Decarbonising general practice

Your guide to a Net Zero action plan for non-clinical emissions

Introduction

The climate emergency is a health emergency. The NHS has made a commitment to deliver the world's first Net Zero health service and achieving net zero requires decarbonisation across the whole health system, including general practice. This guide focuses on understanding and addressing non-clinical carbon within general practice.

Warning – do not read from cover to cover!

The guide is designed to be picked up; read the section you want to act on and put in place one key action today.
Then find another action tomorrow…

- Over time, the number of actions taken will build.
- Make the actions part of a bigger practice wide strategy – they can be ticked off cumulatively.

You are in **great** company. Other GP practices are:

- Becoming carbon literate;
- Measuring their own carbon footprint;
- Greening their estates;
- Designing green action plans for their own practice;
- Signing up to become active practices or already designing active travel plans

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Going Net Zero

Let’s join the healthcare Net Zero movement and decarbonise primary care

Along with the UK government and other businesses and organisations, the NHS in the UK has been proactive in implementing sustainability in healthcare by setting targets and developing the *Delivering a Net Zero NHS* report*, published in Oct 2020. Wales has a decarbonisation plan, Scotland is in the process of developing a plan, Northern Ireland has yet to endorse their targets.

The carbon footprint of the health service is notoriously large – the NHS produces 4% of the UK’s greenhouse gas emissions. The NHS is also responsible for 3.5% of all road travel in England, producing significant air pollution.

This means all parts of the NHS are required to take action and this guide is designed to make it easy for you to start taking action on your non-clinical carbon impacts.

In each section this guide highlights:

- Quick and easy wins and longer-term changes
- How to take action
- How to monitor and measure your improvements

*The NHS has committed to decarbonising by 2040, however, to prevent the worst impacts of the climate crisis, we should be aiming to decarbonise as rapidly as achievable – by 2025 if possible – and not delay starting to take action.

What could a Net Zero practice in 2030 look like?

Imagine your practice with low or no energy bills, fewer asthma patients, healthy staff members who cycle to work daily…

This may sound like a big ask for your organisation, but practices around the country are already taking steps by:

- Reducing their energy use
- Having travel initiatives for staff and patients alike
- Setting up ‘green teams’ to encourage and inspire behaviour change
- Working with suppliers to look for low carbon and environmentally responsible options

This guide will support you on your journey to make a Net Zero practice by 2030 less of a dream and more of a reality.

125,000 lives could be saved each year by 2040 by meeting the minimum climate emissions, according to a study by the Lancet*.

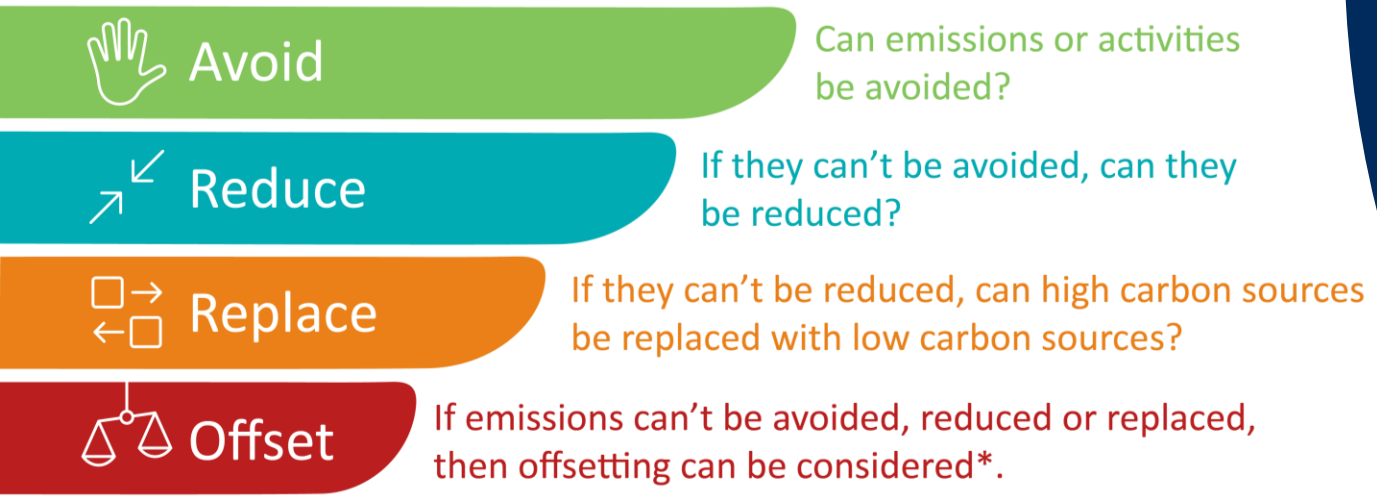
*Source: The public health implications of the Paris Agreement: a modelling study, The Lancet, February 2021, www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30249-7/fulltext#seccestitle10

RC GP NET ZERO

What does Net Zero mean?

Along with the UK government and other businesses and organisations, the NHS has committed to be Net Zero by 2040 and decarbonise its direct emissions from its operation by 80% by 2028-2032.

Working to Net Zero means measuring and reducing as many emissions as possible with offsetting being the last resort. Using a carbon-reduction hierarchy can help:



*Offsetting is controversial and should not be relied upon in a carbon reduction strategy.

Glossary

Carbon footprint
The total amount of greenhouse gas emissions released into the atmosphere that is produced directly or indirectly by human activities. The standard unit of measurement for carbon footprints is carbon dioxide equivalents (CO_2e).

Net Zero
A 'Net Zero' target refers to reaching Net Zero carbon emissions by a selected date where carbon emissions are balanced with those being absorbed.

Zero emissions
Zero emissions are when no carbon is emitted resulting in no net release of carbon dioxide into the atmosphere.

What are scopes 1, 2 and 3?

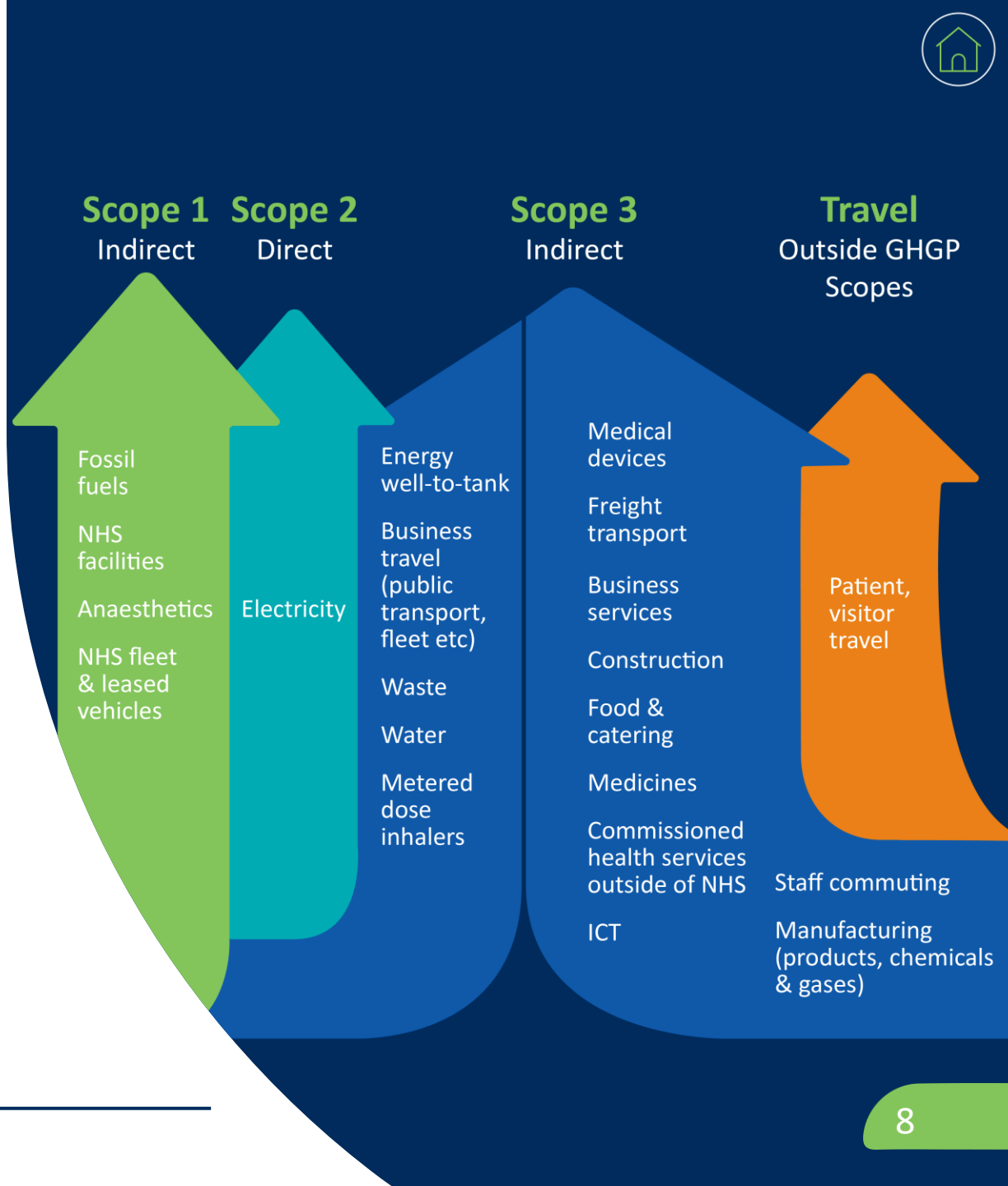
Carbon emissions can be grouped into categories depending on where they arise and where they are used by a business.

The Greenhouse Gas Protocol has categorised emissions in the following way:

Scope 1 – direct emissions created by an organisation through fuel combustion and owned vehicles. For primary care, the scope 1 emissions relate to heating and cooling of buildings and any practice owned vehicles.

Scope 2 – indirect emissions from electricity and energy production.

Scope 3 – all the indirect emissions from suppliers, purchases, transport. For a practice, this includes medicines and chemicals (the biggest impact for primary care), medical and office equipment and consumables plus staff and patient travel and all the services we use to run our practices.



The biggest carbon impacts from healthcare

Healthcare has an environmental impact and generates carbon emissions.

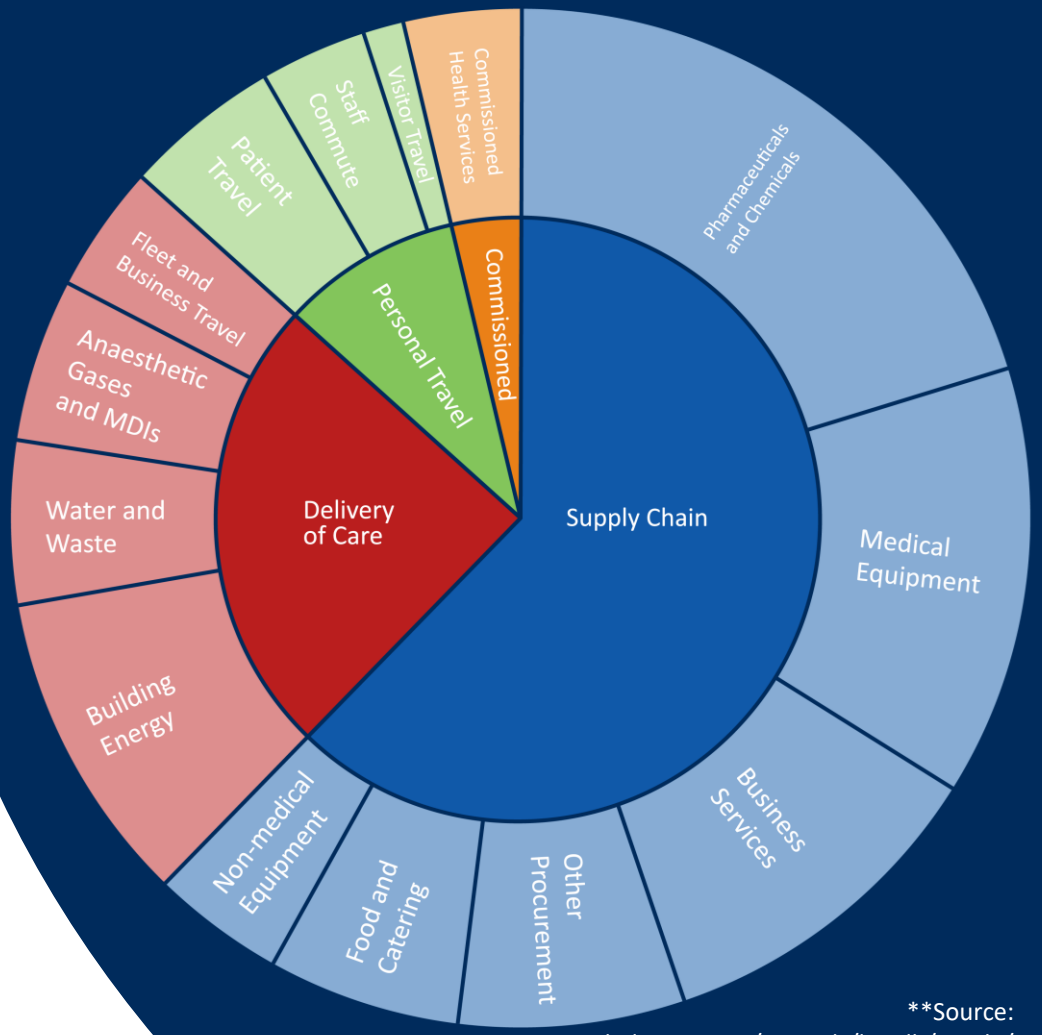
In 2020, the Lancet* calculated the whole of the NHS generated 25 megatons of CO_2e, with primary care being responsible for nearly 25% of the emissions.

Globally, the healthcare sector causes a substantial share of the world's emissions of greenhouse gases and air pollutants:

- 4.4% of greenhouse gases
- 2.8% of harmful particulate matter (air particles)
- 3.4% of nitrogen oxides
- 3.6% of sulphur dioxide

*Source: www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30121-2/fulltext

Contribution of different sectors to the greenhouse gas emissions of the NHS England, 2019**



**Source: www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30271-0/fulltext

Non-clinical emission hotspots from primary care

In primary care:

- **40%** of the emission footprint is due to **non-clinical** carbon from the running of the practice including energy use, transport of staff and patients, business services and procurement.
- **60%** is due to **clinical** – pharmaceuticals and chemicals and gases from inhalers.

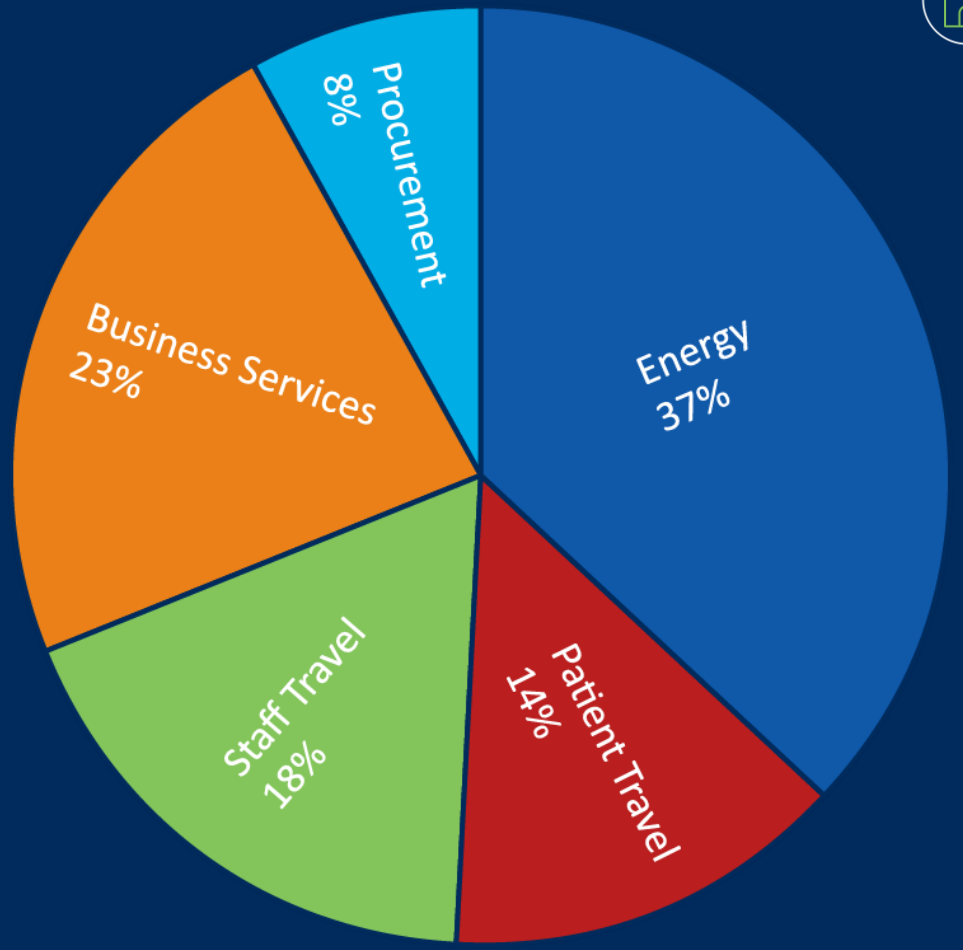
The hotspots in primary care for non-clinical carbon emissions depend on the practice list size, location, building type and services provided. A GP practice can calculate their own emissions footprint at www.gpcarbon.org/#/.

