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**THIS IS A MEETING WHICH THE PUBLIC ARE ENTITLED TO ATTEND**

Dydd Mercher, 11 Mawrth 2020 Dydd Mercher, 11 Mawrth 2020

Dear Sir/Madam

**PWLLGOR CRAFFU ADFYWIO**

A meeting of the Pwllgor Craffu Adfywio will be held in Siambr y Cyngor, Canolfan Ddinesig on Dydd Llun, 16eg Mawrth, 2020 at 2.00 pm.

***Please note that a pre and post meeting will be held 30 minutes prior to the start and following the conclusion of the meeting for members of the committee.***

Yours faithfully

Michelle Morris  
Managing Director

**AGENDA**

**Pages**

**1. CYFIEITHU AR Y PRYD**

Mae croeso i chi ddefnyddio'r Gymraeg yn y cyfarfod, mae angen o leiaf 3 diwrnod gwaith o hysbysiad ymlaen llaw os dymunwch wneud hynny. Darperir gwasanaeth cyfieithu ar y pryd os gwneir cais.

We welcome correspondence in the medium of Welsh or English. / Croesawn ohebiaith trwy gyfrwng y Gymraeg neu'r Saesneg.

**2. YMDDIHEURIADAU**

Derbyn ymddiheuriadau.

**3. DATGANIADAU BUDDIANT A GODDEFEBAU**

Derbyn datganiadau buddiant a goddefebau.

**4. CYNLLUN DATGARBONEIDDIO 2020-2030**

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Ystyried adroddiad y Rheolwr Gyfarwyddwr.

To: L. Parsons (Cadeirydd)  
J. Hill (Is-gadeirydd)  
M. Cross  
G. A. Davies  
G. L. Davies  
M. Day  
P. Edwards  
M. Holland  
H. McCarthy  
J. Millard  
M. Moore  
J. C. Morgan  
K. Pritchard  
K. Rowson  
B. Willis

All other Members (for information)  
Manager Director  
Chief Officers

# Agenda Item 4

*Executive Committee and Council only*

Date signed off by the Monitoring Officer: N/A

Date signed off by the Section 151 Officer: N/A

Committee: **Regeneration Scrutiny Committee**

Date of meeting: **Monday 16<sup>th</sup> March 2020**

Report Subject: **Decarbonisation Plan 2020-2030**

Portfolio Holder: **Councillor David Davies, Executive Member  
Regeneration**

Report Submitted by: **Michelle Morris (Managing Director)**

Reporting Pathway								
Directorate Management Team	Corporate Leadership Team	Portfolio Holder / Chair	Audit Committee	Democratic Services Committee	Scrutiny Committee	Executive Committee	Council	Other (please state)
	03.03.20	05.03.20			16.03.20		26.03.20	Low Carbon Group

## 1. Purpose of the Report

To present the Council's Decarbonisation Plan, which sets out a data driven strategic approach to addressing the carbon emissions in response to climate change.

## 2. Scope and Background

- 2.1 The 2015 Paris Agreement committed to keep global temperature rises well below 2°C above pre-industrial levels with the ambition to limit them to 1.5°C. This target was chosen as an approximate indicator of dangerous levels of climate change. Global average temperatures have already risen by 0.9°C, with further rises inevitable due to carbon already emitted. Therefore, achieving this target requires that emissions peak as soon as possible and then reduce rapidly.
- 2.2 The Environment (Wales) Act 2016 set a target of 80% reduction in carbon emissions by 2050 (against 1990 levels). In response to recent public pressure including the Extinction Rebellion protests and School Climate Strike the Welsh Government has declared a climate emergency and announced its intention to amend its targets to Net Zero in Wales by 2050.
- 2.3 Welsh Government published a delivery plan 'Prosperity for All: A Low Carbon Wales' that calls for public sector leadership, including the ambition for the Welsh public sector to be carbon neutral by 2030. The plan highlights that this target will require public sector bodies to understand their carbon emissions, with Welsh Government asking Natural Resources Wales (NRW) to develop their 'Carbon Positive' project as a model for doing this.
- 2.4 The Council is already taking a number of actions that will reduce our carbon impact, including 21<sup>st</sup> Century Schools, reducing the energy use of schools, and Re:fit programme installing energy saving measures across a range of buildings and investing in low energy LEDs in street lighting. The Council has also reduced the amount of waste sent to landfill, the form of waste disposal which has the greatest climate impact, to just 2.25%. However, we recognised that

achieving carbon neutrality will require a more strategic approach. In June 2019 the Council began developing a Decarbonisation Plan which sets out how the organisation will contribute towards this ambition for carbon neutrality by 2030.

- 2.5 Following a workshop with Natural Resources Wales (NRW) in September 2019, work began on calculating the organisations carbon footprint, with data being collected from across the Council. Following NRW's 'Carbon Positive' model this baseline measurement was calculated in-line with the internationally recognised GHG (Greenhouse Gases) Protocol. This baseline footprint was calculated for the 12-month period of financial year 2018/19 (capturing seasonal variations in energy use). This footprint provides an initial assessment of the Council's climate impact in a widely used framework.
- 2.6 The Decarbonisation Plan is based on using this data to identify nine transitions. These cover: transport and travel (direct and commissioned); procurement (including goods, services and works); electricity; heat; sequestration; and waste.
- 2.7 Each of these is an area of the Council's operations where action can make a significant contribution towards our ambition of carbon neutrality and delivering a more efficient council. The Decarbonisation Plan identifies for each area, the main sources of emissions and three major challenges in achieving carbon neutrality. Moving forward, the Council will develop a transition pathway towards carbon neutrality in all nine areas and agree a prioritisation for action which delivers the required reduction within the resources available to the Council.
- 2.8 The realisation of the ambition within the Decarbonisation Plan will be delivered through other critical projects including the Strategic Property Review, Depot Review, the future of Silent Valley, the Energy Prospectus, Workplace Transformation and Fleet Review. However, work will also be needed to consider how we procure and commission goods and services and use our significant purchasing power to reduce the carbon impact of service delivery and infrastructure development.
- 2.9 The Council's Decarbonisation Plan providing further details is attached to this report.

### 3. **Options for Recommendation**

**Option 1**-That Regeneration Scrutiny Committee considers the proposed Decarbonisation Plan and supports prior to approval by Executive and Council.

**Option 2**-That Regeneration Scrutiny Committee considers the proposed Decarbonisation Plan and make specific recommendations to prior to approval by Executive and Council.

#### **4. Evidence of how does this topic supports the achievement of the Corporate Plan / Statutory Responsibilities / Blaenau Gwent Well-being Plan**

- 4.1 The Decarbonisation Plan will contribute to the Corporate Plan priority of an Efficient Council by identifying opportunities for cost savings from carbon reduction, including invest to save. In particular, there may be opportunities for invest to save projects installing low carbon technology. There may also be potential for income generation through renewable energy schemes. The Decarbonisation Plan will also contribute to Strong & Environmentally Smart Communities, including the development of low carbon infrastructure across the borough.
- 4.2 The Decarbonisation Plan will be central to the Council's contribution to the Welsh Government ambition of a carbon neutral public sector by 2030. In particular, a long-term plan is required to deliver the low carbon infrastructure necessary to achieve targets for electrification of the council fleet and decarbonisation of heating.
- 4.3 The Decarbonisation Plan is an important element of the Council providing public leadership on climate change. The Council has also started to develop a borough-wide response to climate change through the Public Service Board (PSB). Partners at the most recent PSB meeting in January agreed to establish a climate change mitigation steering group to develop a Decarbonisation Plan for the borough as a whole. As part of the Well-being Plan objective, 'look after and protect the environment'. The long-term implications of climate change mean that is also central to the PSB's responsibilities under the Well-being of Future Generations Act. In particular, that in accordance with the Sustainable Development Principle the PSB must 'act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs'.

#### **5. Implications Against Each Option**

##### **5.1 *Impact on Budget (short and long term impact)***

- 5.1.1 The Welsh Government Low Carbon Action plan identifies that historically, public sector efforts to reduce carbon emissions have been based on delivering improvements to the efficiency of public sector buildings and developing renewables. These are the areas where invest to save projects are currently most viable. However, public sector emissions are far more wide ranging and the development of low carbon infrastructure such as electrification of our fleet and decarbonising heat are likely to require significant investment.
- 5.1.2 The large majority of public sector carbon emissions are not actually associated with the public sector's direct use of electricity, gas or fuel, but with the procurement of goods and services. Building consideration of carbon into procurement, and engaging with our major suppliers, will be an important element of the decarbonisation plan that may have cost implications.

5.1.3 The cost of carbon is rising, and will continue to rise if effective climate action is taken on the national and global scale. The Council will be locked-in to these rising energy costs if our infrastructure and service delivery models remain based on fossil fuels. Changes such as developing our own renewable energy could reduce these risks.

5.1.4 Similarly, like many other public and private organisations, the Council holds investments in fossil fuel intensive companies and projects through regional pension schemes. The value of these investments is based on fossil fuel reserves that cannot be used if effective action on climate change is to be taken. Exposure to this 'carbon bubble' is a potential financial (and reputational) risk which will need to be considered as we move toward with the Decarbonisation Plan.

## 5.2 ***Risk including Mitigating Actions***

The last 12 months have seen a significant growth in public pressure for climate action, both nationally and internationally. In addition to Welsh Government, a number of local authorities have also declared climate emergencies. There is a risk of reputational damage if the Council does not respond to this public pressure by providing public leadership, or if the Council responds in a way that is perceived as tokenistic and not supported by tangible actions. Conversely, there is an opportunity to build on this public interest and the Council's own engagement with local residents about environmental issues, to capitalise on this increased public engagement.

## 5.3 ***Legal***

The legislative context around climate change is evolving rapidly, with both UK and Welsh government announcing new, more ambitious emissions reductions targets in the last year. The Welsh Government low carbon action plan outlined a number of proposals for local authorities, in addition to the ambition of the Welsh public sector as a whole being carbon neutral by 2030, including:

- All new cars and light goods vehicles in the Public Sector fleet are ultra low emission by 2025, and where practicably possible, all heavy goods vehicles are ultra low emission by 2030.
- Public Sector buildings should be supplied with renewable electricity by 2020, or as soon as contractually able and, where practicably possible, are supplied with low carbon heat by 2030.

