experience, these projects achieved potential annual savings of £783,564 and 7,196,266 kgCO₂e. This is the equivalent to driving over 20.7 million miles in an average car!



“It has been exciting having the Green Team Competition running in our trust. We weren’t sure in advance what the project outcomes would be as the timescale is challenging for busy staff. The CSH team supported the teams incredibly well and really challenged them to think broadly about the improvements they might investigate. The Awards Ceremony was an uplifting event particularly as the impact was so impressive across all the projects for patients and for staff. It is clear that our teams are really motivated to continue the work they have started. We look forward to taking the learning forward.”

*- Joanne Woolley, Audit and Improvement Manager,
The Christie NHS Foundation Trust*



Carbon Modelling

In 2022, the carbon modelling team provided crucial support for various CSH projects, including the Green Ward Competition, Sustainable Scholar and Fellowship Programme, and the Carbon Footprinting course. The team also contributed to the development of Green Plans for three Integrated Care Systems (ICSs), assisting organisations in reaching their net-zero goals.

Highlights include:

- **Introducing sustainability as part of accreditation:** CSH collaborated with the Royal College of Veterinary Surgeons to develop an environmental sustainability module for its Practice Standards Scheme. The module includes one core standard requirement, eight GP-level requirements, and 31 award requirements to support veterinary practices in monitoring and reducing their environmental impact. The environmental sustainability award will be assessed starting in January, while Core and GP-level assessments will commence in June 2023.
- **Supporting NHS organisations:** CSH partnered with South East London (SEL) ICS, Greener Practice, and SeeSustainability to develop the SEL ICS Green Plan. The team estimated the carbon footprint of SEL's Integrated Care Board (ICB) and all of the ICS's General Practices and developed a standalone Green Plan for Primary Care. CSH also supported Gloucestershire Health and Care NHS Foundation Trust in estimating its baseline carbon footprint to help monitor the impact of carbon reduction initiatives and progress towards net zero.
- **Discharge to Assess:** In partnership with South Warwickshire healthcare providers, CSH evaluated the impact of Covid-19 changes on the Discharge to Assess process of work patterns, travel, resource use, and clinical and social outcomes. In collaboration with a Master's student from Keele University, a focus group discussion was conducted to assess the social impact on staff. This report is scheduled for publication in 2023.
- **Digital transformation:** CSH collaborated with Ufonia, an AI company specialising in automating routine telephone conversations, to evaluate the potential financial, environmental, and social impact of using automated conversations for head and neck cancer triage compared to traditional outpatient appointments. The project has moved into the pilot phase, testing the technology in a clinical setting.

Education and Training

In 2022, CSH continued to develop and expand its range of educational initiatives, training health professionals and organisations in sustainable healthcare and planetary health.

Highlights include:

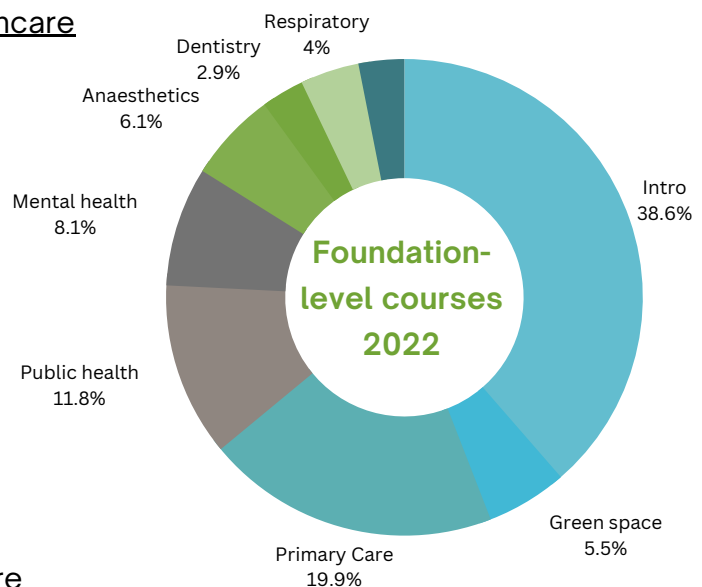
- **Delivering online short courses:** CSH added three new specialty courses, Sustainable Kidney Care, Sustainable Respiratory Care, and Sustainable Anaesthetics, bringing our suite of courses to 12. A total of 1630 clinicians, managers and researchers have now completed our courses since we first launched in June 2020 and return for ongoing mentoring in sustainable healthcare cafés. There were 357 attendees on foundation courses in 2022, and participants booked onto our courses from 20 different countries.