The major emission hotspots will include:

- **Energy use** – for both gas and electricity
- **Travel** – for both patients and staff*
- **Business services** – covering accountancy, IT, waste services etc.
- **Procurement** – covering medical and non-medical equipment and consumables

Other areas – such as water, food and drink and recycling are responsible for smaller proportions of emissions but can be included in your practice plans.

*pre Covid19



Getting started doesn't necessarily mean tackling the biggest areas first. It's a combination of addressing the biggest areas and the easy-wins.

The easy wins motivate your team and can build momentum.

5 benefits of climate action for practices

Taking action has lots of additional co-benefits. If you need to develop a business case for your organisation, these are some aspects to focus on:

1. Positive physical and mental health impacts
on staff and patients

2. Business continuity and resilience
allowing us to continue to provide care to our patients

3. Financial savings
by improving efficiency, reducing waste and changing service delivery models

4. Minimised reputational risk
by demonstrating that we recognise the impact healthcare has on the planet

5. Safer and fairer communities
by recognising and addressing the health impacts of climate change, which exacerbate existing inequalities

"Healthier populations will prove more resilient to future health threats, thus reducing economic consequences. Finally, whole societies profit when disparities between the most privileged and those most vulnerable to the impacts of climate change and disease are reduced."
The Lancet, February 2021

Getting started with Net Zero

To get started…

Establish your carbon footprint baseline and audit your interventions and their impacts.

If you've not already done so, the first step is to audit your carbon footprint so you know what the big issues are. Once established you can monitor the improvements from your actions and interventions.

There are plenty of carbon calculators and tools to use, for example SEE Sustainability, Compare Your Footprint or Smart Carbon who offers a simple and cost-effective way for you to measure the carbon footprint of your operations.

Examples of carbon footprints conducted at a range of services in Salford CCG are available here.

If you're looking for more support for your practice and would like individual help to get started the RCGP Primary Care Development team can help with this pcd@rcgp.org.uk.

Developing a business case

Making an ethical case for sustainable business practices is easy.

Making a financial case for sustainable business practices is also easy. There are many financial benefits from taking action to reduce our resource or energy use. Energy savings are recurring so savings will increase over time.

Sustainable practices as those that:

1. Do not harm people or the planet *and*
2. Create better outcomes for patients by focusing on improving environmental, social, and governance (ESG) performance of a practice

Building a business case isn't a one-and-done endeavour, but rather a living and breathing process.

Through regular dialogue with staff and patients, a practice with a sustainability agenda is better positioned to anticipate and react to economic, social, environmental, and regulatory changes as they arise.

Embedded sustainability efforts clearly result in a positive impact on business performance.

1.

Write a simple narrative to demonstrate how providing more environmentally sustainable healthcare benefits the practice.

2.

Estimate quantifiable savings and benefits. Identify a process to regularly capture these savings.

3.

Intangible benefits – record but don't quantify – yet! Include reputation, staff morale and motivation, productivity, future proofing.

4.

Balance against costs of proposed changes.

How to bring your stakeholders on your Net Zero journey

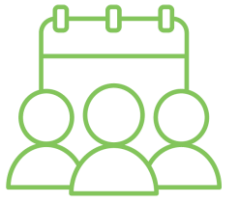
1. **Get to know what your team cares about** and look at where sustainability comes in. It could be small things like a recycling bin or tea bags to big things like procurement.

2. **Set up a green team or green community** with representatives from across the practice.

3. **Discuss the findings** of your carbon footprint audit with the green team or your whole team.

4. **Develop your existing green action plan** or create a Net Zero action plan with targets for each impact area. For inspiration use this guide and the resources within it.

5. **Engage your supply chain** – and patients – in setting targets, asking for their input, and creating a sense that ‘we are in it together’.



6. **Meet regularly** to feedback on progress and troubleshoot challenges.

7. **Celebrate** and acknowledge incremental improvements throughout the year. Human brains need short-term rewards to keep motivated for long-term goals.

Engaging your team

Green communities

Change comes when people across the organisation are taking action and feel empowered and motivated. It means collaborating with engaged members from each department to identify ways to reduce your footprint and improve your processes. This does not mean everyone has to become environmentalists overnight.

Start with engaged people from a range of departments and as momentum increases and change happens, others will adopt the new social norms.

People are more likely to act if they feel part of the process and they know there is commitment at a senior level.

“We’re very good at taking a team approach. We have a group of people that really care and are all working on different areas, and that’s starting to gather momentum. I think that’s been one of the key things.”
Karen Creffield,
Frome Practice and Primary Network Care Manager

A study from Unily on the 'Future of the Sustainable Workplace’ report showed that:

65%
of new staff are more likely to work for a company with a strong environmental record

64%
would definitely or possibly turn down a job from a company with a bad environmental track record

63%
want to learn more green skills to become more valuable in the workplace

57%
of employees said they need more info. on their company’s environmental goals

46%
said they need more training on environmental goals

Training staff
Train and educate your organisation so that they can ensure the Net Zero strategy is sustained and considered for all future decisions.

Tips to engage your team

Support the champions
Who are the people in your workplace who are passionate about seeing plastics eliminated? These are the champions. They can help engage work colleagues – the message is far more powerful when it comes from a team-mate.

Give them support in their role - they could be responsible for making that initial list, staff updates, and generally inspiring others to take the small steps needed.

Start small
All the small actions add up to make a big difference, so make a note of these initial steps you can help staff to get involved in.

Be transparent with your staff about the **environmental impact of the products or service** they're offered/using, the majority will seek the most sustainable options available (making your decisions even easier!).

Communication is key
The more people involved, the greater the impact. Make sure that staff know what's happening, why it's happening and what you're going to do to make it easy for them to join in.

Tips to engage your team

Take pictures of staff travelling to work, or switching off equipment or recycling before and after, have posters around staff and communal areas with reminders of hints and tips on what they **can** do.

You do not have to win over all the hearts and minds within your organisation to care about the environment. Talk about the health benefits.

Emphasise the benefits of a decarbonised practice
Decarbonising can also have financial benefits longer term. Often savings in one area can be used to fund other areas.

Lack of staff engagement?
Why is your team reluctant to participate? E.g., concerns over extra work, disillusion with green initiatives, not sure how they can get involved…

How can you ensure they have the right support, training and capacity?

Ask the staff!

Engaging your patients

The climate emergency remains a vital issue that more and more people want to act on, including your patients.

You don't need to turn everyone 'green'. You can **communicate the benefits of low-carbon lifestyles** to your patients.

48%

of people are more concerned about the planet's health as a consequence of the pandemic*

80%

are willing to make lifestyle changes to stop climate change as big as those they've made for coronavirus**

*Kearney study, April 2020
**Futerra Sustainable Lifestyle Survey, May 2020

What steps can people take?

Eat more plant-based food

Cycle or walk short journeys

Switch to renewable energy

Plant trees

RCGP and the Climate Emergency

The RCGP acknowledges the climate crisis and the catastrophic effect on human health of not acting decisively and urgently. The College accepts its duty to provide leadership, and urgently escalate its action at local, regional, and national level to decarbonise and promote environmental sustainability (RCGP council motion, September 2019).

The RCGP is a signature to the **Sao Paulo Declaration** that gives every person, in every place, from every calling a role to play in safeguarding the health of the planet and people for future generations.

The Climate Emergency Advisory Group (CEAG) is a RCGP Special Interest Group that aims to support the RCGP, at both national and faculty level,

- To enable the general practice community to take meaningful actions on the Climate and Ecological Emergency (CEE)
- To integrate sustainability into all parts of the system including curriculum, policy, guidelines, research and practice.

An increasing number of the RCGP faculties have appointed Climate and Sustainability Leads to support environmentally friendly practice. The CEAG is an on-line community (on a Google discussion group) that is open to non-members to join. The online group is a network for support, information, coordination of efforts, ideas, feedback, and connecting with the RCGP faculty leads and college leadership.

The Role of GPs

GPs, doctors and nurses are the most trusted professionals to tell the truth. By framing action on the climate and ecological crisis as an opportunity to improve patient and public health, we can promote public motivation to act. Through our example and advocacy, we can promote healthy, sustainable living and reduce carbon emissions.

RCGP NET ZERO

Energy

Your energy footprint

Energy is used for space and water heating and electrical equipment, lighting etc. Energy often has a high financial and carbon emissions cost for a practice.

Do you want to save money, energy or carbon? You can do all three simultaneously!

£260 = 233 kg CO_2e* = 1MWh electricity**

Reductions in use can be achieved through behaviour change and technological advances.

A recent survey of GPs revealed the majority were **more** interested in reducing their carbon emissions than reducing their expenditure.

Energy use contributes to around 25% of the non-clinical carbon emissions from primary care.

In 2020, primary care emitted 250,000 tonnes of greenhouse gases through energy use.

*2020 data
** MWh = megawatt hour of electricity = 1,000 kilowatt hours
*** subject to fluctuations in energy prices

How much does our practice spend?

An annual electricity bill of £6,000 is equal to emissions of **over 5 tonnes** of CO_2e each year.

Why address your energy footprint?

1.

It offers huge financial opportunities – up to 25% savings on energy bills in the first 1-2 years.

2.

Energy often has the highest non-clinical emissions footprint

3.

It is the easiest way to have a big impact on carbon emissions

4.

Reporting of energy use and greenhouse gas emissions is **mandatory** for companies with more than 250 employees. More information is available here.

Energy hierarchy triangle

The Energy Hierarchy triangle is a classification of energy options with the most sustainable at the top.

Following the hierarchy approach helps to reduce the environmental impact of the energy use of the practice.

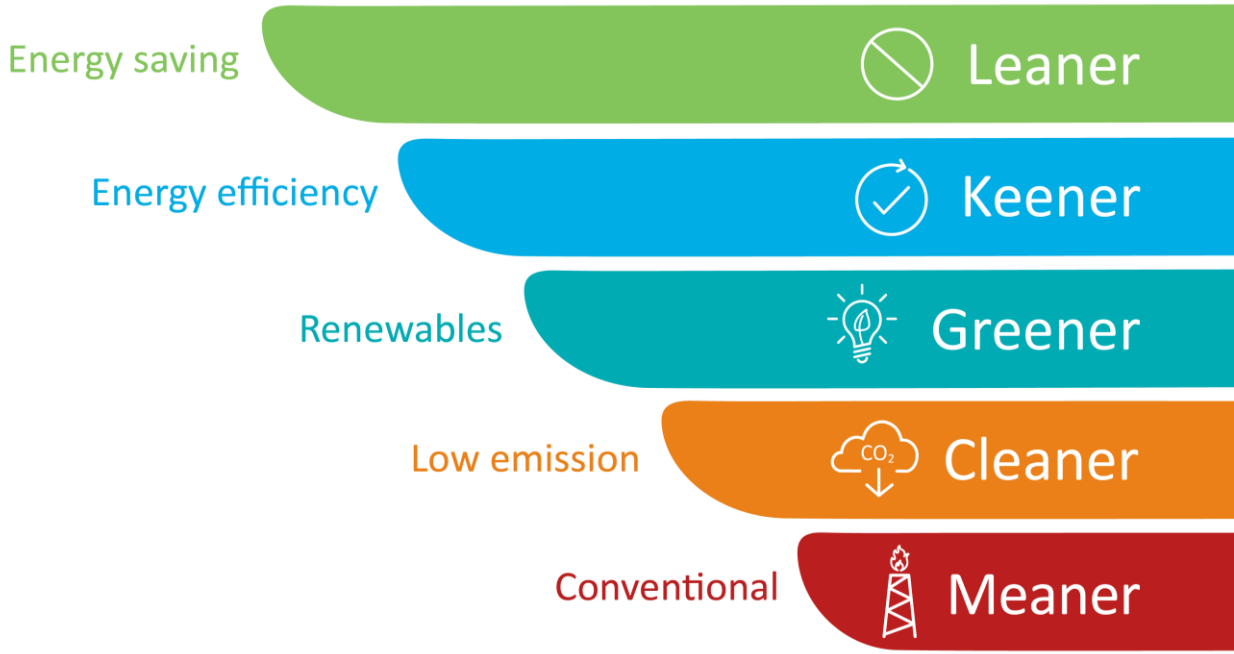
Leaner – The top priority under the Energy Hierarchy is energy conservation or the prevention of unnecessary use of energy. **The cheapest unit of energy is the unit of energy you don't use.**

Keener – The second priority is to ensure the energy that is **used is consumed efficiently.**

Greener – Thirdly, **BUY Green.** The energy that is used is from a renewable energy source. This describes naturally occurring, theoretically inexhaustible sources of energy e.g., 'elemental energy' from the sun, wind, wave, tide or rain (hydropower).

Cleaner – Fourthly, low impact energy production such as nuclear or fossil fuel with carbon capture and storage (not available at scale currently).

Meaner – Finally, energy production using unsustainable sources, such as unabated burning of fossil fuels.



Top actions you can take

1. Understand your current energy use better:

- Carry out an energy audit
- Install a smart meter for better monitoring

2. Make a plan and incorporate the energy hierarchy:

- Making every kWh count: Investing in no-regrets energy saving measures
- Preparing buildings for electricity-led heating: Upgrading building fabric
- Switching to non-fossil fuel heating: Investing in innovative new energy sources
- Increasing on-site renewables: Investing in on-site generation

What is your current energy usage?

Knowing the current energy use (gas and electricity) and identifying heavy users or wasted energy can help put plans in place to reduce use and bills.

How to monitor and measure

- Carry out an Energy audit (see box)
- Interrogate your bills for your annual gas and electricity use
- Calculate your practice floor print
- Use your practice floor print to work out energy per m^2
- Compare your results to RIBAs 2030 Climate Challenge figures (see RIBA targets for energy use)

Energy	Current annual use (kWh)	Annual expenditure (£)	Practice floor print (m^2)	Current benchmark (kWh/m^2) OR (£/m^2)
Gas				
Electricity				

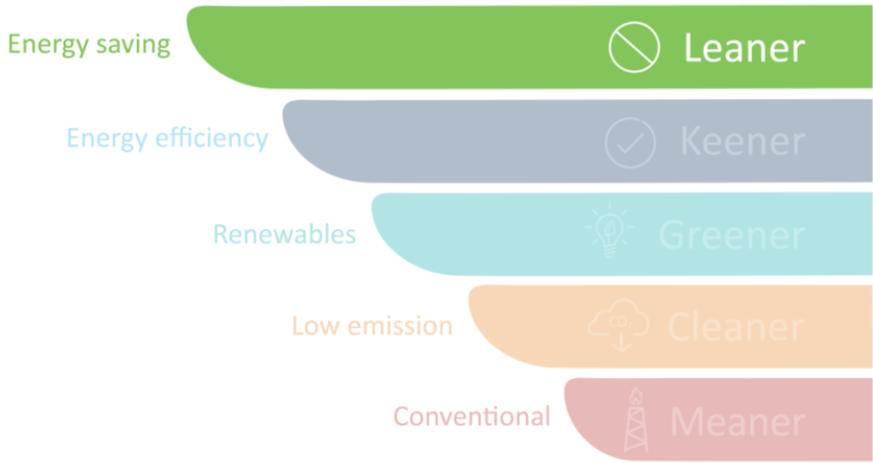
Energy audit

1. Record the floor space of the practice
2. Use the bills to identify total use/expenditure
3. Identify equipment for heating and cooling (air conditioning, room heaters, fridges etc)
4. Measure the energy use of the equipment
5. Identify air leaks around doors, windows
6. Measure loft insulation
7. Identify type of windows (double glazed, single glazed)
8. Check lighting and other appliances

Plug-in energy monitors can help understand the energy use of diffident pieces of equipment. Measure heating and cooling equipment first.

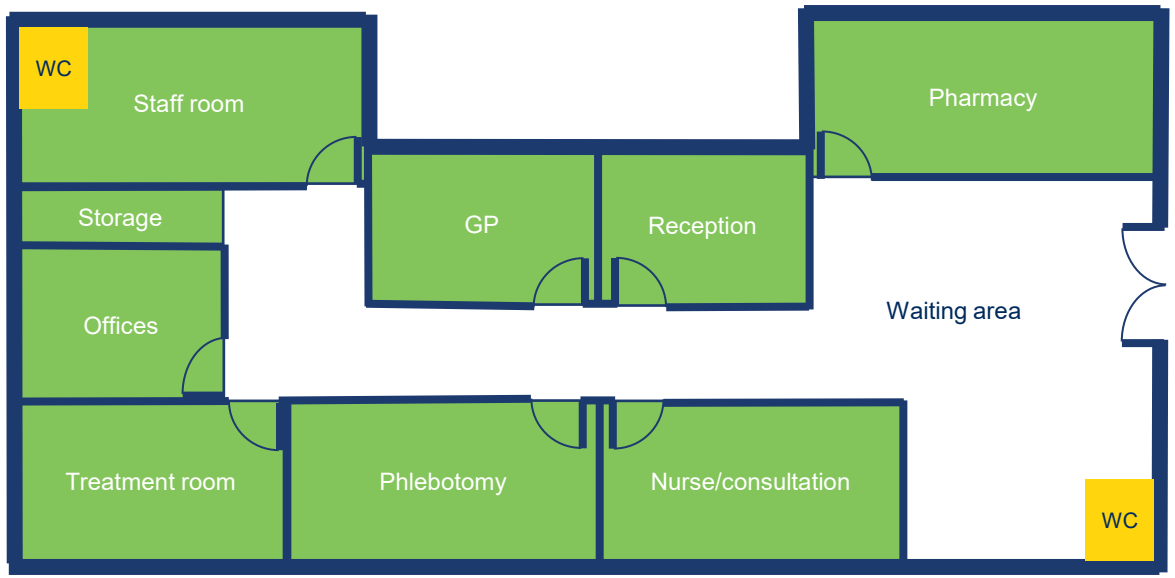
Find monitoring tools here.