New legislation and targets, along with rapidly developing technology, are likely to be major drivers of the Council's climate actions.

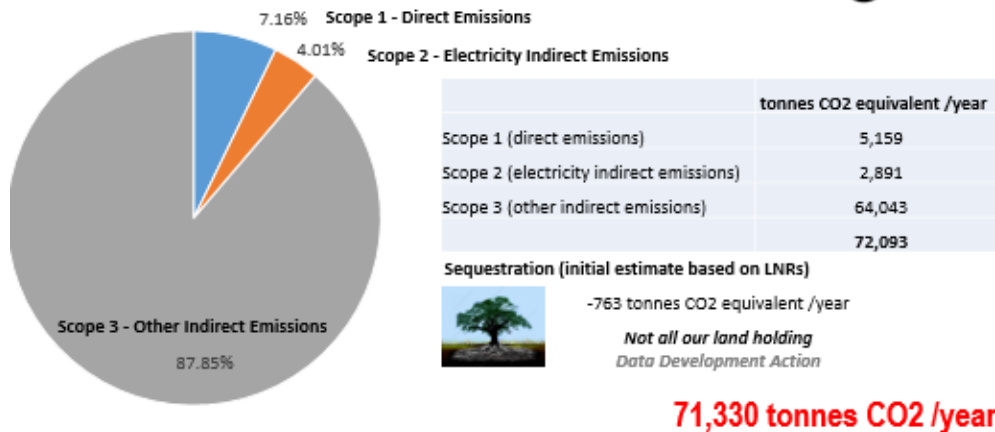
## 5.4 ***Human Resources***

In addition to the need for officers with specialist skills and knowledge to deliver specific low carbon technology projects, the Decarbonisation Plan is also likely to require widespread staff engagement across the organisation in behaviour change as part of a larger transformation of working practises. The plan outlines utilising the Individual, Social and Material (ISM) Tool that it is recommended local authorities use in their climate change planning.

6. **Supporting Evidence**  
 6.1 **Performance Information and Data**

There was previously no central performance monitoring of Council’s carbon impact. The plan sets out the first estimate of our overall impact and also looks at how this data collection can be improved and expanded in the future. There is also considerable scope for further detailed analysis of the data collected for this plan to identify priority actions.

## Our Carbon Footprint 18/19



## Breakdown of Nine Carbon Transitions

Transition	tCO <sub>2</sub> e annual	% of emissions
<b>Procurement Services</b> – Schools, Social Services, Investments	40,552	62
<b>Procurement Works</b> – Building and Highway Construction and Maintenance	6,816	10
<b>Transport Direct</b> – Our Fleet, Commuting, Staff travel for work	6,193	9
<b>Heating (and Cooling)</b> – Decarbonising our heat, e.g. district heating	4,669	7
<b>Procurement Goods</b> – Buying Clothes, Food, IT, Furniture	4,489	7
<b>Electricity</b> – Renewables, Energy Efficiency	3,112	5
<b>Transport Commissioned</b> – School Transport, Onward Waste, Subsidised Buses	484	1
<b>Sequestration</b> – Woodland, urban trees and peatland	-763	-1
<b>Waste</b> –Municipal Waste Disposal: recycling, incineration, landfill	-7,421	-11

- 6.2 ***Expected outcome for the public***  
The Decarbonisation Plan will help to reduce the risks from climate change to service delivery, as well as identifying opportunities to develop a more resilient council for the public.
- 6.3 ***Involvement (consultation, engagement, participation)***  
There is potential to build on existing public engagement with environmental issues, including recycling, nature areas and eco councils in schools. The public will also have an important role to play in helping to reduce the carbon impact of services, through the development of behaviour change elements of the Decarbonisation Plan.
- 6.4 ***Thinking for the Long term (forward planning)***  
Reducing carbon emissions will require systems transformation both internally to the Council and externally across the borough. The Council will have to be a driving force in providing leadership in borough wide developments such as electric vehicle charging networks and heat decarbonisation.
- 6.5 ***Preventative focus***  
Addressing increasing revenue costs from rising energy prices and a reliance on fossil fuels. It is important that decarbonisation and whole life cycle costs (both financial and carbon) are considered in all capital spending decisions, so that the Council is not locked into new carbon intensive infrastructure with high long-term running costs.
- 6.6 ***Collaboration / partnership working***  
The Council will seek to provide public leadership on climate change in Blaenau Gwent through the PSB and Well-being Plan. Climate change was identified as a common well-being priority across Gwent. Work on regional projects, where public bodies in Gwent face similar challenges and can pool resources, such as EV charging and Fleet Review, are already underway. Procurement is a major element of our carbon impact and many of our suppliers also supply other local public sector organisations, so collaboration will be key to engaging them with cutting their carbon emissions. Including engaging with local partners who deliver services on our behalf such as Aneurin Leisure Trust, SRS and Community Asset Transfers through the Decarbonisation Plan, to reduce the impact of our services
- 6.7 ***Integration (across service areas)***  
Integrating the good work already going on across different service areas in the authority into a single Decarbonisation Plan, to provide an overall strategic direction through the Low Carbon Framework is a key element of this project.
- 6.8 ***EqIA (screening and identifying if full impact assessment is needed)***  
See attached screening document.



## 7. **Monitoring Arrangements**

7.1 The Council will monitor our climate impact on an annual basis, through professional and democratic processes. As part of this reporting process we will update our carbon footprint annually, however, it is important to note that our carbon footprint is not suitable for use as the sole measure of our progress towards carbon neutrality. Alternative data will be developed to monitor performance in those areas where footprint data is not suitable. We will also seek to integrate these carbon impact assessment methods into standard corporate reporting and performance management.

### **Background Documents /Electronic Links**

- *Decarbonisation Plan 2020-2030 with Supporting Documents*
- *EQIA Screening Document*

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# Blaenau Gwent County Borough Council Decarbonisation Plan



## 2020 to 2030



# Blaenau Gwent County Borough Council

## Decarbonisation Plan

2020 to 2030

This document is available electronically at the Council's website:

<https://www.blaenau-gwent.gov.uk>

If you have any queries or questions in relation to this plan please contact:

### **Policy and Partnerships**

Blaenau Gwent County Borough Council

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*Mae'r ddogfen hon ar gael yn Gymraeg*

*This document is available in Welsh*





# Content

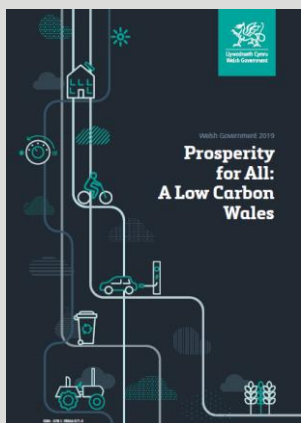
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## Our Ambition to be Carbon Neutral by 2030

We support Welsh Government's ambition for the Welsh public sector to be carbon neutral by 2030, and this plan sets out how we intend to deliver on this ambition over the next ten years.

The plan will also help to ensure that decarbonisation is built into our long-term plans to improve well-being in Blaenau Gwent.

### Achieving a Carbon Neutral Public Sector in Wales



The ambition for the Welsh Public Sector to be carbon neutral is part of the Welsh Government's delivery plan, '[Prosperity for All: A Low Carbon Wales](#)'.

The plan outlines that achieving this ambition will require going beyond the most common public sector actions, such as delivering improvements to the efficiency of public sector buildings and the development of renewable energy solutions. It will also require addressing other areas such as; decarbonisation of heat, procurement, and electrification of fleet.

### What does carbon neutrality mean?

Carbon neutrality means reducing net emissions by at least 95%, there may be a residual 5% of emissions that is not technically feasible to eliminate by 2030.

The Welsh Government ambition is for carbon neutrality across the entire Welsh public sector, i.e. some public sector organisations may be able to achieve negative emissions, to balance out unavoidable emissions in other organisations. Our contribution to this ambition will reflect future Welsh Government guidance.

We recognise that some elements of our emissions are not solely in our direct control and/or will require additional support to achieve, e.g. the availability of low carbon technology and decarbonisation of the power grid. We will seek to collaborate with partners and advocate for actions in these areas.



## Climate Change and the need for Decarbonisation

The 2015 [Paris Agreement](#) commits governments to keep global temperature rises well below 2°C above pre-industrial levels, with the ambition to limit the rise to 1.5°C.

This target was chosen as an approximate indicator of dangerous levels of climate change. Global average temperatures have already risen by 0.9°C, with further rises inevitable due to carbon already emitted. Therefore, achieving this target requires that global emissions peak as soon as possible and reduce rapidly thereafter.

The [Intergovernmental Panel on Climate Change](#) states that meeting climate change goals will require 'rapid and far-reaching transitions ... (that) are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors'.

All countries are legally required to submit national action plans explaining how they will achieve their Nationally Defined Contribution (NDC). These emissions reductions contributions are set by the countries themselves, who report on their progress every five years. Currently the reductions pledged are well below the total required to achieve the 2°C target, the hope is that countries will set increasingly ambitious targets as time goes on.

The Environment (Wales) Act 2016 set a target for Wales of 80% reduction by 2050 (against 1990 levels), and last year the UK's Committee on Climate Change said it was realistic with existing technology for the UK as a whole to reach net zero emissions by 2050.

The committee recommended a 95% reduction in Wales (due to Wales's high concentration of industry and power generation), but the Welsh Government has announced its intention to go further and amend its targets to Net Zero in Wales by 2050.

This new target was part of Welsh Government's declaration of a climate emergency.

# The Structure of Our Plan

Our approach to decarbonisation is based on:

## 1. Public Leadership

We are committed to leading decarbonisation across Blaenau Gwent. We believe that this leadership starts with addressing the climate impact of our own operations. We are already taking a number of positive actions, but we recognise the need to increase our efforts through a systematic corporate approach to decarbonising the authority.

## 2. Collaboration

We will work with our partners to develop joint projects to address common sources of carbon emissions and will be developing a plan for decarbonisation of Blaenau Gwent as a whole, through the Blaenau Gwent Public Services Board. This collaborative approach is informed by the principles of the [Well-being of Future Generations \(Wales\) Act 2015](#).

