

Primary care training session 5

Saving money and carbon in your service

[Please click here to watch the recording](#)

Presenters:

Dr Amit Sharma

Dr Emma Radcliffe

NEL Net Zero Primary Care Leads



Learning objectives

 Saving energy and preventing waste

 Saving money

 Reducing carbon

 Guest speakers: Graham Flynn, Director - Anenta Ltd

 Anenta

 Resources

Every step we take together to reduce our carbon footprint is a step towards great health and wellbeing.

- Every time we reduce the use of fossil fuels from travel and transport operations, we help our patients, staff and residents breathe cleaner air and reduce carbon emissions.
- Every time we support locally produced, low-carbon diets through our supply chains, we improve access to quality and affordable healthy food for people in NEL.
- Every time we nurture green space around health and care facilities, we improve wellbeing for patients and staff, and strengthen local ecosystems that absorb carbon.
- Every time we provide climate literacy training for staff, we empower our people to act and help shape our journey.

Our NEL Green Plan embodies collaboration, urgency, support, empowerment and trust - we are shaping our partnership culture to enable everyone to act.

This is our journey to Net Zero and beyond - we welcome everyone to help shape the path.

“We need ALL staff across NEL Integrated Care System (ICS) making low-carbon decisions every day”

Zina Etheridge

The challenge

NHS is 5% of UK carbon footprint.

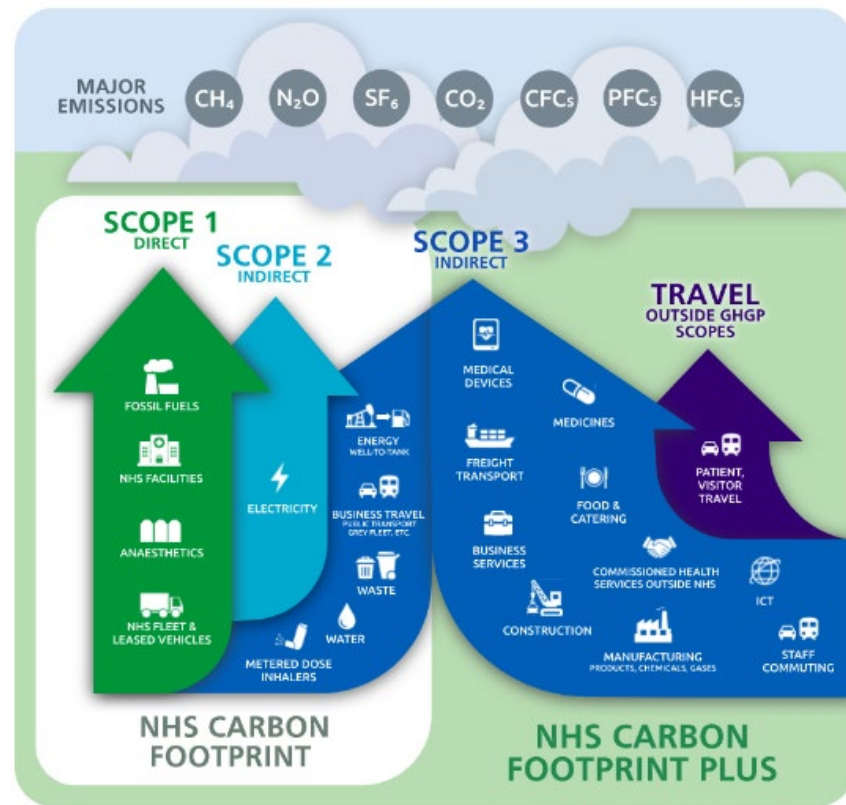
NHS Carbon Footprint- our direct emissions

