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and Care Wales

# DHCW Decarbonisation Action Plan

2024 - 2027



DIGITAL HEALTH AND CARE WALES  
March 2024

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# 1. Who We Are

## 1.1 Digital Health and Care Wales

Established in April 2021, we are the National Organisation building and designing digital services for NHS Wales.

We are a Special Health Authority created to take forward the digital transformation needed for better health and care in Wales, making services more accessible and sustainable while supporting personal health and well-being. Building on recent digital investment, we have a leading role in delivering the national programmes needed for modern technology-enabled healthcare. These large-scale developments will make a significant difference to the people of Wales.

As a growing organisation, we have a bold and ambitious programme of integration and innovation that includes expansion of the digital patient record and the creation of a world-leading national data resource, improving the way data is collected, shared, and used.

Our key responsibilities are to provide a platform for enabling digital transformation, to deliver high quality digital products and services, to expand the digital health and care record, to drive better value and outcomes through innovation and to be the trusted strategic partner and a high quality, inclusive and ambitious organisation.

In order to deliver the digital aims of Welsh Government and to ensure the very best digital solutions for the people of Wales, we work collaboratively with health and care professionals, patients and public, industry and academia.

Our Values reflect and complement the NHS Wales Core Principles and wider public services values; they are at the core of how we work, both within DHCW and in our interactions with others.



## 1.2 Our People

We are led by a Board made up of executive directors and independent members, which is our most senior decision-making body. At the time of writing, DHCW has 1234 employees.

## 1.3 Our Carbon Management

The Estates and Compliance team are currently responsible for defining the approaches and leading on implementing the operational initiatives detailed within this Delivery Plan. Beyond that, the team also works to collate and maintain environmental performance data, produce environmental statistics and reports as necessary, analyse environmental performance data and improve environmental communications across the organisation.

However, Estates and Compliance cannot deliver our decarbonisation aims without the assistance of key stakeholders both within DHCW and external to it (particularly NWSSP). As we do not own any of our offices or data centres, engagement with our landlords is vital to making meaningful progress.

## 1.4 Seren Environmental Consulting Ltd

Our initial plan was prepared in 2021 with the assistance of Seren Environmental Consulting Ltd, who were selected to collaborate with Digital Health and Care Wales in the development of its Decarbonisation Strategic Delivery Plan following a competitive procurement process.

## 2. Statement of Commitment

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### A Foreword by the Chief Executive, Helen Thomas



Members of the Senedd endorsed the Welsh Government's declaration of a Climate Emergency in 2019. The NHS Wales Strategic Delivery Plan, which DHCW are fully committed to, responds to this declaration, and is aligned with Welsh Ministers goal of achieving a net zero public sector by 2030.

Following the COVID-19 pandemic, a clear and ambitious green recovery strategy was crucial. The Digital Health and Care Wales (DHCW) Decarbonisation Action Plan has been developed to support the ambitions set out within the NHS Wales Decarbonisation Strategic Delivery Plan. The plan demonstrates how NHS Wales can contribute to the recovery and its commitment to the Wellbeing of Future Generations (Wales) Act 2015, which addresses long-term persistent challenges such as poverty, health inequity, and climate change.

With climate change, pollution, and detrimental health linked, it is the responsibility of DHCW to act on the climate and health emergency to support a healthier Wales now and in the future. We have made significant progress in decarbonising several focus areas in recent years; however, we recognise that there is more to be accomplished. This Delivery Plan allows us to take a fresh look at our building and energy needs, as well as procurement, travel, and other emissions sources. Some of these emissions are beyond our direct control; highlighting the challenge we have in working collaboratively to influence the decisions of others.

DHCW are in a unique position to contribute towards reducing carbon emissions across the wider NHS by providing and improving digital solutions across NHS Wales, such as those allowing for digital transfer and storing of information and solutions that allow for remote consultation.

In recognition that the nature of our business activities may have an environmental impact, we are fully committed to decreasing this impact across the scope of our operations and the services we deliver.

As we have become more environmentally aware, we are actively taking steps to measure and reduce our carbon footprint to improve sustainability at DHCW by implementing improvement opportunities, enhancing our communication, and placing a greater focus on how we procure goods and services.

While there are a number of activities that can aid us in lowering the amount of carbon emissions that we emit as an organisation, we believe they must be undertaken as part of a comprehensive plan to ensure a complete transformation.

Our positive actions have contributed to embedding a sustainable culture within our organisation, reducing any negative effect on the environment. We will continue to actively work towards achieving our targets in this immensely important area.

In conclusion, each individual at DHCW has a part to play in decarbonising our estate and the wider health service in accordance with prudent healthcare. The decisions you make as an individual, or as a member of the team, will contribute to lowering emissions and improving our environment.

Helen Thomas  
Chief Executive  
Digital Health and Care Wales

### 3. The Climate Emergency and Decarbonisation Targets

#### 3.1 Climate Emergency

We know with high confidence that climate change is happening today and is the result of greenhouse gas emissions caused by anthropogenic (human) activity. Impacts from climate change are being felt today and will continue to increase in the future. The rising global temperature will be increasingly widespread and will lead to wider changes to our weather. Additionally, many impacts of climate change are already being detected and reported.

Globally, a range of concerns for the future have been identified, including:

- irreversible impacts – even at more moderate changes in global temperature, particularly for Arctic ecosystems and coral reefs.
- extreme weather events
- severe impacts on the world's poorest and most vulnerable populations
- environmental and economic damage
- large-scale singular events (such as further sea level rises as major ice sheets melt over Greenland and Antarctica)

Specifically, in the UK, the UK Climate Change Committee (Climate Change Committee, 2023) has stated:

- 2022 was an unprecedented year for the UK's climate. It was the warmest year on record and the first year to exceed an average temperature of 10°C. All four seasons were in the top-ten warmest on record for the UK. The mid-July heatwave broke the previous UK maximum temperature by 1.6°C, exceeding 40°C for the first time with a temperature of 40.3°C recorded at Coningsby in Lincolnshire on 19 July. In 2022 the UK was also drier and generally sunnier than average. Storm Eunice on 18 February was a notable extreme storm with a new wind gust speed record for England (122mph) recorded in the Isle of Wight. These record-breaking extremes are consistent with continued global warming and are likely to occur more frequently in the coming decades.

The climate change risks can be limited by reducing greenhouse gas emissions (mitigation) and preparing for change (adaptation). It is accepted that action to limit future global greenhouse gas emissions will help restrict future changes in the climate system.

## 3.2 Decarbonisation Targets

### 3.2.1 Global Climate Targets

Climate change is clearly recognised as a global problem needing a global response to keep global warming to 'well-below' 2°C above pre-industrial levels, and 'pursuing efforts' to keep it below 1.5°C. At the 26<sup>th</sup> session of the Conference of the Parties (COP 26) to the UNFCCC (United Nations Framework Convention on Climate Change) held in Glasgow (November 2021) a formal commitment was made by countries and companies across the world to secure global net zero carbon emissions by 2050 and to keep 1.5 degrees of warming within reach. Few who have followed developments at COP26 will be in doubt as to the magnitude of the challenge ahead. In Wales, the Welsh Government has set out its intent for the public sector:

### 3.2.2 Welsh Government - A Net Zero Public Sector by 2030

In 2019, the Welsh Government declared a Climate Emergency and launched 'Prosperity for All: A Low Carbon Wales', which set out the Welsh Government's plan for decarbonisation in Wales (*Welsh Government, 2019*). Since then, Welsh Government has put in place binding legislation, strategies, and ambitions to drive carbon reduction activity in Wales. In particular, a Welsh Government Ministerial Ambition' has been set to achieve a Net zero Public Sector by 2030, including the health sector and NHS Wales.

In May 2021, the Welsh Government published its first Welsh Public Sector Net Zero Carbon Reporting Guide (Welsh Government, 2021), which detailed the principles and priorities for the Welsh Public Sector Net Zero Carbon reporting approach (known as the Welsh Net Zero Reporting Approach). This Guide, which was updated in 2023, defines the operational and organisational scope and the data which public bodies in Wales will need to assemble in order to fulfil the reporting requirements. A Net Zero Carbon reporting spreadsheet for the public sector has also been published.

In October 2021, The Welsh Government published its All Wales Plan 2021-2025 (Working Together to Reach Net Zero) focusing on specific actions and expectations needed to meet its 2025 carbon emission reduction targets.

The All Wales Plan specifically identified that a 7% carbon emission reduction by 2025 was needed from the public sector, as a whole, if Wales, as a whole, is to meet its collective net zero carbon targets by 2050.

The Welsh Government has established a 'Team Wales' approach, which means that there is an acknowledgement that different parts of the public sector will be able to make greater or lesser contributions to the net zero carbon reduction programme and that opportunities from carbon sequestration by NRW (Natural Resource Wales) managed woodland could also be legitimately included to offset those residual emissions that are difficult to eliminate (Welsh Government, 2021).

This is the reason that NHS Wales and DHCW do not themselves have absolute net zero targets by 2030. With this collaborative approach, the emissions from NHS Wales are included with all public sector organisations, including NRW and its woodlands. However, as NHS Wales has been identified as the biggest carbon emissions emitters, and potentially, one of the more challenging organisations to decarbonise, particularly against a potential increasing demand

for health and care services, NHS Wales has to meet its share of the collective public sector target.

### 3.2.3 NHS Wales - 1 Million tonnes

As the largest partner in the public sector NHS Wales has recognised, it has a significant contribution to make towards the 'Team Wales' target of a net zero public sector by 2030.