## 3. Data Driven

The basis of our plan is a comprehensive assessment of the carbon impact of our operations, including calculating our carbon footprint. Using this data to identify, and target for action, the highest impact areas of our operations.

## 4. Our Transition Pathways

Decarbonising the council will involve a number of different transitions in each of these high impact areas (e.g. travel, electricity). The plan includes transition summaries which identify key challenges in achieving carbon neutrality in each of these areas.

## 5. Low Carbon Framework

Although each transition will require its own distinct actions, we will also need a low carbon framework to provide a common strategic direction across these transitions.

## 6. Next Steps

A Delivery Board will be established to take decarbonisation forward.

# 1. Public Leadership

We are already taking a range of actions to tackle climate change, but we recognise that to provide public leadership we need to take a more systematic approach. This leadership starts with addressing the council's own carbon impact. The focus of this plan is on **mitigation actions**, aimed at preventing the release of CO<sub>2</sub> and other greenhouse gases that cause climate change (e.g. reducing energy use).

The other major form of climate action is **adaptation actions**, which are taken in response to the changes which are predicted, or are already taking place, as a result of climate change (e.g. improving flood defences). We are already taking adaptation actions and will seek to develop a similar strategic approach to adaptation.

## **Journey so far**

In 2019, we began developing this plan as part of the council-wide Bridging the Gap programme, which develops new approaches to delivering our services in response to the financial challenges we face over the next five years. Following a workshop with Natural Resources Wales (NRW) to explore how they assessed their carbon footprint through the [Carbon Positive](#) project, we began developing the measures used in this plan.

## **The Importance of Local Leadership in Decarbonisation**

Decarbonisation is often perceived as a national or international, rather than local issue. Whereas, the local focus of climate adaptation in responding to the impacts of climate change on services and infrastructure is clear. It is true that in areas such as emissions-related standards for vehicles, international action could have strong and immediate impacts globally. However, even in these areas where international connectivity is high, local action still has an important role to play, for example, through developing a network of local charging points for electric vehicles. Moreover, some of the most far-reaching options for emissions reduction may involve actions in the 'final services' category – e.g., mode shifts from driving to cycling, from business travel to teleconferences, or towards less meat-based diets – all areas where international connectivity is low and local actions are likely to be most important. Planning decisions are inherently local and have significant carbon impacts. Our plan recognises that there are areas of climate emissions which we have limited ability to impact, but also identifies areas where local action has a key role in reducing emissions.

## 2. Collaboration

Addressing emissions from our own operations (known as organisational emissions) through this plan is only one element of our response to climate change. Decarbonisation of Blaenau Gwent as a whole will require collaboration.

We are working with our partners through the Blaenau Gwent Public Services Board (PSB) to develop a plan to keep carbon emissions for Blaenau Gwent as a whole (known as territorial emissions) within a science based carbon budget in-line with the Paris Agreement 2015. The PSB agreed to establish a steering group to develop this plan in January 2020, and will be seeking to involve the public in this process.

We are also working with our partners at the regional level in Gwent through the 'Climate Ready Gwent' programme to identify areas of action where we can collaborate and pool resources. For example, we have already been involved in a Gwent-wide fleet review and been part of a successful bid for funding to install electric vehicle charging points across Gwent, including in Blaenau Gwent. Also, identifying links to regeneration themes and projects taking place across the region such as Cardiff Capital Region City Deal, the Valleys Task Force and Tech Valleys.

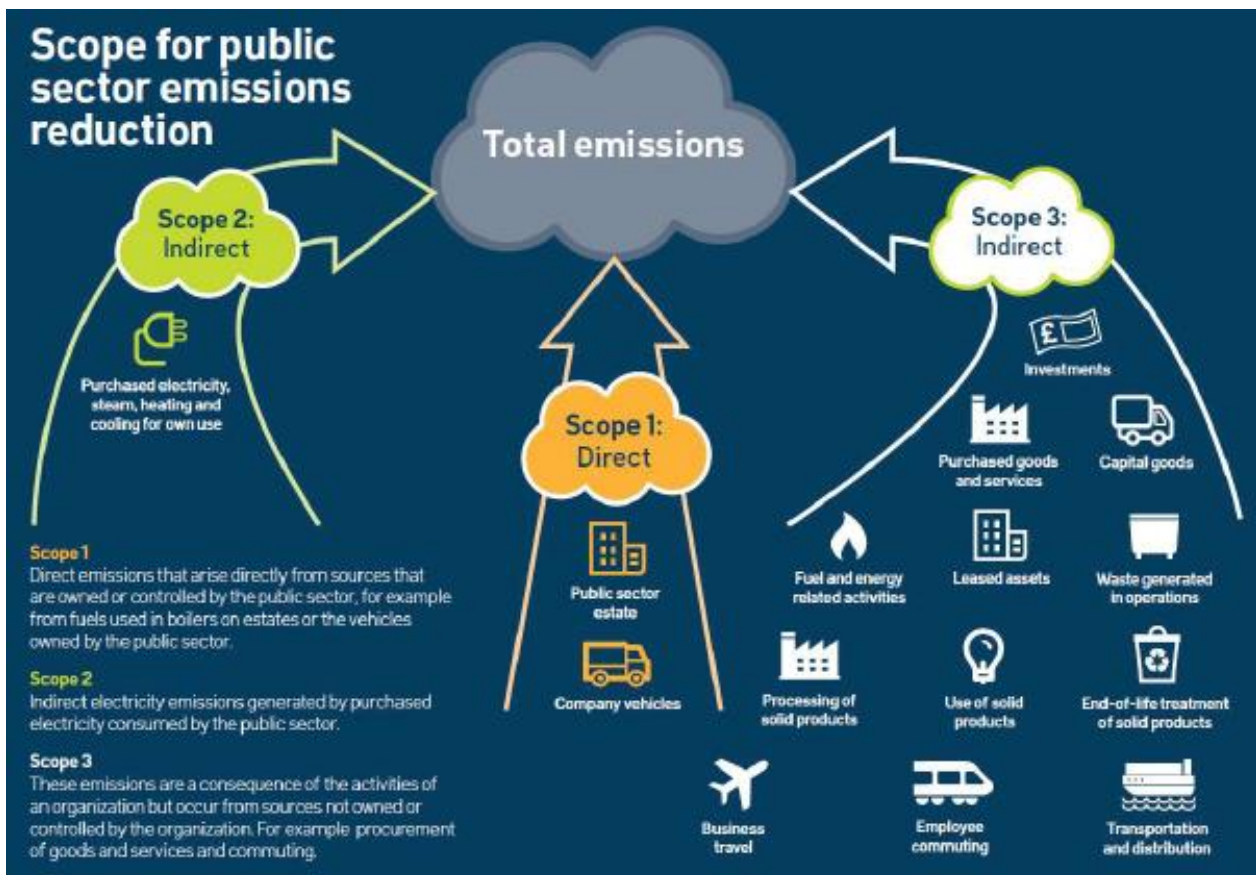


### 3. Data Driven

The first step in developing a more strategic approach to decarbonising was measuring the relative carbon impact of different areas of our operations, so we can focus on the most impactful areas. A central element of this data collection was calculating our carbon footprint, which is a standardised way of defining and reporting organisational emissions. We are also developing data about avoided emissions, calculating carbon savings generated by delivering services, for example, providing public transport and diverting municipal waste from landfill. Carbon footprint calculations only report emissions, so developing data about these avoided emissions is an important part of our data driven approach to carbon neutrality.

#### About our Carbon Footprint

Our carbon footprint was calculated following the example of NRW's Carbon Positive project, which was commissioned by Welsh Government to explore how the Welsh public sector could measure its carbon footprint. The project is based on the internationally recognised GHG (Greenhouse Gas) Protocol Corporate Standard. This approach divides an organisation's emissions into three scopes and a number of sub-categories, as shown below.



The methodology we used is outlined in detail as part of the supporting documents which are available with this plan to ensure the consistency and accuracy of future reporting.

Our initial footprint covers financial year 2018/19, a full 12-month period to include all seasonal variations in emissions. The extent of our carbon footprint was determined by two reporting boundaries, organisational and operational.

Our organisational boundaries include all emissions from assets, such as buildings and vehicles that we have day-to day operational control of, whether we own or lease them (Scope 1 and 2 emissions). Assets we own but do not have operational control over are outside this boundary (e.g. buildings leased to businesses and other organisations).

Our wider operational boundaries include emissions both up and downstream, which are the result of our procurement and other organisations delivering services on our behalf (Scope 3 emissions).

Following NRW's example our data also includes carbon sequestration from Land Use, Land Use Change and Forestry (LULUCF) from land in our operational control. Sequestration represents the annual change in the net amount of carbon stored in different habitat types. In future years we may also be able to calculate the total carbon stored in our land. This carbon stock does not contribute to our ambition of carbon neutrality, but it is important as changes in land use could lead to large one-off releases of stored carbon.

### **Using our carbon data**

We will update our carbon data, including the carbon footprint, on an annual basis, and will seek to make improvements in the quality and range of data included in these calculations.

There are three main purposes that the carbon data in this plan is required for:

- (i) calculating the relative size of the carbon emissions in different areas of the councils' operations;
- (ii) assessing the effectiveness of different forms of action; and

- (iii) monitoring our performance in reducing carbon emissions.

A range of data will need to be reported, because carbon footprint calculations alone cannot fulfil all three of these data functions in every areas of the council's operations. Therefore, developing and improving data to appraise options and manage performance will be important.

### **Data Quality**

The figures presented in this plan represents a first attempt at systematically calculating the carbon impact of our operations. They are largely based on data that was already held in various parts of the organisation, but had not previously been brought together to calculate our carbon emissions.

Guidance from Welsh Government is expected soon about public sector carbon reporting and will be reflected in future calculations. However, given the urgency of decarbonisation we felt it was important to make this initial calculation to inform our plan.