Step 1: Energy saving



Reduce energy use through behaviour change

General Practice Energy Management Floorplan
This energy management floorplan can be used as a guide for ensuring that all rooms/areas have the correct energy saving options available. Sites can apply this as practically as possible, noting different estates types may allow for different solutions.



Treatment and phlebotomy rooms
- Ensure computers and printers/peripherals are switched off every night eliminating standby settings
- Set all PC monitors to go to sleep after 5 or 10 minutes of inactivity – a third of a PC's energy is used by the monitor.
- Use thermostats on radiators to control room temperatures

GP and nurse consulting rooms
- Close doors and window where possible
- Avoid electric heater as they can affect thermostats
- Reducing your PC monitor brightness from 100% to 70% can save up to 20% of the energy the monitor uses.
- Open blinds for natural light

Non-clinical areas
- Consider highest energy efficiency rated appliances within your budget when needing to replace
- Ask staff to only boil as much water is needed in a kettle.
- Use 'on-demand' water heaters instead of kettles

Step 1: Energy saving

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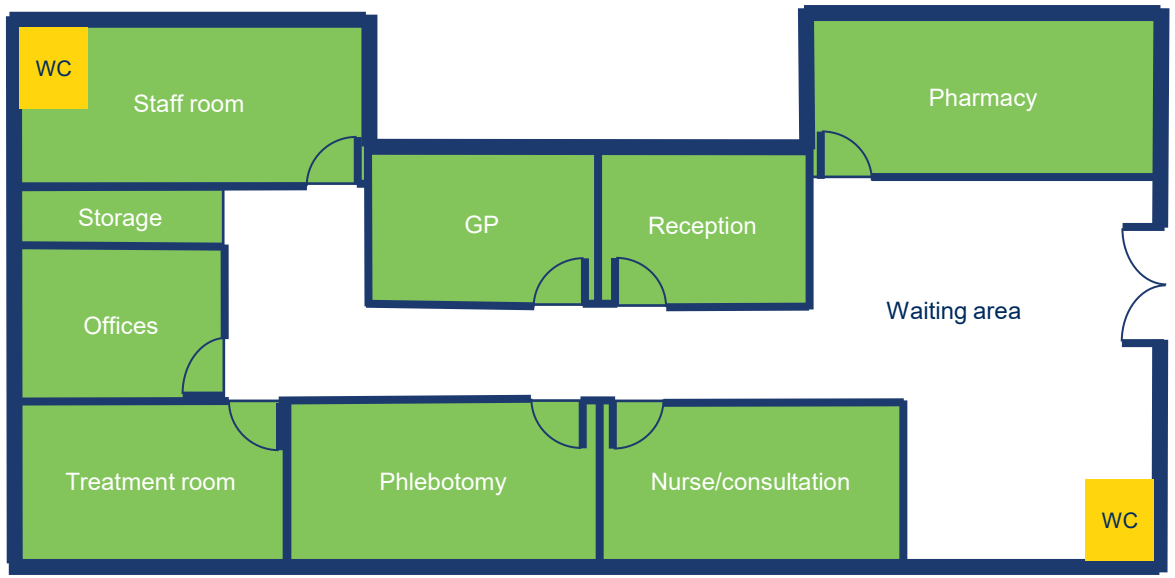


Equipment left on stand-by can use £10 per year per socket.

Case study
One practice asked their clinicians to switch off at the wall as part of their 'Electricity Responsibility Plan'. The depowering of the rooms decreased the practice electricity consumption by 30%.

Outside/Roof space
- Check and upgrade insulation where needed
- Annual maintenance of boilers and electrical items
- Look to improve thermal efficiency of doors and windows
- Prevent heat loss in the winter – Close windows and doors, improve draft exclusion

Shared space/corridors
- Turn the thermostat down 1°C saves 8% in heating costs
- Lights on timers e.g., automatically off overnight
- When replacing equipment choose the highest energy efficiency ratings available

Longer term
Plan to replace a boiler with an air source heat pump in your action plan.

Step 2: Energy efficiency

Reduce energy use through by increasing energy efficiency.
E.g., improved fabric efficiency, upgrades to lighting and cooling equipment, controls and metering.

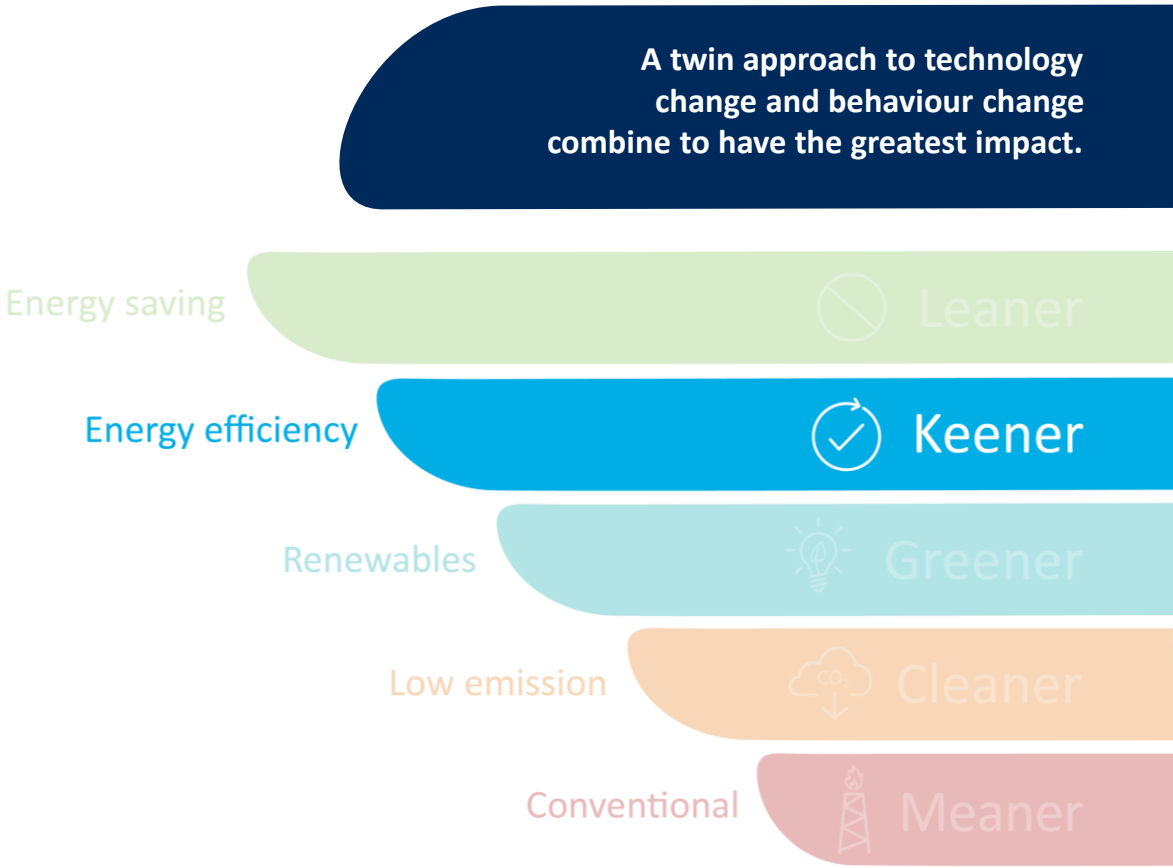
Short-term investments in technology:
- Examine the current insulation – is it sufficient? The National Insulation Association can help.
- Is the thermal efficiency of windows enough? Do they feel cold? Are they double glazed?
- Heating – are there thermostats to control individual room temperatures? There is evidence that multizone control can drive higher savings.
- Can you use an 'On demand' water heaters instead of kettles for hot water?
- Water softening: Build-up of limescale in a central heating system due to hard water can reduce the efficiency of heating systems. Practices can include measures for water softening.

Electricity use

Lighting
- Movement sensors, occupancy-controlled lighting, automatic light sensors
- Lights on timers e.g., automatically off overnight
- Change to LED bulbs

Computers & printers
- Put computers, printers and chargers on powerbanks can be turned off remotely or on a timer every night. Best buy reviews are here, here and here

Equipment
- When replacing equipment choose the highest energy efficiency ratings available
- Low energy AAA rated electrical equipment e.g., refrigerators

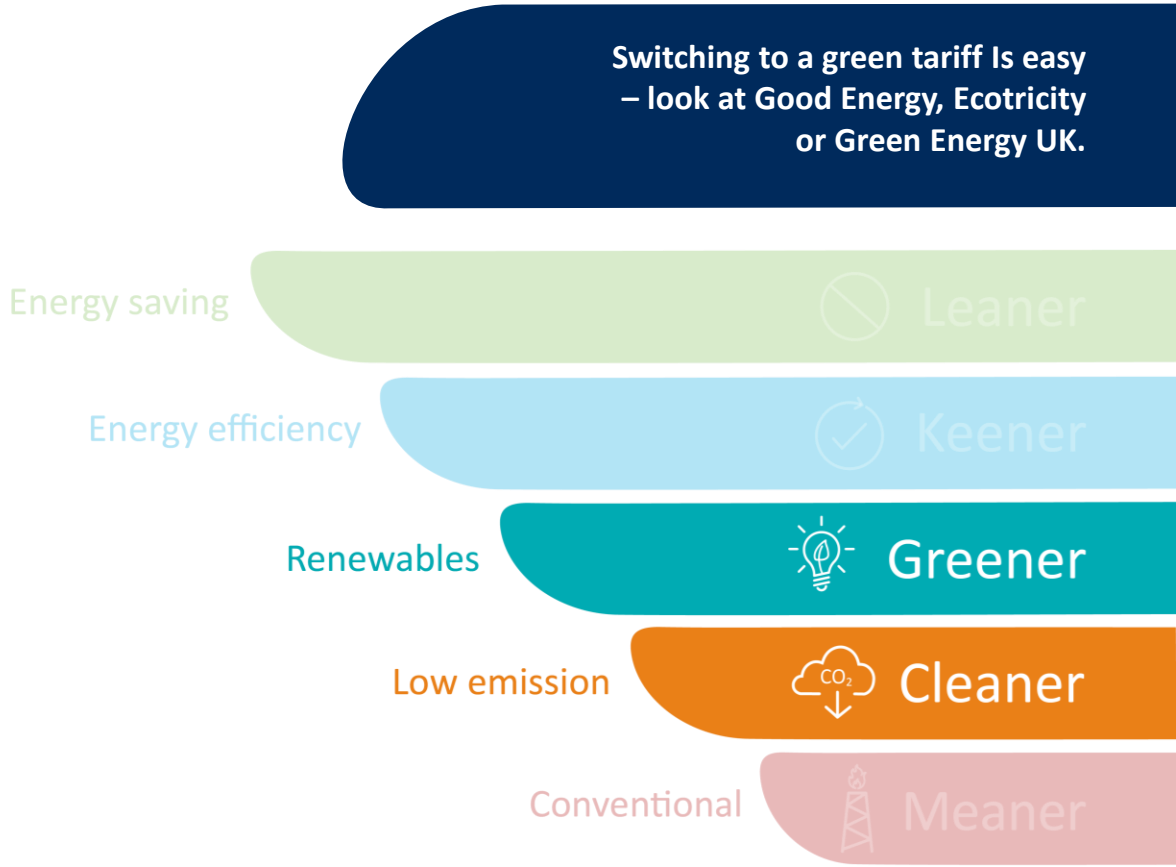


Step 3: Renewables and low emissions

Switch to a green tariff
Only those that are increasing the amount of green energy provision should be invested in. The others are not actually changing the energy-mix on the grid.

To help reduce the amount of carbon used in the UK, you need to look more closely at your choice of tariff. The only truly carbon reducing tariffs are those that buy renewable energy and the REGOs (renewable energy certificates called Renewable Energy Guarantees of Origin) directly from the companies that generate it. **Greener is not more expensive**, most suppliers now absorb the costs of REGOs.

According to information from Ofgem and research by Which?
and the Energy Saving Trust, the greenest tariffs are available from Good Energy, Green Energy UK and Ecotricity.



ecotricity www.ecotricity.co.uk/for-your-business

good energy www.goodenergy.co.uk/business/supply

ge uk www.greenenergyuk.com/Business

Going further: Self generation and heat management

Self generation

Solar panels can be a cost-effective way of converting the natural power of sunshine into electricity or heat. Solar PV generates electricity on site which can be used by the practice, stored for later use or sold back to the grid. Solar Thermal uses sunlight to heat water and offset heating costs. Many UK solar energy manufacturers, suppliers and installers are members of the Solar Trade Association (STA).

Useful information on selling electricity to the grid is available at:

- www.goodenergy.co.uk/business/generation
- www.ecotricity.co.uk/your-green-energy/solar-power-export

Case study – Urban practice
Panels installed on a practice generated 1.3 MWh in 2020. The practice pay the owner for what it uses and any excess is sold back to the grid. The practice know where its electricity is generated, and the carbon emissions are zero.

Heat management

Pre-heating: Where the practice is sufficiently well insulated, it is possible to pre-heat ahead of peak times. This enables access to cheaper tariffs which reflect the reduced costs associated with producing power off-peak and reducing requirements for network reinforcement to manage peak loads.

Smarter heating management and use: A 3-6% reduction in heat demand can be achieved through more informed and smarter management of heating the practice.

Smart meters and real time displays have been found to result in energy savings of around 3%, driven by associated actions such as turning the thermostat down or reducing the amount of time the heating is on.

Case study – Urban practice
Unit prices increased in the period studied by approximately 5% and 10%. Despite those increased unit prices, we have been able to reduce the energy bill in real terms by £2,500 ex Vat in the like for like period.

How?
Decrease energy consumption by reducing thermal loss using intelligent building management system. This refines the timings of the heating system to come on based on actual and predicted outside temperatures to reduce overheating the building when isn't being used.

Long-term actions

In 2021, the government consulted on reducing gas use for heating and replacing gas boilers with alternatives from 2025.

Options for future space and water heating includes heat pumps, electric (and infrared) heaters, district heating systems, biomass boilers and possibly hydrogen boilers. The upfront investment tends to be higher, but they can be cheaper to run – especially when combined with electricity storage battery options.

Air source heat pumps are several hundred percent more efficient than gas. There are grant schemes for investing in these. Plan to replace a boiler with a heat or ground source air-pump in your action plan when your gas boiler is in need of replacement. The Heat Pump Association is accessible here.

Practices have different requirements due to size, location etc. It is worth understanding the options prior to the disaster of a boiler breaking down

Some practices may be able to access Salix funding via the Public Sector Decarbonisation Scheme. This is likely to only apply to NHS Trust owned buildings and health centres.

NHS Property Services

NHS Property services are responsible for 3,000 properties including some GP premises and health centres.

They state “NHS Property Services will align with the ambitions of the wider NHS, aiming to become net zero carbon by 2050”.

Their environmental sustainability strategy covers

- Carbon,
- Waste,
- Fuel,
- Water, and
- Environmental management

Their pledges to reduce their carbon emissions are here.

Their webinar on designing and implementing a strategy to achieve the Net Zero goal is here.

Their contact is via www.property.nhs.uk

Setting targets

Identify ways to reduce your emissions. Once you have calculated your greenhouse gas emissions, this information can help you reduce your emissions and help identify ways to save you money. Setting an emissions reduction target is one way in which this can be achieved.

Setting targets can help you deliver the strategic changes that are needed to reduce use and carbon emissions.

Regarding energy, a practice can set their own targets to achieve their goal such as:

- 50% energy reduction through energy efficiency savings within 3 years,
- Or, have a 100% carbon reduction in space and water heating by installing an air source heat pump by 2025,
- Or, changing to a 100% green energy tariff for electricity supplier by the end of this financial year.

How to set targets:

1. Carry out an energy audit in the practice
2. Identify energy-saving opportunities
3. Implement energy-saving settings where possible
4. Build a business case for energy-efficient replacements and include the payback period.

Route to reduce		Aim/target					
Area	**Current footprint (2021)**	**3 years time**		**6 years time**		**9 years time**	
		Total % reduction	**How**	**Total % reduction**	**How**	**Total % reduction**	**How**
Energy – electricity	200,000 kWh = 46,000 kg CO_2e	25% in use 100% to 'green'	Green team, behaviour change, energy audit Change supplier to 100% renewable	50%	Install on site generation, more efficient equipment	75%	Intelligent building management system for heating
Gas	35,000 kWh = 6500 kg CO_2e	20% in use	Improved insulation, reduced losses	80%	Replace with ASHP/GSHP	100%	Gas free premises

RIBA targets for energy use

RIBA sets energy reduction targets for businesses including a reduction from over 225 kWh/m²/y to less than 55 kEh/m²/y by 2030.