Foundation-level courses

- Introduction to Sustainable Healthcare
- Green Space and Health
- Sustainable Primary Care
- Sustainable Mental Healthcare
- Sustainable Dentistry
- Public Health Leadership for Sustainability
- Sustainable Anaesthetics
- Sustainable Respiratory Care
- Sustainable Kidney Care

Technical courses

- Carbon Footprinting for Healthcare
- Sustainable Quality Improvement
- Teaching Sustainable Quality Improvement





"Comprehensive, stimulating and thought-provoking"

Dr Ahmad Tarakji, Consultant Nephrologist



"The pre-reading was brilliant. It was also great to meet like-minded people and make connections"

Tessa Dadge, Neurophysiotherapist Wales

- **Launching board-level workshops:** In response to requests from Trusts and ICSs, we launched a bespoke workshop on net zero leadership for executives. Involving a short pre-reading and two-hour workshop tailored to the local context and Green Plan, it identifies strategies to inspire staff, accelerate and measure change and highlights what is unique about leadership for sustainability. This year the team provided tailored workshops and follow-up mentoring for nine Trusts and Health Boards and is beginning to work regionally with ICBs.
- **Producing free online modules:** CSH and HEE Northeast Faculty of Sustainable Healthcare partnered for a third year to create a free e-learning module for clinicians on Health Education England's e-Learning for Healthcare platform.

The popular '[Building a Net Zero NHS](#)' module has attracted nearly 50,000 attendees, with one NHS Trust making it mandatory training. 'Sustainability in Quality Improvement' was launched in 2021, and we have been commissioned to develop 'Sustainable Dentistry' for 2023.



- **Engaging in consultation and collaboration:** CSH worked with educational bodies to embed sustainability in undergraduate and postgraduate training across various healthcare professions. Collaborations in 2022 included a MSc module 'Sustainable Healthcare' for Trinity College Dublin, the Royal College of GPs Practice Advisor training, the Royal College of Nursing 'Leading Sustainability in Health and Social Care', and Florence Nightingale Foundations Green Healthcare Leadership Programme for the independent healthcare sector.

Green Space for Health

Improving the management and use of NHS land/green space and community access to green space.

All too often, our thinking about healthcare and the delivery of health services focuses on spaces within hospitals and medical practice buildings, with no consideration of the potential of the outside space also managed by healthcare organisations. We want to change this perspective, demonstrating that “healthcare happens here” – that green spaces on healthcare sites can be a resilient healthcare asset, with benefits to human health and the natural environment. Throughout 2022 we have been working to support the NHS to realise the potential of its green estate as a resilient healthcare asset.

Improving NHS green estate biodiversity

In the 2021-2022 season, we planted 15,721 trees at 83 sites. The 100,000th [NHS Forest](#) tree was planted in December 2022. We are increasingly seeing NHS Green Plans cite the NHS Forest and tree planting, woodland creation and connectivity as deliverables.

Highlights include:

- **Connecting and improving trees and woodlands:** Our NHS Forest ‘Trees Call to Action’ project started in July 2022, funded by the Trees Call to Action Fund. The fund was developed by Defra in partnership with the Forestry Commission and is being delivered by the Heritage Fund. Over the next two years, we will be focusing on tree planting and woodland improvement and management as we work with NHS partners in specific areas to maximise the benefits trees and woodlands on NHS estate provide for nature; staff; patients and the wider community.
- **Improving biodiversity:** Recognising the importance of accessible, biodiverse-rich spaces close to hospital buildings, we have been developing a number of spaces, transforming them from grey to green; improving biodiversity in existing gardens and grounds and providing opportunities for people to connect with those spaces.