- **40% reduction by 2025**
- An 80% reduction by 2028-2032
- Net zero by 2040

NHS Carbon Footprint Plus- entire emissions

- An 80% reduction by 2036-2039
- Net zero by 2045

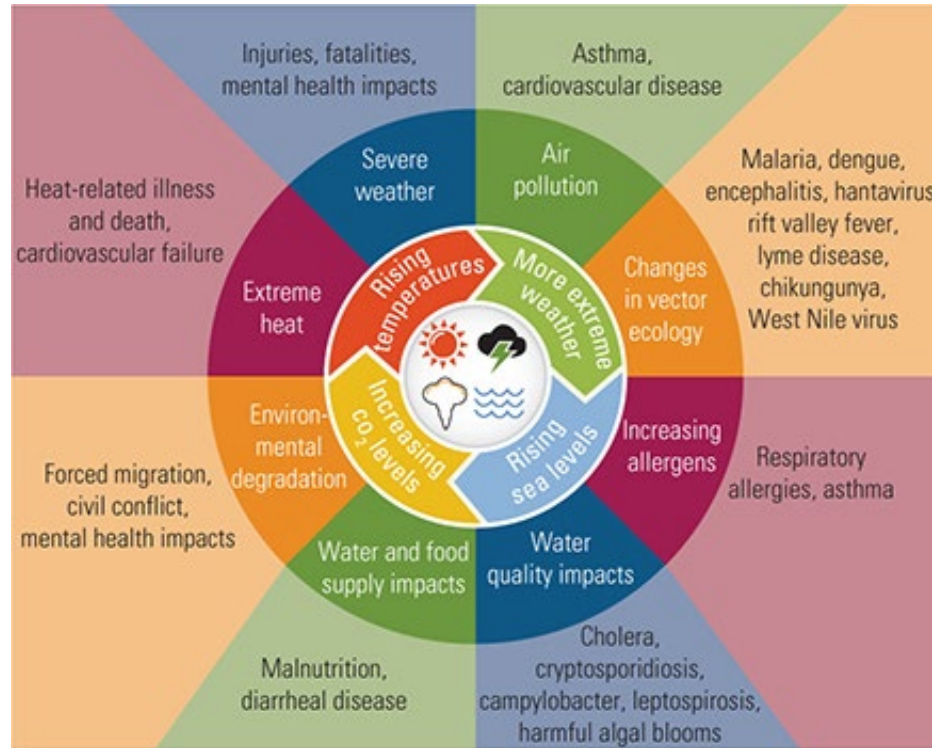
(MtCO ₂ e)	November 2021	80% reduction by 2028 would bring us to
Carbon Footprint	136,420	27,284
Carbon Footprint Plus	847,450	169,490



