

# Swansea Bay University Health Board: Decarbonisation Action Plan 2022-2024



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## Foreword

Swansea Bay University Health Board (SBUHB) welcomes the leadership Welsh Government has shown in publishing the NHS Wales Decarbonisation Strategy (2021) to achieve public sector net zero carbon emissions by 2030. We are delighted to share our refreshed and rightly ambitious Decarbonisation Action Plan for 2022-2023 (DAP), which has delivering Welsh Government (WG) policy to improve health and reduce environmental harm at its heart, including; Well-Being of Future Generations (2015), A Healthier Wales (2021) and the Environment (Wales) Act 2016.

This DAP sets out the Health Board's commitment to being sustainable healthcare leaders; encouraging and enabling positive change across the organisation and working closely with WG and other organisations to resource and embed sustainable healthcare in Wales.

Developing this DAP during a global pandemic has served only to heighten awareness of how health both impacts, and is impacted by, climate change, and how the climate and ecological emergency faced globally is and will continue to affect the health of the communities we serve.

We are proud that Health Board staff already deliver some of the most exciting, innovative and transformational carbon reduction projects in the UK and Europe, including ReFIT a £13.5 million energy efficiency project and Biophilic Wales a £1 million partnership between Swansea Bay UHB and National Botanical Gardens of Wales. In recent years these projects have transformed the electrical infrastructure at Morriston Hospital with a solar farm and the procurement of a greener vehicle fleet and engaged communities, patients and staff in the greening of our estate; improving the health of the environment and the local population.

Our clinical teams, through a new greener health network 'Swansea Bay Green Group', are building support and momentum to change ways of working and reduce the environmental and population harms caused by historic healthcare approaches.

However, total Health Board emissions are still estimated to be 81,467.99 CO<sub>2</sub>e (2020-21) or carbon held by over 99,000 acres of forest<sup>1</sup> with over 70% from indirect sources for example how we purchase services and goods, our staff travel to and from work, and how we manage our water and waste services<sup>2</sup>.

We need therefore to be still bolder and braver, building on our achievements, continuously forging forward with new opportunities and working closely with WG and partners to resource and deliver the scale of change needed.

The HB will look to integrate sustainability across all our operations, where feasible, strengthening patient safety and staff wellbeing, where opportunities exist, and remaining true to our core values and wellbeing objectives:

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<sup>1</sup> [Greenhouse Gas Equivalencies Calculator | US EPA](#)

<sup>2</sup> Public Sector Reporting Data submitted to Welsh Government in January 2022, via reporting tool

SBUHB Core Values	SBUHB WBFGA Objectives
<ul style="list-style-type: none"> <li>• Caring for each other</li> <li>• Working together</li> <li>• Always improving</li> </ul>	<ul style="list-style-type: none"> <li>• Give every child the best start in life</li> <li>• Nurture and use the environment to improve health and wellbeing</li> <li>• Apply ethical recruitment practices and support health and care workers to be healthy, skilled, diverse and resilient</li> <li>• Plan, commission, deliver and promote equitable, inclusive and accessible health and wellbeing services</li> <li>• Provide opportunities to support every adult to be healthier and to age well</li> <li>• Seek to allocate our resources to meeting the needs of, and improving, the population's health</li> </ul>

There has been a growing recognition from the public of the impact the climate has on health. It is now time to raise awareness and take action to address the impact healthcare ways of working have on the climate. Everything we do has the potential to improve population and environmental health and wellbeing and we hope this DAP emboldens, encourages and enables our staff patients and communities to be the agents of change for a sustainable Swansea Bay.

## Contents

<b>Foreword</b> .....	2
<b>1 Introduction</b> .....	5
1.1 Climate Emergency & Net Zero Wales.....	5
<b>2 Our journey to net zero</b> .....	7
2.1 Vision .....	7
2.2 Building on Successes .....	8
2.3 Delivering Change.....	9
2.4 Our Actions .....	9
2.4.1 Our Culture and Ways of Working .....	10
2.4.2 Our Buildings and Estate Planning .....	13
2.4.3 Our Transport .....	18
2.4.4 Our Procurement .....	23
2.4.5 Our Approach to Healthcare .....	26
<b>3 Calculating Health Board Emissions</b> .....	31
3.1 Health Board 2019/20 Direct GHG Emissions.....	32
3.2 Health Board 2019/20 Indirect GHG Emissions .....	32
3.3 Health Board 2020/21 GHG Emissions (Impact of COVID-19) .....	33
<b>4 Responsibilities and Governance</b> .....	34
4.1.1 Management Board .....	34
4.1.2 Population Health Programme Board .....	34
4.1.3 Sustainable Swansea Bay Group .....	34
4.1.4 Sustainable Swansea Implementation group.....	34
4.1.5 All staff.....	35
4.2 Monitoring and reporting .....	35
<b>5 Future steps</b> .....	35
Appendix 1: Key terms and definitions .....	36
Appendix 2: Detailed Action Plan .....	38
Appendix 3: Context .....	47
Appendix 4: Supporting data and information .....	51

## 1 Introduction

Swansea Bay University Health Board (the HB) recognises the significant impacts climate change is having on the health and wellbeing of the planet and people; the immense benefits of reducing this; the urgency of such if we are to improve the wellbeing of our communities and the environment; and the important role our staff have in achieving this.

This document sets out the HB Decarbonisation Action Plan (DAP) for 2022 - 24, and outlines how we will support the Welsh Public Sector in becoming net zero by 2030, through:

- ✓ Our Culture and ways of working
- ✓ Our Buildings, Estates Planning & Land Use
- ✓ Our Transport & Travel
- ✓ Our Procurement
- ✓ Our Approach to Healthcare

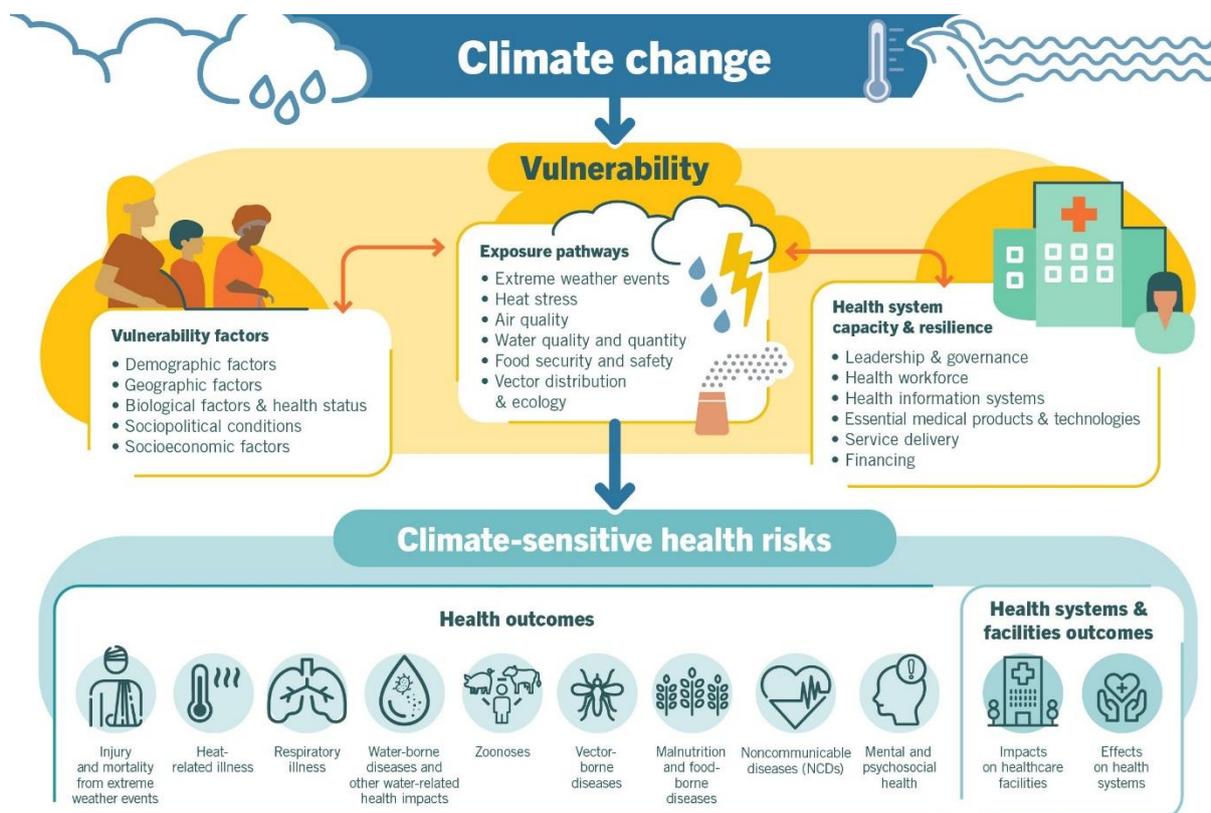
Following a series of workshops with staff from across the HB we have prioritised our decarbonisation actions for the next two years alongside developing a potential future projects pipeline. (Appendix 1)

The HB would like to thank and acknowledge the work of GEP Environmental Ltd. in supporting the development of this DAP

### 1.1 Climate Emergency & Net Zero Wales

Healthcare, as a sector, both impacts climate change through carbon intensive activities, and is impacted by climate change. This complex relationship is demonstrated by the World Health Organisation in the figure below (Figure 1).

**Figure 1 An overview of climate-sensitive health risks, their exposure pathways and vulnerability factors (WHO, 2021)<sup>3</sup>**



Welsh Government and NHS Wales recognise this complex relationship and are driving change through:

- Welsh Government’s Climate Emergency Declaration in 2019
- Well-Being of Future Generations Act 2015
- Welsh Public Sector commitment to Net Zero by 2030
- One Health
- NHS Wales Decarbonisation Strategic Delivery Plan: a 34% reduction in tCO<sub>2</sub>e from a 2018/19 baseline

Further detail on these drivers is provided in Appendix 3: Context.

For the period 2019/20 the HB’s calculated emissions totalled 84,479 tonnes CO<sub>2</sub>e, or the equivalent to that sequestered by 103,502 acres of forest annually<sup>4</sup>. Emissions from HB activities can be divided into:

- **Direct:** Utilities consumption (gas, electricity, other fuels, water), disposal & treatment of waste, operation of NHS Fleet Vehicles, Business Travel (Grey fleet only) & Well-to-Tank GHG emissions

<sup>3</sup> Source: World Health Organisation, 2021 <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

<sup>4</sup> Source: [Greenhouse Gas Equivalencies Calculator | US EPA](#)

- **Indirect:** Procurement of goods & services, employee commuting and outsourced transport services

Both areas have opportunities for reduction. The HB has greater control over direct emissions and opportunities to influence and drive change with indirect emissions. Further detail is provided in Section 3 and Appendix 4: Supporting data and information.

## 2 Our journey to net zero

### 2.1 Vision

The Health Board is committed to keeping people healthy and providing excellent healthcare when they need it, delivering Better Health, Better Care, Better Lives for the people we serve.

Providing healthcare has become a resource intensive activity with a high carbon footprint this DAP is our commitment to working with Welsh Government, our partners, patients and staff to develop, resource and deliver a more sustainable Swansea Bay.

The Well-Being of Future Generations Act (2015) defines sustainable development as:

*The process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals*

This DAP will contribute to the successful delivery of the HB wellbeing objectives;

- Give every child the best start in life
- Nurture and use the environment to improve health and wellbeing
- Apply ethical recruitment practices and support health and care workers to be healthy, skilled, diverse and resilient
- Plan, commission, deliver and promote equitable, inclusive and accessible health and wellbeing services
- Provide opportunities to support every adult to be healthier and to age well
- Seek to allocate our resources to meeting the needs of, and improving, the population's health

Our vision is a more sustainable Swansea Bay healthcare system, more resilient to future climatic changes. This will be achieved through three key approaches:

- Decarbonising our activities and services (where we are able)
- Engaging, encouraging and enabling people to be agents of change
- Collaboration for innovation

## 2.2 Building on Successes

The HB lead delivery of some of the most exciting, innovative and transformational carbon reduction projects in the UK and Europe, reducing our environmental impact and improving the health and wellbeing of our staff, patients, and wider communities.