The NHS Wales 2018/19 Carbon Footprint (Carbon Trust, 2020) was calculated to be approximately **1 million tonnes CO<sub>2</sub>e, which represents around 2.6% of Wales's total greenhouse gas emissions**. This has been set as the baseline for emissions reduction targets for NHS Wales going forward. Boundaries for scope 3 emissions have been defined (GP surgeries, pharmacies and dentists are a notable exclusion) and the future approach for NHS Wales has been established.

The NHS Baseline identified four key source areas for its carbon emissions, and their relative contributions to the 1 million tonnes of carbon emissions:

- Building Use (21%)
- Procurement (62%)
- Fleet & Business Travel (15%)
- Staff, Patient & Visitor Travel (2%)

These four categories are replicated in the NHS Wales Decarbonisation Strategic Delivery Plan, which was published in March 2021 (NWSSP) (Carbon Trust, 2021). The 2021 Decarbonisation Strategic Delivery Plan defined how NHS Wales intends to contribute towards a net zero Public Sector by 2030 by establishing 46 initiatives for decarbonising NHS Wales.

The NHS Wales Decarbonisation Strategic Delivery Plan has set the following headline targets:

- 16% reduction in carbon emissions by 2025
- 34% reduction in carbon emissions by 2030

### 3.2.4 Digital Health and Care Wales

DHCW recognise the Climate Emergency and the need for all those in the public sector to contribute to the ambitious net zero carbon by 2050 goal for Wales set by Welsh Government. All NHS organisations were expected to cascade the NHS Wales Decarbonisation Strategic Delivery Plan across their organisations and to develop and publish their own actions plans to demonstrate how initiatives within the plan will be delivered. Our initial Decarbonisation Strategic Delivery Plan was published in 2021 and this plan refreshes that plan for the period 2024-27 to align with our Integrated Medium Term Plan.

In this Decarbonisation Action Plan, Digital Health and Care Wales has:

- Outlined the decarbonisation challenge for our organisation
- Stated our commitments
- Estimated its baseline emissions using Welsh Government methodologies
- Identified priority sources of carbon emissions

- Established targets in line with those of NHS Wales (which in turn are aligned to the collective public sector ambition of being net zero by 2030)
- Shared the challenge that is particularly associated with procurement related carbon emissions
- Defined a mechanism for monitoring progress
- Adopted those initiatives within the NHS Wales Decarbonisation Strategic Delivery Plan that are relevant to DHCW
- Developed a roadmap of commitments and specific actions up to 2030 (which will be reviewed in 2027 and 2030) in line with carbon reduction targets.

We have established targets in line with those set by NHS Wales (which in turn are aligned to the collective public sector ambition of being carbon neutral by 2030) for our emissions. These are:

- 16% reduction in carbon emissions by 2025
- 34% reduction in carbon emissions by 2030

We are further developing our understanding of our significant procurement emissions in order to set a clear path to the 2025 and 2030 numerical targets. We have engaged with our colleagues at NHS Wales Shared Services Partnership (NWSSP) to take forward this work to improve the accuracy of reporting and identify where carbon savings can be achieved.

## 4. Principles for Public Reporting

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### 4.1 Using the Principles for the Welsh Net Zero reporting approach system

The Welsh Net Zero reporting guide sets out thirteen principles to be adopted for public sector reporting. The principles are in order of priority and with the higher ranked principle expected to take precedence if there is conflict or uncertainty.

Digital Health and Care Wales have adopted these Principles when preparing the Baseline and Decarbonisation Strategic Delivery Plan.

Principle name	Principle Adopted
1. Transparency	Reporting has been transparent and has clearly stated the boundary, methods, data sources, uncertainty and assumptions used for estimation of emissions and removals. Areas of weakness or low-grade data have been highlighted.
2. Good decision-making	DHCW will focus resources on accurately estimating and reporting on the most important activities. For DHCW, this is Procurement, followed by Building Use (particularly electricity consumption at the outsourced Data Centres), and then Business Fleet & Travel.
3. Consistency	<p>The methodology used to report emissions and removals has been applied consistently for 2019/20 and for subsequent prediction modelling.</p> <p>Changes reported between time periods will reflect actual changes to the quantity of emissions or removals, and not changes to the organisation or method.</p> <p>Outsourced activities will be accounted for to avoid carbon leakage.</p> <p>Clarification of scope definition with regards to procurement may be further defined and refined. This will be clearly reported.</p> <p>Confirmation of the rules for including/excluding examples where either DHCW occupies a small space (rooms or works stations) in another workplace and is not charged for the carbon impacts or vice versa, where another NHS team may sit within a DHCW workplace but is similarly not cross-charged for the carbon generated.</p>
4. Partnership working	<p>DHCW understands that the 2030 ambition for the Welsh public sector can only be met by assessing carbon neutrality across the whole sector.</p> <p>Both NHS Wales and Digital Health and Care Wales have internal targets, independent of the overall Welsh public sector ambition and collaboration, partnership, open and honest communication and supportive networks will be critical to delivery of the Decarbonisation Strategic Delivery Plan.</p>
5. Usefulness of data	<p>Our reported data reported will be directly useful for both measuring progress towards meeting the 2030 targets but also in understanding the risks and opportunities of targeted action.</p> <p>It is anticipated that our data will be of use to others within NHS Wales.</p>
6. Local Economic Growth	<p>DHCW implements sustainable procurement and works hard to influence the wider economy through its demand for goods and services and its support for sustainable, low carbon economic growth.</p> <p>The carbon impact data generated and reported through this approach could support activities to develop and sustain low carbon markets in Wales and to provide evidence for supporting existing and potential future suppliers to those markets.</p>
7. Comparability	DHCW understands that the carbon neutral ambition for the Welsh public sector covers the whole sector and therefore it needs to report using the same operational and organisational boundaries, adjusted for organisation type, using the same standardised methodology and emission factors. Variations in boundaries and methodology based on organisational or geographical variation will always be clearly documented (in the case of the DHCW footprint versus that of NHS Wales 2018/19, the inclusion of home-working, necessitated by the profound changes to working patterns brought by the pandemic).

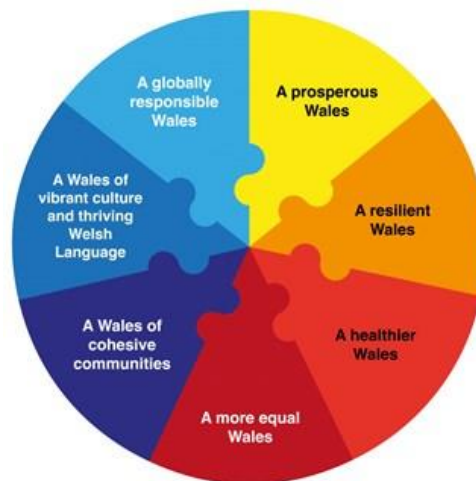
Principle name	Principle Adopted
8. Completeness	<p>Reporting has included estimates for all emission sources within the agreed organisational and operational boundary, unless there is evidence to suggest that the emission source is not relevant for DHCW.</p> <p>For existing emission sources, where activity data was not available, DHCW has followed the provided methodology for estimating activity data, for example, benchmark estimates based on estate size or employee numbers.</p>
9. Proportionate reporting burden	<p>The resources used to estimate emissions and removals have been proportionate to the significance of the source, firstly within NHS Wales, and secondly to DHCW.</p> <p>Whilst completeness and accuracy are important, DHCW has been mindful that it has to balance the need for robust estimates with the required resources. This means not devoting resource to reducing uncertainty for elements (such as waste and water) that form a very small component of the footprint.</p>
10. Improvement over time	<p>All data sets have some uncertainty. DHCW is therefore committed to improving the quality of reporting data over time, within the context of the overall reporting system.</p> <p>Methodologies will only be changed where this results in an improvement in terms of accuracy. There is an expectation that the methodology for assessing carbon data from procurement will evolve significantly over the reporting time period.</p> <p>Where DHCW has estimated emissions for significant source using simple approximations and benchmarks of activity data, DHCW will improve the methodologies in line with Principle 9.</p>
11. Accuracy	<p>DHCW will reduce uncertainty in estimates of activity data and continually improve the accuracy of reporting, subject to Principle 9. Initial opportunities for this are identified later in this plan.</p>
12. Maintenance and extension of ambition	<p>DHCW will commit to reducing all emissions further where possible and continue to search for new opportunities for carbon reductions.</p> <p>The boundaries of the reporting system may also be revised in the future to include emission sources outside the direct control and/or resetting of DHCW's ambition to achieve net carbon removals.</p>
13. Peer review	<p>To strengthen and share knowledge, DHCW has participated in peer review by another NHS Wales reporting organisation.</p> <p>DHCW looks forward to continuing to participate in a peer learning community within NHS Wales.</p>

## 5. Wellbeing of Future Generations Act

The Act came into effect in April 2016, which at the time made it the only piece of legislation of its kind in the world. It represents a significant opportunity for improving and changing life in Wales as a whole. The Act outlines how public bodies in Wales should collaborate to improve the economic, social, environmental, and cultural wellbeing of Wales.

In order to do this, we ensure as far as is practicable, that we deliver our work in accordance with the Sustainable Development principle; *to act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.*

The Act has established seven national wellbeing goals for Wales, illustrated below. We will contribute towards delivering these national goals through our Decarbonisation Strategic Delivery Plan, new ways of working and wellbeing objectives.



### 5.1 Our Wellbeing Objectives



**A HEALTHIER WALES** - A healthier Wales wants everyone to have long, healthy, happy lives, with access to the right health and social care services. Our 14 portfolios of delivery show how our services can contribute to this through providing the right data at the right time to clinicians irrespective of where the patient presents. We will also comply with the new Health and Social Care (Quality and Engagement) (Wales) Act 2020, strive for excellence by ISO standards compliance and prepare for the new Medical Device Regulations legislation.



