

Trafford Council

Carbon Neutral Framework

July 2020



TRAFFORD
COUNCIL



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Introduction, Aims & Objectives



Introduction, Aims & Objectives

Report Overview & Scope

This work has been commissioned by Trafford Metropolitan Borough Council and was largely completed prior to the COVID-19 pandemic. The aims of the Carbon Neutral Framework are as follows:

1. To give an overview of Trafford's emissions through the concept of a carbon budget;
2. To set out the roles and responsibilities of relevant stakeholder groups within Trafford;
3. To define reporting and governance mechanisms between local government, organisations and citizens within the borough of Trafford;
4. To establish clear structures for ambitious collaboration between committed organisations which will contribute to the borough becoming carbon neutral.

The Carbon Neutral Framework is intended to underpin the future development and implementation of borough-wide actions and projects which contribute to carbon neutrality within Trafford.

Successful delivery of carbon neutrality targets within Trafford is contingent upon the following:

- Trafford Council and other local organisations recognising their significant influence over the borough's emissions;
- A core of committed organisations working in partnership, demonstrating leadership and formally pledging support and resources to this agenda;
- Future work and coordination to further develop and implement the structures defined in this document.

Local and National Policy Drivers

In 2015, the UK adopted the Paris Agreement as part of a joint pledge by members of the European Union, committing to:

- Strengthening the global response to the threat of climate change by keeping global temperature rise this century well below 2°C above pre-industrial levels;
- Encouraging efforts to limit the temperature increase even further to 1.5°C.

Tackling the climate crisis is a long-standing issue in the UK, reflected in the legally binding target in the 2008 Climate Change Act. Originally committed to an 80% reduction in emissions against a 1990 baseline by 2050, in 2019 the Act's targets [were revised](#) to a 100% reduction in emissions. In doing so, the UK became the first major economy to pass a net-zero emissions target into law.

On 28th November 2018, Trafford Council declared a Climate Emergency. Council resolved that the impacts of global temperature rise above 1.5°C are so severe that governments at all levels must work together and make this agenda their top priority. Council also resolved that a task and finish group be established to set a target date for carbon neutrality in Trafford and make recommendations for resolving the Council's own emissions.

The council's resolution was issued following the Intergovernmental Panel on Climate Change (IPCC) [Special Report](#) on the impacts of global warming of 1.5°C above pre-industrial levels, first issued in 2018. The report stated that in order to remain within a 1.5°C increase, governments would have to cut emissions of greenhouse gases by 45% by 2030 against a 2010 baseline.

Introduction, Aims & Objectives

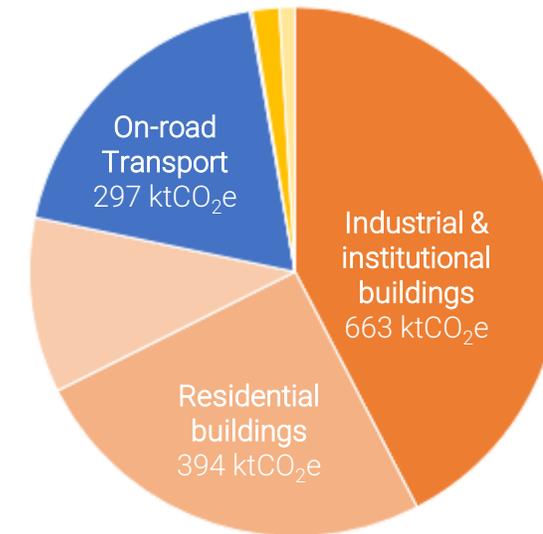
Current Emissions Profile

In their 2019 [Emissions Gap Report](#), the UN Environment Programme found that if we rely solely on current commitments to the Paris Agreement, temperatures can be expected to rise 3.2°C by 2100. Global emissions increased in 2017 after 3 years of stagnation.

The pie chart opposite shows the emissions inventory for Trafford in 2017, the most recent year for which there is available data. The inventory records 'direct' and 'indirect' emissions (also referred to as Scope 1 and Scope 2).¹ The dominant source of emissions is buildings (c. 75%); specifically from the production and usage of energy to provide heat and electricity. Of the remaining 20% or so, the dominant contributor is from on-road transportation i.e. petrol and diesel vehicles, with a small contribution from waste management.