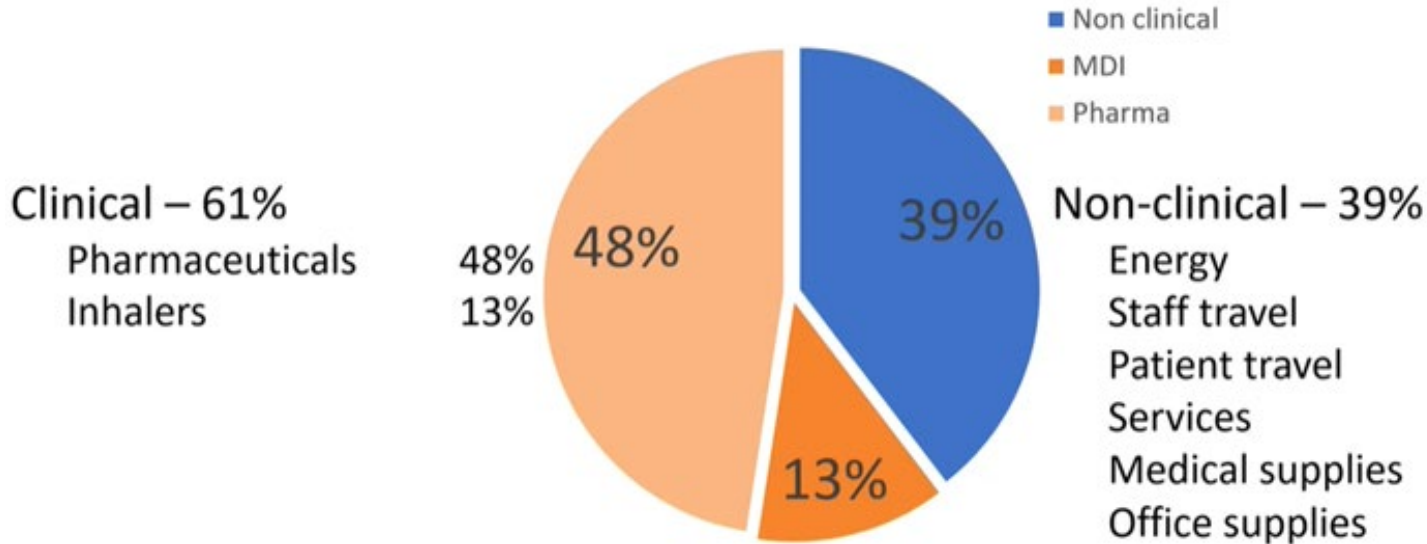


<https://youtu.be/O01rmmniCYo>

The climate crisis is a health emergency



Greenhouse gas emissions from general practice

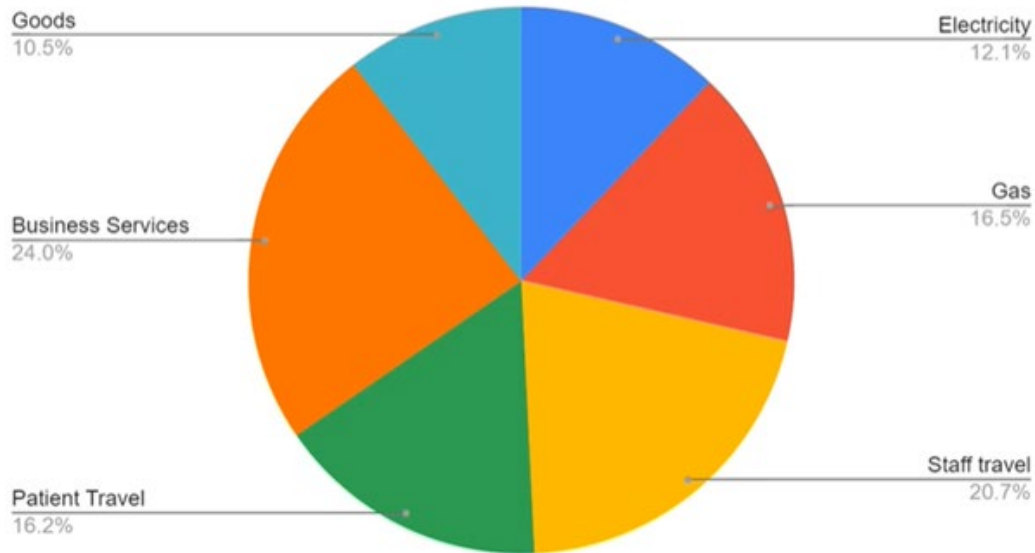


[www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(20\)30271-0/fulltext](http://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30271-0/fulltext)

Source SEE Sustainability

What is the footprint of running a GP practice?

Average practice emissions for 9,200 patients



Source SEE Sustainability

Quiz



Visit [slido.com](https://www.slido.com)

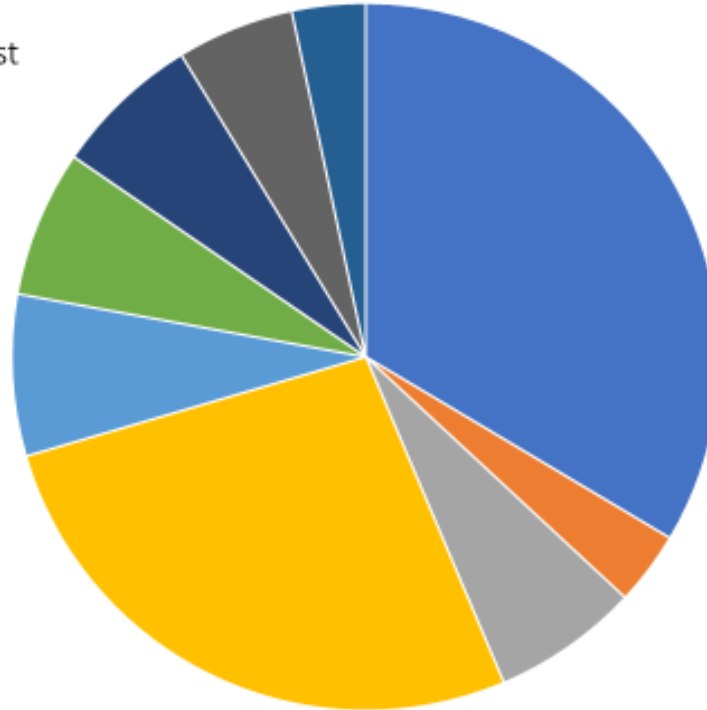


and enter event code [#NELICSGreenPlanPC](https://www.slido.com/join/NELICSGreenPlanPC)

Electricity use in a practice

Where do you think the two biggest slices of the pie chart come from?