Successfully securing funding for Re:FIT, a £13.5 million energy efficiency project, we have improved environmental performance and reduced GHG emissions from buildings across our sites in both Swansea and Neath Port Talbot. This includes improving insulation and upgrading our heating systems to use low carbon technologies, as well as providing significant reductions in our energy bills. Re:Fit has resulted in estimated savings of 3,763 tCO<sub>2e</sub>, or that sequestered by 4,610 acres of forest<sup>5</sup>.

Phase two of Re:FIT developed a full-scale Solar PV farm, providing 4MW of renewable energy to our largest hospital site; Morryston Hospital, located at Brynwhillach Farm. The Solar PV Farm has reduced the carbon emissions from electricity use on the site whilst maintaining delivery of the full range of services the hospital provides. The HB is the first health board / trust in the UK to develop such a facility which, at times during the day, enables the hospital to run on the electricity provided solely by the solar farm.

As a key collaborative partner in the Welsh Government £1M Biophilic Wales project the HB has developed dedicated green spaces across our hospital and clinical sites. Biophilic Wales supports conservation and promotion of Welsh wildlife and native species and improving the health and well-being of communities. We have recently opened one such green space at Morryston Hospital, transforming for staff and patient use a once uninspiring grass verge into a wildflower lined seating area with a grass roofed roundhouse at its heart.

Other notable HB carbon reduction projects include:

- Over 250 electric & hybrid vehicles leased by staff on the salary sacrifice scheme;
- Delivering some of our Head Quarter services remotely; reducing unnecessary commuting travel emissions;
- Estate review to identify areas that could be used more effectively and/or offer potential flexible working conditions;
- Training on opportunities to improve inhaler prescribing and disposal and;
- Primary Care Cluster Community Pharmacy used inhaler return pilot educating patients on the environmental impacts of inhaler disposal.

Building on these successes will be essential to our net zero 2030 journey.

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<sup>5</sup> Source: [Greenhouse Gas Equivalencies Calculator | US EPA](#)

## 2.3 Delivering Change

After calculating HB emissions and engaging with HB staff groups through a number of workshops the following HB decarbonisation approach was identified;

- Decarbonising our activities and services (where we are able)
- Engaging, encouraging and enabling people to be agents of change
- Collaboration for innovation

To deliver the HBs programme of change 5 activity streams, closely aligned to the NHS Wales DSDP, and specific actions to deliver these have been developed, summarised in Table 1.

**Table 1: List of activity streams for action within this DAP**

Activity stream	Priorities
<b>Our Culture and Ways of Working</b>	<ul style="list-style-type: none"> <li>• Leadership development</li> <li>• Staff training</li> <li>• Communication and engagement</li> <li>• Partnerships</li> </ul>
<b>Our Buildings &amp; Estate Planning</b>	<ul style="list-style-type: none"> <li>• Decarbonising new build and major refurbishment</li> <li>• Embedding decarbonisation into HB Estates Strategy</li> <li>• Maximising land assets and hosting renewable energy generation</li> </ul>
<b>Our Transport</b>	<ul style="list-style-type: none"> <li>• Decarbonising HB vehicle fleet</li> <li>• Implementing the Swansea Healthy Travel Charter</li> <li>• Plan for electric vehicle charging infrastructure</li> </ul>
<b>Our Procurement</b>	<ul style="list-style-type: none"> <li>• Improvements to carbon accounting to identify GHG emissions hotspots within our supply chain</li> <li>• Programme of supplier engagement to drive decarbonisation of our supply chain</li> </ul>
<b>Our Approach to Healthcare</b>	<ul style="list-style-type: none"> <li>• Smarter working and digitalisation of our services</li> <li>• Management of medical gases and medicines to reduce GHG emissions</li> <li>• Targeted inhaler programme to encourage switching and initiate Wales first recycling programme</li> <li>• Approach to reducing carbon emissions from waste</li> </ul>

## 2.4 Our Actions

Individual actions for each of the five work streams were agreed for the period 2022-24 with groups from across the HB. In addition to these actions, a pipeline detailing potential future actions has been created and will continue to be developed. A detailed action plan can be seen at Appendix 2: Detailed Action Plan.

### 2.4.1 Our Culture and Ways of Working

We acknowledge that delivering the DAP will require decarbonisation to be integral in HB processes:

- Embedding carbon management into all HB activities and services (where we are able)
- Implementing strong monitoring and reporting of our annual Greenhouse Gas (GHG) emissions
- Continuously progressing achievement of agreed decarbonisation actions whilst identifying future actions

Actions for Our Culture and Ways of Working are detailed in Table 2.

**Table 2 Our Culture & Ways of Working Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Date
Leadership: setting the standard for the Health Board	Ensure Management Board, and other key decision makers are aware of: • DAP commitments • WBFGA • Importance of embedding into activities	CW01	Key identified staff to be aware of requirements of Decarbonisation Act and Health Board DAP that considers Healthcare and climate change, and their role as leaders.	Director of Strategy	2022
		CW02	Further embed decarbonisation into decision making processes, across the Health Board to support the implementation of the DAP	Director of Strategy	2023
Best Practice Carbon Management	Implement NHS Wales and global best practice guidance	CW03	Implement a bi-annual review process for our Decarbonisation Action Plan, submitting supporting progress reports to NHS Wales.	Director of Strategy	2022 and ongoing

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Date
		CW04	Continue to calculate our GHG emissions footprint on an annual basis following current reporting guidelines (as outlined by NHS Wales and Welsh Public Sector Net Zero Carbon reporting).	Director of Strategy / Assistant Director of Estates	Ongoing, next submission June 2022
		CW05	Utilise our annual GHG emissions footprint to identify emissions reduction priorities and to inform the development of interim reduction milestones that align with NHS Wales reduction targets.	Director of Strategy / Assistant Director of Estates	Ongoing
		CW06	Continue to engage with our external partners and other Health Boards and Trusts to collaborate on decarbonisation initiatives and communicate best practice decarbonisation guidance	Director of Strategy and all	Ongoing
Staff & Public Engagement	Enable and encourage staff engagement with the Decarbonisation Action Plan and associated actions.	CW07	Review of training provision to ensure staff can be supported during implementation of this plan, including: <ul style="list-style-type: none"> <li>• General engagement/awareness training for all staff</li> <li>• More specific Carbon and Climate Literacy training for department leads and other key staff</li> <li>• Leadership training (Ref. CW01)</li> </ul>	Director of Strategy	2022
	Climate and Carbon Education	CW08	Continue to develop existing regular communication channels to inform all staff of SBUHB's progress against the DAP and to provide wider knowledge on climate and carbon issues.	Communication Lead / Director of Strategy	2022

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Date
		CW09	Investigate new -communication channels which will encourage staff to share ideas and feedback for inclusion within future DAPs, e.g. staff portal.	Communication Lead	Ongoing
Awareness and Communication	Publish our Decarbonisation Action Plan and raise awareness of what we are doing to support decarbonisation	CW10	Publish our Decarbonisation Action Plan on our website (and other digital platforms as appropriate)	Director of Strategy	2022
		CW11	Develop relevant and engaging case studies to showcase our decarbonisation achievements.	Director of Strategy	Ongoing
		CW12	Identify appropriate communication channels to communicate to patients and visitors our DAP and the actions we're taking to reduce our environmental impact.	Communication Lead	Ongoing

## 2.4.2 Our Buildings and Estate Planning

Our Estate reflects the variety of services we deliver across our hospitals, GP practices, health centres, treatment centres, staff accommodation and offices. Additionally, temporary vaccination and clinic sites were developed in response to Covid-19. 2019/20 emissions from the estate equated to **28,325.63 tCO<sub>2</sub>e** (86.5% of our total emissions excluding procurement), which includes emissions from activities such as gas use, electricity consumption, water use, and waste generation. 72.7% of emissions arising from our estate are a direct result of energy used to power and heat our buildings; particularly Morriston and Singleton Hospital sites.

- **Buildings:**

To progress our Net Zero Carbon vision and build resilience to the impacts of climate change, we are focussing our efforts to reduce Greenhouse Gas (GHG) emissions associated with our buildings and move towards greener and cleaner technologies, without compromising the delivery of our services.

Actions in Table 3 are focussed on technical interventions that we can undertake within our buildings to reduce their carbon intensity.

**Table 3 Our Buildings Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Completion Date
Current Buildings (retrofit & use)	Optimising the use of and reviewing the need for our current buildings	BU01	Implement current and planned building fabric and energy efficiency projects (including LED lighting upgrades) across our estate with support from our established Re:fit Service Provider and other appropriate resources. Continue to identify appropriate centralised funding opportunities to support further works.	Assistant Director of Estates	When funding becomes available
		BU02	Implement a programme of targeted decarbonisation audits to explore opportunities to reduce carbon emissions from our smaller clinical and community sites; including those which are considered as hard to treat.	Assistant Director of Estates	2022

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Completion Date
		BU03	Continue to explore opportunities for carbon emissions reduction at our Morriston and Singleton Hospital sites through upgrading existing air handling units and heat exchangers to reduce energy wastage.	Assistant Director of Estates	2023
		BU04	Continue to explore opportunities for carbon emissions reduction at our Morriston and Singleton Hospital sites through improving the ventilation efficiency to core parts of these sites through heat recovery systems.	Assistant Director of Estates	2023
		BU05	Continue to explore opportunities for carbon emissions reduction at our Morriston and Singleton Hospital sites through the use of more energy efficient humidification and de-humidification systems to reduce energy wastage.	Assistant Director of Estates	2023
		BU06	Link remaining smaller buildings/sites at Morriston and Singleton Hospitals to their respective Building Energy Management Systems.	Assistant Director of Estates	2023
Current Buildings (retrofit & use)	Decarbonise and increase the energy efficiency of our current buildings	BU07	Develop an overall strategy to support the removal of steam fed heating systems within our buildings; particularly at our Morriston and Singleton Hospital sites. Strategy will be informed by results of ongoing feasibility assessment for heat pump replacement at Morriston Hospital.	Assistant Director of Estates	2023
		BU08	Undertake feasibility assessments for remaining areas to determine the viability of installing solar PV at buildings that have not formed part of previous Re:fit projects.	Assistant Director of Estates	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Completion Date
New Builds	New Build Design & Construction	BU09	<p>SBUHB will integrate modern methods of construction (MMC) within the design and construction of all future new build sites considering aspects such as:</p> <ul style="list-style-type: none"> <li>• modular design and offsite fabrication</li> <li>• orientation and form of buildings to maximise daylight and reduce solar gain</li> <li>• building ventilation and air leakage</li> </ul> <p>MMC considerations are being applied by SBUHB in the development of new orthopaedic and operating theatres at Neath Port Talbot and Singleton Hospitals.</p>	Assistant Director of Strategy - Capital	2022
		BU10	<p>SBUHB will work to ensure that the design and construction of all future new build sites aligns with the Principles for Building Healthy Places as well as planning the location of new sites to reduce private vehicle commuting (where possible)</p>	Assistant Director of Strategy - Capital	2023
New Builds	New Build Operational Energy	BU11	<p>SBUHB will develop an approach to minimising unregulated energy consumption from new build sites considering operational aspects such as:</p> <ul style="list-style-type: none"> <li>• forecast energy demand from medical equipment to minimise primary energy usage</li> <li>• maximising the efficiency of plant equipment</li> <li>• reducing energy demand from lighting and small power equipment</li> <li>• installation of smart metering and BMS controls</li> <li>• installation of sub metering feasible within areas that are leased if feasible</li> </ul>	Assistant Director of Strategy - Capital	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Completion Date
	New Build Operation Renewables	BU12	SBUHB will ensure that all new building design makes provision for the installation of on-site renewables and low carbon technologies (i.e. with preference/priority for non-fossil fuel technologies) or for the connection to existing renewable energy supplies (e.g. solar farms) supplying our sites.	Assistant Director of Strategy - Capital	2022

- **Estate Planning:**

As a HB, we own the majority of sites and buildings, and are therefore best placed to implement significant decarbonisation measures within buildings across the estate. SBUHB also leases out small areas to external partners, such as other NHS Health Boards and Trusts. In order to continue to progress our Net Zero Carbon strategy, we have outlined a number of actions regarding how we will utilise the buildings that we own across our estate, detailed in Table 4.