The energy system has two main components: energy supply and energy demand. The term 'energy system' relates to energy in the form of solid, liquid and gaseous energy that is used to provide heat, fuel and electricity across buildings, transport and industrial sectors. Achieving emissions reductions can be achieved in two ways:

- Reducing the demand for energy through improved efficiency, decreased waste and so on;
- 'Greening' the energy supply through the increased capacity of renewable energy sources.



- Industrial & institutional buildings - 42%
- Residential buildings - 25%
- Commercial buildings & facilities - 11%
- On-road - 19%
- Rail - <1%
- Solid waste disposal - 2%
- Wastewater - <1%

Unchecked, the current rate of emissions will use up all of Trafford's 2100 budget within 7 years from 2020.

Introduction, Aims & Objectives

Trafford's Science-Based Budget

The Tyndall Centre for Climate Change Research, based at the University of Manchester, have translated the Paris Agreement targets of limiting temperature change below 1.5°C into a fixed emissions 'budget' for each local authority. One of the key findings of the IPCC Special Report states that if current emission rates are sustained, it is likely that the Paris Agreement target of limiting warming below 1.5°C will be surpassed as early as 2030.

The [science-based budget](#) is not based on tangible policy measures or an assessment of technological capabilities, instead representing an academic approach to defining the rate of emissions reductions required to remain within the Paris Agreement. There are two key ideas underpinning their research:

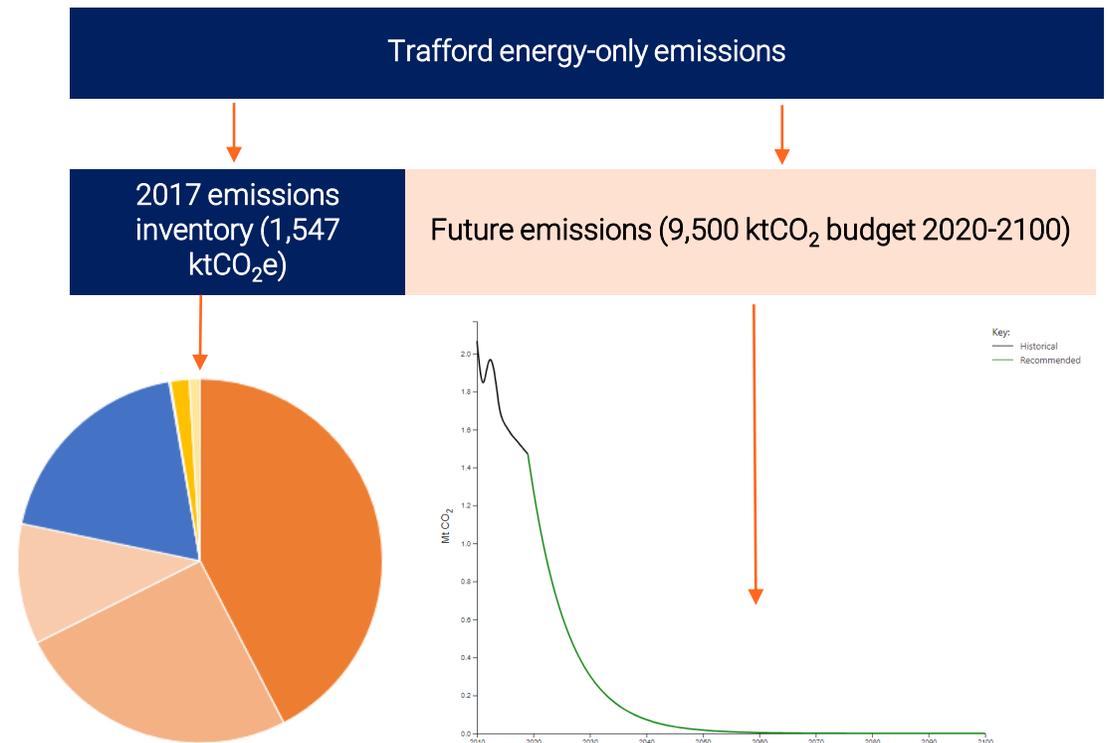
The budget is finite: A global carbon budget represents the finite emissions that can be emitted before the 1.5°C threshold for greenhouse gas concentration is crossed. This global budget can subsequently be scaled down to a national level, and finally, a regional level. A more complete description of this approach can be found in Appendix 2.

Emissions now mean impacts later: Once emitted, carbon dioxide remains in the atmosphere for many years, contributing to increasing the average global temperature. The most crucial element of this approach is therefore understanding the importance of *cumulative* carbon emissions. The year that Trafford becomes zero-carbon is considerably less important than the annual reductions rate of emissions.