Focus on: Fazakerley Woods, Liverpool

- ▶ Fazakerley Woods is adjacent to Aintree University Hospital in Liverpool; at over 13 hectares, it forms a significant area of woodland within an urban setting, surrounded by housing, business estates and a prison. It is vulnerable to anti-social behaviour including fly tipping and vandalism, but it also provides huge potential for the area to be used as a community and healthcare asset, providing easily accessible green space for hospital staff, patients, and residents.
- ▶ Our Nature Recovery Ranger, Nick White, has been working on-site with a group of volunteers, the Friends of Bluebell Woods, to carry out remedial works, improve habitat management and increase accessibility. Although still early in the process, Nick is working on longer-term plans to renovate the woodlands and develop a sustainable management plan. In addition to making environmental improvements, the aim is to increase the useability of the space for a range of groups, for example, green social prescribers, respite groups for carers, healthcare staff and the general public.



Increasing NHS staff resilience, health and wellbeing

Our Green Recovery Challenge Fund programme came to an end in June. The resulting Green Space for Health Evaluation report provides a review of the NatureWell outdoor wellbeing sessions carried out in 2021, with 51 staff from five NHS trusts. They reported improved wellbeing, satisfaction and happiness levels, both immediately after the sessions and one month later and a reduction in anxiety.



“Taking time out to breathe and focus on the trees, even for two minutes has really helped to ease my stress and anxiety.”

– NatureWell participant

The report also evaluates the Nature Recovery Ranger pilot project which delivered activities to support NHS staff wellbeing through nature-based interventions. The majority of participants stated that taking part in the activities had increased their understanding of the natural environment, benefitted their wellbeing, and inspired them to protect the environment.

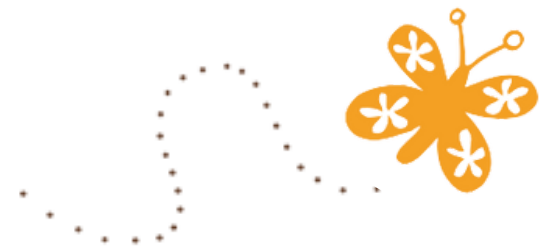
Highlights include:

- **Staff wellbeing through Green Gym, Newcastle:** The Newcastle Hospitals Green Gym, in partnership with the Northumberland Rivers Trust, has run monthly events since May 2018, engaging hospital staff, family and friends in various conservation activities. The aim is to improve wellbeing through nature connection, as well as make a positive contribution to the local environment. As a result of the pandemic, there was a decline in attendance and the programme needed reinvigoration.

▶ Our Nature Recovery Ranger, Sally Johnson, has recently taken up post, working across the Royal Victoria Infirmary and Freeman Hospital in Newcastle; part of her remit is to improve and expand the Green Gym programme. Sally has increased communication and widened interest; building a programme of events near the hospital, which she is running twice a week throughout winter to keep people motivated to get outdoors and connect with nature through the coldest months.



- **Staff Meadows Health and Wellbeing Route, Cardiff:** At the University Hospital of Wales, we worked to create a walking route between the hospital site and the biodiverse wildflower meadows at Heath Park. Through the installation of interpretation panels and online resources, the project encourages staff, patients, visitors and the wider community to make use of this space for health and wellbeing. Additional initiatives, such as a staff walking group, are being developed to further support the wellbeing of staff working at the site.



Developing the NHS green estate for healthcare

We know that our knowledge and understanding of the health benefits of green space are increasing all the time. We continue to support people to develop their knowledge and understanding through our education, network and evidence base.