**Table 4 Our Estate Planning Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Completion Date
Existing Estate	Utilising our current estate	EP01	Ensure Estates Strategy has a decarbonisation focus	Assistant Director of Estates	2022
		EP02	Undertake an estate rationalisation assessment to determine if any of our buildings are being fully utilised	Assistant Director of Estates	2022
		EP03	Business case for Re:fit	Assistant Director of Estates	2022
		EP04	For buildings that have office areas that are underutilised consider the future transformation of office space into additional healthcare facilities as required.	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Completion Date
		EP05	For buildings that have areas that are not being appropriately utilised, review the potential for leasing of these spaces to external partners, such as NHS Health Boards and Trusts to reduce our energy and resource use.	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023
		EP06	For buildings that are severely underutilised or not being appropriately used, investigate opportunities to consolidate/rationalise services into other buildings, considering the following: <ul style="list-style-type: none"> <li>Review whether the building is still required</li> <li>Options for selling or decommissioning buildings to reduce estate wide GHG emissions.</li> </ul>	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023
		EP07	Engage with our local community groups to investigate opportunities to deliver certain facilities/services in mutually convenient locations for our patients and staff to align with the Foundational Economy requirements	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023

• **Renewables and Land Use:**

As major landowners in the area, we have the opportunity to develop significant quantities of energy for our own use as well as providing a small surplus for export to the local energy networks. As we move to increased electrification of heat production and transport options, the ability to generate our own electricity will become increasingly important to manage our carbon emissions as well as helping to insulate the health board from predicted future price rises in purchased electricity. To facilitate this, a more sophisticated approach to renewable energy generation will be required incorporating battery and other storage mediums and forms of electricity generation. SBUHB recognises that significant centralised capital funding will need to be made available to support expansion of renewable energy generation and storage.

To continue to build on the work we have already done, we have identified the following actions to enhance our current land management practices, increase green spaces, improve staff and patient health and wellbeing and promote biodiversity, detailed in Table 5.

**Table 5 Our Renewables and Land Use Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Target Date(s)
Renewables	Increase generation of renewable electricity	RL01	Review opportunities to apply for funding support to help facilitate the roll-out of renewables across our estate through the Estates Funding Advisory Board (EFAB) and other appropriate means.	Assistant Director of Estates	Ongoing
		RL02	Install additional Solar PV capability at existing sites where land or roof space allows. Where Solar PV potential has been identified but been discounted due to poor underlying roof condition, reconsider if funding becomes available for repairs	Assistant Director of Estates	When funding becomes available
		RL03	Optimise the amount of Solar PV electricity produced from our sites used directly by the Health Board through the use of battery and developing storage solutions	Assistant Director of Estates	When funding becomes available
		RL04	Investigate the possibility of deploying other types of renewable energy generation on our land and at our sites.	Assistant Director of Estates	2023
Land Use and Biodiversity	Enhancing our land use and supporting biodiversity	RL05	Determine whether there is underutilised land and/or green spaces across the estate that could be enhanced and/or redeveloped to enhance carbon sequestration, support biodiversity and support biophilic design (to encourage people to connect with the natural environment)	Assistant Director of Estates	2023

### 2.4.3 Our Transport

- **Fleet:**

The HB operates a fleet of 184 vehicles. Our fleet is made up of rapid response vehicles, support vehicles (vans), and fleet cars (company & pool cars). Operation of these vehicles resulted in: **4,308 tonnes CO<sub>2</sub>e** (13.2% of our total direct GHG emissions) for the 2019/20 reporting year.

- **Employee commuting & Non-Emergency Patient Transport Service (NEPTS):**

Employee commuting and the operation of our NEPTS totalled **6,337 tonnes CO<sub>2</sub>e** (12.2% of our total indirect GHG emissions) for the 2019/20 reporting year. As employee commuting data is not routinely collected by the HB calculations utilised commuting metrics as outlined within the Welsh Public Reporting Guidance; based upon staff numbers for 2019/20.

The HB has identified the actions detailed in Table 6 to be implemented to support the decarbonisation of our transport, business travel, and commuting activities.

**Table 6 Our Transport Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Target Date(s)
Enabling Infrastructure	Install supporting infrastructure for ULEV transition	TR01	Review current provision of charging infrastructure across SBUHB’s estate and identify opportunities to increase charging infrastructure in line with NWSSP Best Practice Guidance (currently in development).	Head of Support Services	2022
		TR02	Engage with NWSSP to develop an implementation strategy to expand current provision of electric vehicle charging infrastructure across our estate considering topics such as: <ul style="list-style-type: none"> <li>• Percentage of car spaces with charging provision</li> <li>• Inclusion of public charging points to support community transition to electric vehicles</li> <li>• Best practice activity from other Health Boards &amp; NHS Trusts</li> <li>• Scheduling roll-out to meet current and forecast levels of demand.</li> </ul>	Head of Support Services	2022

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Target Date(s)
	Install supporting infrastructure for ULEV transition	TR03	Engage with other Health Boards and NHS Trusts to share and develop best-practice approaches to support the roll-out of charging infrastructure across NHS Wales.	Head of Support Services	Ongoing
Owned Transport	Transition our owned vehicle fleet to electric/hybrid vehicles	TR04	Procure battery-electric vehicle replacements (where practically possible) and/or ultra-low emissions vehicles (hybrids) through NWSSP for leases ending after April 2022 within our owned vehicle fleet.	Head of Support Services	2023
		TR05	Continue to review the feasibility of opportunities to utilise localised low carbon transport infrastructure as they arise.	Head of Support Services	Ongoing
	Vehicle efficiency and driver training.	TR06	Review the current provision of telematics and vehicle monitoring systems within our owned vehicle fleet and the use of data that is recorded.	Head of Support Services	2023
		TR07	Using data provided by vehicle monitoring systems, identify eco-driving training for all personnel utilising the fleet to reduce vehicle emissions where feasible.	Head of Support Services	Ongoing
Outsourced Transport Services	Non-Emergency Patient Transport Services (NEPTS)	TR08	Collaborate with the Welsh Ambulance Service Trust to identify opportunities to transition non-emergency ambulance vehicles to ultra-low emissions vehicles, electric vehicles or hybrids where possible.	Head of Support Services	2023
	NHS Wales Shared Services (NWSSP)	TR09	Ongoing engagement with NWSSP to optimise courier routes and transition courier vehicles to ultra-low emissions vehicle, electric vehicle or hybrids used in the delivery of NHS Wales shared services.	Head of Support Services	2023
Business Travel & Commuting	Support staff to decarbonise	TR10	Update business travel policies to implement a travel hierarchy that encourages/incentivises sustainable travel and reduces the use of high emission vehicles.	Director of Workforce/ Assistant	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Target Date(s)
	their business travel and commuting.			Director Workforce & OD (TBC)	
		TR11	Ongoing promotion of existing salary sacrifice scheme to encourage uptake of electric and/or hybrid vehicles by staff members.	Communication Lead	2023
		TR12	Consider the possibility of expanding the existing scheme to include e-bikes or second-hand electric vehicles to increase inclusivity for all staff	Head of Support Services	2023
		TR13	Continue to consider opportunities to utilise local car clubs and sharing initiatives to reduce business travel in their own vehicles.	Head of Support Services / Head of Procurement	2023
		TR14	Investigate opportunities to improve the active travel facilities of our sites (e.g., hospitals) to enable both staff and patients to choose low carbon forms of transport	Head of Support Services	2023
		TR15	Ongoing engagement with staff members to promote sustainable and active travel options (where practically possible) for commuting and for business travel including: <ul style="list-style-type: none"> <li>Internally supported campaigns to promote public transport use and car sharing schemes</li> <li>Internal workshops and training on the benefits (GHG emissions and health) of decarbonising travel &amp; transport.</li> </ul>	Head of Support Services	Ongoing
	Support staff to decarbonise their business travel and commuting.	TR16	Continued engagement and communication with staff to promote and highlight existing and future low carbon schemes and active travel facilities (i.e. bike parking, staff showers facilities).	Head of Support Services	Ongoing

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Target Date(s)
Active Travel	Encourage the use of Active Travel options	TR17	Complete an evaluation across SBUHB’s operations to understand the current level of facilities and internal policy available to support active travel options, such as: <ul style="list-style-type: none"> <li>• Provision of showers, changing and storage facilities (e.g. bike racks) across SBUHB sites</li> <li>• Existing public transport provision</li> <li>• Flexibility of shift times to align with public transport timetables</li> <li>• Support mechanisms available to incentivise active travel within SBUHB</li> </ul>	Head of Support Services / Director of Strategy / Workforce	2023
		TR18	Implement the Swansea Bay Healthy Travel Charter with Local Government and public sector organisations in the Swansea Bay area to champion the uptake of active travel, electric vehicle use, and public transport options within our local community.	Head of Support Services / Workforce	2023

### 2.4.4 Our Procurement

The procurement of goods and services through NHS Wales Shared Services Partnership (NWSSP) Procurement Services represents SBUHB’s largest indirect environmental impact, but also an opportunity to support cross-sector decarbonisation across our supply chain. Emissions arising from procurement of goods and services equated to **45,411 tonnes CO<sub>2</sub>e for our 2019/20 baseline year.**

The scale and the variety of the services and goods that we procure represents a significant challenge in being able to set meaningful emissions reduction targets across our supply chain; embedding sustainable procurement whilst still delivering value for money and sustaining high standards of healthcare provision. SBUHB will continue to develop our existing procurement processes and will look to actively engage with NWSSP in supporting the update of their Sustainable Procurement Code of Practice.

Whilst the impact of our supplier’s activities has not been included within our Net Zero Carbon targets, this has been used to inform our supplier engagement activities and to influence wider emissions outside of SBUHB’s control. SBUHB has identified the key actions detailed in Table 7 to be implemented over the course of the next 2 years to support the decarbonisation of our Procurement activities.

**Table 7 Our Procurement Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Target Date(s)
Procurement	Active Interventions	PR01	Further embed the NWSSP Sustainable Procurement Code of Practice to aid interaction with our suppliers/contractors through: <ul style="list-style-type: none"> <li>• Implementation of sustainability risk assessments</li> <li>• Review of HB methodology for determining and validating decarbonisation actions taken by suppliers</li> <li>• Incorporation of decarbonisation requirements within tenders</li> <li>• Actively evaluate decarbonisation commitments from suppliers and considering their relative award weighting against value within tenders.</li> </ul>	Head of Procurement	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Target Date(s)
			<ul style="list-style-type: none"> <li>Assess decarbonisation strategies of our existing/new suppliers/contractors</li> </ul>		
		PR02	Develop and implement a programme of supplier engagement throughout the procurement process and contract delivery to encourage and support ongoing decarbonisation of their operations.	Head of Procurement	2023
		PR03	Keep abreast of the development of new technologies and innovations to work towards substituting existing technologies for low-carbon alternatives where they are available; identifying and encouraging innovative approaches.	Head of Procurement	2023
		PR04	Continue to collaborate with NWSSP Supply Chain, Logistics, and Health Courier Services to introduce a smart delivery system to minimise carbon emissions from supplier transport, and to optimise onward distribution of bulk deliveries.	Head of Procurement	2023
	Supply Chain Awareness	PR05	Develop and implement an awareness campaign to engage with suppliers about their role in support the decarbonisation of SBUHB's operations.	Head of Procurement, Suppliers & Contractors	2023
		PR06	Undertake internal engagement with different teams within SBUHB to understand how procurement activities fit in within our DAP	Head of Procurement	2023
	Supply Chain Engagement	PR07	Update current tender requirements to place greater emphasis upon carbon management and active decarbonisation for prospective suppliers. Develop a set of robust assessment criteria and evidence requirements to be able to fairly compare carbon management across all responders.	Head of Procurement	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner (s)	Target Date(s)
		PR08	Review the decarbonisation strategies of suppliers to understand the level of carbon management and monitoring which currently exists within our supply chain, using approaches such as: <ul style="list-style-type: none"> <li>• Direct consultation with suppliers</li> <li>• Requesting evidence of supplier(s) decarbonisation activities/strategies.</li> </ul>	Head of Procurement	2023
		PR09	Ensure that suppliers are decarbonising their own processes through ongoing supplier / contract management and provide clear and long-term signals about the direction of travel.	Head of Procurement, Suppliers & Contractors	2023

### 2.4.5 Our Approach to Healthcare

It is well documented that there is a significant link between the impacts of climate change and the health and wellbeing of people. We recognise the important role we play in supporting NHS Wales's DSDP, and also the inherent positive impacts that improving healthcare services have on the health and wellbeing of our local communities. To ensure that all actions implemented are effective and appropriate, SBUHB will continue to work with all care functions, including primary care, to share and collaborate on projects that are likely to impact across all healthcare associated operations.