Key Findings

- Remain within a maximum cumulative emissions budget of **9,500 ktCO₂** for the period 2020-2100.

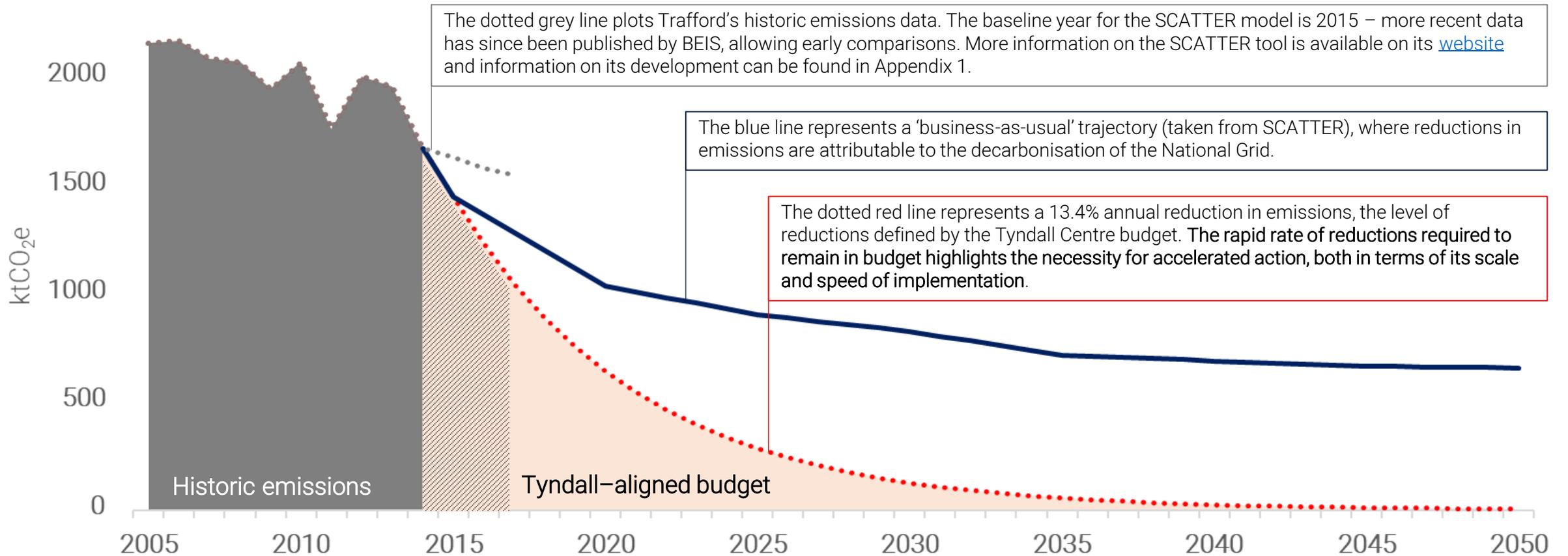
- Initiate an immediate programme of emissions reductions measures **averaging 13.4% annual reduction** in emissions.
- **Reach zero or near-zero carbon no later than 2041**, by which point only 5% of the budget remains.
- Unchecked, the current rate of emissions will use up all of Trafford's 2100 budget within 7 years from 2020.



Introduction, Aims & Objectives

Future Emissions Modelling

The Anthesis SCATTER pathways tool models future emissions trajectories based upon a set of emissions reduction measures within the Trafford energy system.



Introduction, Aims & Objectives

Building the case for action – a sustainable recovery

The global disruption and impacts of the COVID-19 pandemic have forced governors, businesses and citizens to reconsider what is meant by “emergency action”. The next few years will be pivotal as we lead a recovery into a post-COVID society, as well as entering the decisive decade for action on climate change. A recovery which is centred on the resilience, health and sustainability of local communities overlaps heavily with the transition to a zero-carbon borough:

- **Improving public health:** Improved air quality, warmer homes, increased active transport and maintained green spaces all serve to benefit the health of local people and improve their quality of life. Almost 9,000 homes will be taken out of fuel poverty in a carbon-neutral Trafford. Poor air quality, the result of traffic congestion and flue particulates, contributed to deaths in excess of 2,000 people in Greater Manchester in 2016.¹
- **Creating quality of place:** Reduced traffic congestion, sustainable job creation in the low-carbon sector and reduced operational costs through increased operational efficiencies all form part of the business case for transitioning into a low-carbon economy.
- **Investing in green infrastructure:** Turning to natural solutions to climate change (e.g. tree planting, peatland management etc.) carries a wide range of additional benefits:
 - **Biodiversity** – natural spaces in urban and rural environments create refuges for wildlife, safeguarding species diversity and improving resistance to disease.
 - **Water management** – regulation of water availability & quality and flooding.
 - **Heat regulation** – vegetation provides cooling/warming in the summer/winter.
 - **Wellbeing** – increased productivity, increased recreation and reduced stress are all associated with well-maintained green spaces.