Highlights include:

Community Green Hub: At Homerton Hospital in Hackney, our Nature Recovery Ranger, Naomi Paine, is working on transforming the hospital into a community green hub, utilising green spaces for health and wellbeing activities and embedding the concept of nature recovery into treatment and preventative care.

Naomi has identified the Diabetes Unit as a key point for community integration; they organise regular walking groups with outpatients and provide education on healthy eating and outdoor activities. With staff and patient input, she is creating an allotment garden and green wellbeing space on publicly accessible land outside their unit, to deliver these goals along with a programme of nature-connection activities. This supports patients, staff, and community groups in using nature-connection to improve their mental and physical health, as well as providing opportunities for preventative care and capitalising on the hospital's position within the community to make it a welcoming, restorative, educational facility.

Research

Increasing awareness of the relationship between health and the environment

Publications



Journal article

Green endoscopy: British Society of Gastroenterology (BSG), Joint Accreditation Group (JAG) and Centre for Sustainable Health (CSH) joint consensus on practical measures for environmental sustainability in endoscopy

Journal article

“Concrete ways we can make a difference”: A multi-centre, multi-professional evaluation of sustainability in quality improvement education



Journal article

Do no harm: addressing the environmental impact of health care

Book chapter

“Planetary Health and the Anthropocene” in Social Science Perspectives on Global Public Health



Book chapter

“The Climate Emergency and Zero Carbon Healthcare” Social Science Perspectives on Global Public Health