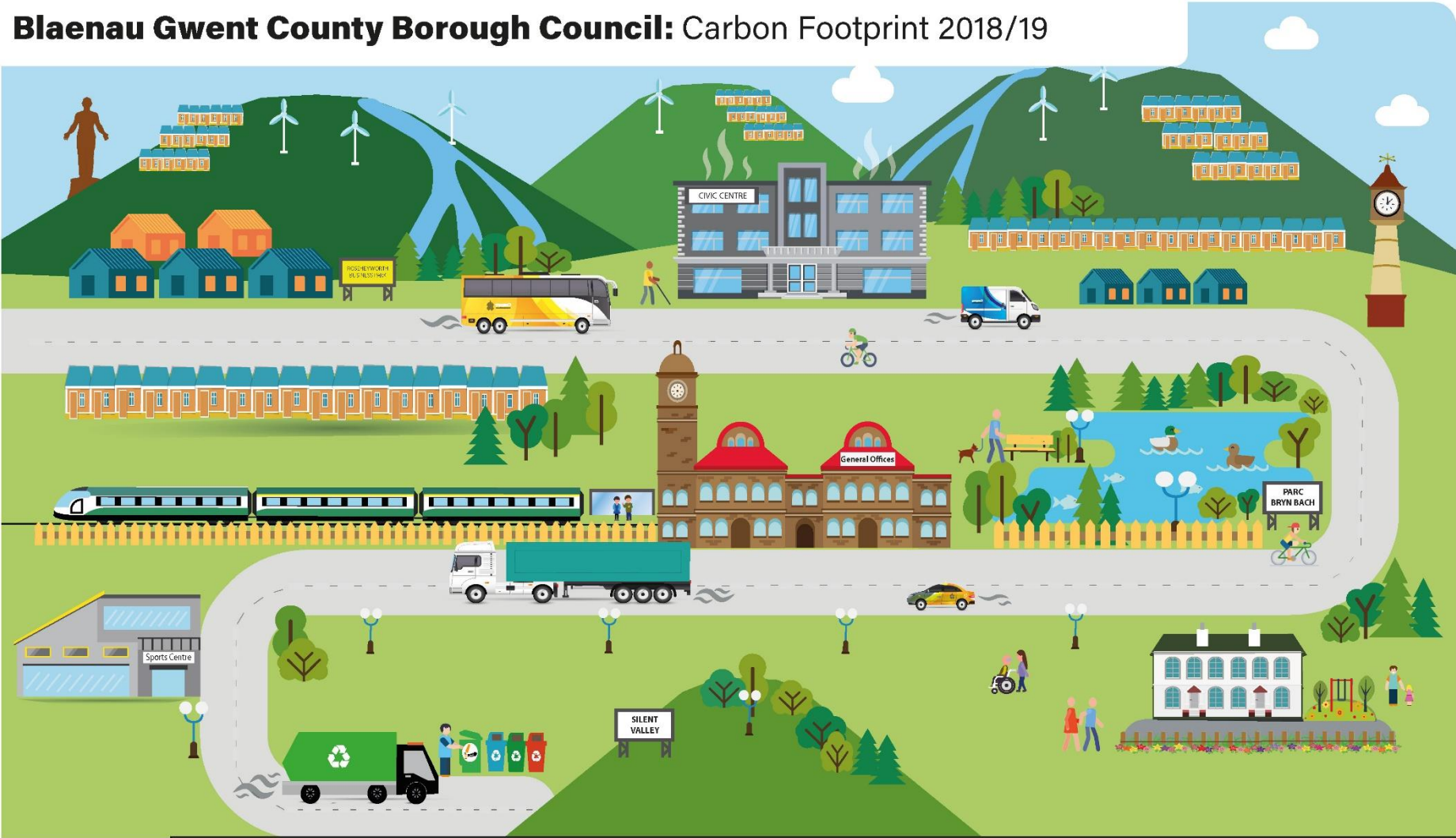
The calculations applied to this data are based on publicly available methodologies and principles, which are available with this plan as supporting documents. As a consequence, we are confident we are well placed in relation to future Welsh Government guidance.

We also recognise that we are at the start of our data journey in relation to carbon and that this will be an ongoing process of improving the range and quality of data we use. This primary focus of this initial calculation has been on enabling comparison of the carbon impact of different areas of the council's operations.

The figure for sequestration is likely to be a significant underestimate as data for tree coverage was only available for our Local Nature Reserves, which are only a small part of our total land holdings.

Our Carbon Footprint for 2018/19, showed in CO<sub>2</sub> equivalent tonnes per year, is shown on the next page as an infographic.

# Blaenau Gwent County Borough Council: Carbon Footprint 2018/19



Our emissions	<b>72,093</b> t CO <sub>2</sub> e /year
<b>(763)</b> t CO <sub>2</sub> e /year Our sequestration	
Our net carbon footprint	<b>71,330</b> t CO <sub>2</sub> e /year



## 4. Our Transition Pathways

Our plan will take a transition based approach to reach carbon neutrality rather than set a series of organisation-wide interim carbon targets.

Each transition represents a coherent area of action with its own distinct low carbon technologies, business models and infrastructure. Breaking decarbonisation down into manageable parts, and working back from the final destination of carbon neutrality to identify the key actions required in each transition pathway.

Recognising these different pathways allows each transition to progress effectively, instead of forcing all areas to proceed at the pace of whichever area's actions are most difficult to achieve. Focusing on transitions, rather than targets, takes advantage of confidence in what can be done now, instead of being held back by fundamental uncertainties around what might be achieved in the future.

Transition pathways help address carbon lock-in, where decisions about infrastructure made now, can commit us to future carbon emissions for many years. Carbon lock-in can also have financial consequences, as we may become tied into purchasing increasingly expensive carbon based power sources and materials.

Decarbonisation in the public sector has so far mainly focused on areas with low levels of carbon lock-in, such as the energy efficiency of buildings and the development of renewable energy. In a number of other areas carbon lock-in is higher, with more systemic changes required, including; heating, procurement and the electrification of fleet. A long-term council-wide plan for multiple transitions is crucial to informing the investment needed to tackle carbon lock-in and realise the full potential financial savings associated with decarbonisation.

Each of our organisational transitions are part of a wider societal low carbon transition that we do not control. Ultimately, both elements will be necessary for us to achieve our ambition of carbon neutrality. If the wider legislative, financial and technological context is not sufficiently supportive some elements of these transitions will not be achievable by our actions alone. But similarly if the council does not plan ahead and take action these organisational transitions will not be achieved even if wider transitions do take place.

## Overview of our Transition Pathways

Using the data generated calculating our carbon footprint we have identified nine transition pathways:

1. **Transport Direct** travel by our staff in corporate or their own vehicles, includes fleet, commuting and staff travel within work.
2. **Transport Commissioned** travel and transport by non- council staff delivering goods and services on our behalf, such as school transport, subsidised bus provision and onward transport for waste.
3. **Sequestration** absorption of carbon on land we own and manage, largely associated with woodland, urban trees and peatland.
4. **Procurement: Goods** which covers what we purchase as an organisation and includes key items such as clothing, food, IT, machinery, equipment and furniture.
5. **Procurement: Services** which covers the services we procure to deliver our functions such as schools and social services. This also includes investments such as pension schemes.
6. **Procurement: Works** which includes all construction and maintenance of our buildings and infrastructure.
7. **Electricity** which covers the electricity we purchase to run all our services. It includes key things such as street lighting, running our corporate buildings and schools. It also includes our use of renewable technologies.
8. **Heat** which includes our heating (and cooling) of our buildings.
9. **Waste** which covers the carbon impacts of our treatment of municipal waste, whether recycling, landfill or incineration.

## **Relationship of transitions to footprint scopes**

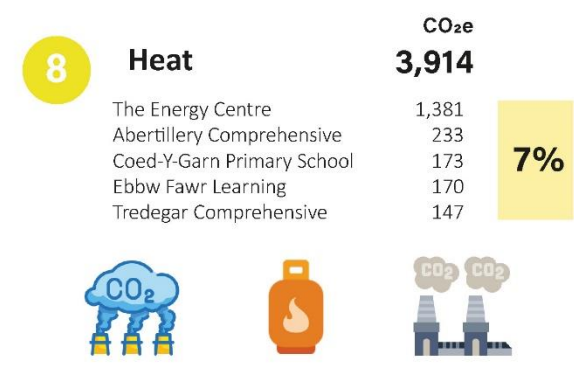
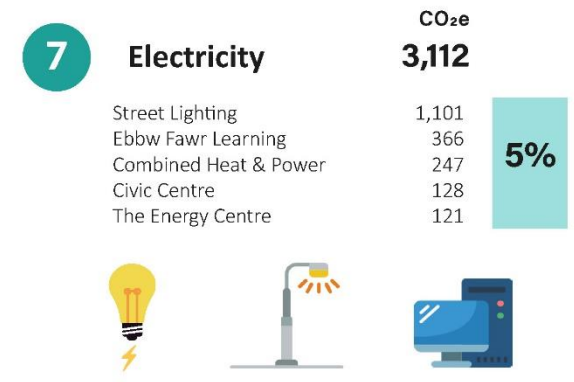
The scopes and categories used in calculating our carbon footprint were developed to provide a standardised way of measuring organisations carbon impact. In contrast, the transitions are organised around the actions needed to reduce these emissions, which leads to different groupings.

For example, emissions from our fleet sit in scope 1 of our footprint alongside gas because both of these emissions are released directly by the council. However, decarbonising our fleet will require completely different actions to decarbonising our gas heating, therefore, fleet sits within the 'direct transport' transition with business travel and commuting, which are part of scope 3 in our footprint, but require similar decarbonisation actions.

The infographic below gives a summary of each transition, including both total CO<sub>2</sub> equivalent tonnes per year and the major sources of emissions within each transition, identified from our carbon footprint calculation. As well as what percentage of our total emissions each transition represents.

Additional information on three major challenges in reaching carbon neutrality for each transition pathway are outlined in the supporting documents to this plan.