Collaborating differently – stepping into the new normal

Sub-national action, both on the part of regional government and local stakeholders, will play a central role in any successful response to the Climate Emergency as part of a sustainable recovery from the COVID-19 pandemic. A key finding of the 2018 Emissions Gap Report states: “...*non-state and subnational action plays an important role in delivering national pledges. Emission reduction potential from non-state and subnational action could ultimately be significant, allowing countries to raise ambition.*”

Evidence from both the 2018 IPCC Report and the Emissions Gap Report makes clear that immediate and drastic action is required, whilst encouraging sub-national policy measures and action as a necessary means of reducing emissions.

Carbon neutrality within the borough can only be achieved with the enlisted buy-in of commercial businesses, the public sector and individual citizens. Accepting that at current rates Trafford’s science-based carbon budget will be used up before 2030, the demand for more ambitious and effective structures of collaboration is high. The structure of the Framework was designed in coordination with local stakeholders, but successful implementation of its design will require a significant shift in the current culture of collaboration.

Even the largest emitting organisations do not individually contribute more than 5% of the Trafford total. Therefore **All** organisations must reduce their emissions by unprecedented and significant margins to not exceed the regional budget.



Framework Design



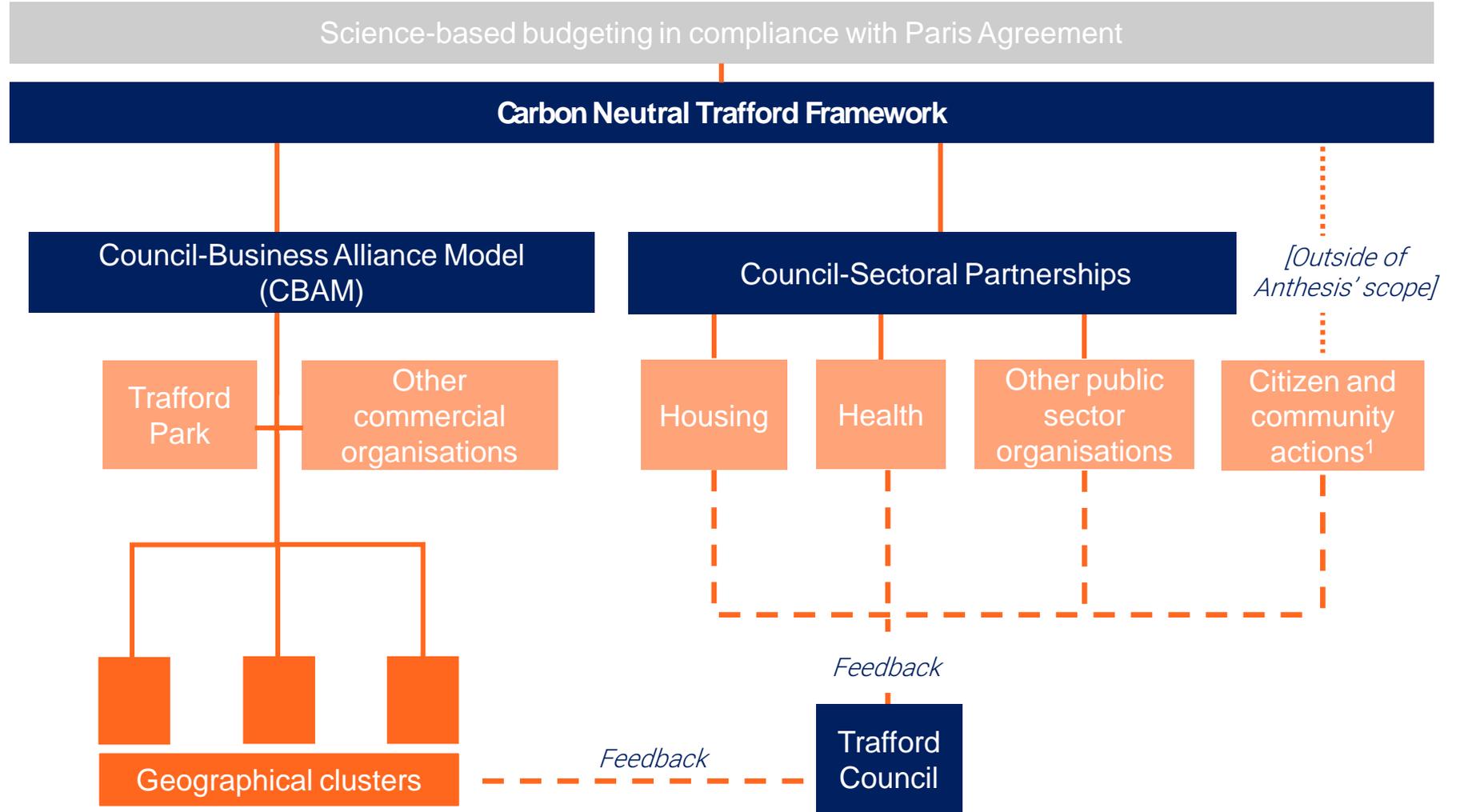
Framework Design

Overview

The role of the Council as facilitator and convenor forms the foundation of the Framework. The ultimate goal of the Framework is to act as a sustainable platform from which Trafford can develop and implement proactive sustainability projects.