- **Smarter Working:**

NHS Wales highlights that the current model of healthcare provision across Wales must evolve moving the point of care away from hospital settings and closer to patient homes and the local communities we serve. The model for future healthcare is to be achieved through increasing the levels of healthcare at local community hubs, the use of digital monitoring of patients, and by encouraging the public to take greater responsibility for their own health. SBUHB appreciates that many healthcare services cannot be delivered outside of hospital settings, but smarter ways of working may be possible.

- **Management of Medical Gases and Inhalers:**

We recognise that the volume of the use of medicines and gases within our services makes this a key focus area of decarbonisation. Accurate consumption data of gases and medicines is not actively recorded across our operations; however, we support the ambition of NHS Wales to include this information within future GHG emissions reporting. Medical gases used for anaesthesia, emergency pain relief, or within inhalers typically include nitrous oxide, isoflurane, sevoflurane, and desflurane which have a significant climate change impact; either through ozone depletion (nitrous oxide and isoflurane) or through global warming potential (sevoflurane and desflurane). Research completed by NHS Wales estimates that nitrous oxide gas canisters are typically disposed of when these are on average 30% full. Disposal of these canisters along with leaks from older hospital sites (via piped networks) contributes to significant wastage across NHS operations<sup>6</sup>. Pressurised metered dose inhalers contain gases with a high global warming potential (GWP), which are damaging to the environment by contributing to climate change.

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<sup>6</sup> NHS Wales (March 2021) - Decarbonisation Strategic Delivery Plan

Expected increases in healthcare demand and the prevalence of chronic obstructive pulmonary diseases (COPD) within our local communities, mean the processes for managing our gases and medicines needs to be made as efficient and sustainable as possible to minimise our environmental impact.

- **Waste Reduction:**

NHS Wales identifies the reduction of waste generated from the provision of healthcare services as a priority to support the decarbonisation of our operations. Currently, more than half of healthcare waste generated by NHS Wales is being recycled which highlights the already significant progress made in this area. Within SBUHB’s operations, we currently recycle 15.7% of the waste generated at our sites, which highlights the need for further action within this area.

SBUHB has identified actions detailed in Table 8 to support the delivery of our services.

**Table 8 Our Approach to Healthcare Actions**

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Completion Date
Smarter Working	Flexible working models	AH01	Undertake a review to determine the proportion of the workforce that could work remotely or on a hybrid basis	Director of Workforce/Assistant Director Workforce & OD	2022
		AH02	Explore the current provision of and opportunities for the implementation of local community and digital hubs to deliver non-hospital services	Director of Digital	2023
		AH03	Publish agile working policy for Health Board staff and develop supporting processes for implementation	Director of Workforce/Assistant Director Workforce & OD	2022
	Estate Rationalisation and optimising	AH04	Consider opportunities to work with external partners (other Health Boards and NHS Trusts) to share and utilise office space to reduce travel requirements	Assistant Director of Estates / Assistant Director of Strategy - Capital	Ongoing

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Completion Date
	site-based working	AH05	Review current processes within our hospital and clinical settings to identify where procedures and processes can be changed or optimised to make these more sustainable.	Clinical Lead (TBC)	2022
	Digitalisation	AH06	Complete a review of the current approach to delivering our services to identify areas that may significantly benefit from digitalisation.	Director of Digital	2022
		AH07	Review current IT systems to identify opportunities to better support future service delivery, including clinical records and communications	Director of Digital	Ongoing
		AH08	Continue to utilise tele and video conferencing software to provide remote consultations and referrals for patients.	Director of Digital	2022
		AH09	Investigate opportunities to provide a paper-free prescription service to patients to remove the need to travel to SBUHB sites (i.e. pharmacies) for medicines.	Clinical Director of Pharmacy	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Completion Date
Medical Gases & Medicines Management	Medical Gases	AH10	<p>Review current practices and behaviours surrounding the use of anaesthetic gases within our clinical services. Identify opportunities to accurately monitor the use of gases and reduce wastage through measures such as:</p> <ul style="list-style-type: none"> <li>• Installing gauges/meters on gas cylinders</li> <li>• Reviewing existing pipework and infrastructure for NOx delivery at older hospital sites</li> </ul>	Clinical Director of Pharmacy/Estates	2023
	Prescribing	AH11	<p>Establish Pharmacy Project Board with key stakeholders from primary and acute pharmacy teams. Develop work plan to include actions for:</p> <ul style="list-style-type: none"> <li>• Increasing use of low GWP inhalers in line with AWMSG recommendations across primary &amp; acute care e.g. prescribing dashboard, PMS 22/23, Community Pharmacy enhanced services, patient engagement, Care Homes.</li> <li>• Education &amp; supporting guidance for healthcare professionals</li> <li>• Disposal of used inhalers through recycling. Acute Care work to involve Greener Ward development with education and training for patients and staff in GWP inhalers</li> </ul>	Clinical Director of Pharmacy	2023

Activity Area	Key Action	Action Ref	Sub Actions	Action Owner(s)	Completion Date
Waste Reduction	Reducing waste generated within our operations and supporting NHS Wales to reduce waste.	AH12	Identify and take advantage of new and emerging methods of recycling and reusing materials (incorporating the principles of the circular economy) which can benefit SBUHB as well as other Health Boards and NHS Trusts.	Assistant Director of Estates	Ongoing
		AH13	Work with clinical staff including infection control to identify further areas where recycling can be included (e.g., Morriston Theatre Trials).	Assistant Director of Estates	2023
		AH14	Work with our catering facilities and partners across our sites to investigate new methods to segregate food waste	Head of Support Services	2023
		AH15	Continue to investigate opportunities to identify and incorporate reusable medical items inc. PPE within service delivery, where feasible.	Clinical Lead (TBC)	2023
		AH16	Initiate cultural change around reducing wastes within SBUHB's staff through internal engagement mechanisms including: <ul style="list-style-type: none"> <li>• Supporting waste management literature and fact sheets</li> <li>• Assigning responsibility for improving waste management within SBUHB's sites. Supported by action CW07 Carbon Literacy Training</li> </ul>	Assistant Director of Estates	Ongoing

### 3 Calculating Health Board Emissions

SBUHB’s GHG emissions for financial year 2019-20 were calculated in alignment with reporting requirements set out in the WG Public Sector Reporting framework. The total HB emissions for this period were calculated to be **84,479 tonnes CO<sub>2</sub>e**. The emissions breakdown (Figure 2) comprise direct and indirect GHG emission sources as decarbonisation approaches will differ based on the level of HB direct control and ownership of the emissions source. The HB GHG Emissions Baseline includes GHG emissions from;

**Scope 1:** operations under the direct control of the HB including fuel combustion (e.g., natural gas in boilers) and fuel use in fleet vehicles.

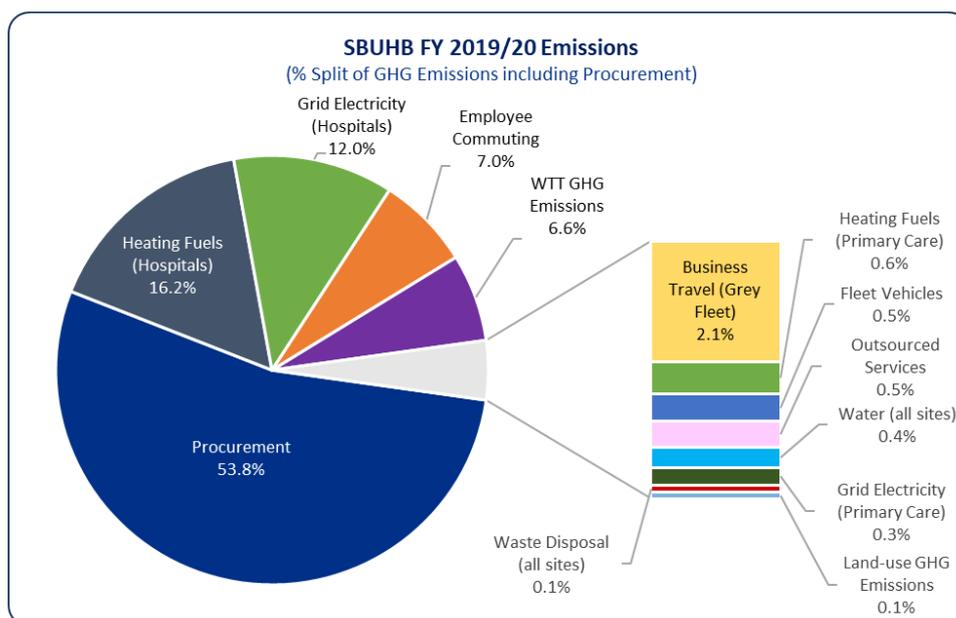
**Scope 2:** the generation of purchased grid electricity used across HB sites.

**Scope 3:** wider HB operations including procurement, water consumption, waste disposal, business travel (grey fleet), employee commuting, outsourced services, transmission and distribution of purchased grid electricity and well-to-tank emissions related to direct and indirect fuel use.

**Land Use:** GHG emissions owing to different types of land use across the HB’s estate; negative values represent removals of GHG emissions from the atmosphere through sequestration (i.e., trees, shrubs, grass) whilst positive values represent GHG emissions added into the atmosphere as a result of type of land use (i.e., urbanised areas).

**Energy use:** GHG emissions owing to heating fuels and electricity has been split between Hospitals and Primary Care to clearly define the relative impact these operations have upon our GHG emissions footprint.