**A GLOBALLY RESPONSIBLE WALES** - A globally responsible Wales improves the economic, social, environmental and cultural well-being of Wales. DHCW has established a sustainability strategy based on the ISO 14001 Environmental Management System requirements and a decarbonisation strategic delivery plan. Our procurement processes align with foundational economy principles.



**A MORE EQUAL WALES** - A more equal Wales with a socio-economic duty, tackles inequality at the heart of decision making, and enables people to fulfil their potential no matter what their background or circumstances. We are prioritising talent and succession planning, aligning to more standardised skills frameworks such as the Digital, Data and Technology Profession (DDAT) framework, and embedding our EDI commitments as outlined in our Strategic Equality Action Plan.



**A WALES OF COHESIVE COMMUNITIES** - A Wales of cohesive communities encourages attractive, safe, viable and well-connected communities. Our stakeholder strategy and the appointment last year of an engagement lead is providing focus on developing and reinforcing our strategic relationships with patients, users and wider stakeholder communities in an inclusive and collaborative style. In 2023, we approved a Community Projects Scheme, whereby our workforce can become volunteers and actively involved in helping those in need.



**A WALES OF VIBRANT CULTURE AND THRIVING WELSH LANGUAGE** - A Wales of vibrant culture and thriving Welsh language is a principle adopted in the development of our strategic equality plan and our commitment to being a bilingual organisation including Welsh language training.



**A PROSPEROUS WALES** - A prosperous Wales uses resources efficiently in an economy which generates wealth and employment opportunities. This is supported by our focus on financial sustainability, efficiency, benefits management and our decarbonisation strategy.



**A MORE RESILIENT WALES** - A resilient Wales maintains healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change. Our Digital Services for Patients and the Public programme helps citizens to engage in better co-productive dialogue with their healthcare provider. Our organisational resilience is tested through various quality initiatives such as ISO accreditation, including ISO 14001 Environmental Management Systems.

## 6. Measuring DHCW's Carbon Footprint

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### 6.1 DHCW and the NHS Wales Carbon Footprint

DHCW did not exist as an entity when the NHS Wales Carbon Footprint 2018/19 was calculated. At the time, its predecessor, the NHS Wales Informatics Services (NWIS) operated from within Velindre University NHS Trust. The NHS Wales carbon footprint (1,001,378 tCO<sub>2</sub>e) included NWIS (along with NWSSP and the Welsh Blood Service) within the 'Footprint Boundary', under the collective Velindre University NHS Trust footprint.

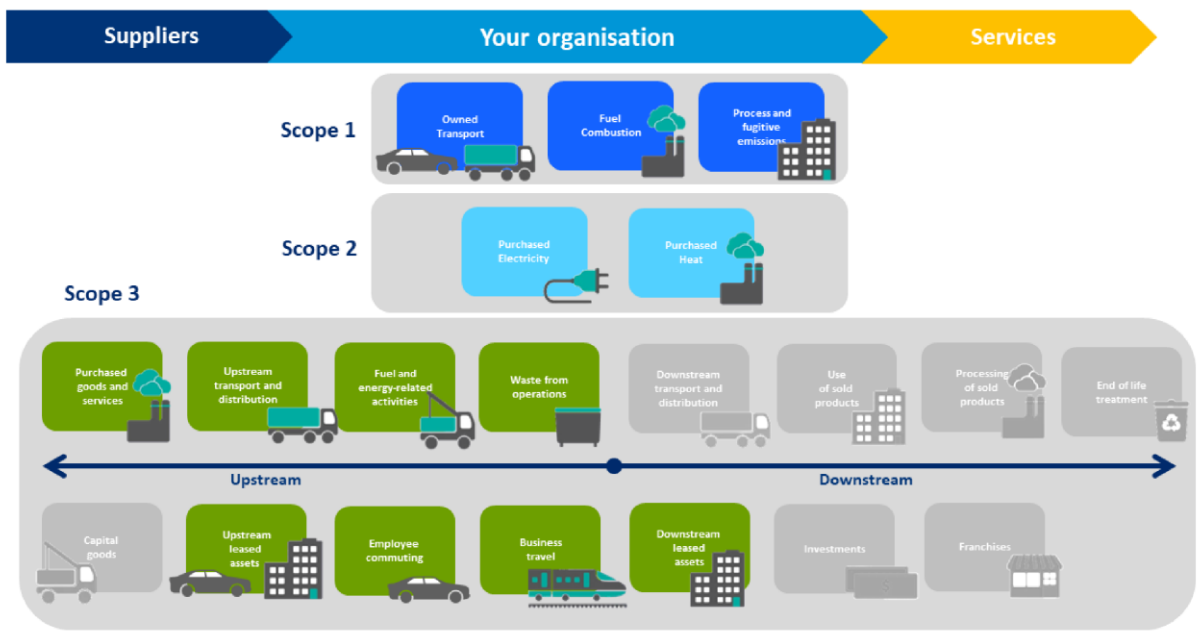
Other entities within NHS Wales have been able to use the NHS Wales Carbon Footprint 2018/19 in formulating their response to the NHS Wales Decarbonisation Strategic Delivery Plan. However, DHCW was unable to do so, without first estimating its own baseline emissions. Accordingly, DHCW selected the subsequent year (2019/20) as its baseline year and estimated its own carbon footprint in that year. The rationale for 2019/20 as a baseline was that it was the first full year of DHCW's associated Carbon Footprint.

### 6.2 Organisational Boundary

For the purposes of this Carbon Footprint, DHCW as an entity forms the organisational Footprint Boundary.

### 6.3 Emission Footprint Boundary

In common with the NHS Wales Carbon Footprint 2018/19, the operational boundaries were set using the Scope 1-3 Framework established by the Green House Gas Protocol (GHG Protocol, 2004).



NHS Wales Carbon Footprint Boundary (Carbon Trust, 2020)

The footprint boundary follows that of the NHS Wales footprint; *the majority of emission types considered outside of the Footprint Boundary (shown in above image in grey) are 'Scope 3 Downstream' emissions. This is largely due to the lack of products downstream from NHS Wales; the nature of the organisation is such that there are no 'sold products'.* (Carbon Trust, 2020)

### 6.4 DHCW’s Baseline Data

DHCW are certified to ISO14001:2015 environmental management system, which is independently audited each year. As our carbon accounting has improved, so has the robustness and increased inclusivity of the Estates led data.

Through our ISO14001:2015 environmental management system, DHCW has put monitoring protocols in place to collate and analyse resource consumption and environmental data, much of it relevant to its carbon footprint. DHCW has developed a carbon accounting tool, based on UK Government published carbon factors to monitor its greenhouse gas emissions. The range of data currently collected includes:

- Electricity consumption
- Gas consumption
- Water (Supply & Treatment)
- General Waste Landfill
- General Waste WtE (Waste-to-Energy)
- Recyclable Waste (including confidential waste)
- WEEE (E-Waste)
- Business Mileage
- Fleet Vehicles

- F-Gas
- Procurement
- Homeworking
- Commuting

Some opportunities for reducing uncertainty exist; however, a baseline year of 2019/20 has been established, which is the first full year of carbon data associated with DHCW being a separate organisation. Our emissions are subdivided into the four categories used by NHS Wales as follows:

- Building Use
- Procurement
- Fleet & Business Travel
- Staff Travel

When analysing and reporting on the data, NHS Wales aggregates the fleet and business travel with staff travel under the general headline of Transport.

For the purpose of carbon accounting, we include our outsourced Data Centres as part of the Building Use category rather than under a procurement classification. DHCW's own servers occupy rack space in two data centres. Although DHCW have no direct control over elements of data centre operation (e.g. cooling, considered under Scope 3 emissions), the servers themselves are owned and managed by DHCW and therefore emissions are considered as Scope 2 rather than Scope 3 emissions. Our rationale is simply that if a building includes our people or our equipment, then it makes sense for that building to be included in the footprint.

In addition, we have chosen to report estimated emissions from home working. These were small for 2019/20, our baseline year but have increased in subsequent years due to changed working practices.

## 7. DHCW Baseline Carbon Footprint 2019/20

### 7.1 Gross Emissions

The DHCW 2019/20 Gross Carbon Footprint was calculated at 19,858 tCO<sub>2</sub>e.

This was about 2% of the NHS Wales 2018/19 baseline Carbon Footprint (1,001,378 tCO<sub>2</sub>e) and places it among the smaller entities within NHS Wales; similar to Public Health Wales but less than Powys Teaching Health Board (Carbon Trust, 2020). In the following sections, the overall footprint is broken down in various ways to aid understanding and in comparison with the NHS Wales footprint as a whole. Initially it is broken down Scope by Scope as set out in the GHG protocols:

**Scope 1:** Emissions from activities owned or controlled by the organisation that release emissions into the atmosphere. They are direct emissions. Examples of scope 1 emissions include emissions from combustion in owned or controlled boilers, furnaces, vehicles; emissions from chemical production in owned or controlled process equipment.

**Scope 2:** Emissions released into the atmosphere associated with the organisation’s consumption of purchased electricity, heat, steam, and cooling. These indirect emissions are a consequence of the organisation’s activities but which occur at sources that the organisation does not own or control.