Existing partnerships such as The Trafford Partnership serve as a useful starting point for new activities. Developing these relationships with elements of the Council-Business Alliance Model (see overleaf) with the borough's organisations offers a structure through which Trafford can drastically reduce its emissions.

More formalised commitments to action on climate change from Partnership members and affiliates have the potential to catalyse new initiatives. Maximising existing Trafford Partnership channels as well as considering geographical clusters (see page 16) are two means of developing projects and actions.



Framework Design

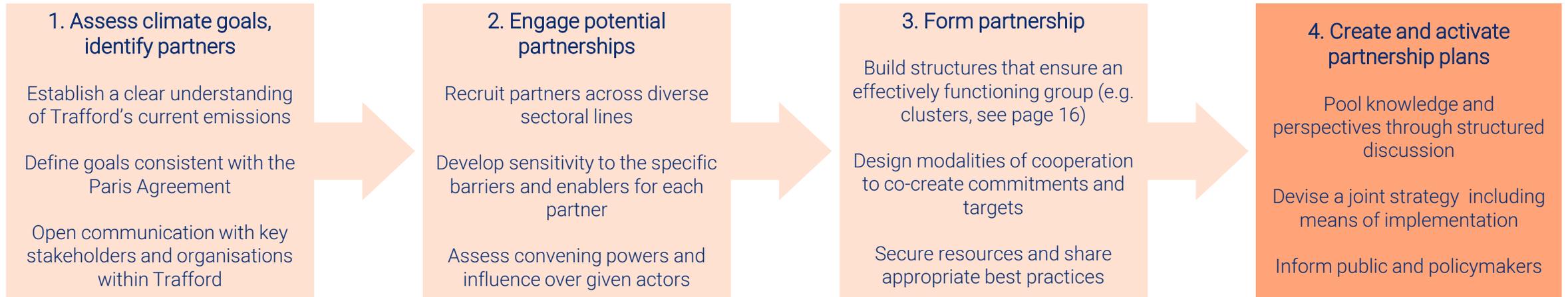
Council-Business Alliances – Best Practice

The CDP [City-Business Alliance](#) Model (CBAM) describes a means of convening private sector organisations in partnership with both the Council and one another, with the specific intention to accelerate progress on climate action. Having achieved the requisite buy-in of key local organisations, the role of the Alliance is to deliver meaningful action and projects which reduce emissions. The Trafford Partnership, acting as a vehicle which facilitates local stakeholder engagement, has a role to play in meeting Trafford's zero-carbon targets. By drawing on elements of the CBAM, the existing Partnership can serve as the key link between engaged local stakeholders and response to the climate emergency.

Trafford Council primarily act as administrators, with a view to:

- maintaining high-level buy-in from local stakeholders on climate action,
- facilitating wide-reaching action through policy support,
- leading an exemplar implementation of its own emissions reductions programme.