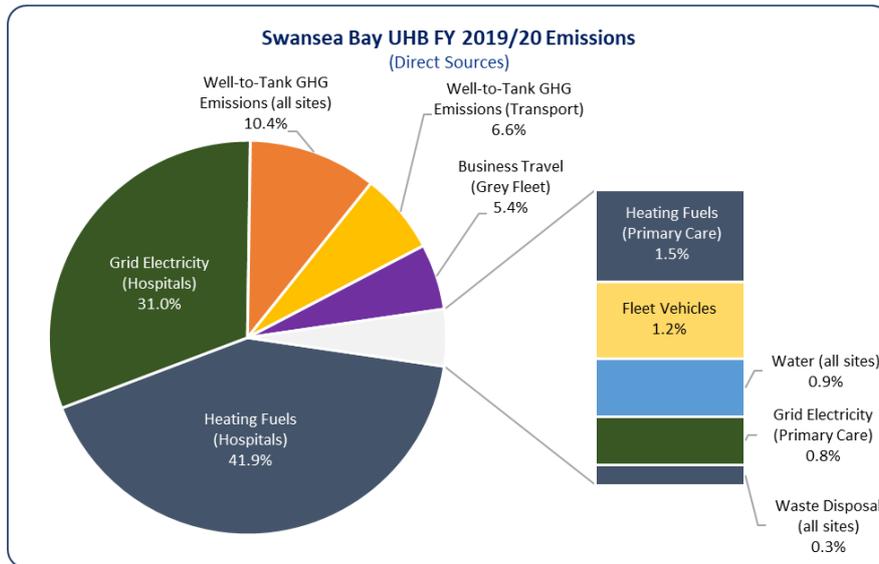
**Figure 2 SBUHB's baseline GHG Emissions 2019-20 reporting period**



### 3.1 Health Board 2019/20 Direct GHG Emissions

Direct GHG emissions, the ones the HB has most control over, provide opportunities for the greatest impact in reducing HB GHG emissions. The HB’s direct GHG emissions footprint (factoring in emissions from our land assets) for 2019/20 is **32,731 tonnes CO<sub>2</sub>e**, and demonstrated in Figure 3 and Appendix 4: Supporting data and information

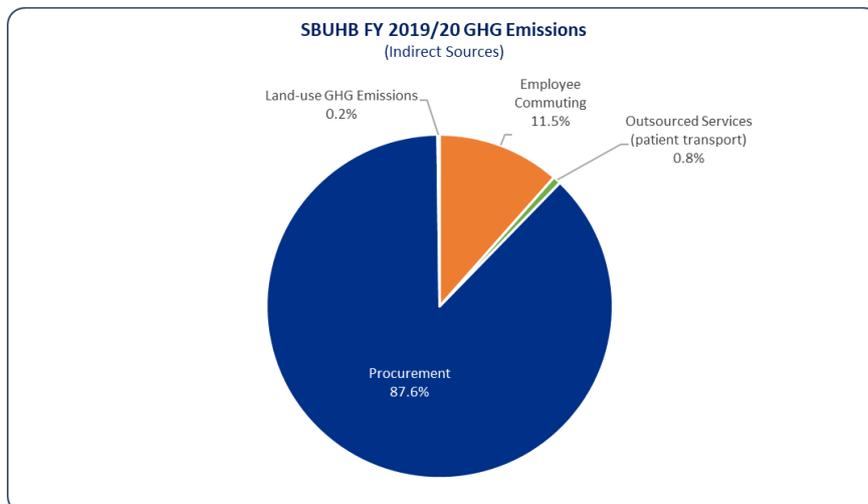
**Figure 3 Direct emissions**



### 3.2 Health Board 2019/20 Indirect GHG Emissions

Indirect GHG emissions represent sources where HB can apply our influence to help to reduce the GHG emissions footprint. The indirect GHG emissions footprint (factoring in emissions from our land assets) for our 2019/20 baseline year is **51,846 tonnes CO<sub>2</sub>e**, and a summary provided in Figure 4 and Appendix 4: Supporting data and information.

**Figure 4 SBUHB's indirect GHG emissions footprint for 2019/20**



### 3.3 Health Board 2020/21 GHG Emissions (Impact of COVID-19)

There has been a noticeable impact of Covid-19 on the emissions of the HB, with the year-on-year increases in emissions associated with the use of heating fuels across our sites, as well as waste disposal & treatment. This is shown in Table 9.

Despite an increase in electricity demand across our sites, year-on-year GHG emissions have shown a reduction. This relates to energy efficiency improvements made to our sites, as well as the continued decarbonisation of the National Grid.

Significant reductions in emissions were also seen in the operation of our vehicle fleets, NEPTS (Outsourced Transport Services), and business travel by our staff.

**Table 9 SBUHB GHG emissions comparison between 2019/20 & 2020/21**

Reporting Scope	GHG Emissions Source	2019-20 GHG Emissions (tCO <sub>2</sub> e)	2020-21 GHG Emissions (tCO <sub>2</sub> e)	Year on Year Comparison (%)
<b>Scope 1</b>	Heating Fuels (all sites)	14,138	14,294	+1.1%
	NHS Fleet Vehicles	390	359	-7.9%
<b>Scope 2</b>	Grid Electricity (all sites)	9,565	8,531	-10.8%
<b>Scope 3</b>	Procurement	45,411	45,411	-
	Employee Commuting	5,948	5,983	+0.6%
	Well-to-Tank GHG Emissions	5,562	5,165	-7.1%
	Business Travel (Grey Fleet)	1,761	876	-50.2%
	Grid Electricity (T&D)	812	734	-9.6%
	NEPTS (Outsourced Transport Services)	389	213	-45.2%
	Water	299	269	-10.0%
	Waste Disposal	106	189	+78.3%
<b>(Gross) Total GHG Emissions (tonnes CO<sub>2</sub>e)</b>		<b>84,381</b>	<b>82,024</b>	-
Land-use GHG Emissions		98	98	-
<b>(Net) Total GHG Emissions (tonnes CO<sub>2</sub>e)</b>		<b>84,479</b>	<b>82,122</b>	<b>-2.8%</b>

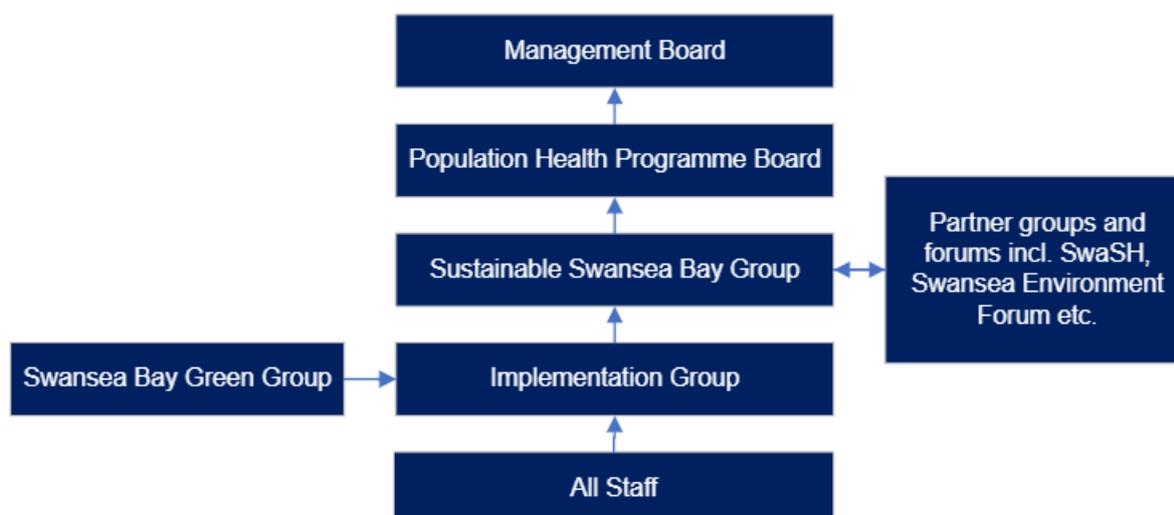
**Please note:** SBUHB utilised 2020/21 Procurement GHG emissions for the 2019/20 reporting year. GHG emissions have been calculated in alignment with Welsh Public Sector Reporting Requirements which utilises different reporting metrics compared to NHS Wales reporting requirements.

## 4 Responsibilities and Governance

The DAP forms part of the HBs five-year Recovery and Sustainability Plan and as such progress will be overseen and monitored through health board governance arrangements.

A summary of governance is shown in Figure 5, with responsibilities provided in Sections 4.1.1 to 4.1.5.

**Figure 5 Responsibilities and governance**



### 4.1.1 Management Board

The Management Board, chaired by the HB CEO, is accountable for the organisational delivery of the DAP and associated financial decisions.

### 4.1.2 Population Health Programme Board

This Board will have oversight of the plan and be updated on programme management. They will also support the embedding of sustainability in services.

### 4.1.3 Sustainable Swansea Bay Group

Sustainable Swansea Bay Group consists of key stakeholders from across the organisation. SSBG is responsible for engaging the organisation in delivery, monitoring the DAP and reporting to Management Board on:

- Delivery progress
- Risks and mitigation
- Financial plans including estimated savings
- Organisational engagement

### 4.1.4 Sustainable Swansea Implementation group

Sustainable Swansea Implementation group (SSIG) consists of DAP 'Action owners' from across the Health Board with responsibility for engaging on, coordinating and progressing delivery of actions and outcomes within agreed financial parameters and timeframes. They will report progress Monthly to the SSBG.

Where a working group is required, the SSBG will approve and agree stakeholders to be included. The action owner will lead the implementation within these groups. Such groups may cover key themes within the DAP or specific actions.

#### 4.1.5 All staff

To ensure implementation and success of the plan every person within the Health Board will be required to be change agents, engaging with sustainability, encouraging colleagues, and enabling action.

## 4.2 Monitoring and reporting

Two key reporting requirements are detailed in Table 10, both reports will be required to be approved by Management Board before submission to Welsh Government.

**Table 10: Welsh Government reporting summary**

#	Report name	Purpose	Frequency	Responsibility
1.1	Public Sector Net Zero Reporting	Tracking GHG emissions data to show status on Public Sector Net Zero target (2030)	Annual (June)	Director of Strategy
1.2	DAP progress report	Demonstrating progress on this plan	Twice a year	Director of Strategy

## 5 Future steps

Whilst this DAP focusses and furthers our journey towards net zero the scale of change required to achieve this by 2030 will also require Health Board during the period of this DAP to consider;

### 2024

- Identification of lessons learned for incorporation into 2024-2025 edition
- Pipeline project and financial planning to resource the scale of change required
- Embedding adaptation and wider sustainability concerns into HB decision making
- Strengthening use of up-to-date carbon foot print data to target future actions
- Developing further the synergies between Value Based Health Care and sustainability
- Create a culture where staff feel empowered to develop their own initiatives, sharing case studies and spreading ideas where initiatives are successful
- Identifying further opportunities for collaboration between Health Boards and other partners

## Appendix 1: Key terms and definitions

Key Term/Acronym	Definition
<b>Biophilic Design</b>	Design concept to increase users connectivity to the natural environment through incorporating nature (plants, light, water) into building design and open spaces.
<b>Carbon Dioxide Equivalent (CO<sub>2</sub>e)</b>	Standard unit of measurement of Greenhouse Gas emissions used to compare relative impacts of different GHG's based upon their global warming potential.
<b>Climate Adaptation</b>	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
<b>Climate Mitigation</b>	Refers to efforts to reduce or prevent the release of greenhouse gases emissions and reduce the impacts of climate change.
<b>Greenhouse Gas Emissions (GHG emissions)</b>	Greenhouse Gas gases defined as gases which are capable of absorbing infra-red radiation (heat) from the sun, contributing to the Earth's greenhouse gas effect.
<b>Gross Total GHG Emissions (per annum) (tonnes CO<sub>2</sub>e)</b>	An organisation/entity's annual GHG emissions total before adjustments are applied for sequestration or GHG removals, measured in tonnes CO <sub>2</sub> e.
<b>Net Total GHG Emissions (per annum) (tonnes CO<sub>2</sub>e)</b>	An organisation/entity's annual GHG emissions total after adjustments are applied for sequestration or GHG removals, measured in tonnes CO <sub>2</sub> e.
<b>NHS Wales Decarbonisation Strategic Delivery Plan</b>	Strategic delivery plan developed by NHS Wales covering (2021-2030) which sets out key initiatives and targets to deliver an ambitious but achievable reduction in carbon emissions.
<b>Scope 1 GHG Emissions</b>	GHG emissions from operations under the direct control of the Health Board including fuel combustion (e.g., natural gas in boilers) and fuel use in our fleet vehicles.
<b>Scope 2 GHG Emissions</b>	GHG emissions from the generation of purchased grid electricity used by the Health Board across our sites.

Key Term/Acronym	Definition
<b>Scope 3 GHG Emissions</b>	GHG emissions resulting from wider Health Board operations including procurement, water consumption, waste disposal, business travel (grey fleet), employee commuting, outsourced services, transmission and distribution of purchased grid electricity and well-to-tank emissions related to direct and indirect fuel use.
<b>Sequestration</b>	Process of physical removal of carbon dioxide from the atmosphere by the biosphere (i.e., trees, plants, oceans, soils) and by anthropogenic means (i.e., carbon capture & storage)
<b>Well-being of Future Generations Act</b>	Welsh Government Act which sets out seven well-being goals which are designed to improve the social, cultural, environmental and economic well-being of Wales.
<b>Well-to-Tank GHG Emissions (tonnes CO<sub>2</sub>e)</b>	Emissions from the processing and refinement of fuels and energy consumed by reporting organisations.