The RIBA has developed voluntary performance targets for operational energy use, water use and embodied carbon.

These performance targets form the basis of the 2030 Climate Challenge. The performance targets align with the future legislative horizon and set out a challenging but achievable trajectory to realise the significant reductions necessary by 2030 in order to have a realistic prospect of achieving net zero carbon for the whole UK building stock by 2050.

You can use your practice figures for total annual energy use (gas and electric) and surgery floor size to understand your current performance. This can help inform practice targets.

RIBA Sustainable Outcome Metrics	Current Benchmarks	2020 Targets	2025 Targets	2030 Targets
Operational Energy kWh/m²/y	225 kWh/m²/y DEC D rated (CIBSE TM46 benchmark)	<170 kWh/m²/y DEC C rating	<110 kWh/m²/y DEC B rating	<0 to 55 kWh/m²/y DEC A rating

*Source: www.architecture.com/-/media/files/Climate-action/RIBA-2030-Climate-Challenge.pdf

Energy options

There are many options which can be considered when looking to reduce heat use or heat losses. This list covers the majority of topics which a practice can consider and research in more detail. The installations costs are a guide only and each practice will need to assess the impact and costs for themselves.

***Running cost:**
+ More than current options
= Cost neutral
– Less than current options

Proposed measure	Description	Potential level of impact	Implementation cost	Running cost*	Ease of installation
Heating, cooling, ventilation (HVAC)					
Heating	Air source heat pump (with 100% renewable electricity supplier)	High	> £1,000	=	Difficult
	Ground source heat pump	High	> £1,000	=	Difficult
	Heating – Electric heating (with 100% renewable electricity supplier)	Medium	£100 to £1,000	- = +	Easy
	Connect to existing district heating	High	> £1,000	- =	Difficult
	Heating – Thermostatic radiator valves or zone control valves	High	> £100	-	Easy
	Heating – Discrete controls	High	> £100	-	Easy
Cooling	Cooling – plant replacement/upgrade	Medium	£100 to £1,000 > £1,000	- =	Difficult
	Replacement of air conditioning with evaporative cooling	Low	£100 to £1,000	- =	Difficult
Ventilation	Fans – Air handling unit	Low	£100 to £1,000	-	Easy
	Fans – High efficiency	Low	> £100	-	Difficult
	Ultrasonic Humidifiers	Low	Less than £100	-	Easy
	Ventilation – Distribution	Low	£100 to £1,000 - > £1,000	-	Easy

Energy options

There are many options which can be considered when looking to reduce heat use or heat losses. This list covers the majority of topics which a practice can consider and research in more detail. The installations costs are a guide only and each practice will need to assess the impact and costs for themselves.

***Running cost:**
\+ More than current options
= Cost neutral
– Less than current options

Proposed measure	Description	Potential level of impact	Implementation cost	Running cost*	Ease of installation
Buildings and building fabric	Cavity wall insulation	High	> £1,000	-	Difficult
	Double glazing with metal or plastic frames	High	> £1,000	-	Difficult
	Dry wall lining	Medium	> £1,000	-	Difficult
	Loft insulation	High	£100 to £1,000	-	Easy
	Floor insulation	Medium	£100 to £1,000 > £1,000	-	Difficult
	Roof insulation	High	£100 to £1,000	-	Easy
	Secondary glazing	Medium	< £100 £100 to £1,000	-	Easy
	Draught proofing	Medium	< £100	-	Easy
	Automatic/revolving doors	Medium	£100 to £1,000	-	Easy
	Radiator reflective foil (external walls)	Low	< £100	-	Easy
	Pipework insulation both external and internal	Low	< £100	-	Easy
	Building management systems	High	£100 to £1,000 > £1,000	-	Easy

Energy options

There are many options which can be considered when looking to reduce heat use or heat losses. This list covers the majority of topics which a practice can consider and research in more detail. The installations costs are a guide only and each practice will need to assess the impact and costs for themselves.

***Running cost:**
\+ More than current options
= Cost neutral
– Less than current options

Proposed measure	Description	Potential level of impact	Implementation cost	Running cost*	Ease of installation
Lighting and Lighting controls	LED – new fitting	Medium	< £100 - £100 to £1,000	-	Easy
	Lighting – discrete controls or centralised control system	Medium	< £100 - £100 to £1,000	-	Easy
Renewable energy	Solar PV	High	> £1,000	-	Difficult
	Solar Thermal	High	> £1,000	-	Difficult
Computers & IT solutions	CRT to LED monitors	Low	< £100 - £100 to £1,000	-	Easy
	Energy Efficient Server Replacement	Low	< £100 - £100 to £1,000	-	Difficult
	LED monitors instead of LCD (cost difference)	Low	< £100 - £100 to £1,000	-	Easy
	Network PC power management	Low	< £100 - £100 to £1,000	-	Easy
Hot water	Flow restrictors	Low	< £100	-	Easy
	Hot Water – Efficient taps	Low	< £100 £100 to £1,000	-	Easy
	Hot Water – Point of use heaters	Medium	< £100 £100 to £1,000	- =	Easy

Resources

Useful websites

- Energy Saving Trust
- The Carbon Trust
- Small Business User Guide – Measuring and reporting your greenhouse gas emissions
- Business Link
- Envirowise
- WRAP
- The Quality Assurance Scheme for Carbon Offsetting
- Royal Institute of British Architects (RIBA) Climate Challenge

Energy providers

- Big Clean Switch
- Ecotricity
- Good Energy
- Green Energy

Trade bodies

- Solar Trade Association
- National Insulation Association
- Building Services Research and Information Association (BSRIA)
- Chartered Association of Building Service Engineers
- The Association for Renewable Energy and Clean Technology
- Building Engineering Services Association

Other useful articles

- Sustainable and environmentally friendly general practice
- Energy saving opportunities for GP practices
- Renewable energy good practice guidance
- Making energy work in healthcare – Government guidance

Travel

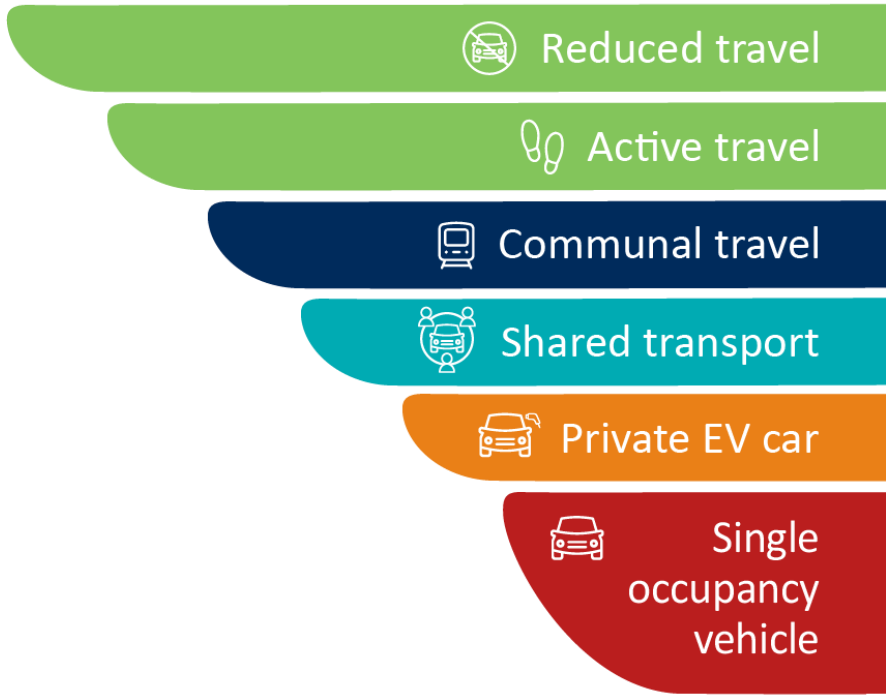
Addressing your travel footprint

Travel carries not only a high carbon cost, but a high health, social and environmental cost.

Petrol and diesel cars generate various pollutants contributing to asthma and respiratory disease, heart attacks and strokes and poor brain development in the young and dementia in the old.

The lack of physical activity due to cars contributes to diabetes and heart disease.

Mike Berners-Lee (*the* leading carbon footprint guru) in his book 'There is no planet B', calculated that for each mile travelled by a diesel vehicle across a town or city, it costs 12 minutes of life from the community. **Each 5-mile trip** to the GPs, or the school run, or the supermarket 'costs' the surrounding community **one hour of life**.



Why address your travel footprint?

1. Big non-clinical impact
2. Health benefits for the individual and surrounding community
3. Transport emissions contribute towards the 40,000 deaths in the UK from poor air quality each year.

Overcoming barriers

Patient travel accounts for around 25% of the primary care carbon footprint. A study into patient travel found that the majority (61%) was conducted by car or taxi because of 'convenience', 'time saving', and 'no alternative' for accessing the surgery.

What is your staffs current travel usage?

Knowing the current travel footprint can help to create plans to reduce it.

How to monitor and measure

1. Survey staff on their:
    a. Monthly or weekly working patterns
    b. Distance travelled
    c. Mode of transport

    (Downloadable form here)
2. Work out their annual mileage by multiplying their weekly or monthly journeys by how many weeks/months they work.
3. Calculate their carbon footprint with the DEFRA figures.

Influencing low-carbon travel and reducing staff travel for work and patient visits will vary depending on your location.

What is your patients' current travel usage?

How to monitor and measure

1. Benchmark your pre-pandemic patient travel footprint
    a. Collate postcode data for a sample of appointments
    b. Quantify the distance travelled for the sample and get an average
    c. Times this by the number of appointments
    d. Work out a % for car journeys.
    e. Use the DEFRA car average figure to calculate the carbon footprint

2. Annually calculate the number (or ratio/proportion) of telephone and in-person appointments.

3. To get better data on people's travel choices poll people arriving in person on the check-in process asking how they travelled.

Travel	Total miles	Total emissions
Staff		
Patient		

RC GP NET ZERO

Reduced travel

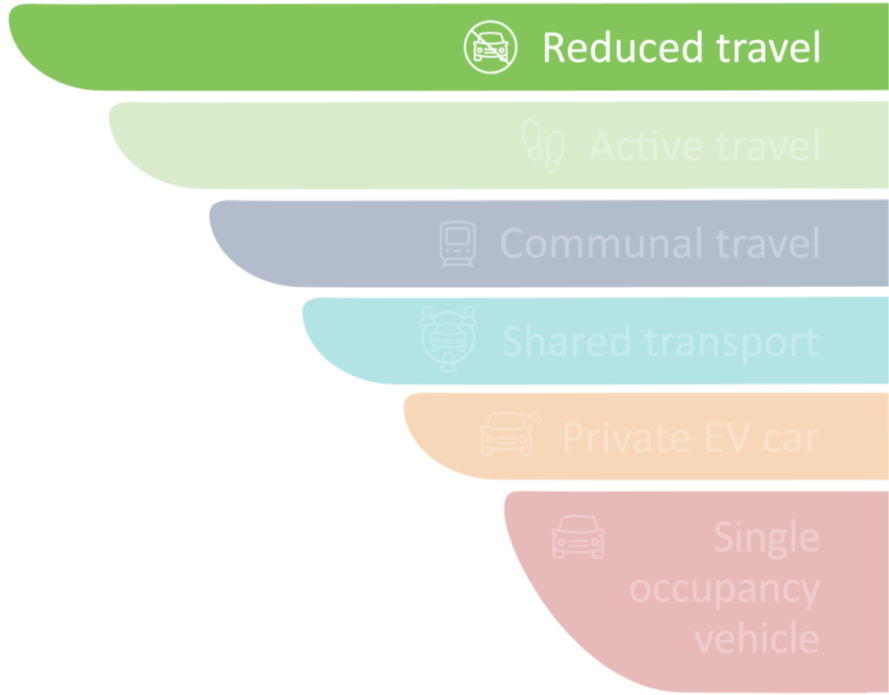
Can high quality healthcare be delivered without patients (or staff) having to travel much at all?

Travel can be reduced with targets to increase telephone appointments (although obviously not at the expense of patient health).

An implementation toolkit is available here and guiding principles here. These guides are likely to be continually updated.

Other options used during the response to Covid 19 includes video ward rounds of care homes, remote monitoring of patients' health in virtual Covid wards, using e-consultation tools such as AccuRx or similar.

Companies such as BT are working to reduce the carbon footprint of providing a telephone and WiFi network.



Reduce the need for travel by examining alternative business models for delivering high quality healthcare

Could the practice have a reduced travel or active travel target for every staff member?

Understanding what reduced-travel or active travel can look like for each staff member and creating a bespoke plan, will have benefits for their health and wellbeing as well as their carbon footprint.

Active travel

Staff can be encouraged to decrease their individual (and therefore the practice's collective) carbon footprint with some simple common-sense schemes:

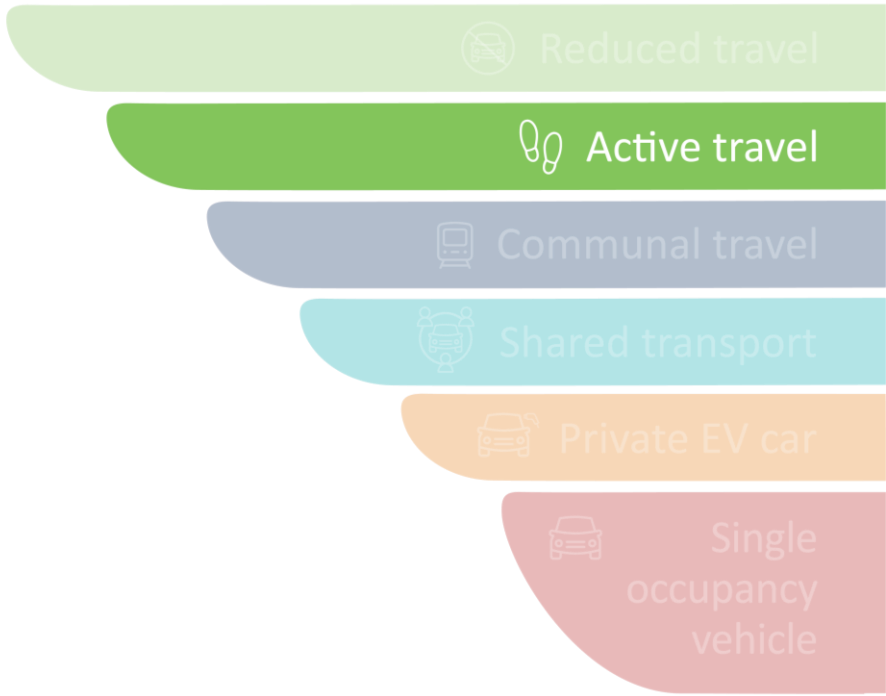
Walking to work would have the lowest carbon footprint and should be the first port of call for staff and patients.

Cycling to work schemes reduce carbon emissions, and lessens the need for a car park. Provide secure bike storage and have shower facilities available to make this a good option for your staff. And an onsite bicycle puncture repair kit and pump helps too!

Priming active travel

For in-person appointments, patients can be primed with active travel information as part of their text booking reminder including:

- Cycle routes
- Walking routes to the surgery
- Bus timetables and location of bus stops including walking time



Cycle to work scheme
Government backed salary sacrifice scheme makes buying a bike for work tax free for employees. More details here or here.

Do you or your staff want to learn to cycle or gain confidence?

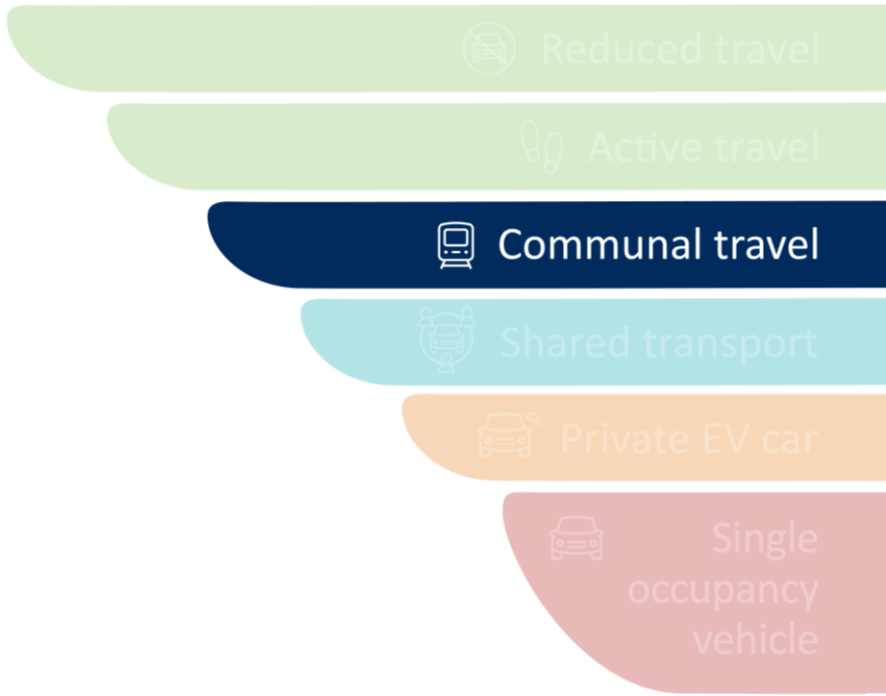
Bikeability scheme through local councils may offer 1:1 lessons (bikeability.org.uk/) or courses via Let's Ride at www.letsride.co.uk/beachampion to help champion the cycling cause

Communal travel

Where cycling is not an option, encourage public transport. For example, offer a loan for yearly travel passes at zero interest, or facilitate flexible working patterns to accommodate public transport timetables.