Computers in use
Computers on standby
Other
Fridges
Heating and cooling water
Lighting in consulting rooms
Other lighting
Monitors
Fan heater + air con



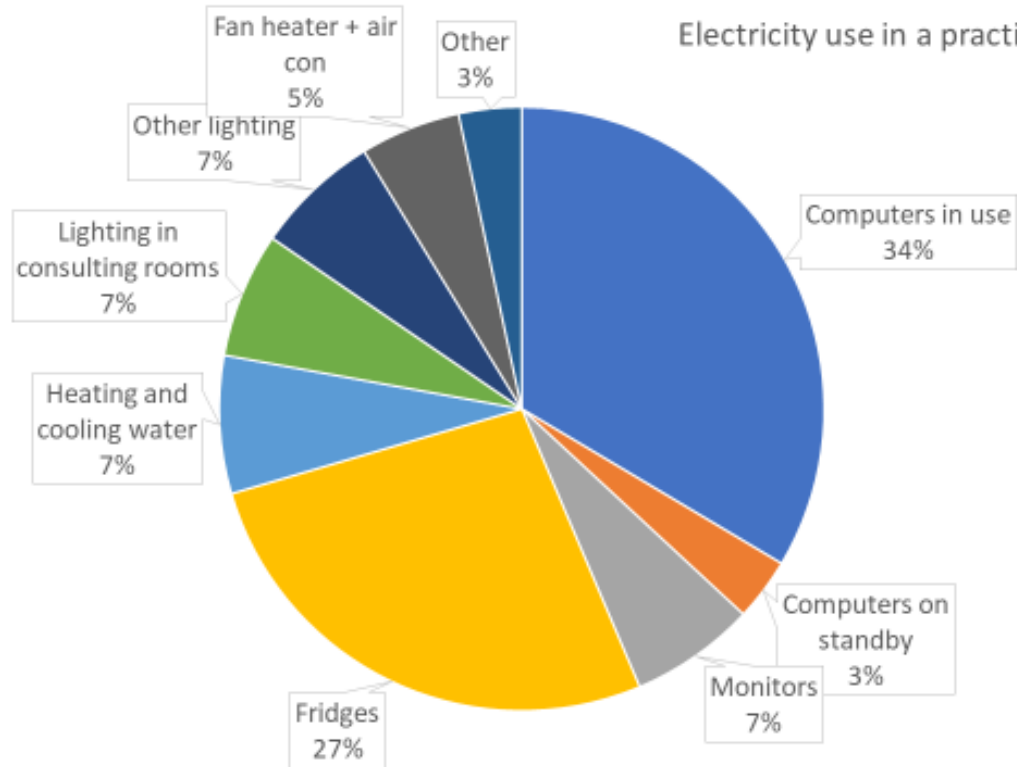
With thanks to Matt Sawyer
<https://seesustainability.co.uk>

Source: SEE Sustainability

Visit [slido.com](https://www.slido.com) and enter event code #NELICSGreenPlanPC

Electricity use in a practice

Computers, monitors	44%
Fridges	27%
Lighting	13%
Kettle, water cooler	7%
Air con/fan heater	5%
Other	3%



With thanks to Matt Sawyer
<https://seesustainability.co.uk>

Source: SEE Sustainability

Computers

	Watts used per hour	Hourly price at 50p/kWh
Desktop computer in use	60-300	3-15p
Desktop computer on standby	3-10	0.1-0.5p
Desktop monitor in use	19	1p
Desktop monitor on standby	0.5	0.025p
Laptop in use	30-70	1.5-3.5p
Laptop on standby	2	0.1p

- If 30 computers at 5p/h, 2 monitors each, 10 hours a day = **£21/day**
- 252 working days/year = **£5292/year**
- Everything on **standby** for the rest of the year = 6240 hours @ 15p/h = **£936**

References:

<https://www.ovoenergy.com/guides/energy-guides/save-on-standby-energy>
<https://www.thehomebackpacker.com/how-much-power-does-a-computer-use-in-sleep-mode/>
<https://www.cse.org.uk/advice/advice-and-support/how-much-electricity-am-i-using>
<https://www.switchenergysupplier.co.uk/how-much-electricity-do-your-appliances-and-gadgets-use/>

Fridges

At 50p/kWh:

- Large fridge freezer = approx. 15p/hour
- Small fridge = approx. 7.5p/hour

In our example practice:

- 2 large fridges for vaccinations = **£1314 each/year**
- 2 small for keeping samples = **£657 each/year**
- 2 kitchens each with a small fridge = **£657 each/year**

Total £5256

Actions:

- Amalgamate fridge contents
- Choose smallest, most efficient appliance available

<https://www.cse.org.uk/advice/advice-and-support/how-much-electricity-am-i-using>