## Appendix 2: Detailed Action Plan

KEY
Ready to go
Start developing with collaboration
Dependent on identifying funding

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
<b>Our Culture and Ways of Working</b>								
Leadership: setting the standard for the Health Board	Ensure all Management Board staff, and other key decision makers are aware of: • Decarbonisation Action Plan commitments • WBFGA • Importance of embedding into activities	CW01	Key identified staff to be aware of requirements of Decarbonisation Act and Health Board DAP that considers Healthcare and climate change, and their role as leaders.	Director of Strategy	2022	% of Management Board aware of requirements		2 - Action 5 - 2022
		CW02	Further embed decarbonisation into decision making processes, across the Health Board to support the implementation of the DAP	Director of Strategy	2023	N/A		
Best Practice Carbon Management	Implement NHS Wales and global best practice guidance	CW03	Implement a bi-annual review process for our Decarbonisation Action Plan, submitting supporting progress reports to NHS Wales.	Director of Strategy	2022 and ongoing	No. of submitted reviews		Phase I reporting requirement
		CW04	Continue to calculate our GHG emissions footprint on an annual basis following current reporting guidelines (as outlined by NHS Wales and Welsh Public Sector Net Zero Carbon reporting).	Director of Strategy / Assistant Director of Estates	Ongoing, next submission June 2022	N/A		Phase I reporting requirement
		CW05	Utilise our annual GHG emissions footprint to identify emissions reduction priorities and to inform the development of interim reduction milestones that align with NHS Wales reduction targets.	Director of Strategy / Assistant Director of Estates	Ongoing	N/A		
		CW06	Continue to engage with our external partners and other Health Boards and Trusts to collaborate on decarbonisation initiatives and communicate best practice decarbonisation guidance	Director of Strategy and all	Ongoing	N/A		
Staff & Public Engagement	Enable and encourage staff engagement with the Decarbonisation Action Plan and associated actions.	CW07	Review of training provision to ensure staff can be supported during implementation of this plan, including: • General engagement/awareness training for all staff • More specific Carbon and Climate Literacy training for department leads and other key staff • Leadership training (Ref. CW01)	Director of Strategy	2022	Training needs analysis		2 - Action 2 - 2022 - Training for BMS
	Climate and Carbon Education	CW08	Continue to develop existing regular communication channels to inform all staff of SBUHB's progress against the DAP and to provide wider knowledge on climate and carbon issues.	Communication Lead / Director of Strategy	2022	Communication and engagement plan		2 - Action 1 - Ongoing/Annually
		CW09	Investigate new -communication channels which will encourage staff to share ideas and feedback for inclusion within future DAPs, e.g. staff portal.	Communication Lead	Ongoing	N/A		2 - Action 1 - Ongoing/ Annually

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
Awareness and Communication	Publish our Decarbonisation Action Plan and raise awareness of what we are doing to support decarbonisation	CW10	Publish our Decarbonisation Action Plan on our website (and other digital platforms as appropriate)	Director of Strategy	2022	Plan on website and updated annually		
		CW11	Develop relevant and engaging case studies to showcase our decarbonisation achievements.	Director of Strategy	Ongoing	at least 1 case study/quarter		2 - Action 1 - Ongoing/ Annually
		CW12	Identify appropriate communication channels to communicate to patients and visitors our DAP and the actions we're taking to reduce our environmental impact.	Communication Lead	Ongoing	N/A		2 - Action 1 - Ongoing/ Annually
<b>Our Buildings</b>								
Current Buildings (retrofit & use)	Optimising the use of and reviewing the need for our current buildings	BU01	Implement current and planned building fabric and energy efficiency projects (including LED lighting upgrades) across our estate with support from our established Re:fit Service Provider and other appropriate resources. Continue to identify appropriate centralised funding opportunities to support further works.	Assistant Director of Estates	When funding becomes available	Energy consumption following project implementation (e.g. kWh/m <sup>2</sup> )		5 - Action 1 & 2 - 2022 4 - Action 2 (b) (c) (d) (g) (j) (l) - 2022
		BU02	Implement a programme of targeted decarbonisation audits to explore opportunities to reduce carbon emissions from our smaller clinical and community sites; including those which are considered as hard to treat.	Assistant Director of Estates	2022	no. sites audited		4 - Action 1 - 2022 4 - Action 2 (d) (f) (h) (i) (j) (k) (l) - 2022
		BU03	Continue to explore opportunities for carbon emissions reduction at our Morriston and Singleton Hospital sites through upgrading existing air handling units and heat exchangers to reduce energy wastage.	Assistant Director of Estates	2023	Energy consumption following project implementation (e.g. kWh/m <sup>2</sup> )		
		BU04	Continue to explore opportunities for carbon emissions reduction at our Morriston and Singleton Hospital sites through improving the ventilation efficiency to core parts of these sites through heat recovery systems.	Assistant Director of Estates	2023	Energy consumption following project implementation (e.g. kWh/m <sup>2</sup> )		4 - Action 2 (e) - 2022
		BU05	Continue to explore opportunities for carbon emissions reduction at our Morriston and Singleton Hospital sites through the use of more energy efficient humidification and de-humidification systems to reduce energy wastage.	Assistant Director of Estates	2023	Energy consumption following project implementation (e.g. kWh/m <sup>2</sup> )		
		BU06	Link remaining smaller buildings/sites at Morriston and Singleton Hospitals to their respective Building Energy Management Systems.	Assistant Director of Estates	2023	N/A		9 - Action 1 - 2024 4 - Action 2 (a) - 2022
	Decarbonise and increase the energy efficiency of our current buildings	BU07	Develop an overall strategy to support the removal of steam fed heating systems within our buildings; particularly at our Morriston and Singleton Hospital sites. Strategy will be informed by results of ongoing feasibility assessment for heat pump replacement at Morriston Hospital.	Assistant Director of Estates	2023	N/A		6 - Action 1 - 2023

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
		BU08	Undertake feasibility assessments to determine the viability of installing solar PV at buildings that have not formed part of previous Re:fit projects.	Assistant Director of Estates	2023	N/A		10 - Action 1 - 2023
New Builds	New Build Design & Construction	BU09	SBUHB will integrate modern methods of construction (MMC) within the design and construction of all future new build sites considering aspects such as: <ul style="list-style-type: none"> <li>• modular design and offsite fabrication</li> <li>• orientation and form of buildings to maximise daylight and reduce solar gain</li> <li>• building ventilation and air leakage</li> </ul> MMC considerations are being applied by SBUHB in the development of new orthopaedic and operating theatres at Neath Port Talbot and Singleton Hospitals.	Assistant Director of Strategy - Capital	2022	Energy performance ratings (e.g. EPC, DEC's)		13 - Action 1 - 2022
		BU10	SBUHB will work to ensure that the design and construction of all future new build sites aligns with the Principles for Building Healthy Places as well as planning the location of new sites to reduce private vehicle commuting (where possible)	Assistant Director of Strategy - Capital	2023	N/A		16 - Action 1 - 2022
	New Build Operational Energy	BU11	SBUHB will develop an approach to minimising unregulated energy consumption from new build sites considering operational aspects such as: <ul style="list-style-type: none"> <li>• forecast energy demand from medical equipment to minimise primary energy usage</li> <li>• maximising the efficiency of plant equipment</li> <li>• reducing energy demand from lighting and small power equipment</li> <li>• installation of smart metering and BMS controls</li> <li>• installation of sub metering feasible within areas that are leased if feasible</li> </ul>	Assistant Director of Strategy - Capital	2023	Energy consumption of building and/or equipment (e.g. kWh)		
	New Build Operation Renewables	BU12	SBUHB will ensure that all new building design makes provision for the installation of on-site renewables and low carbon technologies (i.e. with preference/priority for non-fossil fuel technologies) or for the connection to existing renewable energy supplies (e.g. solar farms) supplying our sites.	Assistant Director of Strategy - Capital	2022	N/A		4 - Action 2 (f) - 2022 15 - Action 1 - 2021
<b>Our Estates Planning</b>								
Existing Estate	Utilising our current estate	EP01	Ensure Estates Strategy has a decarbonisation focus	Assistant Director of Estates	2022	Completed strategy		
		EP02	Undertake an estate rationalisation assessment to determine if any of our buildings are being fully utilised	Assistant Director of Estates	2022	% utilisation per building/site		33 - Action 2 - Ongoing
		EP03	Business case for Re:fit	Assistant Director of Estates	2022	Completed business case		
		EP04	For buildings that have office areas that are underutilised consider the future transformation of office space into additional healthcare facilities as required.	Assistant Director of Estates / Assistant	2023	N/A		37 - Action 3 - Ongoing

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
				Director of Strategy - Capital				
		EP05	For buildings that have areas that are not being appropriately utilised, review the potential for leasing of these spaces to external partners, such as NHS Health Boards and Trusts to reduce our energy and resource use.	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023	N/A		
		EP06	For buildings that are severely underutilised or not being appropriately used, investigate opportunities to consolidate/rationalise services into other buildings, considering the following: <ul style="list-style-type: none"> <li>Review whether the building is still required</li> <li>Options for selling or decommissioning buildings to reduce estate wide GHG emissions.</li> </ul>	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023	N/A		
		EP07	Engage with our local community groups to investigate opportunities to deliver certain facilities/services in mutually convenient locations for our patients and staff to align with the Foundational Economy requirements	Assistant Director of Estates / Assistant Director of Strategy - Capital	2023	N/A		
<b>Our Renewables and Land Use</b>								
Renewables	Increase generation of renewable electricity	RL01	Review opportunities to apply for funding support to help facilitate the roll-out of renewables across our estate through the Estates Funding Advisory Board (EFAB) and other appropriate means.	Assistant Director of Estates	Ongoing	N/A		
		RL02	Install additional Solar PV capability at existing sites where land or roof space allows. Where Solar PV potential has been identified but been discounted due to poor underlying roof condition, reconsider if funding becomes available for repairs	Assistant Director of Estates	When funding becomes available	% of renewable energy generation pa (e.g. kWh)		35 - Action 2 - 2026 & 2030
		RL03	Optimise the amount of Solar PV electricity produced from our sites used directly by the Health Board through the use of battery and developing storage solutions	Assistant Director of Estates	When funding becomes available	% of renewable energy generation pa (e.g. kWh)		
		RL04	Investigate the possibility of deploying other types of renewable energy generation on our land and at our sites.	Assistant Director of Estates	2023	N/A		10 - Action 1 - 2023 35 - Action 1 - 2023
Land Use and Biodiversity	Enhancing our land use and supporting biodiversity	RL05	Determine whether there is underutilised land and/or green spaces across the estate that could be enhanced and/or redeveloped to enhance carbon sequestration, support biodiversity and support biophilic design (to encourage people to connect with the natural environment)	Assistant Director of Estates	2023	Total available hectares per building/site		34 - Action 3 - 2024
<b>Our Transport</b>								