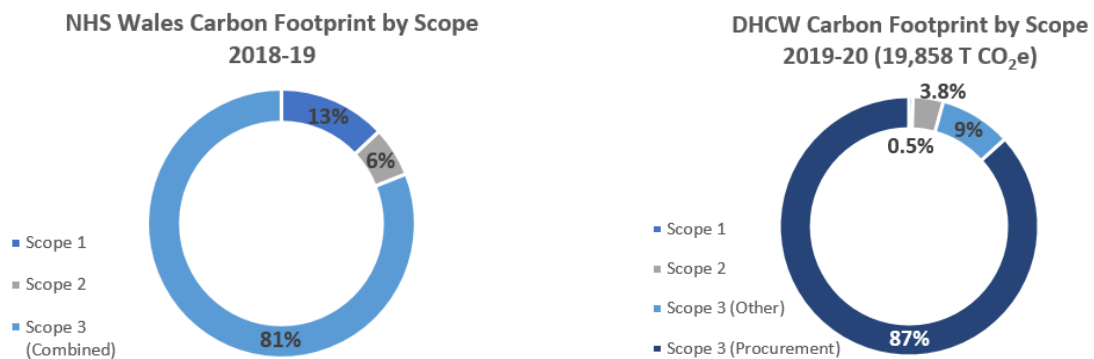
**Scope 3:** Emissions that are a consequence of the organisation’s actions, which occur at sources that it does not own or control and which are not classed as scope 2 emissions. Examples of scope 3 emissions are business travel by means not owned or controlled by the organisation (staff using personal cars for work travel), waste disposal which is not owned or controlled, or purchased materials or fuels and energy consumption at outsourced Data Centres. (HM Government, 2019). This also includes those emissions associated with remote working.

Examples specific to DHCW’s baseline footprint are:

**Scope 1:** exhaust emissions from DHCW fleet vehicles.

**Scope 2:** power generation emissions to provide electricity consumed at DHCW’s offices.

**Scope 3:** emissions in the production of IT equipment procured by DHCW.



NHS Wales' carbon footprint is dominated by Scope 3 emissions. This was even more so for DHCW's baseline footprint, with Scope 3 Procurement emissions representing over 87% of the footprint. These emissions also had some data uncertainties due both to the methodology used and the data set available.

Of the remaining 13% of DHCW's baseline footprint, scope 2 emissions were the next largest source with scope 1 emissions being the smallest contributor.

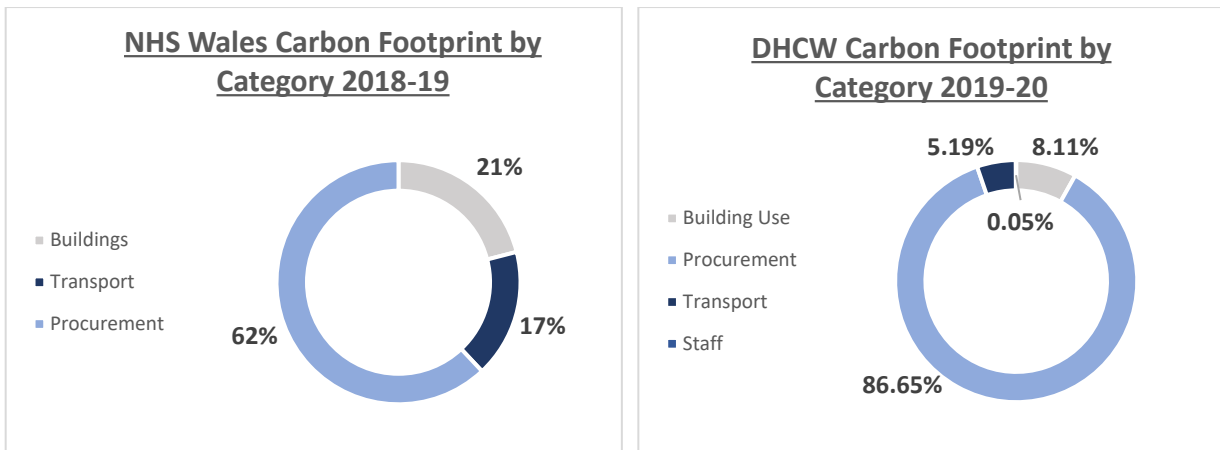
In the NHS Wales 2018/19 Carbon Footprint report, emissions were broken down into three main categories; building use, transport, and procurement. The DHCW baseline footprint added Homeworking, as shown in the following summary table:

Broad Category	Category	Scope	Emissions (T CO <sub>2</sub> e)	%
Building Use	Natural Gas	1 & 3	92	
	Electricity (Offices)	2 & 3	400	
	Water & Waste	3	10	
	Electricity (Datacentres)	2 & 3	1,109	
	Subtotal		1,611	8.11%
Procurement		3	17,207	86.65%
Transport	Business Travel	3	138	
	Fleet	1	22	
	Commuting	3	871	
	Subtotal		1031	5.19%
Staff	Home Working	3	9	0.05%
Total			19,858	100%

Table 1: Summary of DHCW's baseline 2019/20 emissions by scope

Note: DHCW undertake All Wales procurements which were included in our baseline figures for 2019/20. However, Welsh Government has advised that the correct reporting route is via DHCW's footprint.

The following figures contrast the relative importance of the categories in the NHS Wales (Carbon Trust, 2020) and DHCW footprints.



### 7.2 Net Emissions

The NHS Wales 2018/19 Carbon Footprint report follows the GHG Protocol and UK Environmental Reporting Guidelines in making a dual report to reflect 'Net Emissions'. This report does likewise.

**DHCW's 2019/20 Net Emissions were 19,652 T CO<sub>2</sub>e.**

NHS Wales' energy procurement policy has moved to the purchase of REGO certified renewable electricity, and over half of DHCW's electrical consumption was covered by REGO certification. This was consumption at Tŷ Glan-yr-Afon, Cardiff and Bocam Park, Pencoed.

REGO certificates are issued by Ofgem (Office of Gas and Electricity Markets) to generators of renewable electricity. Certificates can be used by licensed electricity suppliers to prove to the final customer that the energy was produced from renewable sources (i.e. off-site renewable generation). However, REGO certified renewable electricity is included when UK Government determines the overall carbon intensity of UK grid electricity, in order to calculate emission factors. DHCW uses these emission factors when calculating emissions relating to its electricity consumption, including that not covered by REGO certification. As there is the clear potential for double-counting the renewables component, REGO certificated electricity is not permitted to be used by public bodies as an offset reduction within the reportable Carbon Footprint.

For the purpose (only) of Net Emissions, REGO certified electricity is considered as zero carbon for generation (Scope 2) and associated 'well-to-tank' (Scope 3), but not for the associated transmission and distribution of the electricity (Scope 3).

Tŷ Glan-yr-Afon, Cardiff and Bocam Park, Pencoed now have carbon neutral nuclear backed electricity (as part of the All-Wales contract). Our two Data Centres are REGO certified, and all other locations are on green tariff electricity contracts.

### 7.3 Buildings

DHCW currently occupy approx. just under 5,900 m<sup>2</sup> of leased office floor space in a diverse range of buildings, under different landlords.

DHCW has a portfolio of five leased offices across Wales. These are:

Cardiff: Tŷ Glan-yr-Afon, 21 Cowbridge Road East (TGA)  
 Cardiff: Castlebridge 2, Cowbridge Road East (CB2)  
 Mold: Media Point – Unit 3, Mold Business Park (MMP) – occupied 2021  
 Pencoed: Bocam Park (Bocam Park)  
 Swansea: Technium 2, Swansea Waterfront Innovation Quarter (Technium)

At the time of setting our baseline footprint, DHCW occupied two and half floors in Mamhilad House in Pontypool, but this lease was surrendered in July 2023.

DHCW also currently occupy a few rooms and desk space in Cwmbran House and have a small presence at the National Imaging Academy in Pencoed. These sites are not leased to DHCW and are therefore excluded from our carbon footprint.

All our leased offices sit within a wider healthcare, university, or commercial campus. We have no associated land or grounds with the lease arrangements. Our leased space varies from whole buildings to a single floor.

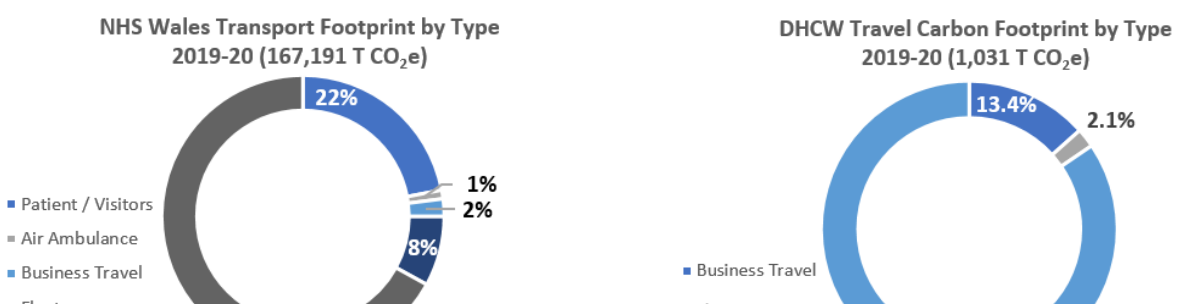
In addition to our offices, DHCW delivers services to NHS Wales from owned servers located at two third-party datacentres. During the footprint year, these were located in Blaenavon and Newport. In 2021, we closed our activities at Blaenavon and moved to a new Data Centre in Rhondda Cynon Taf.

### 7.4 Transport

DHCW are a digital delivery service and its staff are required to travel to different NHS Wales primary and secondary care facilities, from GP Practices to hospitals, across Wales. Some activities can only be carried out physically on site. This could be an installation or troubleshooting type task but equally it could be to check equipment or interact with existing digital capability and work collaboratively with the local NHS teams. During the pandemic, DHCW significantly reduced business travel by accelerating the ability to provide many digital services remotely. It is likely that this mode of remote service delivery will be sustained at a high level, but there will always be a residual requirement to travel which cannot be completely eliminated.

To a large extent, the geographical spread of the office network was to have staff local to all of the NHS Health Boards and Trusts, and therefore minimise both business and commuter travel.