<https://bulb.co.uk/carbon-tracker>

In carbon terms:
10 500 kWh = approx.
2 tonnes CO₂e



Image courtesy of Matt Sawyer

Other electrical equipment

1 kWh fan heater / electric radiator = 34p/hour
 2 kWh fan heater / electric heater = 68p/hour
 Action - take care heating consulting rooms with fan heaters



42" TV = 6p/hour



8KG Washing machine (A rating)
 = 17p/cycle
 8KG Washing machine (D rating)
 = 36p/cycle



Microwave 900w = 31p/hour
 Action - standby energy use can be huge! Turn off when not heating food



Dishwasher

Full size (Bosch series 2) = 32p/cycle
 Slimline (Beko integrated) = 26p/cycle
 Action - fill fully and run less often/only when full.



Electric kettle = 1.3p/min
 Action - boil only what is needed. Don't boil 'just in case'



With thanks to Dr Naomi Adelson, RCGP Midlands Faculty Board Climate Change Rep

BULBS

If 50p/kWh

1000 hours = 100 days @10h/day

100 (working) days = 20 weeks or 5 months



	GU10 2.4W	GU10 35W Halogen	GU10 70W Halogen
Cost to buy	£1.65	£2.99	£7.44
Lifespan (hours)	25,000	2,000	3,000
Power used (W)	2.4	35	70
Convert power to kW (/1000)	0.0024	0.035	0.070
Energy use per 1000 hours (kWh)	$0.0024 * 1000 = 2.4$	$0.035 * 1000 = 35$	$0.070 * 1000 = 70$
If £0.50/kWh	$2.4 * 0.5 = £1.20$	$35 * 0.5 = £17.50$	$70 * 0.5 = £35$
Cost for 1000 hours	£1.20	£17.50	£35
Cost for 2500 hours (per year)	£3	£43.75	£87.50
If practice uses 50 bulbs	£150	£2,187.50	£4,375

With thanks to Matt Sawyer

Gas Heating

Action	Approx. cost saving per annum
Insulate water tank using a thermal jacket	£300
Turn central heating thermostat down	£155 per degree
Set condensing gas boiler central heating flow temperature to 60°C: https://moneysavingboilerchallenge.com	£110
Delay turning on the central heating from October to November	£85
Use radiator valves to turn off heating in unused rooms	£65
Regularly maintain central heating system	£50

From NHS Dorset **Energy bills & efficiency awareness campaign – Autumn 2022**

Government advice



Make sure you are warm enough and have a minimum indoor temperature of 18°C



Turn your combi boiler flow temperature down to 60°C. Flow temperature is the temperature of the water that your boiler sends to radiators

[Source: Energy saving tips to save money - Help for Households](#)

Summary of energy waste actions

- Make every kWh count!
- Turn down computer monitor brightness to 70%
- Turn off when not in use
- Unplug laptops when fully charged
- Find underused electrical items, such as fridges, and clean up and switch off – either into storage or arrange for safe collection
- Replace older model electrical appliances with more efficient energy consumption – arrange for safe collection. Use LEDs
- Create a switch off sheet – checking off what is safe to turn off at the end of each day
- Go dark on apps and devices
- [Government energy efficiency guidance](#) – for homes but applies to small practices.

Advice from the GP IT team

What can't be switched off

- Do not power off PC's at the wall socket **shutdown only (leaving wall socket switch on)** so we can wake machines remotely if we need to respond to Cyber security issues in order to patch or update client PC's.
- Do not touch any of the servers or switch equipment as this will usually result in failed power supplies or corrupted hard disk drives where power has not been shut down gracefully and possible. This is for business continuity (BC) and to avoid disaster recovery (DR)
- Do not switch off Patient call and check in solutions at the wall – as they are also prone to blown fuses and failed power supplies etc.
- Working fridges that contain medicines and food.

Do switch off

- Printers, scanners and screens can be turned off at the power
- Monitors
- Ensure the right switch is being turned off and not the single wall socket that powers a multiplug with various devices attached.

We do need to be mindful that failed devices will usually attract a cost and time delay to get fixed where we have had issues in the past.