Easy-wins include identifying opportunities to incentivise low-carbon travel:

- Subsidising or loan staff money for monthly or annual bus/travel passes.
- Publicise the bus routes and bus timetables on the practice website.
- Signpost the path from the surgery to the nearest bus stop.
- Default public transport advice on the bottom of surgery letter.



Communal travel targets

Could the practice have a communal travel target for patients?

Understanding what public travel can look like for each staff member and creating a bespoke plan, will have benefits for their health and wellbeing as well as their carbon footprint.

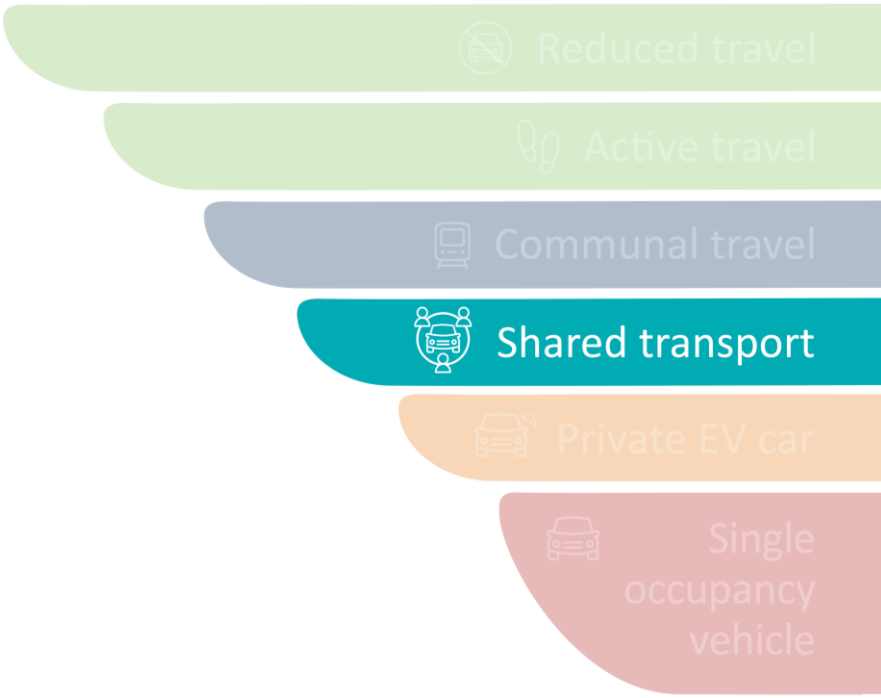
Personalised staff travel plans can be very powerful to help staff make changes to their commute.

Shared transport

There are many options to increase the number of staff using shared vehicles.

For example:

- Shared vehicles by practice staff (see Case study below).
- Staff car sharing can be incentivised by review shift start times for staff who are geographically close.
- Creating personalised staff travel plans.



Case study
One practice realised that 4 members of staff all lived close together but travelled in separate cars.

When asked, it transpired this was due to the start and finish times of their work being different. When synchronised, they shared cars meaning less fuel costs for them and better staff morale and camaraderie.

Watch this 7-min video on travel footprints for practices here.

Car use

Single occupancy vehicles creates several problems:

- Space used on the road (The UK has around 250,000 miles of paved road!)
- Air pollution from exhaust fumes
- Air pollution from tyre and brake dust

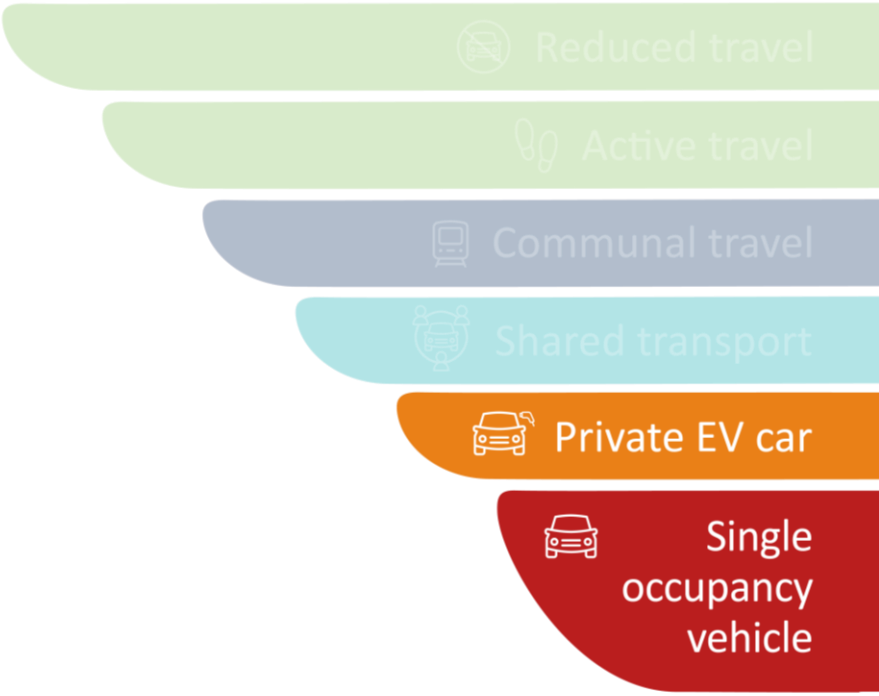
Where cars are used and can't be shared, reducing air pollution from exhausts can be achieved with electric vehicles.

Practices can help overcome barriers for staff and patients to 'go electric':

- Install practice electric charge points for cars.

For larger organisation, deliverables for sustainable development include:

- Signing up for a free Green Fleet Review
- Cutting business mileages and NHS fleet air pollutant emissions by 20% by 2023/24. In 2020/21 organisations should:
  - Consider reducing air pollution from fleet vehicles,
  - Ensure that any car leasing schemes restricts the availability of high-emission vehicles,
  - Ending business travel reimbursement for any domestic flights within England, Wales and Scotland.



Install electric charge points for cars for staff and patients in the car park.

Lead by example

Modelling behaviour

Staff are important positive role models for each other and patients.

Positive images are seeing staff arriving on foot or by bike, staff signing up and promoting local activities e.g., park-runs.

The practice can demonstrate its commitment by signing up to the "Active practice" charter and improving active travel infrastructure.

Improving behaviour

One in four people say they would be **more active** if it was recommended by a GP or nurse.*

*Source: Health Survey for England 2008: CVD and risk factors adults, obesity and risk factors children

Case study

Wish Surgery in Brighton examined their modes of travel for staff and patients with the aim of reducing the environmental impacts of travel.

Actions included:
Encouraging active modes of travel by producing, publicising and distributing 'Walking maps' and 'Cycle maps' showing locations of cycle parking.

Providing information on cycle training and cycle to work schemes.

Promotions on the benefits of walking and cycling.

Public transport was encouraged through maps with walking route to bus stops and season ticket loans for staff.

More information here.

Setting targets

Setting targets can help you deliver the strategic changes that are needed to reduce carbonised travel and carbon emissions.

Regarding travel, practice staff can set their own targets to achieve their goal such as:

- Increase active staff travel by 25% within 3 years,
- Offer all staff loans for public transport passes and/or cycle to work scheme by the end of the year with targets for increased take up,
- Promote active travel for all patients who attend the surgery (see here for ideas).

Example

Route to reduce		Aim/target					
Area	**Current footprint (2021)**	**3 years time**		**6 years time**		**9 years time**	
		Total % reduction	**How**	**Total % reduction**	**How**	**Total % reduction**	**How**
Staff travel	200,000 miles = 46,000 kg CO_2e	25% in carbonised transport 25% inc in active commute	Incentivise those closest to walk or cycle.	50%	Actively encourage bike to work scheme, e-bikes, install facilities.	75%	Install EV charge point at surgery, encourage those who travel most to EV.
Patient travel	35000 miles = 6500 kg CO_2e	20% in use	Promote walking scheme, actively push active travel.	80%	Look at practice boundary, install EV charge point for patients.	100%	Arrange with local bus service re requirements.

Example of activities to promote active travel

Proposed measure	Description	Potential level of impact	Implementation cost	Patients	Staff
Staff cycle parking	Provision of long term secure and covered cycle parking and shower facilities	High	Medium	NO	YES
Patient cycle parking	Provision of short term cycle parking conveniently located and accessible with the potential to secure bikes using self provided locks	High	Medium	YES	NO
Cycle to work scheme	Providing staff with a loan to purchase bicycles at a discounted cost	High	Medium	NO	YES
Public transport route maps and timetables	Making timetables and route maps for buses and trains available on the surgeries website and by providing relevant links	High	Low	YES	YES
Public transport season loans	Travel loans to be offered to interested staff while raising staff awareness of the financial benefits that can be achieved using public transport	High	Medium	NO	YES
Walking and public transport map	Distribution of tailored maps in order to increase local knowledge of the area and encouraging walking and public transport usage while reducing the perceived need to drive.	Medium	Low	YES	YES
Promotion of walking as a healthy way to travel	Raise awareness of the health benefits associated with regular walking and encouraging its uptake	Medium	Low	YES	YES

Source: Wish Park Surgery, https://wishpark.gpsurgery.net/wp-content/uploads/sites/331/2015/12/160222_Travel-Plan_Final.pdf

Example of activities to promote active travel

Proposed measure	Description	Potential level of impact	Implementation cost	Patients	Staff
Cycle maps	Increase local knowledge of the area encouraging cycling while reducing the perceived need to drive.	Medium	Low	YES	YES
Promotion of cycling as a healthy way to travel	Raise awareness of the health benefits associated with regular cycling and encouraging its uptake	Medium	Low	YES	YES
Promotion of public transport benefits	Promotion of benefits that can be gained by public transport use	Medium	Low	YES	YES
Taxi services	Promotion of taxi services for patients when travelling to and from the surgery	Medium	Low	YES	NO
Cycle training	Promotion of cycle training courses through the practice website	Low	Low	YES	YES
Car sharing scheme	Promotion of car sharing for staff making similar journeys and who are looking to cut the financial cost or environmental impact of car use	Low	Low	NO	YES
Accessibility to the rail network	Promotion of routes between the surgery and nearby railway stations	Variable by location	Low	YES	YES

Source: Wish Park Surgery, https://wishpark.gpsurgery.net/wp-content/uploads/sites/331/2015/12/160222_Travel-Plan_Final.pdf

How to convert distance travelled into carbon emissions

How to monitor and measure

Staff mileage and calculating the carbon footprint using government conversion factors.

Blank sheets are downloadable here.

	A	B	C	D	E
	Daily distance travelled – return trip (miles)	**Yearly distance travelled (miles) (a x days worked x weeks worked)***	**Car type and size (petrol/diesel ; S/M/L)**	**Emissions per mile (see table to the right)**	**Carbon emissions (kg CO_2e) (b x d)**
Staff					
Anne	5	1,150	Petrol, small	0.239	**275 kg**
Bill	15	3,450	Diesel, large	0.329	**1,135 kg**
Claire	25	5,750	Electric	0.00	**0 kg**

Fuel type**	Engine size	Emissions (kg CO_2e/mile)
Petrol	Small	0.239
	Medium	0.300
	Large	0.448
Diesel	Small	0.221
	Medium	0.268
	Large	0.329
Hybrid (PHEV)***	Average	0.113
Electric (BEV)***		0.00

* assume works 5 days a week, 46 weeks a year

** Source: www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020

*** BEV – Battery Electric Vehicle; PHEV – Plug-in Hybrid Electric Vehicle

Resources

Staff data recording form

- Carbon Footprint of staff travel

No travel

- Does telemedicine reduce the carbon footprint of healthcare?

Active travel

- Physical Activity and Lifestyle Toolkit
- Cycle to work scheme
- The green commute initiative

Green travel planning

- Scotland and NI
- Travel plan

Examples of green travel plans

- The Christie Hospital
- Walton Community Hospital
- NHS Travel Planning Forum

Clean air posters and resources

- Business action on clean air

Carbon conversion factors for transport

- Greenhouse gas reporting conversion factors 2020

Business services

Addressing your practice's business service footprint

Business services are all the professional services practices use such as telephony, computers and IT, accountancy and finance, payroll, insurance and many others.

Each service a practice uses has their own carbon footprint. **Part of their footprint forms part of our footprint**. We can lower our footprint by influencing those around us and those whose services we use to start their own Net Zero or decarbonisation journey.

We have financial influence over our suppliers and can use this to improve their environmental behaviour.

Rather than switching to a new more 'sustainable' supplier, giving existing suppliers a chance to improve will improve the overall supply chain.

You won't be the only one asking them to change, and the more voices asking
for change, the more chance of this happening.

Top actions you can take

- Identify your expenditure and service hotspots
- Cancel services you no longer need
- Substitute low-carbon alternatives and less environmentally harmful services
- Ask your suppliers about their plans to tackle their carbon emissions
- Set them deadlines to improve by

Essential business services

GP practices need to abide by certain minimum legal standards.
These include providing services for patients via telephone access and well-trained staff with up-to-date mandatory training such as first aid, CPR or safeguarding.

The CQC mandate a number of policies which may involve additional or external business services e.g., infection control, health and safety, preparing a business continuity plan, equipment calibration and PAT testing, checking staff on the DBS register.

The premises need to be well maintained and hazard free – waste providers and fire safety is paramount.

Other services are highly desirable – for example independent accountants analysing the books for tax payments.

These services can continue to be provided but questions could be asked about the impact they are having and their own carbon emissions footprint.

"Every time you spend money, you're casting a vote for the kind of world you want,"
Anna Lappe

Why address your business services footprint?

Every service and purchase has a carbon footprint from travel, production, cleaning and waste impacts.

The message from the Greener NHS report is clear: The NHS has committed to reaching net zero by 2045 for the emissions it influences through the goods and services it buys from its partners and suppliers. Work on achieving this has already started; From April 2022, all NHS tenders must include a minimum 10% weighting for net zero and social value. From April 2023, all suppliers of contracts above £5m will be required to have a carbon reduction plan. You can find more information on the NHS supplier road map here.

Audit of business services

Use your invoice information to calculate the amount of spend in each of categories (see next page).

Having your carbon footprint calculated will help identify which services are the highest contributors to the practice's overall footprint.

See here for more details.

Calculating your impacts with spend-based data

Category	Examples	Our practice spend (£)
Financial	Accountancy, payroll, banking/bank charges	
Communication	Telephones, IT, websites, broadband, software licences	
Membership services	Defence unions, DBS checks, music performance	
Insurance and legal services	Building insurance, liability insurance, ICO (information commissioners office), CQC and medical levies/membership fees	
Servicing	Lifts, oxygen, fire alarms, medical equipment, boilers and heating equipment, sterilisation of equipment services	
Maintenance	Building fabric, facilities management, building service charges	
Waste	Confidential, shredding, recycling, clinical and non-clinical waste	
Recruitment costs	Advertising, screening, occupational health assessments	
Postage and carriage	Letter, parcels, Docman, scanning	
Water and sewerage		
Education and training		

Conduct an audit

All business services can be audited and examined – later there is worked example of IT Services.

Calculate the total spend by category. This can give a rough carbon footprint although some business types have a higher average carbon footprint per £ spent than others.

You can use spend-based figures against your annual accounts and the categories your services and purchases fall under.

For individual help here you can contact pcd@rcgp.org.uk.

The practice accountant may have all this information already available.

Spend-based figures provide an average for different services. They have limitations – for example if services become cheaper - but are an easy way to monitor, measure and demonstrate progress.

Setting targets

Setting targets can help you deliver the strategic changes that are needed to reduce carbon emissions from all business services.

Regarding business services, the practice can set their own targets to achieve their goal:

- Reduced service use by identifying legacy or historic services which are no longer needed,
- Identify less environmentally harmful services for the services contributing most to your footprint,
- Introduce a carbon metric along side financial cost when contracting with services,
- Set a number (%) of services contacted to ask about their emissions footprint.

Route to reduce		**Aim/target**					
Area	**Current footprint (2021)**	**3 years time**		**6 years time**		**9 years time**	
		Total % reduction	**How**	**Total % reduction**	**How**	**Total % reduction**	**How**
Business services	E.g. 110,000 kg CO_2e	20% in service use 25% reduction in carbon	Identify services which are no longer needed. Use lower carbon services in the biggest hotspots.	50% reduction in carbon	Actively identify further low carbon services. Use only services with a decarbonisation plan in place.	At least 75% reduction in carbon	Use only carbon neutral suppliers for all new suppliers. Audit and press current suppliers to achieve carbon neutrality.

More actions you can take

For the business services you use, can you

- Use resources more efficiently?
- Substitute for low-carbon alternatives?
- Ensure that suppliers are decarbonising their own processes?
- Request services have had their carbon footprint calculated?

Identify low carbon alternatives using the Carbon Trust, green directories and regional low carbon networks (see Resources).

Influencing change
When engaging new suppliers for tenders and new contracts include questions about their sustainability and carbon reduction commitments.
This can also be done with existing suppliers.

Start with your biggest providers first or the ones with the highest figures in your audit.

A letter can be sent to suppliers asking what they are doing regarding their carbon emissions footprint and the actions they are taking to reduce it.