Employee commuting was the largest element of transport emissions for NHS Wales, totalling 67% of the 165,000 TCO<sub>2</sub>e transport emissions (Carbon Trust, 2020). In DHCW's baseline year, commuting was also the largest component, totalling 85% of the 1,031 TCO<sub>2</sub>e transport emissions. Staff commuting is a higher proportion of the DHCW footprint due to the absence of patient/visitor journeys, which form a major component of the NHS Wales transport footprint.



## 7.5 Procurement

DHCW purchase a wide variety of goods and services. Some of these purchases relate to our own needs and others (for example software licences) to the wider needs of NHS Wales. The baseline year annual spend was approximately £75M, (some exclusions apply). There is a close relationship with the NHS Wales Procurement Team – known as NHS Wales Shared Services Partnership (NWSSP).

The procurement spend of just under £75M (19/20) was substantial, but only around 4% of the NHS Wales 'non-pay' spend of £1,863m as reported in the 2018/19 carbon footprint report (Carbon Trust, 2020). The latest available annual spend is for 2022/23 as was £92.7M.

## 7.6 Home Working

Enabling home working has the potential to reduce Scope 1 and 2 emissions from DHCW's buildings; in the short term through reduced energy demand at existing offices, and in the medium term through opportunities to reduce the office portfolio. Home-working also reduces Scope 3 emissions relating to commuting, as less journeys have to be made.

However, home workers consume energy for office equipment, home heating and in some settings home cooling. These result in Scope 3 carbon emissions, which may not have occurred if the workers had been in the office. Including the indirect, displaced scope 3 emissions from remote working in our baseline will allow meaningful comparisons with year-on-year performance to be undertaken.

The current version of Welsh Government carbon reporting guidance requires estimation of Scope 3 commuting and home-working emissions.

DHCW regularly review on and off-site numbers to enable our offices to operate as efficiently as possible.

### 7.7 Improvement and Revision Approach

Opportunities to improve accuracy and reduce uncertainty may be identified in the future and will be responded to accordingly.

## 8. 2025 and 2030 Emissions Targets & Progress to date

When producing their initial Decarbonisation Plan, DHCW mapped its emission decarbonisation pathway between 2019/20 and 2029/30.

Note: There was a reduction in the carbon emissions for 2020/21 and 2021/22 due to the significant impacts of the COVID-19 pandemic.

The Digital Health and Care Wales decarbonisation targets are set as follows:

Our operational performance against targets is summarised in the table below:

Target and Actual Performance	Emissions (tCO <sub>2</sub> e) (actual and target)	Percentage Reduction vs 2019/20	Cumulative Savings (tCO <sub>2</sub> e) vs 2019/20
2019/2020 Baseline	2,757	-	-
2020/2021	2,011	-27%	-746
2021/2022	1,579	-43%	-1178
<b>2022/2023</b>	<b>1,676</b>	<b>-39%</b>	<b>-1081</b>
2025 (Target)	2,316	-16%	-441
2030 (Target)	1,820	-34%	-937

Operational Emissions have reduced by 39% comparatively to the baseline year (2019/2020), this currently exceeds the 2025 target; however, this is predominantly as a result of working practices in a post pandemic environment; therefore, we recognise that if hybrid-working practices should change that may have an impact on progress.

Our gross emissions performance (which includes supply chain) is summarised in the table below:

DHCW Target and actual performance	Emissions (tCO <sub>2</sub> e)	Percentage reduction vs 2019/20	Cumulative Savings tCO <sub>2</sub> e
2019/2020 (Baseline)	19,964	-	-
2020/2021	17,501	-12%	-2,463
2021/2022	13,978	-30%	-5,986
<b>2022/2023</b>	<b>7,003</b>	<b>-65%</b>	<b>-12,961</b>
2025 (Target)	16,770	-16%	-3,194
2030 (Target)	13,176	-34%	-6,788

Supply Chain (Procurement) Emissions, which account for the largest proportion of DHCWs carbon footprint (76%), have reduced by 69% (a substantial reduction of 11,880 Tonnes CO<sub>2</sub>e). Improved data gathering and an enhanced carbon footprint methodology (Tier 2) have enabled us to make these reductions.

Our Delivery Plan is designed to achieve the NHS Wales 2025 and 2030 targets of 16% and 34% emissions reductions in our gross operational emissions.

The plan to reduce procurement related emissions is being led by NWSSP through their own Delivery Plan. However, with our digital expertise, we acknowledge that we have a major role to play in assisting NWSSP to identify realistic reduction pathways for procurement of IT Goods and Services. We will continue to work with NWSSP to scope out the way forward, so that numeric reduction targets may be set for subsequent years.

## 9. Strategic Delivery Plan

### 9.1 NHS Wales Strategic Delivery Plan

NHS Wales identified 46 Decarbonisation Initiatives, of which 27 are directly or indirectly applicable to Digital Health and Care Wales. In producing their Decarbonisation Strategic Delivery Plan, NHS Wales provided a framework, which Health organisations could adopt to show compatibility, integration, and support. The DHCW Delivery Plan is deliberately adapted and co-ordinated with that of NHS Wales to demonstrate synergy.

### 9.2 Our Journey

The success of this Delivery Plan will be highly dependent on the governance structure put in place at DHCW. As with NHS Wales, DHCW will have an ambitious management approach to ensure sustained momentum and provide the financial investment to support implementation.

The following activities describe our implementation approach for the Delivery Plan; these were split between mobilisation and improvement approaches.

- ❖ DHCW will always show leadership and commitment to deliver their Decarbonisation Action Plan in order to address the Climate Emergency for Wales as declared by Welsh Government and the Senedd.
- ❖ A 'Decarbonisation Group' will oversee progress against the Decarbonisation Action Plan; this will include a wide range of interested parties from within DHCW.
- ❖ A 'Decarbonisation Lead' as a dedicated role will drive the focussed implementation of the Decarbonisation Action Plan. Initially, this will be managed by the Estates and Compliance Team although it is recognised that decarbonisation activity is far wider than operational buildings emissions.
- ❖ 'Action Plans' are embedded into our existing ISO 14001:2015 environmental management system – these will be reviewed annually.
- ❖ DHCW will enable the successful implementation of the Decarbonisation Action Plan by supporting access to additional resource and finance for delivery of initiatives, using external resources and collaborating with NHS partners and third parties where necessary.

### 9.3 Improvement and Revision Approach

- ❖ Our Estates and Compliance Team will continue to oversee our monitoring and measurement processes to capture improved data coverage, reduce the level of uncertainty and communicate carbon performance – aligned with Welsh Government and NHS Wales reporting guidelines.
- ❖ DHCW will actively support the work of NWSSP in the progression of procurement emission related carbon accounting.

- ❖ DHCW will issue a revision of this Delivery Plan with updated and refined targets by 2027 (or earlier if determined appropriate).
- ❖ DHCW will review the success of this Delivery Plan implementation annually.

## 9.4 Decarbonisation Initiatives

NHS Wales lists six activity streams for which decarbonisation activities have been identified:

- Carbon Management
- Buildings, Estates and Planning
- Transport
- Procurement
- Estate Planning and Land Use
- Approach to Healthcare

Each activity has a subset of decarbonisation initiatives that DHCW must consider and implement if relevant to its activities. The following table summarises the NHS Wales initiatives and DHCW's intentions and progress to date, where they are relevant.

**Note:** In the below tables, initiatives (rows) greyed out are not applicable to DHCW. Detailed reporting against each initiative is reported to Welsh Government via the DCR team in NWSSP on a quarterly basis.

### 9.4.1 Carbon Management

No.	NHS Wales Initiative	DHCW Initiative
1	Implement best practice carbon management with dedicated roles in place to undertake Delivery Plan initiatives.	DHCW has appointed the Estates and Compliance team to lead on the Decarbonisation Delivery, with support from key teams.  DHCW has a certified ISO 14001 environmental management programme through which it will use to plan, do, check and act upon all decarbonisation initiatives.
2	Proactively communicate the Climate Emergency to staff and the public with the aim of stimulating low carbon behaviours and growing engagement in the decarbonisation agenda.	DHCW actively uses digital noticeboards and TENtalks to raise awareness on all aspects of sustainability, including climate change, throughout the year.  Dedicated sustainability and environmental management SharePoint pages are used to communicate the Decarbonisation Action Plan and our carbon footprint.

No.	NHS Wales Initiative	DHCW Initiative
3	Drive the engagement required for decarbonisation across each organisation's leadership teams to develop a focussed and active approach to project implementation.	DHCW has senior leadership involvement for all aspects for its environmental management and sustainability programmes. This is fully extended to include decarbonisation activity within Digital Health and Care Wales.