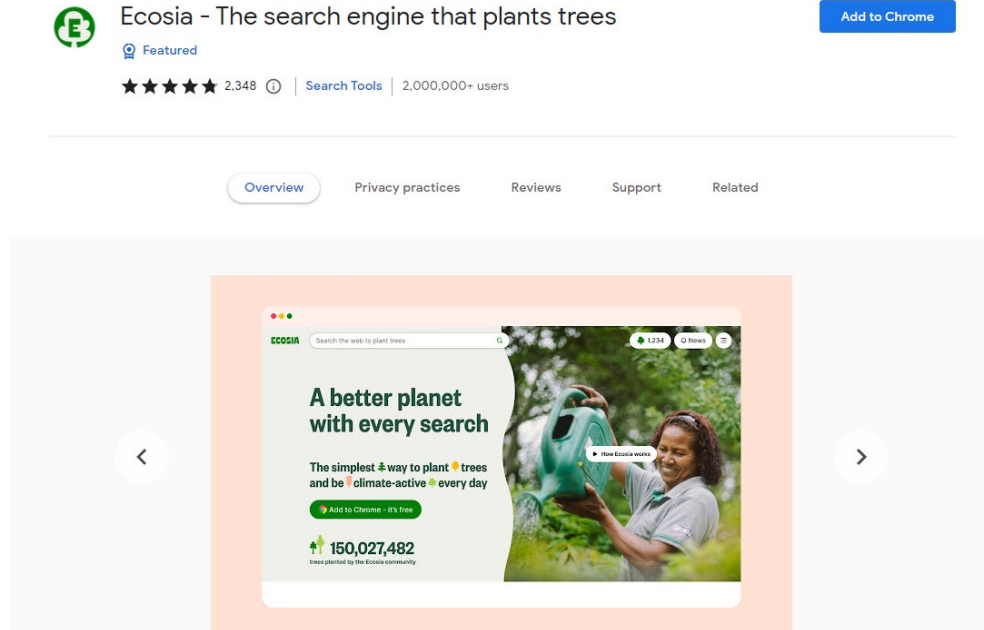
Email management

- Clear your inbox!
- Do you need to reply to an email?
- If you wish to acknowledge receipt of an email you can simply click 'like' 👍 button at top of the email you've received
- Use MS teams chat function to contact colleagues

Emails use between 4g, and with attachments, 50g of CO₂e to send and much more to read

One email stored for a year is the carbon equivalent of one plastic bag

Ecosia search engine



The screenshot shows the Chrome extension page for Ecosia. At the top left is the Ecosia logo (a green 'E' with a tree) and the text "Ecosia - The search engine that plants trees". To the right is a blue "Add to Chrome" button. Below the title is a "Featured" badge, a star rating of five stars, and the number "2,348" with a small icon. Further down are links for "Search Tools" and "2,000,000+ users". A navigation bar contains "Overview" (highlighted), "Privacy practices", "Reviews", "Support", and "Related". The main content area features a large promotional card with a background image of a woman watering a plant. The card text includes: "A better planet with every search", "The simplest way to plant trees and be climate-active every day", "Add to Chrome - it's free", and "150,027,482 trees planted by the Ecosia community".

Search Ecosia and follow the instructions to install the extension; it takes about 2 mins max to make it your default search engine.

<https://www.ecosia.org/>

Rethink, Refuse, reduce, reuse, repair, regift, recycle!

Consider

- Rechargeable batteries
- Paper lite
- Less printers
- Toner recycling

Printer toners using existing schemes such as:

1. <https://www.brother.co.uk/recycling> (For genuine Brother parts, high quality items can be refilled and directly reused)
2. <http://www.zerowasterecycling.co.uk/faq.aspx>
3. <https://cartridges4charity.co.uk/toner-cartridge-recycling/>
4. <https://everycartridge.com/uk/alternatives/>
5. <https://www.officexpress.co.uk/recycling/> (Requires purchase of toner through Office Xpress to become a customer)

- Reusable PPE – see Revolution Zero <https://www.revolution-zero.co.uk/>

Energy saving Trust guide to energy efficiency in the workplace

<https://energysavingtrust.org.uk/a-guide-energy-efficiency-in-the-workplace/>

NHS Supply Chain Sustainability <https://www.supplychain.nhs.uk/sustainability/>

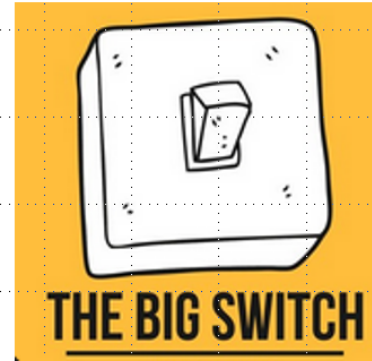
fairer, greener, bolder healthcare

The Big Switch! An idea in progress...

who: Probus Practice

what: Killswitch! Spencer persuaded the partners to use some of the savings made in his Tuned up Toner project to invest in a “killswitch”, a single switch installed near the alarm, carefully mapped to all non-essential equipment across the practice (eg monitors) excluding eg fridges and medication stores, which can be flipped at night at lock up time.

why: Many of our devices at home and work are left on standby overnight, which accumulates over time and amounts to both carbon and financial cost. This initiative is trying to stop that by switching all non essential equipment at once overnight. Watch this space for results!