Report

The Annual Carbon Footprint of NHS Sight Tests at Five Optometry Practices

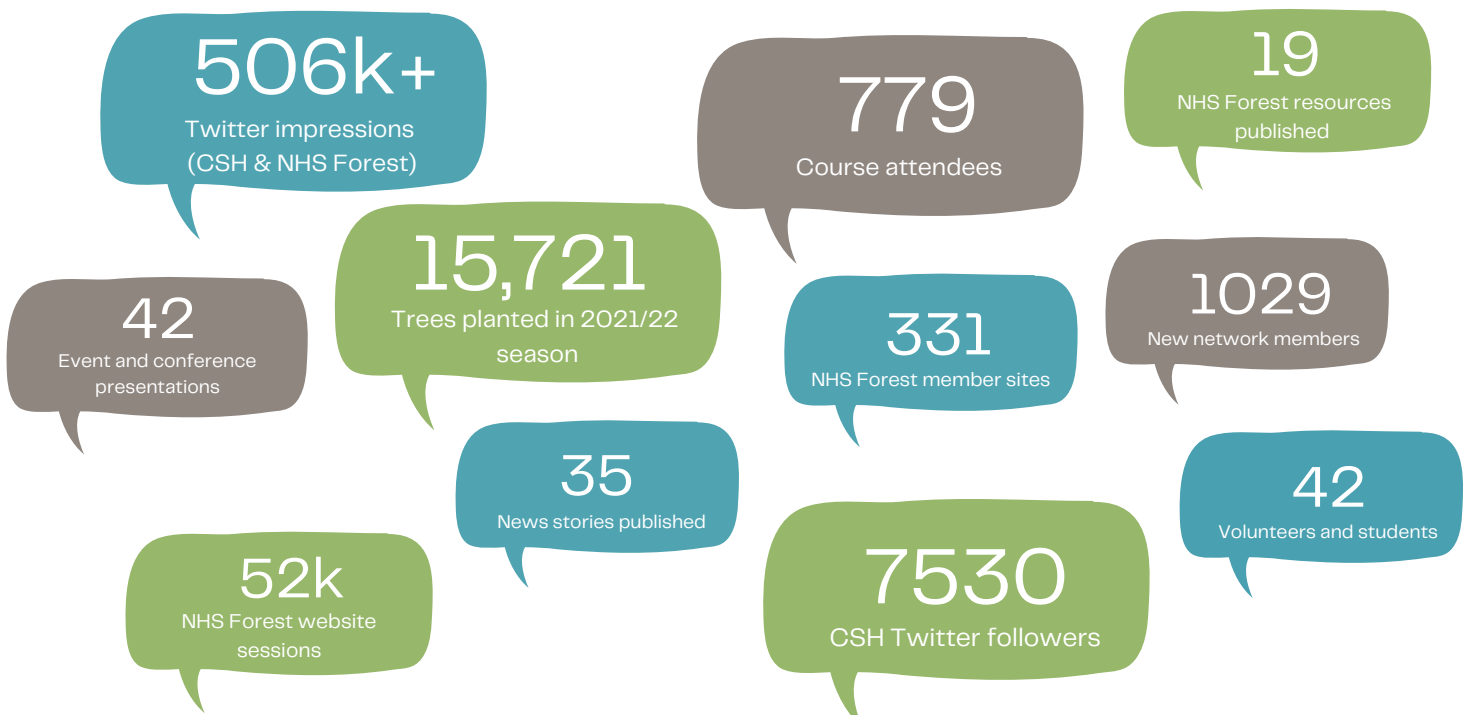
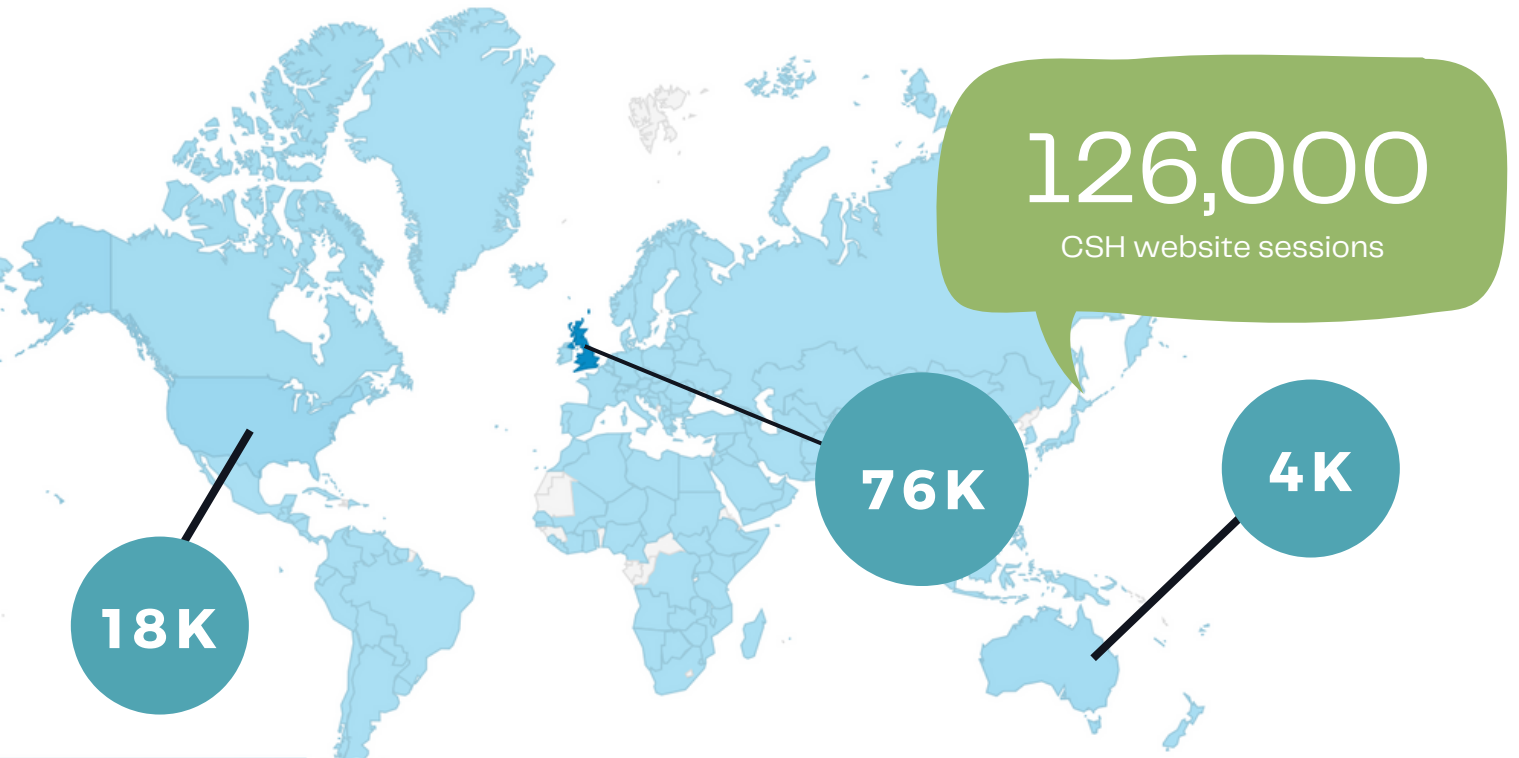