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
Enabling Infrastructure	Install supporting infrastructure for ULEV transition	TR01	Review current provision of charging infrastructure across SBUHB's estate and identify opportunities to increase charging infrastructure in line with NWSSP Best Practice Guidance (currently in development).	Head of Support Services	2022	Feasibility study	Green	14 - Action 3 - 2022 14 - Action 4 - 2027/8 17 - 2022
		TR02	Engage with NWSSP to develop an implementation strategy to expand current provision of electric vehicle charging infrastructure across our estate considering topics such as: • Percentage of car spaces with charging provision • Inclusion of public charging points to support community transition to electric vehicles • Best practice activity from other Health Boards & NHS Trusts • Scheduling roll-out to meet current and forecast levels of demand.	Head of Support Services	2022	The actions will depend on the outcome of the feasibility study	Yellow	17 - Action 2 - 2022
		TR03	Engage with other Health Boards and NHS Trusts to share and develop best-practice approaches to support the roll-out of charging infrastructure across NHS Wales.	Head of Support Services	Ongoing	N/A	Green	
Owned Transport	Transition our owned vehicle fleet to electric/hybrid vehicles	TR04	Procure battery-electric vehicle replacements (where practically possible) and/or ultra-low emissions vehicles (hybrids) through NWSSP for leases ending after April 2022 within our owned vehicle fleet.	Head of Support Services	2023	% of vehicle fleet that are EV/hybrid	Green	19 - Action 1 - 2022 20 - Action 3 - 2025
		TR05	Continue to review the feasibility of opportunities to utilise localised low carbon transport infrastructure as they arise.	Head of Support Services	Ongoing	N/A	Green	19 - Action 1 - 2022 20 - Action 3 - 2025
	Vehicle efficiency and driver training.	TR06	Review the current provision of telematics and vehicle monitoring systems within our owned vehicle fleet and the use of data that is recorded.	Head of Support Services	2023	% vehicle fleet with telematics / monitoring systems	Green	18 - Action 3 - 2023
		TR07	Using data provided by vehicle monitoring systems, identify eco-driving training for all personnel utilising the fleet to reduce vehicle emissions where feasible.	Head of Support Services	Ongoing	Fuel efficiency, % of poor driving metrics (e.g., harsh breaking, acceleration rates)	Yellow	
Outsourced Transport Services	Non-Emergency Patient Transport Services (NEPTS)	TR08	Collaborate with the Welsh Ambulance Service Trust to identify opportunities to transition non-emergency ambulance vehicles to ultra-low emissions vehicles, electric vehicles or hybrids where possible.	Head of Support Services	2023	% of how WAST NEPTS fleet is made up	Green	
Outsourced Transport Services	NHS Wales Shared Services (NWSSP)	TR09	Ongoing engagement with NWSSP to optimise courier routes and transition courier vehicles to ultra-low emissions vehicle, electric vehicle or hybrids used in the delivery of NHS Wales shared services.	Head of Support Services	2023	% of how HCS fleet I made up	Green	
Business Travel & Commuting	Support staff to decarbonise their business travel and commuting.	TR10	Update business travel policies to implement a travel hierarchy that encourages/incentivises sustainable travel and reduces the use of high emission vehicles.	Director of Workforce/Assistant Director	2023	Sustainable Business Travel	Green	21 - Action 2 - 2022

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
				Workforce & OD (TBC)		guidance produced		
		TR11	Ongoing promotion of existing salary sacrifice scheme to encourage uptake of electric and/or hybrid vehicles by staff members.	Communication Lead	2023	N/A		21 - Action 1 - 2023
		TR12	Consider the possibility of expanding the existing scheme to include e-bikes or second-hand electric vehicles to increase inclusivity for all staff	Head of Support Services	2023	Consultation with scheme provider		21 - Action 1 - 2023
		TR13	Continue to consider opportunities to utilise local car clubs and sharing initiatives to reduce business travel in their own vehicles.	Head of Support Services / Head of Procurement	2023	N/A		19 - Action 2 - 2022
		TR14	Investigate opportunities to improve the active travel facilities of our sites (e.g., hospitals) to enable both staff and patients to choose low carbon forms of transport	Head of Support Services	2023	No. active travel facilities per building/site		2 - Action 4 - Ongoing
		TR15	Ongoing engagement with staff members to promote sustainable and active travel options (where practically possible) for commuting and for business travel including: • Internally supported campaigns to promote public transport use and car sharing schemes • Internal workshops and training on the benefits (GHG emissions and health) of decarbonising travel & transport.	Head of Support Services	Ongoing	N/A		2 - Action 4 - Ongoing
	Support staff to decarbonise their business travel and commuting.	TR16	Continued engagement and communication with staff to promote and highlight existing and future low carbon schemes and active travel facilities (i.e. bike parking, staff showers facilities).	Head of Support Services	Ongoing	% of workforce undertaking active travel		2 - Action 4 - Ongoing
Active Travel	Encourage the use of Active Travel options	TR17	Complete an evaluation across SBUHB's operations to understand the current level of facilities and internal policy available to support active travel options, such as: • Provision of showers, changing and storage facilities (e.g. bike racks) across SBUHB sites • Existing public transport provision • Flexibility of shift times to align with public transport timetables • Support mechanisms available to incentivise active travel within SBUHB	Head of Support Services / Director of Strategy / Workforce	2023	No. active travel facilities per building/site		2 - Action 4 - Ongoing 16 - action 2 - 2022
		TR18	Implement the Swansea Bay Healthy Travel Charter with Local Government and public sector organisations in the Swansea Bay area to champion the uptake of active travel, electric vehicle use, and public transport options within our local community.	Head of Support Services / Workforce	2023	% compliance with 22 points included in the charter		2 - Action 4 - Ongoing 16 - Action 4 - 2023
<b>Our Procurement</b>								

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
Procurement	Active Interventions	PR01	Further embed the NWSSP Sustainable Procurement Code of Practice to aid interaction with our suppliers/contractors through: <ul style="list-style-type: none"> <li>• Implementation of sustainability risk assessments</li> <li>• Review of HB methodology for determining and validating decarbonisation actions taken by suppliers</li> <li>• Incorporation of decarbonisation requirements within tenders</li> <li>• Actively evaluate decarbonisation commitments from suppliers and considering their relative award weighting against value within tenders.</li> <li>• Assess decarbonisation strategies of our existing/new suppliers/contractors</li> </ul>	Head of Procurement	2023	N/A		Supports actions 25-32
		PR02	Develop and implement a programme of supplier engagement throughout the procurement process and contract delivery to encourage and support ongoing decarbonisation of their operations.	Head of Procurement	2023	N/A		
		PR03	Keep abreast of the development of new technologies and innovations to work towards substituting existing technologies for low-carbon alternatives where they are available; identifying and encouraging innovative approaches.	Head of Procurement	2023	N/A		
		PR04	Continue to collaborate with NWSSP Supply Chain, Logistics, and Health Courier Services to introduce a smart delivery system to minimise carbon emissions from supplier transport, and to optimise onward distribution of bulk deliveries.	Head of Procurement	2023	YoY % or actual change of upstream transportation GHG emissions		
	Supply Chain Awareness	PR05	Develop and implement an awareness campaign to engage with suppliers about their role in support the decarbonisation of SBUHB's operations.	Head of Procurement, Suppliers & Contractors	2023	N/A		
		PR06	Undertake internal engagement with different teams within SBUHB to understand how procurement activities fit in within our DAP	Head of Procurement	2023	N/A		
	Supply Chain Engagement	PR07	Update current tender requirements to place greater emphasis upon carbon management and active decarbonisation for prospective suppliers. Develop a set of robust assessment criteria and evidence requirements to be able to fairly compare carbon management across all responders.	Head of Procurement	2023	N/A		
		PR08	Review the decarbonisation strategies of suppliers to understand the level of carbon management and monitoring which currently exists within our supply chain, using approaches such as: <ul style="list-style-type: none"> <li>• Direct consultation with suppliers</li> <li>• Requesting evidence of supplier(s) decarbonisation activities/strategies.</li> </ul>	Head of Procurement	2023	Supplier annual GHG emissions, No. suppliers engaged		
		PR09	Ensure that suppliers are decarbonising their own processes through ongoing supplier / contract management and provide clear and long-term signals about the direction of travel.	Head of Procurement, Suppliers & Contractors	2023	Supplier annual GHG emissions, No. suppliers engaged		

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
<b>Our Approach to Healthcare</b>								
Smarter Working	Flexible working models	AH01	Undertake a review to determine the proportion of the workforce that could work remotely or on a hybrid basis	Director of Workforce/Assistant Director Workforce & OD	2022	N/A	Green	37 - Action 1 - 2022
		AH02	Explore the current provision of and opportunities for the implementation of local community and digital hubs to deliver non-hospital services	Director of Digital	2023	No. of community/digital hubs	Yellow	38 - Action 1&2 - Ongoing
		AH03	Publish agile working policy for Health Board staff and develop supporting processes for implementation	Director of Workforce/Assistant Director Workforce & OD	2022	Completed Policy	Green	
	Estate Rationalisation and optimising site-based working	AH04	Consider opportunities to work with external partners (other Health Boards and NHS Trusts) to share and utilise office space to reduce travel requirements	Assistant Director of Estates / Assistant Director of Strategy - Capital	Ongoing	N/A	Green	37 - Action 4 - Ongoing
		AH05	Review current processes within our hospital and clinical settings to identify where procedures and processes can be changed or optimised to make these more sustainable.	Clinical Lead (TBC)	2022	N/A	Green	37 - Action 4&5 - 2023/Ongoing 38 - Action 1 - Ongoing 38 - Action 4 - 2023
	Digitalisation	AH06	Complete a review of the current approach to delivering our services to identify areas that may significantly benefit from digitalisation.	Director of Digital	2022	N/A	Yellow	38 - Action 1&2 - Ongoing 38 - Action 4 - 2023
		AH07	Review current IT systems to identify opportunities to better support future service delivery, including clinical records and communications	Director of Digital	Ongoing	N/A	Yellow	38 - Action 3- Ongoing 38 - Action 4 - 2023
		AH08	Continue to utilise tele and video conferencing software to provide remote consultations and referrals for patients.	Director of Digital	2022	No. of remote consultation/referrals delivered pa	Green	38 - Action 1&2 - Ongoing
		AH09	Investigate opportunities to provide a paper-free prescription service to patients to remove the need to travel to SBUHB sites (i.e. pharmacies) for medicines.	Clinical Director of Pharmacy	2023	N/A	Green	38 - Action 5 - Ongoing
	Medical Gases & Medicines Management	Medical Gases	AH10	Review current practices and behaviours surrounding the use of anaesthetic gases within our clinical services. Identify opportunities to accurately monitor the use of gases and reduce wastage through measures such as: <ul style="list-style-type: none"> <li>Installing gauges/meters on gas cylinders</li> <li>Reviewing existing pipework and infrastructure for NOx delivery at older hospital sites</li> </ul>	Clinical Director of Pharmacy/ Assistant Director of Estates	2023	Volume of unused medical gases disposed of pa	Green

Activity Area	Key Actions	Action Ref.	Sub Actions	Action Owner(s)	Completion Date	Metrics	Status	NHS Wales Decarbonisation Strategy
			<ul style="list-style-type: none"> <li>Utilising medical gas capture technology in new builds and refurbishments</li> </ul>					
	Prescribing	AH11	Establish Pharmacy Project Board with key stakeholders from primary and acute pharmacy teams. Develop work plan to include actions for: <ul style="list-style-type: none"> <li>Increasing use of low GWP inhalers in line with AWMSG recommendations across primary &amp; acute care e.g. prescribing dashboard, PMS 22/23, Community Pharmacy enhanced services, patient engagement, Care Homes.</li> <li>Education &amp; supporting guidance for healthcare professionals</li> <li>Disposal of used inhalers through recycling. Acute Care work to involve Greener Ward development with education and training for patients and staff in GWP inhalers</li> </ul>	Clinical Director of Pharmacy	2023	No. of prescribed low GWP inhalers as a % of all inhalers prescribed		42/43 46 - Action 1 - 2022 46 - Action 2 - 2021 46 - Action 3 - 2022
Waste Reduction	Reducing waste generated within our operations and supporting NHS Wales to reduce waste.	AH12	Identify and take advantage of new and emerging methods of recycling and reusing materials (incorporating the principles of the circular economy) which can benefit SBUHB as well as other Health Boards and NHS Trusts.	Assistant Director of Estates	Ongoing	N/A		45 - Action 3 - 2022
		AH13	Work with clinical staff including infection control to identify further areas where recycling can be included (e.g., Morriston Theatre Trials).	Assistant Director of Estates	2023	% clinical healthcare waste recycled pa		45 - Action 3 - 2022
		AH14	Work with our catering facilities and partners across our sites to investigate new methods to segregate food waste	Head of Support Services	2023	5 food waste recycled / composted pa		
		AH15	Continue to investigate opportunities to identify and incorporate reusable medical items inc. PPE within service delivery, where feasible.	Clinical Lead (TBC)	2023	% of reusable PPE distributed to staff pa		45 - Action 2 - 2023
		AH16	Initiate cultural change around reducing wastes within SBUHB's staff through internal engagement mechanisms including: <ul style="list-style-type: none"> <li>Supporting waste management literature and fact sheets</li> <li>Assigning responsibility for improving waste management within SBUHB's sites.</li> </ul> Supported by action CW07 Carbon Literacy Training	Assistant Director of Estates	Ongoing	% workforce trained		44 - Action 2 - 2023

## Appendix 3: Context

### *Climate Change - The Global Context*

Action on an international scale is required for any level of meaningful change to the Earth's climate. The 2030 framework developed by The United Nations (UN) aims to increase momentum towards sustainable development and Climate Change resilience through the UN Sustainable Development Goals and the UN Framework Convention on Climate Change (UNFCCC) Paris Agreement.