# Blaenau Gwent County Borough Council: Transitions Summary 2018/19

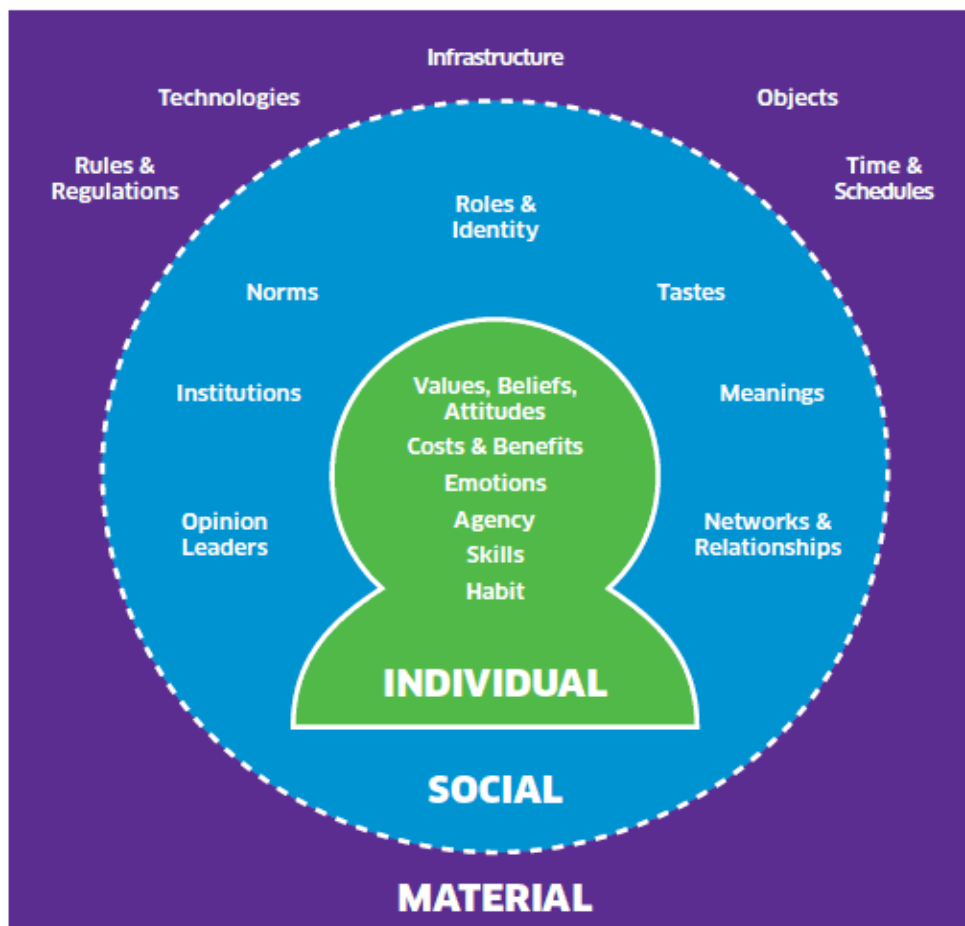


## 5. Low Carbon Framework

The Low Carbon Framework covers common elements that will be inform the delivery of all nine transitions, including:

### Behaviour Change

Everyone at the council, including staff and elected members, will have a role to play in decarbonisation. This behaviour change programme will have to go beyond awareness raising and common generic actions. We will target specific behaviours, placing them in their wider context to support systemic change. This approach will be based on the Individual, Social and Material (ISM) Tool developed for local authorities to use in their climate change planning, as shown below. Further information on this tool is provided in the supporting documents to this plan.



Evidence shows successful behaviour change programmes for decarbonisation are the result of meaningful staff involvement combined with senior management commitment.

## **Just Transition**

Decarbonisation is not only a technological transition but also a social transition. A just transition means ensuring that the benefits of decarbonisation are fairly distributed and supporting those who may lose out. A just transition is not only desirable but may be the only way decarbonisation can be achieved.

Changes within the council may create new working patterns and job roles, so it is important to involve staff in ensuring these are positive changes. Changes in service delivery will have different impacts on different groups, the benefits of these changes must be fairly distributed.

## **Co-Benefits**

We will also consider how decarbonisation can deliver other benefits. The decarbonisation plan, as part of Bridging the Gap and council's Medium-term Financial Strategy, can help to identify both potential cost savings and priorities for investment. Changes in public service delivery need to link in with the Well-being of Future Generations Act, particularly the Sustainable Development Principle, ensuring the needs of the present are met without compromising the ability of future generations to meet their own needs.

Climate change is only one of a number of planetary environmental boundaries that are under severe pressure from human activity. In particular, biodiversity loss, which is now recognised as the sixth mass extinction event. Decarbonisation actions should also protect and enhance biodiversity, and be linked to our local Biodiversity Partnership and Action Plan.

## 6. Next Steps

We will set up a Delivery Board who will provide strategic overview and be supported by reporting and accountability mechanisms. The board will oversee the next steps, including:

- Developing the nine transitions in detail and identifying priorities for action and areas which need further investigation.
- Further development of carbon data and integration into decision making and corporate performance management.
- Prioritising the need for investment and additional skills and capacities across different transitions (Including creating a central record of existing projects and staff delivering decarbonisation).
- Identify and begin delivery of demonstration projects, which will inform wider transitions. Including ensuring that learning from actions that are already underway is shared widely.
- Mainstreaming decarbonisation, by ensuring that all service areas have the resources needed to take ownership of delivering transitions and that consideration of decarbonisation is taking into account in policy development and changes in service delivery.

# Blaenau Gwent County Borough Council Decarbonisation Plan



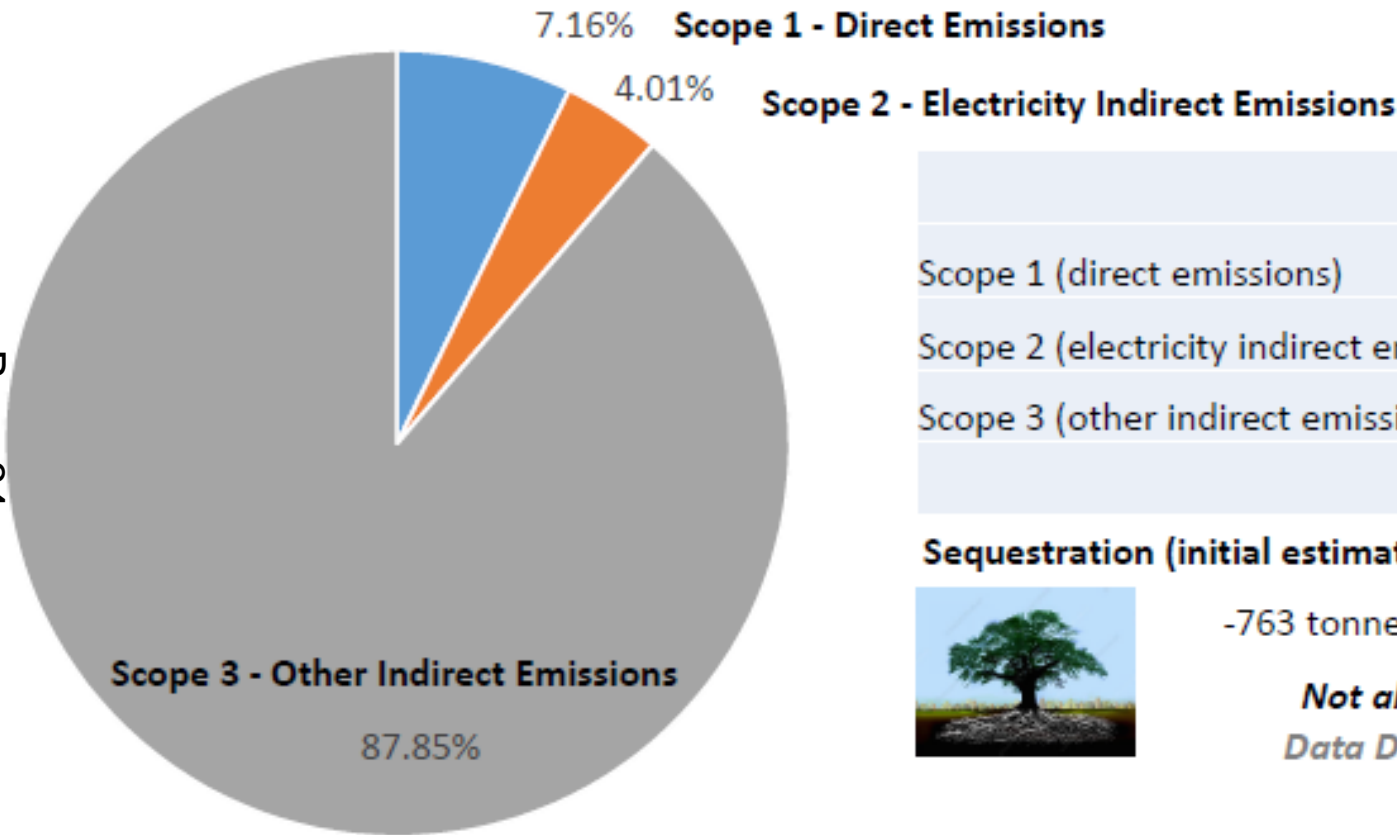
## Supporting Documents





# Blaenau Gwent Carbon Footprint 2018/19 Breakdown by Scope

Page 34



	tonnes CO2 equivalent /year
Scope 1 (direct emissions)	5,159
Scope 2 (electricity indirect emissions)	2,891
Scope 3 (other indirect emissions)	64,043
	<b>72,093</b>

### Sequestration (initial estimate based on LNRs)



-763 tonnes CO2 equivalent /year

*Not all our land holding  
Data Development Action*

**71,330 tonnes CO2 /year**

<b>Blaenau Gwent County Borough Council Carbon Footprint 2018/19</b>	<b>tonnes CO2e/year</b>
<b>Scope 1 (Direct Emissions)</b>	<b>5,159</b>
Heating	4,143
Diesel and Petrol	1,016
<b>Scope 2 (Electricity Indirect Emissions)</b>	<b>2,891</b>
<b>Scope 3 (Other Indirect Emissions)</b>	<b>64,043</b>
Categories 1 and 2 -purchased goods and services	60,295
Category 3 -extraction, production & transportation of fuel & energy	771
Category 4 -upstream transportation & distribution (included in categories 1 & 2)	-
Category 5 -waste generated in operations (included in categories 1 & 2)	-
Category 6 -business travel	293
Category 7 -employee commuting & homeworking	2,200
Category 8 -upstream leased assets (None)	-
Category 9 -downstream transportation & distribution	484
<b>Total Scopes 1, 2 and 3</b>	<b>72,093</b>