Resources

Green business directories and suppliers

- Carbon Trust Accredited Suppliers and installers of energy efficiency and renewable energy technology
- UK's most comprehensive Green Business directory
- Directory to find like-minded businesses committed to environmental best practices
- edie's suppliers directory
- For help from construction professionals e.g., for intelligent heating control specialist
- Accredited supplier registry
- Future Fit Business Benchmark provide a comprehensive scheme to assess and address the environmental and social impact of your business, but doesn't currently support benchmarking
- International Chamber of Commerce has set up a pledge scheme for SME leaders future-proof their business by committing to halve greenhouse gas emissions before 2030 and reach Net Zero emissions before 2050

Regional low carbon business networks

- Derby/Notts
- Oxfordshire
- Kent

Accountancy

- How to create a greener accountancy practice
- Kung Fu - Low Carbon Accountant (B-Corp)

Example: Net Zero IT services

The impact of IT services

IT can fall into two parts – business services and procurement of goods. Services include telephone services and broadband suppliers; procurement of goods include new computers and peripherals.

Information technology (IT) is increasingly a place where companies can save money and energy, while reducing their carbon footprint and preserving the environment.

Green IT (green information technology) is the practice of environmentally sustainable computing.

Green IT aims to minimise the negative impact of IT operations on the environment by designing, manufacturing, operating and disposing of computers and computer-related products in an environmentally-friendly manner.

Expenditure Audit

Audit current expenditure on services including telephone systems, IT, websites, broadband contracts, software licences etc. using the table below.

Service	Supplier(s)	Cost
Telephone systems		
IT		
Website hosting		
Broadband contracts		
Software licences		
Data storage		
New computers		
New peripherals (e.g., monitors, printers)		
Other		

Addressing your IT and online carbon footprint

The motives behind green IT practices include reducing the use of hazardous materials, maximizing energy efficiency during the product's lifetime and promoting the biodegradability of unused and outdated products.

Green IT covers the purchase on new equipment through to the disposal at the end of its useful life, alongside the software and energy when in use.

E-waste — the obsolete technology that winds up in landfills and incinerators, often in developing nations — is an increasingly serious global environmental problem, so it is important to maximize the lifespan of IT products.

Whilst storing data in the cloud may seem like it doesn't have an impact, the reality is it is actually stored on the ground in huge data servers that are run on energy and often fall back on diesel generators. Regularly deleting emails, unnecessary files and reducing the need for sending unnecessary data or files is another way to reduce your carbon footprint.

Life cycle of a computer

Mining	A computer has over 30 different minerals including silica, iron, aluminium, copper, nickel, arsenic and cadmium
Manufacturing	Often energy intensive and included processing of minerals and transportation
Packaging	Often involving cardboard and plastics for protection and include its disposal
Shipping	From factory to store and to homes/businesses
Use	Using software and electricity
End of life	Including recycling or waste disposal

Dell calculated each desk top computer emitted **720kg** CO_2e over an average lifespan of 4 years.

Top actions you can take

- Identify your IT expenditure and hotspots
- Request services and products which have already calculated their carbon footprint
- Discuss procuring and using low-carbon/low environmental impact equipment and services

Carry out an IT systems audit

Perform an audit of your current IT systems – both equipment and use

Audit what services and tools are being used. This could identify items that do not need to be powered on or refreshed as part of a cycle, leading to a reduction in energy usage and costs.

The audit can examine:

- What is being used and when?
- What is being left on when not used?
- All plugged in IT equipment including hard drives, monitors, printers, fax and franking machines,
- All consumables including toners/print cartridges,
- Reuse and recycling options end of life.

Can the power management of the essential devices be improved?

A study in 2016 showed an office using 50 computers (exclusive of the monitor) used 171 watts of electricity. If permanently left on, this generates about 35,000 kg CO_2e per annum.

To absorb this amount of carbon dioxide – using an average amount of carbon dioxide absorbed per hectare of UK woodland at 5.4 tonnes per year, this equates planting over 6 hectares of woodland *each and every year*.

The most sustainable solution for a computer is taking care of the one you have.

Tips for Greener IT – Equipment

Lifetime of equipment
It can be tempting to purchase new, more efficient computers every couple of years, but the amount of energy and hazardous materials used to produce new equipment can be far more environmentally damaging than the extra electricity consumed by older systems.

Circular procurement
PCs can be leased or rented rather than bought. By considering hardware as a 'service', the supplier ensures it is the optimal system and longevity including repairing and maintaining rather than replacing

How much equipment?
Recording the amount of IT and peripherals can help practices reduce their purchases. Are there extra monitors, headphones or tones in the backs of cupboards that have been forgotten about and could be used rather than buying another one?

Do I need more?
When you do make new purchases, look for hardware than can easily be upgraded and consider sourcing from suppliers that guarantee they will take back and recycle all equipment at the end of its useful life.

Reducing the refresh rate of devices
Whilst it may be natural to look for the lowest cost options when purchasing new kit, if the lifespan of a device is considered, a more expensive upfront device may become cheaper over time if it is expected to last longer. This also reduces the amount of equipment that needs to be recycled or disposed of.

Carbon emissions and IT options
Sending an email
0.3g – Sending a short email from laptop to laptop
17g – Sending a long email (10mins to write, 3mins to read)
280g – Sending same long email as a letter on recycled paper
350g – Sending same long email as a letter on virgin paper

Video consulting or meetings – per hour
2g – on 13" Mac book
10g – on laptop
50g – on desk top

Holding an online video conferencing meeting for 10 people on laptops for an hour would generate a total of **100g** CO_2e.
If the meeting was face to face, average travel was 2 miles and all attendees drove average cars, the footprint would be **5,300g** CO_2e.

Data from Mike Berners-Lee in 'How Bad Are Bananas?'

Tips for Greener IT – Use and end of life

During use

Energy consumption

- See Energy section
- Reduce energy use - switch off when not in use; buy products with low energy consumption.
- As part of the energy audit, map energy consumption across the practice for IT/electronic equipment.
- Set energy efficiency settings for all computers, printers and monitors.

Digital transformation

Practices and patients are far more familiar with digital working including video and phone consultations, e-consults, remote access of information etc.
This includes online meetings both internally and externally of the practice

Software

- Set requirements for sustainable design to be incorporated into software applications – ask the IT department when it comes to installing or upgrading software.
- Switch to Ecosia as web browser – a tree is planted for every 45 searches made.

Maintain and reuse

Upcycling and repairing at the right time makes equipment last longer.
Local repair shops or the IT department can help. A guide from Norton is here.

After use

Take back programs - Dell has emerged as an industry leader with its takeback service.

Recycle 'Anything with a plug, battery or cable can be recycled' – Recycle Your Electricals.

Reduce e-Waste with Recycle Now.

Setting targets

Setting targets can help you deliver the strategic changes that are needed to reduce carbon emissions from IT.

Regarding IT, the practice can set their own targets to achieve their goal such as:

- Three yearly audit of equipment and services
- Reduced the number of pieces of equipment or the frequency they are replaced
- Reduce energy consumption while in use
- Look at extending the life of equipment through maintenance

Route to reduce		Aim/target					
Area	**Current footprint (2021)**	**3 years time**		**6 years time**		**9 years time**	
		Total % reduction	**How**	**Total % reduction**	**How**	**Total % reduction**	**How**
IT equipment and services	5,000 kg CO_2e	Reduce by 25%	Repair and maintain all computer equipment rather than replace. Reduce number of printers to a few in a central location.	50%	Change procurement policy for new equipment to only those with lower impact.	75%	Have zero emission IT online services for data storage with green supplier. Commit to 100% repairable and upgradable equipment.

Resources

Greener procurement of IT equipment and services

- Ethical Consumer's laptop shopping guide (subscription service)
- How to choose a sustainable and ethical laptop

Recycling toner and printer cartridges

- What to do with printer cartridges
- The Recycling Factory

Green webhosting

- Green Geeks

End of life

- What to do with electrical items
- Recycle Your Electricals

Useful articles

- 25 vital computer maintenance tips and checklist to protect your device
- Why your internet habits are not as clean as you think

Example: Net Zero waste

Addressing your waste footprint

Waste contributes to the overall carbon footprint of a practice.

The management of healthcare waste is an essential part of ensuring that General Practice activities do not pose a risk or potential risk of infection and are appropriately managed. A small minority of waste is potentially hazardous and if not disposed of correctly can result in injury or infection.

All staff are responsible for the safe management and disposal of waste and should understand how waste should be segregated and stored prior to collection or disposal.

This is driven by the need to reduce environmental impact, comply with waste regulations and other national guidance such as the *Health and Social Care Act 2008: Code of practice* and guidance on the prevention and control of infections and related guidance, and reduce costs associated with waste management.

While the carbon emissions from our waste are relatively small, **we cannot recycle our way out of the climate crisis, but we can reduce wasted resources.**

Why address your waste footprint?
Following the Waste Hierarchy is not only law to reduce resource usage and to prevent pollution, but it also reduces the carbon footprint. It is the legal responsibility of the General Practice, not the waste contractor, to ensure full compliance with environmental waste regulations. BMA advice is here.

Infectious or offensive waste?

Infectious waste contaminated with body fluids from a patient with a known or suspected infection with a proven infection risk and there are also medicines or chemicals present. ->Yellow bag.

Examples – Contaminated PPE • Medicated dressings • Contaminated dressings.

Non-contaminated infectious waste -> Orange bag.

Offensive (non-hazardous) waste from patients with no known or suspected infection which may be contaminated with body fluids. -> Yellow and Black Tiger stripe bag.

Examples: Gloves, aprons • Dressings (including blood stained) • Stoma or catheter bags • Cardboard vomit/urine bowls • Incontinence pads • Female hygiene waste, nappies.

Top actions you can take

- Don’t use clinical waste bags for non-clinical waste
- Identify the main items in waste and remove at source
- Segregate the waste correctly

Monitoring and measuring

Carrying out a waste audit (see right)

- Current waste collection systems
- Volume of waste generated
- Composition of waste and detailed analysis of key waste streams e.g., quantity of avoidable waste and causative factors, composition of waste packaging etc.
- Seasonality or demand peaks
- System constraints (e.g., infection control)

Download a waste audit form here

Waste audit

Over a week:

1.

Record the number and type of waste bags collected within the practice

2.

Examine the contents of each bag by colour e.g., tiger stripe bag/black bag, recycling bag

3.

Separate into categories and weigh totals e.g. Plastic, Metal (e.g., aluminium), Paper, Mixed/contaminated waste and Food waste

4.

Return waste to (correct) waste stream

5.

Repeat for other waste streams

6.

Consider if waste has been appropriately disposed of and whether it was avoidable by comparing against the waste hierarchy

Where do I put healthcare waste?

General practice waste management categories

It is easy to overlook the duty of care and legal responsibilities placed upon us personally to dispose of healthcare waste appropriately.

Correct segregation of waste ensures compliance with law and means it will be processed in the safest & cost-effective way, minimise any environmental impact; the colour of the container indicates its disposal route.

Improper segregation of waste and mis-use of waste bag types creates a significant challenge for the NHS.

Where do I put healthcare waste?

Offensive waste (tiger-striped bags):

- All clinical rooms should have this as main waste stream for GP practices.
- Used for non-infectious healthcare waste, e.g., items contaminated with blood or body fluids, PPE, speculums etc.
- All healthcare waste should be considered non-infectious unless proven otherwise?

Infectious waste (orange bags):

- Used for infectious waste **only** – typically solely needed in treatment rooms for dressings (e.g., leg ulcers), minor ops products etc.
- Should **not** be used routinely in GP practices as majority of patients and procedures are not infectious.

Sharps waste (yellow lidded):

- Used for all needles, syringes and vials contaminated by anything given to the patient, e.g., pharmaceuticals and most vaccines.

Sharps waste (purple lidded):

- Used for all needles, syringes and vials contaminated with cytotoxic and/or cytostatic medicinal products and their residues (e.g., BCG, Leuprorelin, Testosterone, Progesterone, Goserelin).

Sharps waste (orange lidded):

- Used for needles, vacutainers and waste from phlebotomy/podiatry (contaminated by blood or body fluids taken from the patient) that are **not** contaminated with pharmaceuticals.

General & recycling waste:

- General waste includes couch roll and paper towels.
- **Not all** clinical rooms should have a recycling bin – it is better having one in a central location. Recyclable waste may include packaging, papers, plastics etc.

Confidential waste:

- For all patient identifiable papers and sensitive information.
- This should be shredded and recycled (whether on site or via appointed third party).

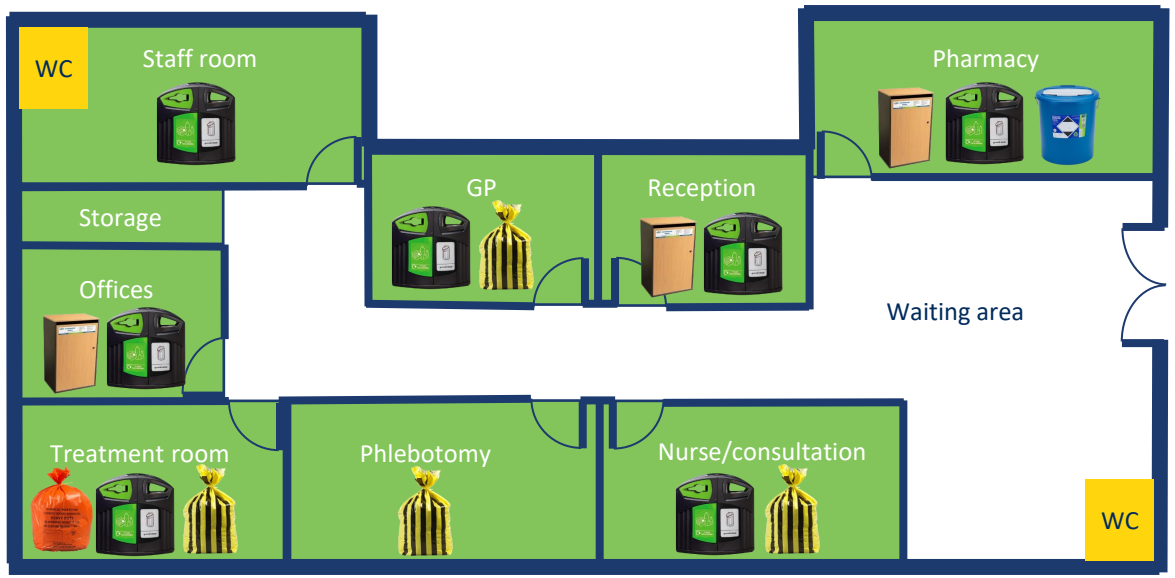
Medicinal waste (blue or purple lidded):

- All expired or patient returned medicines should be placed in blue-lidded containers, with exception of cytotoxic/cytostatic medicines which is placed in purple lidded containers.

How to configure waste bins on site?

General Practice Energy Management Floorplan

This waste management floorplan should be used as a guide for ensuring that all rooms/areas have the correct waste containers available.
Sites should apply this as practically as possible noting different estates types may allow for different configurations.



GP consultation rooms
- Tiger waste
- General waste
- Sharps bin

Offices, reception
- Paper recycling
- Confidential waste

Treatment room
- Tiger waste
- Sharps bin
- Infectious waste
- Recycling

Phlebotomy
- Tiger waste
- Sharps bin
- Recycling

Nurse consultation rooms
- Tiger waste
- General waste
- Sharps bin

Pharmacy
- Medical waste
- Recycling
- Confidential waste

The waste hierarchy

Reduce and prevent
Biggest reduction in waste is be preventing it from being generated in the first place. For example, less packaging, less new products, repairing, products designed for a longer life.

Reuse
Products and components that are used for the same purpose again, e.g., reusable PPE masks.

Recycle
Waste materials that are reprocessed into products and materials that can be used for the same or different purposes.

Recovery
Energy is recovered but the loss of resources occurs e.g., waste to energy incineration plants.

Disposal
Last resort. Either sent to incineration without energy recovery or sent to landfill.

What about plastic?

Plastics are incredibly useful and have changed the way we live our lives. The versatility of the material – to be moulded and shaped makes them suitable for many applications. There is increasing concern about how many are used and how they are disposed. Because they generally don't degrade or corrode, they persist for many hundreds of years.

Plastics are useful for packaging goods. Plastics is versatile, hygienic, lightweight, flexible and highly durable and accounts for the largest usage of plastics worldwide. It is used in numerous packaging applications including containers, bottles, drums, trays, boxes, cups and protection packaging.

Primary care rely on flexible plastics for packaging. When it comes to plastics, the softer they get the harder they are to recycle.

The UK government has set a target of eliminating avoidable plastic waste by end of 2042.

A useful guide from WRAP is here.

In the UK, it is estimated we use five million tonnes of plastic every year, nearly half of which is packaging.

	Durable, high strength and can be used in low weight applications	Recyclable?
Non-biodegradable	Lasts for years, can fracture into smaller pieces/ microplastics.	Yes, if collected and sorted into separate material reprocessing streams.
Biodegradable	Breaks down in a defined period of time.	Yes, if separated from nonbiodegradable plastic streams and dealt with separately. **Cannot** be recycled in the same way as non-biodegradable plastic.
Compostable	Material decomposes/ biodegrades in **industrial** composting conditions. Materials that meet an appropriate home composting standard can be composted in home composting systems.	Separated and sent to industrial composting facilities. **Not** suitable for sending to recycling with other plastics.