#### 9.4.2 Buildings, Estates and Planning

No.	NHS Wales Initiative	DHCW Initiative
4	Progress a transformational energy and water efficiency retrofit programme across the estate – every building with a long-term future will have undergone a multi-technology energy-efficient upgrade by 2030.	<p>DHCW leases all of its workspace from commercial organisations or occupies under agreement with other Public Sector Bodies.</p> <p>We actively engage with our landlords, to consider installation of efficient heating and cooling systems.</p> <p>DHCW commits to including Decarbonisation and energy efficiency upgrades of those buildings we occupy. This will be included as a central priority and obligation within our Estates Plan and in our liaison and negotiations with our landlords. This includes both office buildings and the Data Centres.</p> <p>We will adopt cloud computing services using a cloud-first approach for both new and existing workloads.</p>
5	Fully replace all existing lighting with LED lighting by 2025.	In 2023 DHCW installed LED lighting at Technium 2 and Ty Glan-yr-Afon meaning that all DHCW buildings now have 100% LED lighting.
6	Complete expert heat studies by the end of 2023 for all acute hospitals to set the plan to transition away from fossil fuel heat sources	<i>Initiative relates to conducting Heat Studies in hospitals and is therefore not applicable to DHCW.</i>
7	Progress low carbon heat generation for all non-acute sites larger than 1,000m <sup>2</sup> by 2030.	DHCW currently has workspace in one building that is larger than 1000m <sup>2</sup> (Tŷ Glan-yr-Afon). This building is leased to DHCW only; however, a section of the building is separated from DHCW occupied areas and

No.	NHS Wales Initiative	DHCW Initiative
		<p>houses local residents. The building uses natural gas for heating purposes. Gas consumption is monitored.</p> <p>DHCW have and will continue to work with its landlord to seek low carbon alternatives to using natural gas for heating at Ty Glan-yr-Afon.</p>
8	<p>We will not plan to install any further natural gas CHP plant – renewable CHP will be championed instead. For existing CHP plant, we will prioritise decommissioning over investment in major refurbishment of failed CHP from 2025, with the ambition for all CHP to be decommissioned by 2030.</p>	<p><i>DHCW does not have any natural gas CHP on its office or data centre sites and has no intention of installing natural gas CHP in the future, therefore this initiative is not applicable to DHCW.</i></p>
9	<p>Take an active approach to efficient control of energy in buildings. All buildings will have up-to-date, standardised, and effective building management systems (BMS). Dedicated resource to optimise the use of energy by BMS control will be put in place by 2023.</p>	<p>DHCW commits to taking an active approach to efficient control of energy in our buildings, using our certified ISO 14001 Environmental Management System.</p> <p>We will continue to work with our landlords to achieve up-to-date, standardised, and effective Building Management Systems. DHCW commit to taking an active approach to improve efficiency, the refurbishment and upgrading of building technology.</p> <p>DHCW currently has workspace in five buildings that are leased. In addition, we have rack space in two commercial Data Centres.</p> <p>Energy efficiency in the data centres we use is a key performance indicator, both in the procurement process and in ongoing operational relationships.</p>
10	<p>Determine the overall viable potential for onsite renewable energy generation at each NHS Wales organisation by 2023. Install</p>	<p>Due to the nature of our building leases, there are currently no onsite renewable energy opportunities for DHCW at its office buildings. This is therefore determined to be</p>

No.	NHS Wales Initiative	DHCW Initiative
	half of this potential by 2026, and the remainder by 2030	<p>zero at this time but we will continue to have discussions with our landlords.</p> <p>Our leased Data Centres have various renewable energy generation onsite including solar panels and adiabatic cooling systems.</p>
11	Develop and build low carbon buildings to net zero standard – engage and collaborate with NHS partners across the UK on the emerging net zero building standard for hospitals and adopt a net zero building accreditation approach which will be defined by 2022.	<i>DHCW does not carry out construction or major refurbishment of buildings. In general, all refurbishments are internal and interior modifications of the workspaces. At this moment, initiatives relating to New Builds and Major refurbishment are not directly applicable. Should this ever change, then DHCW is committed to implementing these Initiatives also.</i>
12	All project teams to have an independent client-side sustainability representative to provide due diligence support for the optimal low carbon design across all development stages – and be responsible for ensuring the Net Zero Framework process is followed.	<i>DHCW does not carry out construction or major refurbishment of buildings. In general, all refurbishments are internal and interior modifications of the workspaces. At this moment, initiatives relating to New Builds and Major refurbishment are not directly applicable. Should this ever change, then DHCW is committed to implementing these Initiatives also.</i>
13	Integrate Modern Methods of Construction (MMC) into the design and construction of new buildings – this will consider modular design, offsite fabrication, and just-in-time delivery to minimise construction-related carbon emissions	<i>DHCW does not carry out construction or major refurbishment of buildings. In general, all refurbishments are internal and interior modifications of the workspaces. At this moment, Initiatives relating to New Builds and Major refurbishment are not directly applicable. Should this ever change, then DHCW is committed to implementing these Initiatives also.</i>
14	Install electric vehicle charging points in new developments beyond minimum requirements, and future-proof new car parks by installing infrastructure to enable straightforward installation of future charging points.	<p>DHCW have installed 8 electric vehicle charging points at Tŷ Glan-yr-Afon and a further 4 at Media Point.</p> <p>DHCW is committed to working with its landlords to install additional EV charging points.</p>
15	Prioritise low carbon heating solutions as a key design principle. No fossil fuel combustion systems are to be installed as the primary heat source for new developments.	The opportunity was taken at one of our newer offices, Media Point, to switch away from using natural gas as the means of

No.	NHS Wales Initiative	DHCW Initiative
		heating (and to purchase a renewable electricity tariff).
16	Incorporate the principles of sustainable transportation into the design of new sites (in addition to electric vehicle infrastructure) in line with the Welsh Government's Active Travel Action Plan for Wales	<i>DHCW does not carry out construction or major refurbishment of buildings. In general, all refurbishments are internal and interior modifications of the workspaces. At this moment, initiatives relating to New Builds and Major refurbishment are not directly applicable. Should this ever change, then DHCW is committed to implementing these Initiatives also.</i>

### 9.4.3 Transport

No.	NHS Wales Initiative	DHCW Initiative
17	NWSSP will work with Health Boards and Trusts to develop the best practice approach for electric vehicle (EV) charging technology, procurement, and car park space planning – this will include consideration of NHS Wales' own fleet, staff vehicles, and visitor EV charging.	<p>All DHCW premises are leased; as of May 2023 DHCW have installed x4 EVPCs at our North Wales office and x8 EVPCs at our Cardiff office.</p> <p>At our other premises where it is not possible for DHCW to install EVPCs, we have liaised with our landlords to request that they explore options for installing EVPCs.</p> <p>DHCW are now part of the Transport and Procurement Group that NWSSP have formed featuring NHS wide participation.</p>
18	A standardised system of vehicle management for owned and leased vehicles will be developed to plan, manage, and assess vehicle performance - this will entail central fleet management oversight within each organisation.	<p>DHCW lease a small number (15) of vehicles in line with best practice for NHS Wales. Our fleet is centrally controlled by one team.</p> <p>When a standardised system of vehicle management is communicated to us we will comply with its content.</p> <p>A telematics solution is currently being trialled by the Estates and Compliance team. We plan to use the accompanying software to create an interactive dashboard to monitor driver behaviour. This will be reported internally.</p>
19	All new cars and light goods fleet vehicles procured across NHS Wales after April 2022 will be battery-electric wherever	Discussions have taken place with NWSSP regarding ULEV vehicles.

No.	NHS Wales Initiative	DHCW Initiative
	<p>practically possible. In justifiable instances where this not suitable, ultra-low emission vehicles should be procured.</p>	<p>It is the current viewpoint that the light commercial/van market is not mature enough, making the transition more problematic.</p> <p>The hybrid market is also limited to one vehicle that falls short on range and carrying capacity.</p> <p>Current lease arrangements are in regular review and we will continue to monitor the situation.</p> <p>A Car Club run by a major supplier was evaluated for cost effectiveness. Due to the nature of car hire and the use of Grey Fleet it was not viable.</p>
20	<p>All new medium and large freight vehicles procured across NHS Wales after April 2025 will meet the future modern standard of ultra-low emission vehicles in their class.</p>	<p><i>Initiative relates to the procurement of large freight vehicles and is therefore not applicable to DHCW.</i></p>
21	<p>All Health Boards and Trusts will appraise the use of staff vehicles for business travel alongside existing pool cars. Health Boards and Trusts will update their business travel policies to prioritise the use of electric pool cars, electric private vehicles, and public transport.</p>	<p>Staff continue to be notified of sustainable methods of transport available to them. EV charging facilities within our remit continue to be utilised by an increasing number of staff.</p> <p>Details of Fleet solutions lease schemes, which only include vehicles that emit 120g/km or less, are also regularly communicated.</p> <p>An updated Travel Plan has also been produced.</p> <p>Fuel type, mileage, and type of vehicle are captured as part of data recorded by our internal Finance department. Emissions data is then generated and reported to Welsh Government.</p> <p>Any further developments that can be made will be considered at the appropriate time.</p>

No.	NHS Wales Initiative	DHCW Initiative
22	The Welsh Ambulance Service NHS Trust will continue to develop their electric vehicle charging infrastructure network plan for the existing NHS Wales estate to facilitate the roll-out of electric vehicles.	<i>Initiative relates to the Welsh Ambulance Service NHS Trust and is therefore not applicable to DHCW.</i>
23	The Welsh Ambulance Service NHS Trust will aim for all rapid response vehicles procured after 2022 to be at least plug-in hybrid EV, or fully battery-electric in appropriate locations.	<i>Initiative relates to the Welsh Ambulance Service NHS Trust and is therefore not applicable to DHCW.</i>
24	The Welsh Ambulance Service NHS Trust will actively engage with vehicle manufacturers for research and development of low carbon emergency response vehicles and report annually, with the ambition to operate plug-in electric, or alternative low carbon fuelled, emergency ambulances by 2028.	<i>Initiative relates to the Welsh Ambulance Service NHS Trust and is therefore not applicable to DHCW.</i>

#### 9.4.4 Procurement

No.	NHS Wales Initiative	DHCW Initiative
25	NWSSP will transition to a market-based approach for supply chain emissions accounting.	<p>Currently, Digital Health and Care Wales is using the supply chain emissions tool provided by Welsh Government for use in the public sector.</p> <p>It is anticipated that the method of carbon accounting for procurement emissions will evolve. DHCW believes its specific type of digital and ICT goods and services are well suited to early adoption of more refined accounting tools.</p>
26	NWSSP will expand its current Sustainable Procurement Code of Practice to include a	DHCW purchases goods and services directly. It also uses the services of NWSSP. Both organisations follow the Sustainable Procurement Codes of Practice for all