# Carbon Data Sources 2018/19

## Decarbonisation Plan – Data Sources

### Scope 1 – Direct Emissions

*Burning of fossil fuels on-site as part of operations, this will be largely through heating and use of corporate fleet*

Categories	What information have we got	Source of Information	Unit of measurement	What will this tell us	Department
Natural Gas	Detailed information on property portfolio including utility costs (Gas and Electric) and	<ul style="list-style-type: none"> <li>Annual reports from CRC report which is being finalised October 2019. This will provide, per property, annual costs and consumption of energy.</li> <li>Ongoing property database development to support monitoring of the data requirements on a frequent basis</li> </ul>	<ul style="list-style-type: none"> <li>Annual Cost</li> <li>Annual kwh consumption</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency and cost of each council-owned building in property portfolio</li> </ul>	Environment Resources
Diesel – Fleet	Detailed reports on vehicles including fuel costs, fuel usage, age of fleet, CO2 emissions	<ul style="list-style-type: none"> <li>Odyssey Fuel Management System that can provide period based reports</li> <li>Costs provided via spend from budget management</li> </ul>	<ul style="list-style-type: none"> <li>Cost</li> <li>Fuel Consumption</li> <li>Mileage</li> </ul>	<ul style="list-style-type: none"> <li>Cost and CO2 per vehicle</li> <li>Consideration: Costs versus Carbon</li> </ul>	Environment Resources
Petrol – Plant and Machinery	Detailed reports on petrol usage	<ul style="list-style-type: none"> <li>Odyssey Fuel Management System that can provide period based reports</li> <li>Costs provided via spend from budget management</li> </ul>	<ul style="list-style-type: none"> <li>Costs</li> <li>Litres purchased</li> </ul>	<ul style="list-style-type: none"> <li>Cost and CO2 per vehicle</li> <li>Consideration: Costs versus Carbon</li> </ul>	Environment Resources

## Decarbonisation Plan – Data Sources

### Scope 2 – Electricity Indirect Emissions

*Emissions produced off-site from the use of electricity in operations*

Categories	What information have we got	Source of Information	Unit of measurement	What will this tell us	Department
Electricity purchased	Detailed information on property portfolio including utility costs (Gas and Electric) and	<ul style="list-style-type: none"> <li>Annual reports from CRC report which is being finalised October 2019. This will provide, per property, annual costs and consumption of energy.</li> <li>Ongoing property database development to support monitoring of the data requirements on a frequent basis.</li> </ul>	<ul style="list-style-type: none"> <li>Annual Cost</li> <li>Annual kwh consumption</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency and cost of each council-owned building in property portfolio</li> </ul>	Environment
Street Lighting	Information on the amount it costs the Council to	<ul style="list-style-type: none"> <li>Invoice information / budget cost code</li> </ul>	<ul style="list-style-type: none"> <li>Annual Cost</li> <li>Annual kwh consumption</li> </ul>	<ul style="list-style-type: none"> <li>Seasonality trends for street lighting costs</li> </ul>	Environment

## Decarbonisation Plan – Data Sources

### Scope 3 – Other Indirect Emissions

Categories	What information have we got	Source of Information	Unit of measurement	What will this tell us	Department
<b>Category 1 and 2</b> Goods and Services	Detailed cost analysis of third party spend – ascertained from current budgeting information	<ul style="list-style-type: none"> <li>• BTG Third Party Spend analysis, broken down into further cost code analysis to enable us to match the DEFRA 75 cost categories</li> </ul>	<ul style="list-style-type: none"> <li>• Annual costs per category</li> </ul>	<ul style="list-style-type: none"> <li>• Provide detailed analysis of the procurement list for category spend</li> </ul>	Resources
<b>Category 3</b> Upstream Energy	<b>No further information required as the data collected in Scope 1 and 2 for Gas and Electricity is used</b>				
<b>Category 4</b> Upstream transport and distribution	<b>No further information required as the data collected in Scope 3 (categories 1 and 2 goods and services is used)</b>				
<b>Category 5</b> Waste	<b>No further information required as the data collected in Scope 3 (categories 1 and 2 goods and services is used)</b>				
<b>Category 6</b> Business Travel	Costs for staff expenditure on business travel including mileage claims, rail and air travel	<ul style="list-style-type: none"> <li>• Budget cost code analysis for the period 18/19 received from Resources</li> </ul>	<ul style="list-style-type: none"> <li>• Annual costs per travel type – Car, Rail, Air</li> </ul>	<ul style="list-style-type: none"> <li>• Cost analysis per travel type</li> </ul>	Resources
<b>Category 7</b> Commuting and Home Working	Detail information on staff (anonymised) with home post code and designation and FTE to calculate mileage	<ul style="list-style-type: none"> <li>• Information received from OD Trent system</li> <li>• Policy and Performance currently looking at info to calculate mileage per week by staff to place of work</li> </ul>	<ul style="list-style-type: none"> <li>• Mileage travelled per week/year by staff</li> <li>• Potential by job type and department</li> </ul>	<ul style="list-style-type: none"> <li>• Avg mileage per employee to work</li> <li>• Breakdown Dept.</li> <li>• Policy/behavioural change</li> </ul>	OD Policy and Performance
<b>Category 8</b> Upstream leased assets	<b>Initial identification would include Other Buildings utilised by the Council however as we have operational control costs for Gas and Electric will be included in Scope 1 and 2</b>				
<b>Category 9</b> Downstream Transport	Costs, volume and mileage of journeys for Home to School Transport, Bus Subsidy Services and Waste Distribution from Processing Plant to Treatment	<ul style="list-style-type: none"> <li>• Home 2 School Transport – Transport Section that hold contracts data requirements</li> <li>• Bus Subsidy Services – Joint Transport Service that manage our contracts</li> <li>• Waste Distribution – Performance Team</li> </ul>	<ul style="list-style-type: none"> <li>• Journeys</li> <li>• Passengers</li> <li>• Mileage</li> <li>• Costs</li> <li>• Bus Services</li> <li>• Location of Waste distribution</li> <li>• Tonnages / material type</li> </ul>	<ul style="list-style-type: none"> <li>• Number of Journeys</li> <li>• Number of passengers</li> <li>• Average Mileage</li> <li>• Number of services</li> <li>• Location of Waste distribution</li> <li>• Local supply chain</li> </ul>	Transport Education Community Services Policy and Performance

## Decarbonisation Plan – Data Sources

### Sequestration

Categories	What information have we got	Source of Information	Unit of measurement	What will this tell us	Department
Sequestration	Area of tree coverage in local nature reserves	<ul style="list-style-type: none"> <li>Council GIS mapping system</li> </ul>	<ul style="list-style-type: none"> <li>Hectares of land</li> </ul>	<ul style="list-style-type: none"> <li>Type of tree</li> <li>Habitat type</li> </ul>	Environment

### Waste - Carbon Emissions Avoidance

Categories	What information have we got	Source of Information	Unit of measurement	What will this tell us	Department
Waste Disposal of municipal waste	<ul style="list-style-type: none"> <li>Detailed breakdown of municipal waste information collected</li> <li>Quarterly and annual reports</li> </ul>	<ul style="list-style-type: none"> <li>Waste Collection System</li> <li>Performance information collated and reported on by Corporate Performance Team, supported by Waste Team</li> <li>Waste breakdown of material type and the percentage of each treatment.</li> <li>Split of Household and Non-Household Waste</li> </ul>	<ul style="list-style-type: none"> <li>Tonnes of waste by material type with percentage of breakdown by:                             <ul style="list-style-type: none"> <li>Recycled,</li> <li>Incinerated and ;</li> <li>Landfilled</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Information by material type and the treatment of each category</li> <li>Identification of waste material that avoid the most carbon through recycling</li> <li>Identification of those material types that do not avoid carbon emissions</li> </ul>	Corporate Performance Waste Team

# Transition Pathway - Three major challenges in reaching carbon neutrality

## Transport

The number of ULEV (Ultra Low Emission Vehicles) on the road is beginning to take off and government has repeatedly brought forward deadlines for the end of sales of new petrol/diesel cars (including hybrids). Welsh government has made ambitious proposals for all new public sector vehicles to be ULEV by 2025 or 2030 for HGVs. Reflecting that ULEV options in the HGV market are currently very limited and high cost. Transport has been divided into two transitions:

<b>1 Transport Direct</b>		<b>9%</b>
Direct transport includes all work related travel by BGCBC employees (including travel to work), whether in their own, or in BGCBC fleet, vehicles.		
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
ULEV Infrastructure. Replacing our entire fleet with ULEVs will require substantial capital investment. Particularly as even when ULEVs whole life cycle costs are lower, savings are the result of lower running costs, while up-front costs are higher. In addition, investment is also required to provide charging infrastructure for this fleet, in particular for a Central Depot replacement. The recent Gwent Fleet Review highlights the potential for collaborative public sector procurement.	Agile Working. In addition to reducing travel, both too and in work, changes such as home working and virtual meetings can also improve workplace efficiency, but technical support and cultural change are required to realise the full benefits. This plan has begun the process of using data to understand our staff travel patterns and requirements.	Commuting. Commuting miles are likely to remain substantial, particularly as many jobs have to be done in person. Charging infrastructure for staff vehicles is part of meeting this challenge, although home charging is likely to play a far larger role. However, the council will also have to support employees with the issues around upfront costs of ULEVs, as well as promoting and improving public and active transport options.