Any plastic that evades appropriate collection and treatment that escapes into the environment has the potential to have a long-lasting impact on the environment.

Types of plastic

Plastic can be made from fossil-based or bio-based materials. The nature of the material used to make a plastic, or the term used to describe it does not necessarily dictate the way it will behave at the end of its life e.g., a bio-based plastic or bioplastic does not automatically mean it will biodegrade.

Important characteristics can include strength, thermo-stability, gas barrier properties, transparency, lightweight, shatter-resistant and recyclability.

Name	Polymer name	Symbol	Uses	Recyclable
PET (or PETE)	Polyethylene terephthalate		Used in bottles, food trays, tope, tote bags, carpet.	Yes
PE – HDPE	polyethylene		High density PE is used for milk bottles, bleach, cleaners, toys and most shampoo bottles.	Yes
PVC	Polyvinyl Chloride		Plumbing pipes. Tiles, shoes, gutters, window frames	In some places, yes
PE - LDPE			Low density PE is used for carrier bags, food bags, bin liners and packaging films	Harder to do, but yes in some places
PP	Polypropylene		Commonly used for margarine tubs, microwaveable meal trays, kitchenware, yogurt containers	Yes
PS	Polystyrene		Take-out containers and disposable cups and plates, ‘packaging peanuts’	No
Other			Includes CDs, baby bottles, spectacles, exterior light fittings	Not usually

Source: wrap.org.uk/resources/guide/understanding-plastic-packaging-and-language-we-use-describe-it

Monitoring and measuring

Monitoring and measuring

Understanding a ‘current state map’ at each site includes:

- Carrying out a plastic audit (see box)
- Considering actions to reduce unnecessary use

Plastic audit

Start from the beginning and make a list of all the single-use plastics that exist in your practice: getting a better understanding on what actually gets thrown away will give a great starting point on what to eliminate altogether.

Identify the different types of plastic (where possible) – see previous page for types.

Identify if reusable or recyclable options are possible e.g. changing from polystyrene cups to reusable (glass, metal, rigid plastic) or recyclable (e.g. Type 5 Polypropylene) ones.

Tips to reduce plastic

Think long term

- Getting into good habits with the small steps is not the only thing you can do
- Thinking longer term to change the culture of using single-use plastics is essential

Plastic free office

- Pointless plastic – identify and avoid unnecessary plastic e.g., plastic folders, folder dividers, plastic coated paper clips
- Paperless office – as offices transition to becoming paperless, start phasing out plastic (biro) pens and use pencils or metal pens instead
- Laminating – laminating posters will take hundreds of years to biodegrade. Choose alternatives like printing on card
- Create a central supplies library – for stationery and equipment , and ask staff to check there before purchasing anything new
- Stationery orders – order eco-friendly stationery and ask the supplier to use paper or cardboard packing materials instead of bubble-wrap, polystyrene or plastic wrapping

Food and drink

Kitchen and staff room – provide reusable crockery and cutlery e.g., glass jugs and glasses for water and metal spoons for stirring drinks. Avoid disposable plastic cutlery.

Encourage homemade lunches – having good food storage and preparation facilities will encourage and enable staff to bring in homemade lunches which inevitably reduces single-use plastic packaging.

Office snacks and shop – a great way to influence what snacks are eaten in the office, and what packaging is left behind. For example, replacing bottles for cans, and plastic packaged sweets and crisps with healthy fruit and other alternatives.

Provide staff with reusable mugs and bottles.

Plastic-free events – use paper decorations for practice parties and birthdays. Avoid cards and wrapping paper with glitter which is micro-plastic.

Encourage good recycling or go compostable

Sometimes using a single-use item is unavoidable. Even with the best effort, there are going to be times when you do have plastic waste in your office, but the key is to make sure staff are encouraged to recycle all appropriate materials, and correct usage of bins.

Setting targets

Setting targets can help you deliver the strategic changes that are needed to reduce carbon emissions from waste and plastics.

Regarding waste and plastics, the practice can set their own targets to achieve their goal such as:

- % volume reduction
- % increase in recycling
- % reduction in financial costs

Route to reduce		**Aim/target**					
Area	**Current footprint (2021)**	**3 years time**		**6 years time**		**9 years time**	
		Total % reduction	**How**	**Total % reduction**	**How**	**Total % reduction**	**How**
Waste	40 bags a week	25%	Audit current use, aim to increase recycling to **all** recyclable material.	50%	Identified excess packaging, unused resources, change suppliers.	75% - 10 bags in total	Aim for fully reusable medical equipment, so eliminating waste at source.
Plastics	5 bags a week	20%	Audit current use. Identify plastic hotspots. Single use plastic free kitchen.	50%	Identified excess packaging, use circular loops where packaging returns to seller.	80%	No single use plastics used at all. Only plastic from essential single use medical equipment.

Top actions you can take

Recycle

- Send printer cartridges for recycling
- Set up a food waste collection for kitchen waste
- Look for a closed- loop paper recycling supplier e.g. Paper Round collect paper in London and then resell it as office paper

Best practice recycling set-up

- No under-desk bins
- All waste and recycling bins in the same place
- Clear visual signage with images on them that reflect the waste streams people have in your office. Words like Mixed Recycling or General waste are meaningless as different waste collectors accept different items so include images. WRAP has some good examples of clear signage
- Ensuring clinical waste bins are not used for ‘general waste’ with clear signage

Resources

UK government guidance

- Guidance on applying the waste hierarchy in England
- Guides to understanding your waste responsibilities
- Environmental guidance for your business in Northern Ireland & Scotland

Waste and recycling guidance

- WRAP (the Waste & Resources Action Programme)
- Zero Waste Scotland
- Recycle Now

Useful articles

- BMA ‘Disposing of clinical waste’
- IPC Waste management Policy for General Practice

Procurement of goods

Addressing your procurement footprint

“Procurement **holds the key** to the majority of impacts. It has a vital role to influence the supply chain, in your own operations and the distribution of your products and services” according to Hugh Jones, managing director of The Carbon Trust.

Procurement of goods in practice includes medical consumables (PPE to uniforms), office consumables (printing, paper, postage), medical equipment (BP machines to oximeters) and office equipment. Being aware of what we buy, how it is used and how it is disposed of is vital.

Practices are part of the global supply chains as these extend around the world. They are vulnerable to natural disasters and civil conflict. Climate change, water scarcity, and poor labour conditions in much of the world increase the risk to our ability to have the tools, equipment and staff to deliver great healthcare.

Procurement can make a real difference when cutting carbon emissions as carbon is associated with the assembly, packaging, transport, storage and handling of products and materials which account for a significant proportion of an organisations carbon footprint.

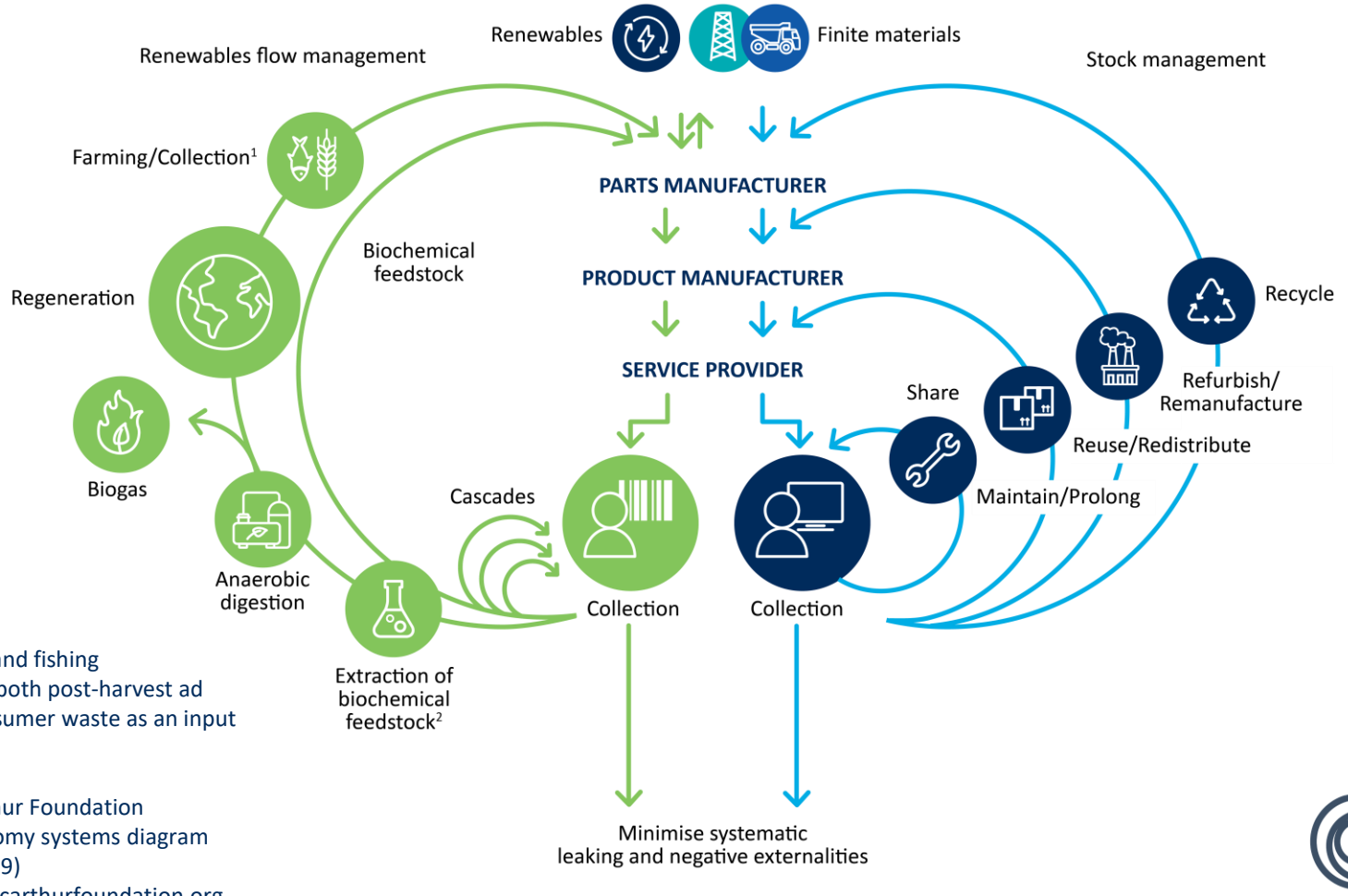
The NHS aims to reduce emissions under its influence, including those in its supply chain, travel and suppliers, to Net Zero by 2045. This also includes an 80% reduction in these emissions by 2036.

The NHS is working closely with its suppliers to ensure they meet the requirements laid out in the NHS supplier roadmap, so they align with NHS net zero ambitions before the end of the decade.

Top actions you can take

- **Reduce the number of products used by extending their lifespan e.g., frequency of replacing practice uniforms**
- **Identify less environmentally harmful services for the services contributing most to your footprint – e.g. request products which have their carbon footprint calculated**
- **Think through the whole lifecycle of the services being provided and the equipment and products used**

The circular economy for procurement*



1. Hunting and fishing
2. can take both post-harvest ad post-consumer waste as an input

Source
Ellen MacArthur Foundation
Circular economy systems diagram
(February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough, Cradle to Cradle (C2C)

*Source: https://www.ellenmacarthurfoundation.org/explore/the-circular-economy-in-detail

Medical procurement – equipment

Medical equipment

There are two reasons that medical equipment has a high carbon footprint. Firstly, the high carbon impacts associated with the materials and the production of them, and secondly the end-of-life disposal options.

Producing equipment made from metals has a large carbon and ecological footprint from mining to melting and moulding. For instance, the carbon footprint of an aluminium Zimmer frame and wheelchair are 24 and 168 kg CO_2e respectively, similar to a train journey to Amsterdam (28 kg) or a one-way flight to Rome, respectively.

For medical equipment, redundancy feels built in, with a newer model coming soon. By extending the lifespan of our equipment, making them multi-use rather than single use, investing in repairing and maintaining, we can reduce the environmental and carbon impact from our equipment.

Action

Audit all the medical equipment bought over the previous 12 months.

SEAL medical supplies

0115 9063000 sales@sealmedical.com

Case study : Seal Medical Supplies
Recycling medical equipment

Seal Medical Supplies are a retailer of medical equipment based in Nottingham. A team of field-based technicians carry out calibration, servicing and repairs to medical equipment across the UK in partnership with their sister company - Seal calibration Ltd.

In addition, they offer a medical equipment disposal service allowing medical establishments to **responsibly dispose of old or broken equipment**. Upon collecting your old medical equipment, a traceable waste transfer notice is provided for your records.

Once collected, the equipment will be assessed and working parts salvaged, recycled or refurbished. Items that can't be reused in any fashion are responsibly disposed of.

Send all those old stethoscopes, ECG machines, otoscopes or ophthalmoscope from your practices.
www.sealmedical.com
Tel: 0115 906 3000
Email: sales@sealmedical.com

RC GP NET ZERO

Medical procurement – consumables

Medical consumables

There are many products which constitute 'medical consumables' – from PPE and masks to PV speculums, couch roll, venepuncture equipment, wound dressings and many more.

Many medical supply companies aim to produce single use disposable equipment for additional sales. However, reusable medical devices are available.

Any item that contacts intact skin but not mucous membranes – Intact skin acts as an effective barrier to most microorganisms – are considered **low risk** for causing infection and can be made reusable. They can be disinfected between use when required.

Action

Audit the medical equipment bought over the previous 12 months.
Optimise stock inventory to avoid products going out of date and being wasted.

Case studies

Carbon footprint of PPE

If, over a year, a practice used…

20 rolls of aprons (200 per roll) = 4000 apron @ 65g CO_2e/apron = 260 kg

16 boxes of disposable masks (50 per box) = 800 masks @ 20g CO_2e /mask = 16 kg

175 boxes of gloves (100 per box) = 17,500 gloves @ 26g CO_2e /glove = 455 kg

Their total carbon would be **731 kg CO_2e** (about 3/4 tonne CO_2e) annually.
Source:
https://journals.sagepub.com/doi/full/10.1177/01410768211001583

Revolution Zero

During the first year of the coronavirus pandemic, NHS alone has disposed of 1.4 billion masks. Revolution-ZERO masks and other PPE target both zerocarbon and zero waste by having a fully circular cradle-to-cradle service offering.

Sterile services and equipment reuse

Some practices are discussing with the Sterile Services Dept in their local acute trust about using reusable equipment and having it sterilised after use rather than using single-use equipment.

Office procurement – equipment

Office Equipment

Office equipment covers personal electrical equipment (headsets, telephones, cables, webcams and microphones) to office electricals (fans, printers shredders, projectors) to furniture (desks, drawers, back rests, foot stools, standing desks) to new door locks and radiators.

Action

- Audit the office equipment bought over the previous 12 months
- Log stock inventory to know what resources and equipment are currently available in the practice

Case study: Warp-it

Warp-it helps businesses find, give away, or loan office furniture, equipment and other resources.

They help save money time and space.

Reduce waste disposal and purchasing costs.

No need to purchase new equipment and resources for your organisation.

Find a new owner for your surplus kit in your organisation or beyond.

They are currently used nationwide by many healthcare and other organisations.

By 2021, they have saved 11,000,000 kg CO_2e and £25 million and diverted nearly 4 million kg of equipment from waste streams.

www.warp-it.co.uk
0800 0488755
General enquiries: info@warp-it.co.uk

Office procurement – consumables

Office consumables

This category includes stationery (paper, envelopes, pens, tape and appointment cards) to printer consumables (toners and printer cartridges) to staples and storage options (box files, poly pockets, filing trays) to books (training manuals, diaries, notebooks) to batteries to refuse sacks and cleaning products.

Action

Audit your office consumables bought over the previous 12 months.

Batteries have a footprint of 12.1kg CO_2e per kg of battery.
A 4-pack of AA alkaline batteries weighs around 100g so their carbon footprint is 1.2kg CO_2e.

Recycling ink/toner cartridges saves nearly 9,600 kg of aluminium, 40 tons of plastic, and one million litres of oil for every 100,000 cartridges recycled.

Setting targets

Setting targets can help you deliver the strategic changes that are needed to reduce carbon emissions from procurement.

Regarding procurement, the practice can set their own targets to achieve their goal such as:

- Reduced the number of products used e.g. frequency of replacing practice uniforms
- Identify less environmentally harmful options for the services contributing most to your footprint
- Think through the whole lifecycle of what you are doing/the service being provided
- Ask suppliers about their sustainability plans

> "Public authorities have to regard economic, social and environmental well-being in connection with public services contracts and also taking into account wider social and environmental value when they choose suppliers."
>
> Services (Social Value) Act 2012

Route to reduce		Aim/target					
Area	**Current footprint (2021)**	**3 years time**		**6 years time**		**9 years time**	
		Total % reduction	**How**	**Total % reduction**	**How**	**Total % reduction**	**How**
Medical procurement	24,000 kg CO_2e	25%	Audit and identify medical equipment and consumables. Manage stock better.	50%	Identify alternative clinical pathways to reduce single use.	75%	Identify reusable medical equipment; remove single use; 100% at end of life to refurb service.
Office procurement	20,000 kg CO_2e	20% in use	Paper free with digital as default for communication.	50%	Use recycled equipment as default via Warp-it, etc.	100%	Remove all single use materials; only use suppliers with Net Zero policy.