Government document

Climate and Health: applying All Our Health

Impact in Numbers

Communication, outreach and engagement



Finances

Dec 1st 2020 - Nov 31st 2021

Income

As a charity, our focus is on the difference we can make to our mission. Charities have different ways of securing funding they need for their work. As in the previous years, CSH had a mixed income from grants, education work including courses and mentoring, consultancy-type work and tree sponsorship and donations. We also benefitted from some grants that include contributions for our tree planting and mentoring activities. Over the course of 2021/22, we successfully stabilised and grew our income streams, building our resilience. We secured an overall income level of £1.25 million, compared to the previous year's £0.8 million – more than we have ever secured before, and in the face of uncertainties facing charities post-pandemic and during the cost of living crisis.

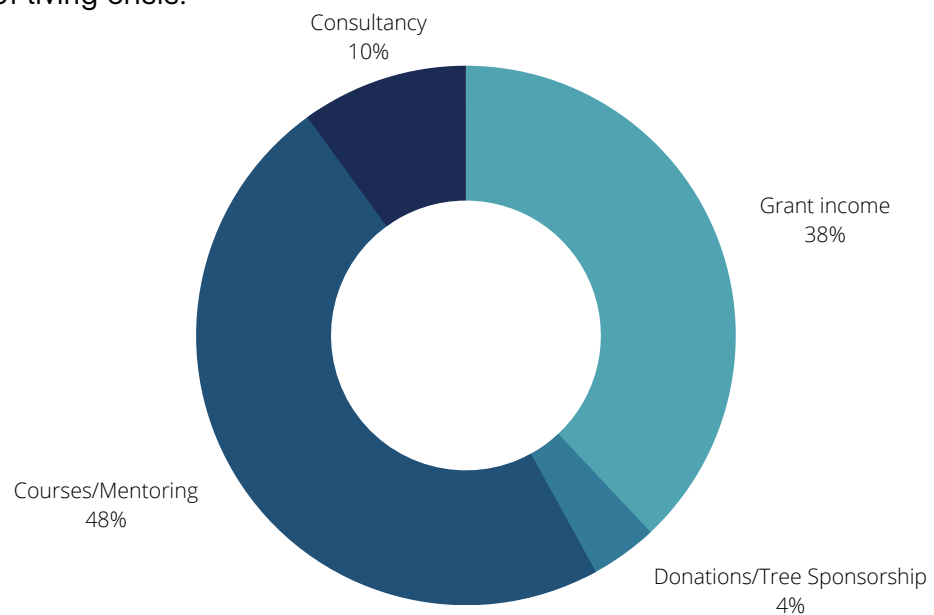


Figure 1: CSH income breakdown for 2022

Funding & Support

Over 2022, CSH received funding from different organisations for the development of educational resources and block booking of its courses, including South East London Integrated Care System, Health Education England and University of Dublin. It also received a grant from the Health Foundation to continue with its SusQI education programme.