<b>2 Transport Commissioned</b>		<b>1%</b>
<p>Commissioned transport covers transport services we pay for (e.g. bus), deliveries to and from the council, and travel by non-BGCBC employees delivering services on our behalf. Public and school transport supported by the council produces overall carbon savings by avoiding car use.</p>		
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>ULEV Infrastructure. This transition will rely on a local charging network. Suppliers who provide significant levels of transport services will have to upgrade their fleet. Currently contracts for some bus services struggle to attract bids, given the high cost and limited availability of electric buses there are concerns about the capacity of the local market to respond.</p>	<p>Shortening supply chains. Using suppliers with local bases has the potential to significantly reduce travel distances. In many cases this might require developing local production and delivery capacity, which would have additional benefits in terms of strengthening our foundational economy.</p>	<p>Reducing number of journeys. Utilising data to identify opportunities to reduce the number of journeys required to deliver products to the council and to deliver services on our behalf. Maximising these potential reductions may require wider changes in areas such as procurement processes, storage capacity and service delivery models.</p>


<p><b>3 Sequestration</b></p>		<p><b>-1%</b></p>
<p>Carbon sequestration removes emissions from the atmosphere, these negative emissions are crucial to achieving carbon neutrality. In addition, as land owner the council is responsible for substantial carbon stocks already captured, trees and peatland are the main two natural carbon stores. Both these land types in Wales have been badly degraded as carbon stores over a number of years by deforestation and peatland ‘improvement’ for agriculture (now often abandoned). Deindustrialisation in Blaenau Gwent has resulted in another wave of landscape change, we now have the highest proportion of woodland coverage of all Welsh local authorities.</p>		
<p><b>Challenge 1</b></p>	<p><b>Challenge 2</b></p>	<p><b>Challenge 3</b></p>
<p>Improve digital mapping and data availability. Trees rate of carbon sequestration varies significantly with species type, management and age. The initial figure in this plan is a very rough estimate for a small element of the council’s landholdings (LNRs). A complete picture of current tree stock is key to understanding the carbon impacts of our current landholdings.</p>	<p>Right tree, in the right place. Current national rates of tree planting are falling well short of ambitious government targets, which reflect that Welsh (and Blaenau Gwent) tree coverage is still well below the European average. However, it is vital that tree planting efforts not only consider the number of trees planted but also the most suitable trees and locations. In order to maximise not just carbon capture but co-benefits to air quality, biodiversity and climate adaptation.</p>	<p>Peatland. Even less data is currently available about the size and condition of our peatland holdings. Peat soils are a major carbon sink, but those which have previously been ‘improved’ for agriculture or forestry may well be releasing carbon. It is important we understand our potential for peatland restoration.</p>

## Procurement: Overall


Procurement emissions make up a larger proportion of our footprint than the more familiar scope 1 and 2 emissions combined. Like scopes 1 and 2 these emissions are largely ultimately the result of the use of gas, electricity and oil, but they are spread across a wide range of goods and services from different suppliers, both upstream and downstream of the council. The proportion of our emissions coming from procurement is in line with other public and private sector organisations. Influencing others to reduce these emissions is a significant new challenge for BGCBC. Given the extent of these emissions, procurement has been broken down into three transitions, but there are also challenges that are common to all three:


<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Calculating Carbon Neutrality. The council will continue to deliver a range of services, which will lead to some emissions even if the carbon intensity of these activities is reduced. In many areas (from waste disposal to public transport) these services generate overall carbon savings outside our footprint. Procurement footprint measurements are also not suitable for calculating carbon neutrality for the public sector as a whole (due to double counting issues).</p>	<p>Performance Measurement. Our procurement footprint calculations rely entirely on national averages of carbon intensity. This method can generate a useful baseline procurement footprint and enable the targeting of high carbon areas. However, it cannot function as an ongoing monitoring tool for carbon reduction activity. Identifying specific measures for these high carbon areas will be a priority.</p>	<p>Strategic Direction. Clear policy objectives and priorities are needed to make performance measures meaningful. The flexibility of public sector procurement is limited by cost and regulatory pressures, so early strategic direction and high level buy in will be required to decarbonise procurement.</p>

<b>4 Procurement: Goods</b>		<b>7%</b>
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Computers and Office Equipment. In addition to the energy efficiency of IT equipment, the carbon impact of its manufacture is significant. It is important procurement considers how to maximise reuse, refurbishment, useful life and waste recovery from these products.</p>	<p>Food and Drink. Seasonality, health and waste (including utensils and packaging) are all important factors for carbon impact. A more plant based diet has the greatest potential for reductions. There are also important fairness issues around prices paid to farmers.</p>	<p>Collaboration. Common supply chains and combined purchasing power can give public sector organisations more influence. A lot of previous public sector work on sustainable procurement, including developing standards and guidance, has taken place on a regional basis. This previous work also identified challenges 1 and 2 as priorities for the public sector.</p>


 <b>5 Procurement: Services</b>		<b>62%</b>
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Education and Social Care. Although the carbon intensity of these services is low, because they are our two largest service areas their total impact is significant. In both areas there are a number of local providers, who will all face similar issues, and for many of whom the council is their largest or only customer, giving us scope to influence them and promote collaboration.</p>	<p>Investments. Divestment of pension funds is a rapidly growing movement that demonstrates public leadership by withdrawing financial support for fossil fuels. The council does not directly control The Greater Gwent (Torfaen) Pension Fund but can influence it to further reduce its climate impact, as well as assessing our other investments.</p>	<p>Identify Carbon Hot Spots. Our footprint provides a broad overview of impacts, further analysis and development of data to identify actionable carbon hot spots within our value chains should be a priority. This means identifying specific actions with their own specific performance measures.</p>

<b>6 Procurement: Works</b>		<b>10%</b>
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Whole Life Costing. Decisions should reflect the full cost of buildings or other infrastructure over their working life, both financial and carbon. Carbon costs include both the carbon released during construction, and the use of carbon during the building's life (and beyond).</p>	<p>New Buildings. Building standards are evolving rapidly as zero carbon new build is becoming a reality. The council is already using environmental schemes such as BREEAM for major construction programmes like 21st Century Schools, and our ambition should be to lead the way. Buildings must also be flexible to respond to rapidly changing service delivery requirements, while still delivering zero carbon performance.</p>	<p>Maintenance. In addition, to the retrofit programme required by the heat transition, regular maintenance is important to maintaining energy efficiency standards. There is also potential to reduce the carbon impact of maintenance works.</p>

 <b>Electricity</b>		<b>5%</b>
<p>This transition is now well underway, with the grid becoming increasingly green as a variety of forms of renewable power are installed (solar, wind, hydro). Energy efficiency is also improving, with the council making substantial investments through programmes like Re:fit. Low carbon electricity will also play a key area in decarbonising other areas such as heating and transport, placing pressure on supply.</p>		
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Procurement of Electricity. Welsh Government ambition for all public sector buildings to be supplied with 100% renewable electricity by 2020. High standards for green electricity are important so that this procurement creates new renewable capacity, rather than simply redistributing existing capacity.</p>	<p>Renewable Generation. BGCBC is exploring the potential for renewable generation through initiatives like our Energy Prospectus. Installed capacity in Blaenau Gwent is currently among the lowest across all Welsh local authorities. Grid capacity and load balancing will also play an important role in local generation.</p>	<p>Demand Reduction. Even with 100% renewable power, energy efficiency measures such as efficient appliances, better use of data and automated saving measures, as well as staff behaviour change, will be important.</p>

 <b>Heat</b>		<b>7%</b>
<p>Decarbonising space and water heating (and cooling) in BGCBC’s buildings will be part of a wider transition away from a national heating system based on a standardised gas grid. It is very early in this transition but it seems clear that the switch will not be to a single technology, but involve a range of alternatives such as district heating networks, heat pumps, hydrogen and solar thermal to fit local circumstances.</p>		
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Replacement of Gas Based Infrastructure. With much of BGCBC’s existing infrastructure (gas boilers) reaching the end of its life, we will need to make decisions about replacements that will lock in emissions for years to come. These changes may require the entire heating system to be modified (radiators, plumbing etc.)</p>	<p>Retrofit Existing Buildings. The majority of heating will take place in existing buildings. A comprehensive retrofitting programme is crucial to raise performance standards. Particularly as reduced emissions from some low carbon heat technologies are dependent on good building performance.</p>	<p>Demand Reduction. Improved heating controls and use of data can reduce heating demand, particularly by allowing more fine grained control of temperature in different parts of buildings to match the time and type of use.</p>



 <b>Waste</b>		<b>-11%</b>
<p>Significant progress has been made in this transition towards the Welsh Government objective of a Zero Waste Wales in 2050. This is an area where substantial carbon savings are already being made by BGCBC.</p>		
<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p>Waste Streams. Looking to achieve a number of challenging targets for treatment of materials, through our Waste Management and Recycling Strategy 2018-2025, including minimum 70% reuse and recycling/compost, 80% source separation and maximum 5% landfill and 30% energy from waste.</p>	<p>Circular Economy. Involves moving beyond traditional waste management to prevent materials from entering the waste stream in the first place. For example, our new HWRC centre is part of intercepting potential waste for reuse. Also involves eliminating unnecessary packaging and single use products.</p>	<p>Behaviour Change. Upstream public behaviour has a large impact on the volume and type of waste entering our waste system. Not just at the point of waste disposal, but in consumer choices made prior to this.</p>

# Behaviour and the ISM Tool in the Climate Change Plan

Transformational change across all sectors of society is necessary for the achievement of climate change targets and associated objectives, such as the reduction of fuel poverty. Infrastructural and technological measures are crucial for our transition to a low carbon Scotland, but the impact of many of these measures depends heavily on the extent to which people adopt and use them. It is therefore vital that policy makers understand how and why people behave the way that they do in order to design cost-effective interventions. Incorporating behaviours into policies requires particular insights and understanding. Officials and analysts developed the ISM (Individual, Social, Material) tool to make these insights and understandings more accessible for policy makers.

## Why use ISM?

- In order to successfully influence behaviour it is crucial to recognise that all behaviour is contextualised within the values and attitudes that we hold; the habits we have; the people around us; and the tools and infrastructure available to us in our day-to-day lives. For this reason, a package of interventions will generally be more successful in influencing behaviour than one element alone. The ISM tool can be used to see where interventions need to be targeted.

## How to use ISM?

- This is a practical tool, that shortcuts complex theory and can be used throughout the policy process.
- ISM starts from a 'live' challenge and identifies the relevant factors and influences in their context (individual, social or material). When used in a workshop setting, it is an effective engagement tool, with all of the people involved in a specific challenge participating. This approach means that issues are identified which may not emerge through a desk-top approach. Progress can be measured over time by looking at changes in the key factors and the end behaviour.
- It is often described as 'a head, in a circle, in a square' as shown below. Each shape represents a context, and within each shape there are the factors that influence each context.