Spencer Casey, Probus
Practice PM

Contact details:

Spencer.casey@nhs.net



Fairer, Greener, Bolder Healthcare: Genius real ideas collected by Greener Practice Network Cornwall connecting human health and planetary health, reducing climate impacts on health, and healthcare impacts on climate and nature.

fairer, greener, bolder healthcare

Tuned up Toner

who: Probus Surgery

what: using re-useable ink bags in leased Epson printers

why: reduces waste and cost. Small ink bags cost £12, are refillable, finally compostable, and print 40,000 sheets v hard units, not refillable, costing £90/110 and printing 10,000 sheets. Printer also energy efficient. Projected to save £55k over 3-5 years.



Spencer Casey, PM,
Probus Surgery

Contact details:

spencer.casey@nhs.net



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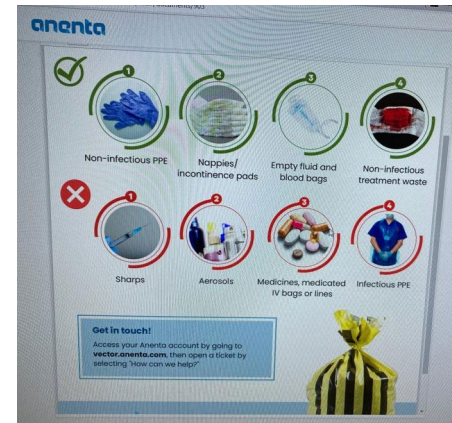
External speaker: Waste management

Anenta Ltd

- Correct segregation reduces environmental impacts
- The implementation of the offensive waste as a standard to replace the 80% of orange bags
- HEE training module - coming soon
- [Access your Anenta account](#) for education materials
- Ask for access to the Anenta account
- Anenta's online tracking system

- CHP properties – use [NHSPS waste services](#)

Contact
support@anenta.com
for account access
issues



WHICH BIN?



RECYCLING



NON-CONFIDENTIAL PAPER, CARD, CANS, BOTTLES. ALSO CONSIDER NON-KERBSIDE RECYCLING SCHEMES LIKE TERRACYCLE & REFACTORY WHO TAKE PACKAGING ITEMS E.G. BLISTER PACKS, NEEDLE CAPS, & SOFT PLASTIC

DOMESTIC



PAPER TOWELS, STICKY STRIPS FROM PATHOLOGY BAGS. ALSO PLASTIC WRAPPERS (E.G. FROM SWABS, SYRINGES, DRESSINGS, COIL KITS, ETC) & NEEDLE CAPS, BUT ONLY WHERE NO RECYCLING BOX SCHEME EXISTS (SEE LEFT)

OFFENSIVE



INFECTION NOT SUSPECTED BUT CONTENTS CONTAINS BODY FLUIDS, E.G. SANITARY PADS, INCONTINENCE PADS, SOILED COUCH ROLL, NAPPIES, USED GLOVES

INFECTIOUS



WASTE FROM PATIENTS WITH KNOWN INFECTIONS E.G. WOUND DRESSINGS, INFECTED SWABS, PPE USED FOR INFECTED PATIENTS

COSTINGS ARE APPROXIMATE PER TONNE, FROM ROYAL COLLEGE OF PHYSICIANS' 2020 REPORT: 'LESS WASTE, MORE HEALTH: A HEALTH PROFESSIONAL'S GUIDE TO REDUCING WASTE'. SCAN QR CODE ABOVE FOR MORE INFO

https://drive.google.com/file/d/1Z5AGSug-2Gqv_Ts3yJ-3FNsx47DcWcSv/view

RCGP: [Less waste, more health: a health professional's guide to reducing waste](#)

Gloves off campaign

Be Glove AWARE.  **NHS**
Barts Health
NHS Trusts

#GAW22

Gloves on?