No.	NHS Wales Initiative	DHCW Initiative
	framework for assessing the sustainability credentials of suppliers.	purchased goods and services, regardless of which organisation takes the lead Buying role.
27	Value to the local supply chain will be maximised, whilst maintaining high standards for goods and services.	DHCW has established protocols for increasing the amount of goods and services purchased locally, and this has commenced. DHCW will continue to drive value to the local supply chain in Wales, whilst maintaining high standards for goods and services.
28	100% REGO-backed electricity will be procured by 2025, and 100% green gas by 2030.	<p>NWSSP manage the All-Wales electricity and gas contract on behalf of NHS Wales organisations. For DHCW sites which are not part of this contract, we will ensure that green tariff contracts are sought.</p> <p>The Data Centres we use have confirmed that they purchase renewable electricity (and do not use natural gas for heating).</p>
29	NWSSP Procurement Services will embed NHS Wales' decarbonisation ambitions in procurement procedures by mandating suppliers to decarbonise.	<p>DHCW work closely with NWSSP and use Sustainable Procurement Code of Practice.</p> <p>DHCW uses the Welsh Government methodology for monitoring carbon emissions related to its procurement spend and this can be used to assess performance in decarbonisation of its purchases.</p>
30	Sustainability will be embedded within strategic governance – NHS Wales – NWSSP Procurement Services will work across Wales to champion decarbonisation in the supply chain, and influence decarbonisation ambitions for buildings and transport	DHCW to continue to work closely with NWSSP and use Sustainable Procurement Code of Practice.
31	NWSSP Procurement Services will improve supply chain logistics and distribution to reduce the carbon emissions from associated transport.	DHCW to continue to work closely with NWSSP and use Sustainable Procurement Code of Practice.
32	NWSSP Procurement Services will actively develop and support procurement requirements to support implementation of the NHS	DHCW will continue to work with NWSSP to further decarbonise our Procurement processes, as this is the most significant part of the DHCW carbon emission footprint.

No.	NHS Wales Initiative	DHCW Initiative
	Wales Decarbonisation Strategic Delivery Plan.	

#### 9.4.5 Land Use

No.	NHS Wales Initiative	DHCW Initiative
33	All-Wales strategic estate planning will have carbon efficiency as a core principle – quantified carbon will be a key decision metric for planning new developments, rationalisation of the estate, and championing smart ways of working.	<p>DHCW does not own any buildings. This provides a more agile and flexible capability in terms of the type and amount of workspace that we lease.</p> <p>DHCW has produced an Estates Rationalisation Plan which sets out how we intend to reduce our footprint, this plan has been shared with Welsh Government and NWSSP.</p> <p>Where practicable, we embed ourselves within workspaces that belong to other organisations, who would share our vision and ambition for decarbonised workspaces.</p> <p>DHCW strategic estate planning will have carbon efficiency as a core principle and will use this Decarbonisation Strategic Delivery Plan, the carbon accounting tools and its smarter working programme to deliver carbon efficiency across the Estate.</p>
34	NWSSP and Welsh Government will advise Health Boards and Trusts on an appraisal approach for allocating land for uses such as renewable energy generation, greenhouse gas removal and afforestation – NHS Wales organisations will maintain green space and utilise land for decarbonisation, including collaborating with neighbouring landowners.	<i>Initiative relates to NWSSP and Welsh Government land appraisal and is not applicable to DHCW.</i>
35	Large-scale renewable energy generation opportunities with private wire connections to NHS Wales sites will be progressed where viable.	<i>DHCW will be open to any opportunities for private wire connections to any of its sites. However, this may not be viable, given that DHCW does not own any of its properties.</i>

## 9.4.6 Approach to Healthcare

No.	NHS Wales Initiative	DHCW Initiative
36	Our approach to 21st-century healthcare will be central to the design of new hospital developments – redesigning the whole journey with care closer to home in a carbon-friendly primary care estate with a reduced need to visit hospitals.	<i>Initiative is not applicable to DHCW, as this relates to the design of new hospitals.</i>
37	Support the Welsh Government's target for 30% of the Welsh workforce to work remotely, by continuing to facilitate flexible and smart working, developing the existing approach to remote working technology, and rationalising existing office space.	<p>DHCW has a Hybrid Working Policy in place. Remote working technology is available to all of our staff and we will aim to exceed 30% of our workforce working remotely.</p> <p>Apart from its own staff, DHCW has a huge influencing role to enable increased remote working in other parts of NHS Wales. DHCW is committed to identifying opportunities for remote working and working with NHS Wales partners to implement supporting systems, as well as designing and maintaining such systems to ensure that they operate effectively.</p> <p>The Welsh Government target for remote working (30%) is currently being exceeded. DHCW will continue to:</p> <ul style="list-style-type: none"> <li>• maintain &gt;30% remote working during normal years</li> <li>• play a lead role in facilitating remote working for other parts of NHS Wales</li> <li>• provide resources and incentives to staff to use less carbon intensive modes of transport when they do commute</li> </ul>
38	Continue to utilise technology to increase the efficiency of engagements between staff and the public where suitable.	DHCW will continue to provide technology services to primary and secondary care services enabling them to continue to utilise virtual services for online consultations.
39	Health education will be used to champion decarbonisation across our service – we will encourage sustainable healthcare practice, waste efficiency, and low carbon staff and patient behaviour.	DHCW raise awareness of all of the above good practices on a regular basis through monthly Environmental Awareness communications, the Environmental SharePoint page etc. All DHCW employees are also required to undertake Environmental, Waste and Energy Training.

No.	NHS Wales Initiative	DHCW Initiative
		DHCW formally review our environmental management status annually, using data to scrutinise our performance and inform future priorities, adjusting to take advantage of any opportunities or to correct any areas of weakness.
40	Support the work of existing working groups such as the Welsh Environmental Anaesthetic Network to raise awareness of the carbon impact of medical gases and transition to a culture where gases with low global warming potentials are prioritised	<i>Initiative not applicable to DHCW as it relates to the use of medical gases.</i>
41	Explore methods of minimising gas wastage and technologies to capture expelled medical gases.	<i>Initiative not applicable to DHCW as it relates to the use of medical gases.</i>
42	Take a patient-centric approach to optimise inhaler use, focusing on a reduction in the overreliance of reliever inhalers where possible and emphasising the importance of inhaler-specific disposal and recycling.	<i>Initiative not applicable to DHCW as it relates to the use of inhalers.</i>
43	Transition the existing use and distribution of carbon-intensive and high global warming potential (GWP) inhalers to alternative lower GWP inhaler types where deemed suitable.	<i>Initiative not applicable to DHCW as it relates to the use of inhalers.</i>
44	Support the development of guidance by 2022 for best practice reduction of pharmaceutical waste.	<i>Initiative not applicable to DHCW as it relates to reducing pharmaceutical waste.</i>
45	Develop a 'plastics in healthcare' initiative to address waste in the delivery of health care – this will aim to tackle PPE, single use plastics, and packaging waste.	DHCW will participate and contribute to all strategies delivering single use plastics and packaging waste, without compromising safety. DHCW will adopt all relevant guidance from NHS Wales.

No.	NHS Wales Initiative	DHCW Initiative
		<p>DHCW will continue to ensure that as close to zero to landfill as possible.</p> <p>We have engaged with our IT supplier to ensure that measures are now in place to reduce unnecessary packaging with an emphasis on plastic.</p>
46	Engage with pharmacists and prescribers to build upon and support existing efforts to encourage responsible disposal of inhalers through discussions with patients, information leaflets, posters and media.	<i>Initiative not applicable to DHCW as it relates to the use of inhalers.</i>

## 10. Roadmap

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### 10.1 NHS Wales approach

NHS Wales has set out a strategic roadmap for its NHS Wales Initiatives, summarising planned activity on each of the 46 initiatives out to 2030. DHCW has set out its own roadmap below. By following this roadmap, we are confident of achieving the NHS Wales 2025 and 2030 targets for our Carbon Footprint:

- **2025 Target 16% reduction**
- **2030 Target 34% reduction**

NHS Wales has set out a strategic roadmap, which gives NWSSP the strategic role in leading all of the procurement strands of the NHS Wales Delivery Plan. DHCW's role is a supporting one and the DHCW Roadmap for Procurement is indicative only, relying as it does on an NWSSP low-carbon procurement strategy that is to be developed. The NHS Wales carbon footprint for 2018/19 shows ICT-related procurement as a very small (<5%) component of the overall procurement footprint and centrally, NWSSP might rightly focus elsewhere on the more sizeable components. Conversely, DHCW's footprint is dominated by ICT-related procurement, and by definition DHCW are the subject-matter experts within NHS Wales. For these reasons, while working within NWSSP's Delivery Plan framework, DHCW must provide leadership on emissions reduction in ICT procurement.

### 10.2 Roadmap Review and Revision

The roadmap below will be regularly reviewed and incorporated into DHCW's detailed annual ISO14001 Objectives, which include a robust structure for defined targets, responsibilities, and intra-year timescales, along with a well-established process for routine review.

If regular review shows that the Roadmap is not delivering the forecast emission reductions, additional actions may be considered.