Since the Paris Agreement was ratified in 2015, global average temperatures have risen by over 1°C with further inevitable rises projected to occur as a result of carbon already emitted. The UNFCCC has identified that urgent action is needed to halt Climate Change and deal with its impacts. Increased climatic consequences are already prevalent due to this rise, increasing the urgency with which we must act to drastically reduce global carbon emissions. If we don't act now, the threat we face becomes critical as we risk global temperatures rising above a tipping point resulting in irreversible changes to our planet.

### *Climate Change – impacts on health and delivery of healthcare*

The World Health Organisation (WHO) acknowledges that Climate Change is the most significant threat to the health of humanity on a global scale. The impact of increased frequency of extreme weather coupled with detrimental impacts of increased pollution on health is already resulting in significant increases in pressures upon our existing health systems across the World. The WHO estimates that Climate Change will lead to around 250,000 extra deaths per year globally from 2030, and that the direct cost impact will be \$2-4 billion per year over the next decade<sup>7</sup>.

As a result of Climate Change by 2050 in Wales the average annual temperatures are projected to rise by 1.2°C, summer rainfall is expected to decrease by 15% with winter rainfall expected to increase by 6%<sup>8</sup>. Health related impacts upon our population are likely to range from increased heat-related and air quality illnesses, disruption to accessing healthy foods, through to disruption of healthcare services due to increased levels of extreme weather.

### *Welsh Government Climate Emergency*

In 2019 the Welsh Government declared a Climate Emergency, becoming one of the first nations in the UK to declare. The Welsh Government has further supported its commitments to decarbonisation through its recent publication of 'Prosperity for All: A Low Carbon Wales, which set out 100 policies and proposals to ensure the 2030 carbon emission targets are met. As part of this commitment the Welsh Government

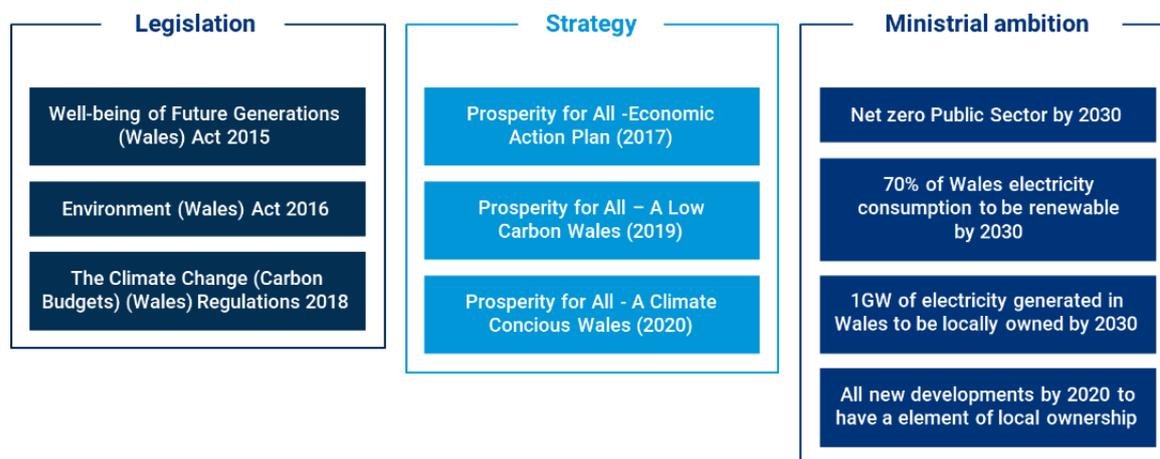
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<sup>7</sup> World Health Organisation: <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

<sup>8</sup> Public Health Wales (November 2021) – 'Health & Wellbeing Impacts of Climate Change' (<https://phw.nhs.wales/news/new-resource-highlights-health-impacts-of-climate-change/climate-change-infographics-english/>)

has binding commitments and targets for the Public Sector to achieve Net Zero Carbon status by 2030.

To support the Public Sector in meeting their Net Zero Carbon target and achieve carbon reduction in alignment with the climate emergency, the Partnership Council for Wales will head the 'Team Wales' approach to coordinate collaboration towards decarbonisation projects between representatives of different Welsh public services; including NHS Wales.



**Figure 6 Extract from the Welsh Government Climate Emergency Document**

### ***NHS Wales Decarbonisation Strategic Delivery Plan***

NHS Wales has a significant role to play in delivering decarbonisation across the Public Sector; whilst maintaining a safe, effective, and high-quality health service across Wales. Published in March 2021, NHS Wales's Decarbonisation Strategic Delivery Plan (2021-2030) sets out key initiatives and targets to deliver an ambitious but achievable reduction in carbon emissions from NHS Wales's operations including:

- Buildings & Estates
- Transport
- Procurement
- Approaches to Healthcare

NHS Wales has outlined the headline commitments for carbon reduction up to 2030 (Figure 6). These will be reviewed in 2025 and 2030 alongside the overall carbon reduction targets for these periods. Further NHS Action Plans are expected to be developed which will form the basis of how SBUHB will implement planned initiatives aligned with our own DAP.

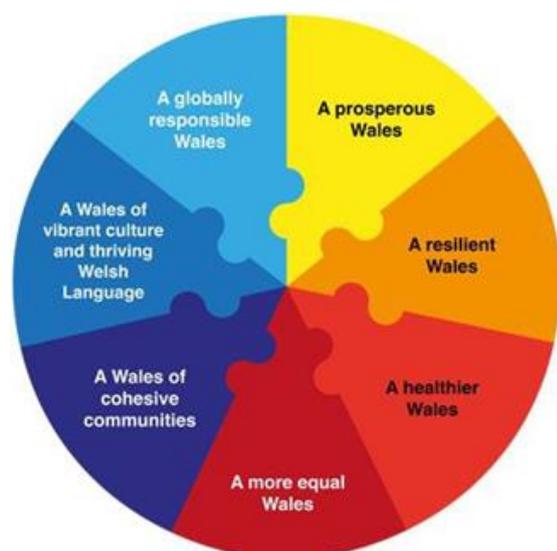
**Table 11 NHS Wales Decarbonisation Strategic Delivery Plan Targets**

NHS Wales Decarbonisation Target	Emissions (tCO <sub>2</sub> e)	Percentage reduction from 2018/19	Cumulative savings from initiatives will total (tCO <sub>2</sub> e)
<b>2025</b>	845,600	-16%	459,000
<b>2030</b>	661,500	-34%	1,982,500

### *The Well-Being of Future Generations Act (2015)*

SBUHB’s commitments (as part of NHS Wales) under the Well-being of Future Generations Act (2015) requires that Climate Change is a key consideration as part of everyday decision-making. By ensuring effective collaboration and the involvement of relevant stakeholders, we intend to embed decarbonisation within our day-to-day practises as a Health Board to limit our contribution to Climate Change and thereby its consequences. Through adopting the fundamentals of the Ways of Working under the ‘sustainable development principle’, the Act ensures our decarbonisation decisions support the Welsh Government’s well-being objective as well as the seven national well-being goals.

Climate Change is considered one of the greatest global challenges and requires innovation and collaboration to ensure the well-being of the future generations in Wales.



**Figure 7 The Well-Being of Future Generations Act’s seven wellbeing principles**

### *The Role of SBUHB*

As a major employer in the region and provider of NHS services across Swansea, Neath Port Talbot, and the wider region, SBUHB has an important role to play in supporting decarbonisation activities. We will align our own ambition with key priorities and targets set out in NHS Wales’s DSDP. SBUHB will work in co-

ordination with our partners both in the NHS and more widely, to deliver our DAP. We recognise that SBUHB can also provide an advisory role to support the wider delivery and inform future development of the DAP.

### ***Sustainable Recovery to the COVID-19 Pandemic***

To support NHS Wales's recovery from the COVID-19 pandemic, the Welsh Government has set up a Green Recovery Taskforce; the objectives of which are closely aligned with the overall aims of NHS Wales's DSDP, such as reducing carbon emissions and building resilience to reduce climate risk.

SBUHB will look to identify new opportunities to support the Green Recovery through the implementation of our Decarbonisation Action Plan.

NHS Wales highlights that 'significant societal change is achievable' and outlines that there needs to be similar urgency and commitment to tackle the Climate Emergency.

## Appendix 4: Supporting data and information

Table 12 SBUHB's baseline GHG Emissions for 2019-20

Reporting Scope	GHG Emissions Source	2019-20 GHG Emissions (tCO <sub>2e</sub> )	% of Net GHG Emissions
Scope 1	Heating Fuels (Hospitals)	13,663	16.2%
	Heating Fuels (Primary Care)	475	0.6%
	NHS Fleet Vehicles	390	0.5%
Scope 2	Grid Electricity (Hospitals)	9,338	11.1%
	Grid Electricity (Primary Care)	228	0.3%
Scope 3	Procurement	45,411	53.8%
	Employee Commuting	5,948	7.0%
	Well-to-Tank GHG Emissions	5,562	6.6%
	Business Travel (Grey Fleet)	1,761	2.1%
	Grid Electricity (T&D) (all sites)	812	1.0%
	Outsourced Services (NEPTS)	389	0.5%
	Water (all sites)	299	0.4%
	Waste Disposal (all sites)	106	0.13%
<b>(Gross) Total GHG Emissions (tonnes CO<sub>2e</sub>)</b>		<b>84,381</b>	<b>-</b>
Land Use GHG Emissions		98	0.12%
<b>(Net) Total GHG Emissions (tonnes CO<sub>2e</sub>)</b>		<b>84,479</b>	<b>-</b>

Table 13 SBUHB's direct GHG emissions footprint for 2019/20

GHG Emissions Source	2019/20 GHG Emissions (tCO <sub>2e</sub> )	% of Total
Heating Fuels (Hospitals)	13,663	41.7%
Grid Electricity (Hospitals)	10,130	31.0%
Well-to-Tank GHG Emissions	5,562	17.0%
Business Travel (Grey Fleet)	1,761	5.4%
Heating Fuels (Primary Care)	475	1.5%
NHS Fleet Vehicles	390	1.2%
Water	299	0.9%
Grid Electricity (Primary Care)	247	0.8%
Waste Disposal	106	0.3%
<b>(Gross) Total GHG Emissions (tonnes CO<sub>2e</sub>)</b>	<b>32,633</b>	<b>-</b>
Land Use GHG Emissions (tonnes CO <sub>2e</sub> )	98	0.3%
<b>(Net) Total GHG Emissions (tonnes CO<sub>2e</sub>)</b>	<b>32,731</b>	<b>-</b>

**Table 14 SBUHB's indirect GHG emissions footprint for 2019/20**

GHG Emissions Source	GHG Emissions (tCO <sub>2</sub> e)	% of Total
Procurement	45,411*	87.8%
Employee Commuting	5,938	11.5%
Outsourced Transport Services (NEPTS)	389	0.8%
<b>(Gross) Total GHG Emissions (tonnes CO<sub>2</sub>e)</b>	<b>51,748</b>	<b>-</b>
Land Use GHG Emissions (tonnes CO <sub>2</sub> e)	98	0.2%
<b>(Net) Total GHG Emissions (tonnes CO<sub>2</sub>e)</b>	<b>51,846</b>	<b>-</b>