- The individual context includes individuals' values, attitudes and skills. Influencing behaviour change at the individual level involves making the sustainable choice the easy, default choice.
- The social context includes social norms, people's networks and relationships, and the influence of opinion leaders. Influencing behaviour change at the social level involves building common cause (shared values) and supporting the development of positive social norms.
- The material context includes infrastructure, technology and regulations, and the times and schedules of everyday life. Influencing behaviour change at the material level involves supporting the development of technology and infrastructure, considering regulation where appropriate and influencing softer factors such as people's schedules.

## Our ISM approach

- We are embedding the ISM approach across policy development work in the Scottish Government and other public bodies. We: held two launch events in June 2016 (internal and external audiences); are integrating ISM into policy training material; and the Sustainable Scotland Network (SSN) is supporting its use with public bodies.
- A contractor will deliver up to 20 ISM workshops across the draft Climate Change Plan policy areas to inform policy development and implementation. A number of workshops have already taken place, and more detailed information will be provided to the Scottish Parliament when the draft Climate Change Plan is laid in January 2017.

*Prepared by the Scottish Government for the Environment, Climate Change and Land Reform Committee.*

*16 September 2016*

## Carbon Literacy Glossary

**Adaptation** – Action that helps cope with the effects of climate change - for example construction of barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought.

**Avoided Carbon** – Estimated on the basis of comparative impacts of all system-wide changes in emissions or removals occurring because of the activity or service compared to a base scenario where the activity or service does not exist.

**Carbon Emissions/Impact** – Amount of CO<sub>2</sub>e released into the atmosphere.

**Carbon Footprint** - The amount of carbon emitted by an individual or organisation in a given period of time.

**Carbon Lock-in** – The difficulty created in attempting to introduce low carbon technologies caused by existing infrastructure's reliance on dominant fossil fuel-based energy systems.

**Carbon Neutral** – A process where there is no net release of CO<sub>2</sub>. The process would be carbon neutral if the amount taken out of the atmosphere and the amount released were identical.

**CO<sub>2</sub>** – Carbon dioxide is a gas in the Earth's atmosphere. It occurs naturally and is also a by-product of human activities such as burning fossil fuels. It is the principal greenhouse gas produced by human activity.

**CO<sub>2</sub>e** - Six greenhouse gases are limited by the Kyoto Protocol and each has a different global warming potential. The overall warming effect of this cocktail of gases is often expressed in terms of carbon dioxide equivalent - the amount of CO<sub>2</sub> that would cause the same amount of warming.

**Decarbonisation** – Removal of carbon emissions producing processes from a sector or industry. In most areas decarbonisation is known to be technically feasible, but there are high costs associated with a transition to low carbon infrastructure and ways of working.

**Electrification** – Powering a system by electricity, in many cases switching from a previous power source. This carbon reduction benefits of electrification are dependent on electricity being generated from low carbon sources.

**Greenhouse Gasses** – Natural and industrial gases that trap heat from the Earth and warm the surface. The Kyoto Protocol restricts emissions of six greenhouse gases: natural (carbon dioxide, nitrous oxide, and methane) and industrial (perfluorocarbons, hydrofluorocarbons, and sulphur hexafluoride).

**Mitigation** - Action that will reduce man-made climate change. This includes action to reduce greenhouse gas emissions or absorb greenhouse gases in the atmosphere.

**Offsetting** - A particular form of sequestration used to compensate for emissions of CO<sub>2</sub> by participating in, or funding, efforts to take CO<sub>2</sub> out of the atmosphere. Offsetting often involves paying another party, somewhere else, to save emissions equivalent to those produced by your activity. The UK Committee on Climate Change recommends that offsetting should not be used as part of achieving carbon targets, except as an emergency last resort, due to significant doubts about its effectiveness and fairness.

**Paris Agreement** - Is a 2015 agreement setting out how countries will meet their obligations under the international treaty on climate change, the United Nations Framework Convention on Climate Change (UNFCCC). Its central aim is to keep global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. All countries must set out their contributions to this target, called nationally determined contributions (NDCs)

**Sequestration** – Long term removal of CO<sub>2</sub> from the atmosphere, for example, in organic material, particularly in peatland and forests.

**Scopes** – Are an internationally recognised way of classifying carbon emissions produced by an organisation, developed through the Greenhouse Gas Protocol.

**Scope 1** - Direct emissions from sources that are owned or controlled by the organisation, for example, emissions from combustion in owned or controlled boilers, vehicles, etc.

**Scope 2** - Emissions from the generation of electricity that is purchased or otherwise brought in from outside the organizational boundary.

**Scope 3** - Emissions that are a consequence of the activities of the organisation, but occur from sources not owned or controlled by the organisation. These can be both upstream, e.g. the procurement of goods and downstream, the delivery of services by others on behalf of the organisation.

**Transition** - System transitions are transformative changes in the methods of producing, selling, transporting and using goods and services. An historical example would be the replacement of horse drawn carriages with cars.

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# Equality Impact Assessment Template Form



**Description of Assessment** *(Please specify below)*

*Initial assessment on Decarbonisation Plan*

**Responsible Directorate** *(Please specify below)*

*Corporate Services*

**Responsible Officer** *(Please specify below)*

*Michelle Morris (Managing Director)*

**Assessment Date** *(Please specify below)*

*21/02/2020 Draft 1*

**Staff Involved in Assessment** *(Please specify below)*

*Andrew Parker (Service Manager: Policy and Partnerships)*

*Daniel Wheelock (Policy Officer)*

## PART 1: SCREENING EXERCISE TO IDENTIFY ADVERSE IMPACT

Does this 'Option' have a <u>positive or an adverse impact</u> on any of the following protected characteristics? (please complete all)	If yes	Please describe what the impact will be?	What is the significance of the impact?	If low, please explain this 'significance' rating. (if 'high' please complete template below)	
Race	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	→	The plan has the potential to have a positive overall impact on those covered by protected characteristics relating to race. However, those with protected characteristics are often more vulnerable to the impacts of climate change and may face additional barriers is accessing the benefits of climate action. Consideration should be given to establishing early engagement with defined communities covered by this characteristic e.g. Gypsy and Traveller Communities and communities with potential language barriers.	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be considered in terms of their contribution to a just transition.
Disability	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	→	The plan has the potential to have a positive overall impact on those covered by protected characteristics relating to disability. However, those with protected characteristics are	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be considered in terms of their contribution to a just transition.



			often more vulnerable to the impacts of climate change, e.g. the effect of flooding on people with physical disabilities, and may face additional barriers in accessing the benefits of climate action.		
Sex	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	→	The plan has the potential to have a positive overall impact, but it is important consideration be given to the impacts of gender inequality on vulnerability to the impacts of climate change and access to the benefits of climate action.	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be considered in terms of their contribution to a just transition.
Age	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	→	The plan has the potential to have a positive overall impact, but it is important consideration be given to the impact of age on vulnerability to the impacts of climate change and access to the benefits of climate action There is a clear movement from children and young people in relation to climate change noticeably from 'school strikes' and other engagement channels e.g. Children's Grand Council.	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be considered in terms of their contribution to a just transition.
Sexual Orientation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	→	The plan has the potential to have a positive overall impact on those covered by	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be

			protected characteristics relating to sexual orientation. As with other protected characteristics above disadvantage, leading to isolation/poverty, may make it more difficult for people to adapt to climate change or access the benefits of climate action.		considered in terms of their contribution to a just transition.
Religion and Belief	Yes <input checked="" type="checkbox"/> No	→	The plan has the potential to have a positive overall impact on those covered by protected characteristics relating to religious belief. As with other protected characteristics above disadvantage, leading to isolation/poverty, may make it more difficult for people to adapt or access the benefits of climate action.	<input type="checkbox"/> High <input type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be considered in terms of their contribution to a just transition.
Gender Reassignment Status	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	→	The plan has the potential to have a positive overall impact on those covered by protected characteristics relating to gender reassignment. As with other protected characteristics above disadvantage, leading to isolation/poverty, may make it more difficult for people to adapt or access the benefits of climate action.	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low	As part of the decarbonisation plan all low carbon actions will be considered in terms of their contribution to a just transition.

Marriage and Civil Partnership	Yes X No	→	It is anticipated that the plan will overall have a positive impact on those covered by protected characteristics relating Marriage and Civil Partnerships	<input type="checkbox"/> High XLow	Low currently will consider as part of further research.
Pregnancy and Maternity	Yes X No <input type="checkbox"/>	→	It is anticipated that the plan will overall have a positive impact on those covered by protected characteristics relating Marriage and Civil Partnerships	<input type="checkbox"/> High X Low	Low currently will consider as part of further research.
Welsh Language	Yes X No <input type="checkbox"/>	→	It is anticipated that the plan will overall have a positive impact on Welsh language speakers.	<input type="checkbox"/> High x Low	This will include the Welsh Language Compliance Standards for Policy Development.

### Further Considerations

Just Transition. A just transition means ensuring that the benefits of decarbonisation are fairly distributed and supporting those who may lose out from transition. A just transition is not only desirable but may be the only way decarbonisation can be achieved. There is a large body of evidence that poorer communities and/or those with high levels proportions of people with protected characteristics are disproportionately exposed to environmental risks, due to historic and ongoing disadvantage of these communities in planning processes in particular. In the case of climate change this is likely to include vulnerability to impacts such as flooding.

Likewise, at the individual level many people with one or more protected characteristics are likely to be less able to adapt to the impacts of climate change due to lower levels of financial and cultural capital. Similarly, although they may stand to benefit from adaptation or mitigation actions with potential co-benefits in relation to issues such as fuel poverty or access to transport, it is important to recognise these existing forms of disadvantage may also make them less able to access these opportunities.

Carbon emissions are strongly positively correlated with wealth, but those in poverty are most vulnerable to the impacts of climate change. There is also a strong argument that policy discourse about climate actions systematically focuses on actions that are more likely to be taken by wealthier people (often due to financial barriers associated with taking these actions), e.g. installing insulation. However, despite wealthier people taking more of these actions their emissions remain higher. In contrast, other types of action, often taken by those with protected characteristics, are frequently not recognised as climate actions despite their resulting in lower

emissions, e.g. turning off central heating. Strategies promoting climate actions are often strongly gendered, with a focus on financial decision making and upfront cost and little attention paid to the ongoing impacts of integrating action in to everyday life, impacts that are closely associated with gendered caring roles.



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