10.3 DHCW Roadmap

	Buildings	Transport	Procurement	Approach to Healthcare
2021	Our action plan and building priorities were agreed, which delivered a 1% year on year energy efficiency reduction.	8 additional EV charging points were installed.	We have worked with NWSSP to develop an understanding of NWSSP carbon accounting tool for Procurement of DHCW goods and services.	96% of staff worked remotely during the pandemic.
2022	<p>We improved upon our carbon footprint methodologies.</p> <p>We liaised with all landlords with regards to the BMS capabilities, LED lighting coverage and REGO certification.</p> <p>We rolled-out LED lighting installation across our buildings, where required.</p> <p>We improved building management, to allow 1% year-on-year reductions in emissions related to natural gas consumption.</p> <p>We had 'TM44' energy surveys carried out and successfully worked through the actioned recommendations.</p>	<p>We implemented actions to improve carbon footprint methodologies.</p> <p>2 EV vans were trialled and liaison took place with Lease Vehicle Companies to understand opportunities.</p> <p>We liaised with landlords with regards to increasing the number of EV charging points at sites not controlled by ourselves.</p> <p>We undertook a Staff Travel Survey.</p> <p>We developed a Travel Plan and made improvements to reduce</p>	<p>We Implemented actions to improve carbon footprint methodologies by reviewing our spend, to remove double-counting and wrongly allocated spending. A procurement methodology for calculation not wholly dependent on spend was developed by NWSSP.</p> <p>We worked with NWSSP to develop a strategy for low-carbon ICT procurement, including (e.g.) building carbon reduction requirements into invitations to tender; developing (or adopting) low carbon standards for ICT equipment.</p>	<p>We implemented actions that improved our carbon footprint methodologies.</p> <p>We have evaluated hybrid working practices to ensure that we maintain a minimum 30% working remotely.</p> <p>We have promoted home working energy efficiency measures to staff.</p>

	<p>We vacated our Mamhilad House office and moved to a smaller shared premises.</p> <p>The Infrastructure Core Services team worked with providers to ensure that we followed best practice guidance at each of our Data Centres, whilst selecting, deploying and managing IT services.</p>	<p>the carbon intensity of commuting.</p> <p>We implemented smarter working to enable a reduction in business mileage.</p>	<p>Datacentre management have worked with providers and used Best Practice Guidance of the EU CofC on Data Centre Energy Efficiency for monitoring of datacentre performance.</p>	
<p>2023</p>	<p>Estate Rationalisation: We have reached agreement with several organisations for shared space.</p> <p>Estate Rationalisation: we have surrendered a lease for two and half floors (8653 sq ft) in Pontypool.</p> <p>We completed LED lighting roll-out across all sites.</p> <p>Achieved the target of 1% y-o-y reductions in gas-related emissions.</p> <p>Use of datacentres with a PUE of 1.3 or better by 2023/24 was achieved.</p>	<p>We have reviewed our EV opportunities for lease vehicles.</p> <p>We continued working smarter to enable a 10% year-on-year reduction in business mileage.</p>	<p>We have engaged with NWSSP in the development of a Sustainable Procurement Code of Practice.</p>	<p>We have maintained a minimum 30% working remotely strategy.</p> <p>DHCW has worked with its ICT suppliers with regards to unnecessary waste packaging and single use plastic.</p>

<p><b>2024</b></p>	<p>Liaise with landlords to ensure continue use of renewable electricity.</p> <p>1% y-o-y reductions in gas-related emissions.</p> <p>Estate Rationalisation: option to reduce footprint and increased shared use of space.</p> <p>Upgrade/refurbishment of largest energy consuming office building.</p> <p>We will adopt cloud computing services using a cloud-first approach for both new and existing workloads.</p>	<p>Promote EV opportunities for staff within the lease car scheme.</p> <p>Significant drive for public and active travel and implement a plan to reduce the carbon intensity of staff commuting.</p> <p>Working smarter to enable a reduction in business mileage.</p> <p>Further develop Travel Plan and practical measures to (with the aid of national measures) reduce carbon intensity of commuting.</p>	<p>Review and revision of low-carbon ICT strategy with NWSSP.</p>	<p>Maintain a minimum 30% working remotely strategy. Promote home working energy efficiency measures to staff.</p> <p>Measure DHCW's digital footprint to identify a baseline.</p>
<p><b>2025</b></p>	<p>Estate Rationalisation: option to vacate smaller location.</p> <p>1% y-o-y reductions in gas-related emissions</p> <p>Liaise with landlords to ensure continue use of renewable electricity.</p>	<p>DHCW will review the electric options for its remaining fleet vehicles and increase the proportion of electric vehicles in use.</p> <p>Working smarter to enable a reduction in business mileage.</p>	<p>NWSSP will have updated to market-based emissions accounting and will engage with supply chains to support decarbonisation. Assist in this process for major ICT contracts. Engagement with key suppliers on decarbonisation.</p>	<p>Maintain a minimum 30% working remotely strategy.</p> <p>DHCW will continue to develop digital technology to support a smart communication approach between NHS sites and with the public at home.</p> <p>Further refine DHCW's digital footprint and gain an</p>

	Use of datacentres with a PUE of 1.2 or better by 25/26.			understanding of the impact of National systems on NHS Wales footprint.
2026	Estate Rationalisation: 2 floor sub-letting at TGA .  1% y-o-y reductions in gas-related emissions.	Strategy of Working smarter to ensure an ongoing reduction business travel reduction.  Working smarter to enable a reduction in business mileage.	Engagement with key suppliers on decarbonisation.	Maintain a minimum 30% working remotely strategy. Promote home working energy efficiency measures to staff.  Continue to improve upon DHCW's digital footprint and measure the impact of National systems on NHS Wales footprint.
2027	Investigate alternatives to natural gas heating.  Use of datacentres with a PUE of 1.1 or better by 2027/28.  1% y-o-y reductions in gas-related emissions.	Working smarter to enable a reduction in business mileage.	Engagement with key suppliers on decarbonisation.	Maintain a minimum 30% working remotely strategy.  Review DHCW's digital footprint and its impact of National systems on NHS Wales footprint.
2028	Liaise with landlords to install non fossil fuel heating in TGA for completion by 2030.	All leased vehicles will be electric (or hybrid if rural network of EV charging points not yet fully operational).	Engagement with key suppliers on decarbonisation.	Maintain a minimum 30% working remotely strategy. Promote home working energy efficiency measures to staff.  Review DHCW's digital footprint and its impact of

				National systems on NHS Wales footprint.
2029	Estate Rationalisation: Work with other organisations to sublet areas of our leased buildings.	Working smarter to enable a reduction in business mileage.	Engagement with key suppliers on decarbonisation.	Maintain a minimum 30% working remotely strategy.  Review DHCW's digital footprint and its impact of National systems on NHS Wales footprint.
2030	Every building will have undergone an energy efficient upgrade – low carbon heating, renewable electricity purchased and most energy efficient building that is practicable. DHCW will have a smaller physical footprint through smarter working practices.	Working smarter to enable a reduction in business mileage.  All leased vehicles will be electric (fully EV, where rural network of EV charging points allows.	NHS Wales believes that significant parts of the supply chain will have progressed to net zero emissions.	Maintain a minimum 30% working remotely strategy. Promote home working energy efficiency measures to staff.  Review DHCW's digital footprint and its impact of National systems on NHS Wales footprint.

## 11. Conclusions

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Digital Health and Care Wales assessed its baseline carbon footprint for 2019/20. The gross carbon emissions for scopes 1, 2 and 3 were **19,858 T CO<sub>2</sub>e** (net 19,652 T CO<sub>2</sub>e).

Procurement related emissions were the largest component (approx. 87%) of our carbon footprint, and the category with the most uncertainty. The plan to reduce procurement related emissions is being led by NWSSP through their own Delivery Plan. However, with our digital expertise, we acknowledge that we have a major role to play in assisting NWSSP to identify realistic reduction pathways for procurement of IT Goods and Services. We will continue to work with NWSSP to scope out the way forward so that numeric reduction targets may be set for subsequent years.

Our Decarbonisation Action Plan is focused on Carbon Management, Buildings, Estates and Planning, Transport, Procurement, Estate Planning and Land Use and Approach to Healthcare.

The Decarbonisation Pathway has been designed to achieve the NHS Wales 2025 and 2030 targets of 16% and 34% emissions reductions in the gross emissions.

DHCW is committed to playing its part in the decarbonisation of NHS Wales. The targets are challenging but achievable, they will require increased provision of resources, and pro-active micromanagement of all aspects of carbon accounting and improvement programmes.

## 12. Glossary

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**Carbon footprint** - a term for the carbon emissions from an organisation or individual. A carbon footprint will likely also include non-carbon greenhouse gases, such as methane or refrigerants, which also contribute to climate change.

**CO<sub>2</sub>e** - Carbon dioxide equivalent is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO<sub>2</sub>e signifies the amount of CO<sub>2</sub>, which would have the equivalent global warming impact.

**Emission Factor** - a coefficient that allows conversion of activity data into GHG emissions. It is the average emission rate of a given source, relative to units of activity or process.

**Greenhouse Gas Protocol (or GHG Protocol)** - an international standard for reporting on emissions of greenhouse gases such as carbon dioxide.

**Greenhouse gases (GHG)** - gases that have been identified as contributing to climate change. The main definition of GHGs comes from the Kyoto Protocol and includes carbon dioxide and methane as the main sources of warming.

**Power Utilisation Efficiency (PUE)** - a measure of data centre energy efficiency, which divides the amount of power coming into a data centre by the amount of power used to run data centre information technology equipment (cooling systems, UPSs, etc.).

**REGO** - Renewable Energy Guarantee of Origin certificates; certificates which show that electricity (or gas) has been generated from a low-carbon source.

**Scope 1 Emissions** - Direct emissions from combustion of gas and other fuels.

**Scope 2 Emissions** - Emissions resulting from the generation of electricity and other energy purchased.

**Scope 3 Emissions** - Emissions made by third parties in connection with operational activities.

**WEEE** - Waste Electrical and Electronic Equipment.

**Well-to-Tank** - also known as upstream or indirect emissions, is an emissions factor, which accounts for all the GHG emissions released into the atmosphere from the production, processing and delivery of a fuel or energy.



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