In addition to funding from the Government's Green Recovery Challenge Fund for our Green Space for Health programme we secured a multi-year commitment from the Trees Call to Action Fund. This fund was developed by Defra in partnership with the Forestry Commission and is being delivered by The National Lottery Heritage Fund.



We also secured support from a range of corporate sponsors.

RSK group's multi-year sponsorship agreement with CSH includes strategic pro bono work to support the NHS Forest. It also includes annual sponsorship for NHS Forest trees to be planted through our Trees Call to Action Fund grant.



RSK is a leading integrated environmental, engineering and technical services business, and it will be leveraging its expertise and experience, particularly around nature-based solutions, to provide advice and consultancy to guide and support CSH's strategic work. RSK employees will also support NHS Forest projects through a volunteering programme.

The NHS Forest benefited from ongoing corporate sponsorship from a number of businesses, including Assura, who sponsored one tree in the NHS Forest for each of the 600+ healthcare sites they look after; DSSR Consulting Engineers, who committed to an annual tree donation; IQVIA, who pledged to contribute trees to be planted in 2023/24 linked to our Trees Call to Action Fund grant; Alcon, the largest eye care device company in the world, who sponsored one tree in the NHS Forest for every one of its UK&IRE associates; and Waterplus, who sponsored trees in 2022. Individual tree sponsors also contributed generously by sponsoring trees through our website.



Expenditure

As last year, a large proportion of CSH’s 2021/22 expenditure of £1.1 million covers the cost of our staff. This is due to the type of work we do which focusses on education, training, mentoring and consultancy-type work.

Our programme staff include Rangers who are part of our Green Space and Health team and work on NHS sites, helping the NHS to ‘green’ their services across their substantial estate, and involve many communities, patients and staff in their activities. Our method of change means that we catalyse transformation by working in partnership with many large and influential organisations, and support individual ‘green champions’ to work within their organisations to the same effect. Consequently, we need a range of staff in our growing team to implement our activities, as mirrored in our expenditure.

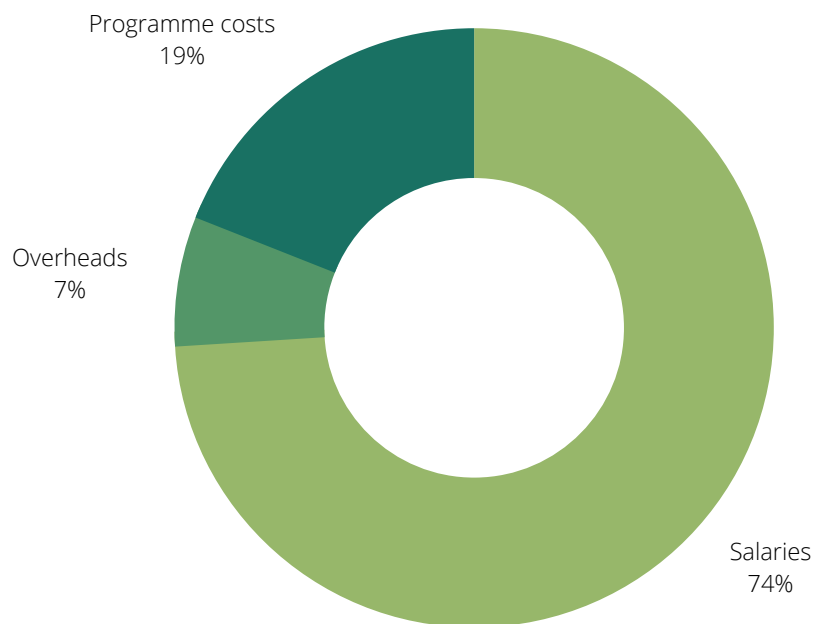


Figure 2: CSH expenditure breakdown for 2022

Team Growth

In 2022, CSH continued growth in all programmes with eleven new staff members.

In the Green Space Programme, we employed six new staff members including Felicity Harris as Programme Director, Emma Edwards as Ranger Manager and four new rangers.