More procurement actions you can take

Avoiding unused items expiring

- Have a good stock management system
- Keep items that expire soon at the front of the cupboards to avoid waste

Increasing reuse

- Where possible purchase products that can be decontaminated and reused, rather than single use items
- Charge a deposit on items, local practices charges £20 for hiring BP machines
- Hold an amnesty day for returned items
- Wash, autoclave and reuse items such as ring pessaries, metal scissors

More procurement actions you can take

Switching material choices

- For items that are unavoidably single-use switching to a lower carbon alternative can be preferable
- Rather than you having to become a carbon footprint expert on different materials here are some high and low carbon examples:

  High carbon footprints:
  - Metals
  - Cotton

  Lower carbon footprints:
  - Plastic
  - Recycled paper
  - Bamboo

Simple switches

- If they can’t be reused, switching from metal to plastics has a lower footprint or from virgin tissue roll to recycled or bamboo tissue

RC GP NET ZERO

More office-based actions you can take

Avoiding unused items expiring

- By having a good stock management system and keeping items that expire at the front of the cupboards it can avoiding items expiring before they are used
- Buying in bulk will save money by making the most of bulk purchase offers, and can consolidate the number of deliveries made, reducing carbon emissions

Reduce the impact of your purchases

- Keep things in use for as long as possible
- Buying items to last or on a lease where they are kept in circulation for longer
- Working with a IT provider that responsibly manages the end of life of waste electrical items; ideally by refurbishing an making available within the local community
- Request take-back schemes for packaging or ask for ‘no packaging’ options
- Create a recommended purchase list for the low-carbon options so staff can buy from this list rather than having to evaluate themselves

More office-based actions you can take

Switching material choices

- For items that are unavoidably single-use switching to a lower carbon alternative can be preferable. For example from virgin paper products to recycled

Reduce

Printing

- Changing printing settings so people have to press the printer to print
- Double-sided printing as a default setting

Cleaning products

- Switch to brands that sell soluble sachets that are diluted with water in trigger bottles or mop buckets

Resources

NHS Supplier roadmap

- https://www.england.nhs.uk/greenernhs/get-involved/suppliers/

Companies who offer reusable equipment

- RB Medical

Reusable medical devices

- WFHSS
- Seal Medical
- Revolution Zero

Office equipment

- Warp-It

Net Zero Action Plan

What is a ‘Net Zero Action Plan’?

Introduction

A Net Zero Action Plan can cover as many areas as the practice wishes. However, the major hotspots for non-clinical emissions for primary care are:

- Energy,
- Travel for patients and staff
- Business services including IT and waste
- Procurement covering medical and office equipment and consumables

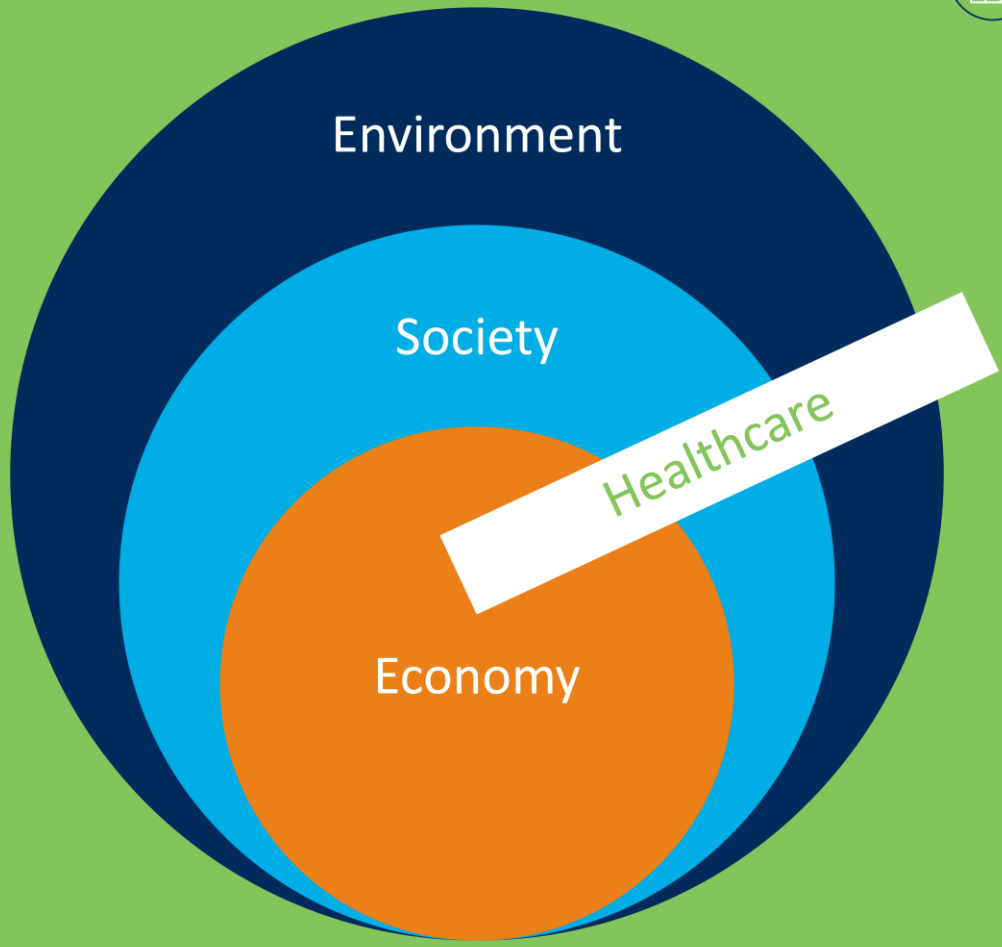
Before you start

What is already in place?

Look at the practice and identify good and great behaviour, ideas and systems that already exist.

Who needs to be involved?

Ultimately the aim is to involve all employees but at the start you need to decide who is best placed to lead the development of the practice plan.



Healthcare straddles **all** the above areas. It is influenced by the environment and impacts upon it; it is part of society, and it impacts on the economy both directly and indirectly.

Monitoring and measuring your impacts

As with all actions on a green action plan, you will need to build in a monitoring and measuring process to calculate how well your actions are leading towards your goals. This can fit with your annual QoF cycle.

Monitoring your actions is vital to make sure you are on the right trajectory and are on target to reach net zero as soon as feasible.

There are audit and other analysis tools available for each section of energy use, staff and patient travel, waste production, procurement and spend on business services.

There are plenty of carbon calculators and tools to use, such as SEE Sustainability, Compare Your Footprint or Smart Carbon – who offer a simple and cost-effective way for you to measure the carbon footprint of your practice. If you'd like additional support, the RCGP offers a consultancy service via pcd@rcgp.org.uk.

Target setting

You can use SMART planning to have Specific, Measurable, Achievable, Realistic and Timely goals so you know the aims to achieve and by when.

Implement your plan

1.

Use the audit tools to identify carbon emissions for each aspect of non-clinical emissions

2.

Set targets and actions for each of the areas

3.

Complete the expandable guidance plan here.

See Frome Case Study as an example.

Visit SEE Sustainability for a downloadable action plan.

Develop your Net Zero Action Plan

Forms can be downloaded here.

		Aim/target					
Area	Current footprint	3 years time		6 years time		9 years time	
		% reduction	How	% reduction	How	% reduction	How
Energy – Electricity							
Energy – Gas							
Travel – Staff							
Travel – Patient							
Business services							
Procurement – Medical							
Procurement – Office							
Total							

Case study:
Frome Medical Practice Plan to reduce their footprint

Frome Medical practice have had their carbon footprint calculated and have worked on reducing their emission hotspots. An extract is below.

Area	Action
Measure Patient travel Staff travel (via travel survey completed in March) Energy Procurement	To work with SEE sustainability to measure our current carbon footprint, collate all data Spring 2021 and submit for analysis. To evaluate our report in summer 2021 and focus on any additional changes.
Staff travel	To look at plans to reduce carbon from travel to work through exploring alternatives, home working where appropriate. To measure NHS miles and reductions we can make through adoption of virtual meetings. Exploring electric bike and car options.
Patient travel	Promoting active transport. Encouraging less visits to the practice through telephone triage, video calls etc. Focusing on Chronic disease “one stop” clinics.
Procurement	Continued work to improve the knowledge of our supply chains and make improvements which reduce carbon.
Energy	To look at how we make the practice carbon neutral for energy. We currently have 100% renewable energy supplier and solar panels. The next step is look at alternatives with our landlord such as air source heat pumps.
Carbon literacy	To have a carbon literate workforce with 75% having completed training and working towards accreditation in this area so we maximise organisational impact and individual impact.

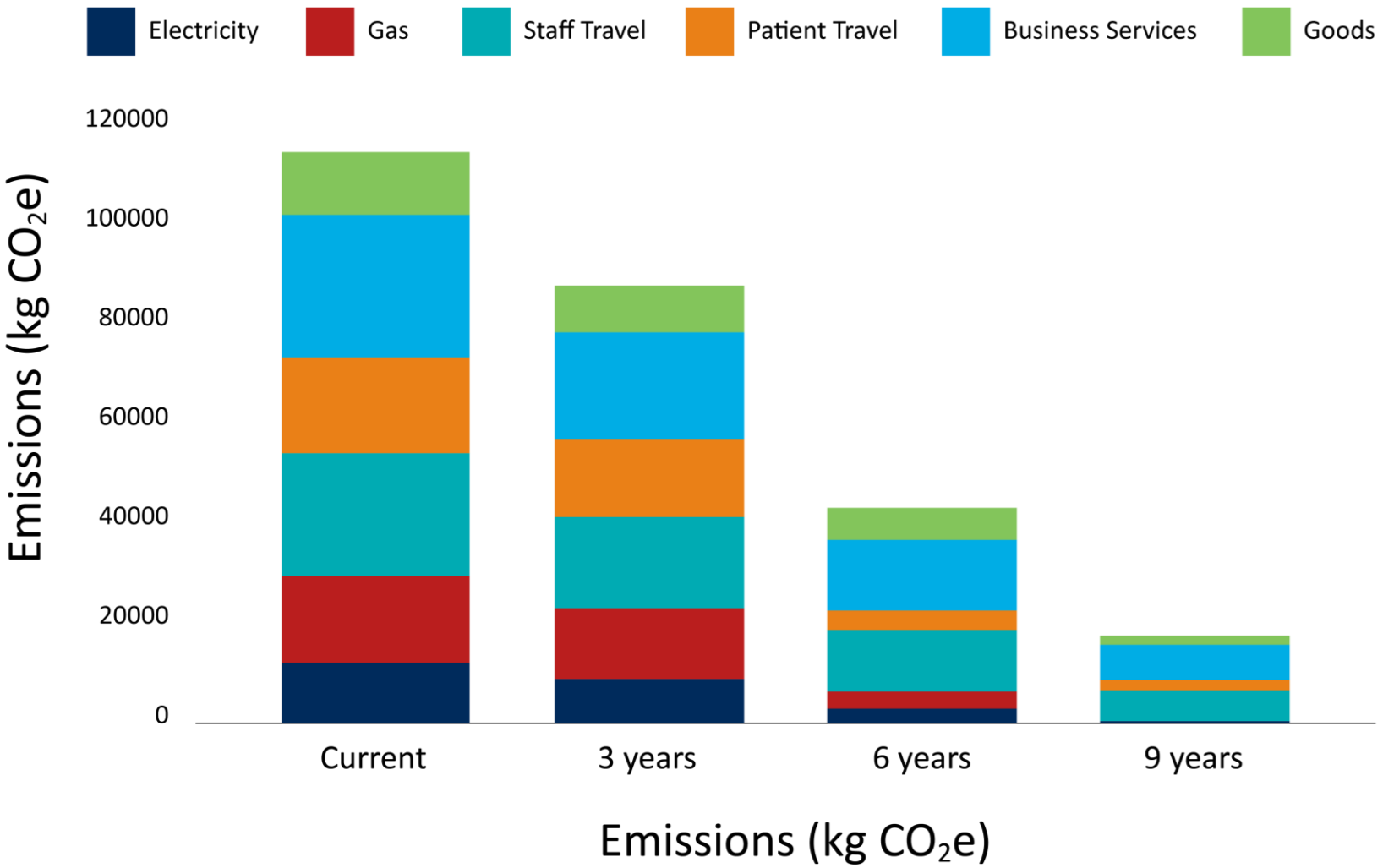
Source: www.fromemedicalpractice.co.uk/green-impact-policy

Example of a low carbon general practice

What could a practice look like in the process of decarbonising their non-clinical emissions?

		Aim/target					
Area	**Current footprint (kg CO_2e)**	**3 years time**		**6 years time**		**9 years time**	
		% reduction	**How**	**% reduction**	**How**	**% reduction**	**How**
Energy - Electricity	46,000 kg CO_2e	25% in use 100% green	Green team, behaviour change, energy audit. Change to 100% renewable.	50%	Install on site generation, more efficient equipment.	75%	Intelligent building management system for heating.
Energy – Gas	37,000 kg CO_2e	20% in use	Improved insulation, reduced losses.	80%	Replace with ASHP/GSHP.	100%	Gas free premises.
Travel – staff	46,000 kg CO_2e	25%	Incentivise those closest to walk or cycle.	50%	Actively encourage bike to work scheme, e-bikes, install facilities.	75%	Install EV charge point at surgery, encourage those who travel most to EV.
Travel – patient	24,000 kg CO_2e	20% in use	Promote walking scheme, actively push active travel.	80%	Look at practice boundary, install EV charge point for patients.	90%	Arrange with local bus service re requirements.
Business services	30,000 kg CO_2e	20% in service use 25% fall in carbon	Identify services which are no longer needed. Use lower carbon services in the biggest hotspots.	50% reduction in carbon	Actively identify further low carbon services; using only services with a decarbonisation plan in place.	At least 75% reduction in carbon	Use only carbon neutral suppliers for all new suppliers. Audit and press current suppliers to achieve carbon neutrality.
Medical procurement	24,000 kg CO_2e	25%	Audit and identify medical equipment and consumables. Manage stock better.	50%	Identify alternative clinical pathways to reduce single use.	75%	Identify reusable medical equipment; remove single use; 100% at end of life to refurb service.
Office procurement	20,000 kg CO_2e	20% in use	Paper free with digital as default for communication.	50%	Use recycled equipment as default via Warp-it etc.	100%	Remove all single use materials; only use suppliers with net zero policy.
Total	**227,000 kg CO_2e**						**40,900 kg CO_2e – 82% reduction**

Practice Carbon Reduction Trajectory



When a practice agrees an action plan, and starts to implement changes, it can also plot a trajectory of emission reductions.

This shows an example of the expected emissions as 3,6 and 9 years from the start of the plan.

Practices can use the non-clinical carbon emission calculator (www.gpcarbon.org) to check they are on track with their pledges.

Summary

What can I do first?

1. Measure your emissions
2. Set a decarbonisation target to zero
3. Make an action plan and take action

What could I prioritise?

1. Reduce energy use and decarbonise what is used
2. Make active travel default choice for staff and patients and decarbonise the rest
3. Reduce all procurement and use low carbon options for what is used

Other groups and organisations

- **UK Health Alliance for Climate Change** (UKHACC). The RCGP is a founding member of the UKHACC. It brings together doctors, nurses and other health professionals to advocate for responses to climate change that protect and promote public health. The Alliance coordinates action, provides leadership and helps amplify the voices of doctors, nurses and other healthcare professionals across the UK.
- **Greener NHS** is the successor to the Sustainable Development Unit. It is working to achieve the NHS target of becoming a net zero carbon health service by 2040. See **Delivering a Net Zero Health Service**.
- **Centre for Sustainable Healthcare** (CSH) is a charity based in Oxford working on sustainable healthcare in research and practice. It provides strategic input and consultancy to national and local programmes. There is a **network for Primary Care** with lots of resources as well as a forum for discussion.
- **World Organization of Family Doctors** (WONCA) has a Working Party on the Environment that fosters the role of family doctors in protecting the health of their patients and communities from the impacts of environmental hazards and environmental degradation, and to promote healthy and sustainable societies at the local and global level. Family Doctors from every region of the world are engaging in planetary health within their local and global communities. The Working Party always welcomes new members.
- **Planetary Health Alliance** is a consortium of over 240 dedicated universities, NGOs, government entities, research institutes, and other partners around the world committed to advancing planetary health.

Further support

You are not alone in your journey! There are many others taking these steps and a lot guidance is available on these issues. Contact pcd@rcgp.org.uk for further personalised support to develop your carbon reduction plan.

- SEE Sustainability, Resources for primary healthcare: seesustainability.co.uk/blog/f/useful-sustainability-resources-for-primary-healthcare
- Carbon Literacy Project: carbonliteracy.com
- Centre for Sustainable Healthcare: sustainablehealthcare.org.uk/courses
- Greener NHS: www.england.nhs.uk/greenernhs/
- Greener Practice: greenerpractice.co.uk
- Health Care Without Harm, Global road map for health care decarbonization: healthcareclimateaction.org/roadmap
- Health Declares: healthdeclares.org/
- The Lancet, The public health implications of the Paris Agreement: a modelling study: thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30249-7/fulltext
- UK Health Alliance on Climate Change, Carbon Literacy guide: ukhealthalliance.org/resource/carbon-literacy-guide/
- Green Impact for Health: www.greenimpact.org.uk/GIforHealth

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