- When in contact with blood/body fluid, non-intact skin, or mucous membranes.
- When in contact with chemical hazards such as disinfectants, preserving agents or cytotoxic drugs.
- Only when hands are thoroughly dry (post-hand washing or alcohol rub) to reduce risk of dermatitis.
- When in an operating theatre, or carrying out a high risk procedure, it is recommended to double glove.

Gloves off?

- As soon as gloves are suspected to be damaged.
- When no longer in contact with blood/body fluids, non-intact skin or mucous membranes.
- When a single aspect of patient care/treatment has ended (e.g. gloves may be required to empty a urinary catheter before providing mouth care).
- When it's necessary to carry out hand hygiene.
- When contact with chemicals has ended.

Gloves are not a substitute for hand hygiene*

Is there a risk to me?* No risk? **NO GLOVE!**

According to NHS England data, a staggering **12.7 billion gloves** were sent for use in the NHS and social care in **England alone** from 25 February 2020 to 31 March 2022.

The plastic in gloves is derived from **crude oil**, the production of which contributes to **climate change and environmental pollution.**

Make one change.

Source: rcn.org.uk

Medicines waste

NEL carbon footprint for medicines and chemicals 2019/20

= 174,700 (tCO₂e)

= 21% of our total carbon footprint

plus

- Reducing medicines waste
- Polypharmacy

Source: Dr Deborah Gompertz
(Greener Practice)

Medicines Impact; England:

- 25% of yearly NHS CO₂ emissions
- £300 million not taken each year.

A Solution in South Somerset:

The Complex Care GP team noticed that often medicine adherence was only reliably detected by looking at peoples' medication stocks at home.

Asking:

“Can you show me your meds... please?”

Identified that 1 in 4 people visited were non-adherent.

Resources for deprescribing



Prescribing and deprescribing

Prescribing contributes the largest carbon footprint of all our activities in General Practice.



- Social prescribing saves carbon!
- [MedStopper](#)
- [PrescQIPP](#)
- [Polypharmacy-Guidance-2018.pdf \(scot.nhs.uk\)](#)

Support for NHS Staff in fuel poverty

- Unison grant
- The Care Workers' Charity – Crisis grants
- MoneyHelper Service:
 - Free NHS Telephone Support Line 0800 448 0826, Monday to Friday 8am-6pm
 - National Support Team +44 7701 342 744 on WhatsApp
 - Online portal

<https://www.england.nhs.uk/supporting-our-nhs-people/support-now/financial-support/>

[Warmer homes scheme for Londoners](#) - of you have a low household income (less than £20,000 a year after rent/mortgage and council tax deductions

[Tips from Money Saving Expert](#) – that are for the home but apply to small GP surgeries.

[Green Doctors London](#) charity that offers free and impartial energy advice to help residents stay warm, save money and live greener

[Home \(shine-london.org.uk\)](http://shine-london.org.uk) fuel poverty referral network and free energy advice service for Londoners

Making net zero business as usual

PRIORITY ASK

- **We ask that all** staff complete the short [Greener NHS online modules](#)

GOING FORWARD, HOW CAN YOU CONTRIBUTE?

- **Interact** with the Net Zero Clinical Leads for Primary Care
- **Reflect on** how your team can contribute to the delivery of the NEL ICS Green Plan
- **Remember** that the NHS is a paper lite organisation
- **Prioritise active travel** to commute and for business
- **Consider low carbon options** in the services that you design and the programmes that you deliver
- **Feedback loops** - identify opportunities to innovate and share examples of good practice

GOING FORWARD, HOW CAN NEL SUPPORT YOU?

- **Seek resource and expertise from the NEL team** to support delivery and innovation at scale
- **Provide training on how taking climate action** increases health equity

FUTURE PROOFING THE SYSTEM

- Taking climate action is essential to protect the population and **reduce pressure on the NHS**
- **Improve staff retention**, making our organisation one that takes the climate crisis seriously.

What you can do today

Check out how you are helping deliver the [NEL ICS Green Plan](#)

Complete the short [Sustainable Healthcare Module](#)

Email nelondon.nelgreenteam@nhs.net to [join the Green Team](#)

Join our [Greener NHS Community](#) and connect with likeminded people across the NHS

Follow the campaign on social media: www.twitter.com/GreenerNHS

Sign up for the national Ebulletin: <https://www.england.nhs.uk/email-bulletins/greener-nhs/>

Anyone working with/in primary care can join the [Greener Practice North London Network](#)

Thank you for listening



Next sessions

 Session 6: Carbon foot of your practice **NEW DATE 23 February**

Session 7: Best of Net Zero in Primary Care.

 **16 Mar.**