In the Clinical Programme, we employed a Clinical Programme Manager, Hazel Walsh, a new Fellow in Quality Improvement, Alice Clack and a Sustainable Practice Lead, Catherine Richards. Ben Whittaker re-joined the team full time after a year as a Greener NHS Fellow.

For the core team, we hired a full-time Admin lead Aneesa Aljahmi, and Sara LeMaitre has joined as a fantastic Communications assistant in addition to our Communications lead.

CSH continues to benefit from volunteers who have worked on central projects and tasks. During 2022 we carried out our planned expansion of the volunteers' programme, by increasing numbers, grouping them into batches, offering a standardised induction, and asking for a minimum six month commitment (4-8 hours per week), or full time for one month. We had forty-three volunteers and students on elective placements, contributing the equivalent of 573 days, or 2 FTE staff.





Looking Forward: 2023

In 2023 CSH will build on the strong growth of the team in 2022 to have greater impact across all our programmes. We will look more deliberately at partnerships outside the UK to maximise our impact, working with the natural communities of practice via our established and growing specialty-based networks. This year will be about setting the foundation for this work over the next years and will include the launch of our new Networks platform.

Clinical Transformation

For our clinical work, we will build on the emerging opportunities to:

- Enhance new and existing partnerships to secure Sustainability Fellowships and Scholarships
- Grow The Green Ward Competition and Green Specialty Challenges
- Develop the SusQI Academy and Beacon Site Programme
- Build opportunities with the Greener NHS expansion
- Offer more training courses and extend the reach of existing ones
- Build strategic international relationships with key partners to increase our impact
- Secure funding for a national Green Walking Programme

Green Space for Health

Our Green Space for Health Programme has a busy 2023. We will be:

- Enhancing the management of 15 NHS woodlands through advice and improving tree planting, woodland creation and management across a wider number of sites through training and support
- Demonstrating the role of green social prescribing on secondary healthcare sites and the impact for patients and disseminating our learning through case studies and education
- Creating more opportunities for staff to access green space and nature-based interventions for their own health and wellbeing
- Advocating for the importance of green space for health, particularly for communities facing health inequalities

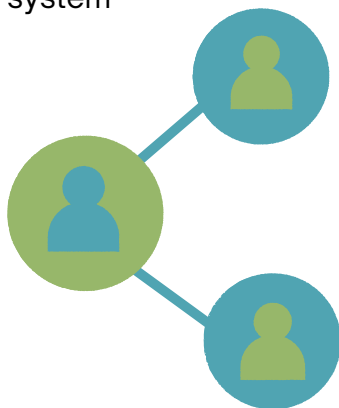
Our communications team will help us to develop strong messaging and to design powerful campaigns which will increase our reach and impact.

Core funding for CSH is being sought from several grant making foundations.

Join in

Engage with our programmes, resources and networks

- ▶ Use our [resources](#) to find out about how your organisation or clinical practice can be more environmentally sustainable
 - ▶ Royal Colleges and specialty bodies can link with CSH's [Sustainable Scholars and Fellowship programme](#) and [Specialty Networks](#)
 - ▶ Organisations can [sponsor our programmes](#) and commission a [carbon footprint analyses](#) of their services or products
 - ▶ Lend a hand and [volunteer](#) for us! We regularly advertise internships and volunteer opportunities
 - ▶ [Donate](#) to help our team build a more sustainable healthcare system
 - ▶ NHS Trusts can save money and increase sustainability by partnering on CSH's [Green Ward Competition](#) and joining the [NHS Forest](#)
 - ▶ Healthcare professionals, educators, students, and the public can join the CSH [sustainable specialties networks](#) to connect and exchange knowledge
 - ▶ Sign up to our [CSH & NHS Forest newsletters](#) to stay up to date on our programmes, events and courses
 - ▶ Join our 3-part [short courses](#) in sustainability, health and healthcare
-Share your sustainability ideas and initiatives with us!



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