The CBAM can be broken down into four distinct phases, describing distinct steps between goal-setting and project implementation:



Council-Business Alliance Mission Statement

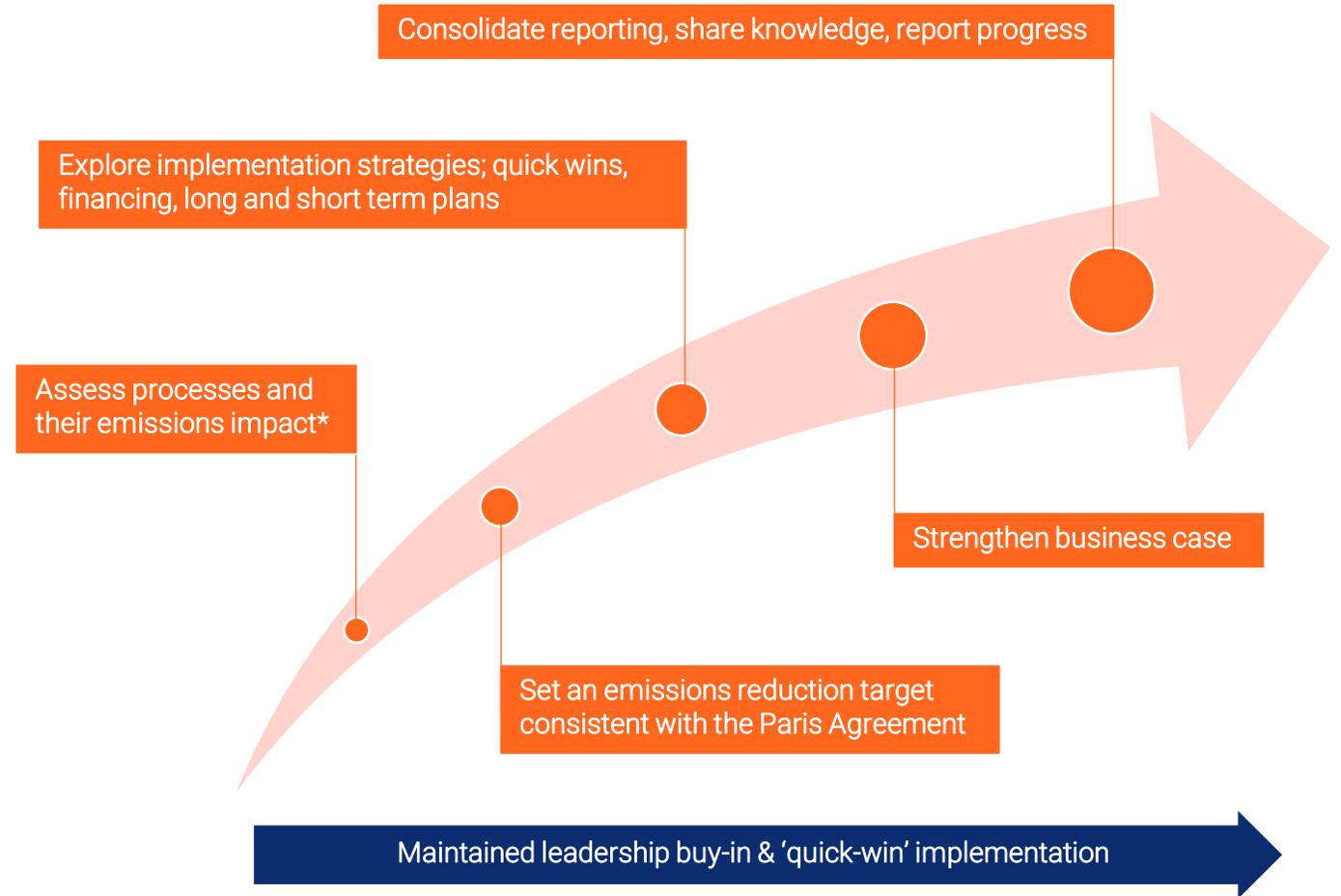
- To contribute to the Paris Agreement's commitment to limit the increase in global average temperature to 1.5°C
- To deliver on common ambitious emissions targets in line with Trafford's climate goals
- To adapt to climate change by adjusting to, and reducing the risk of, changes to the climate
- To build Trafford's resilience to the physical hazards of climate change
- To improve the quality of life for Trafford's residents and support the local economy

Framework Design

Role of Alliance Members

As contributors to a Council-Business Alliance (CBA), local stakeholders coordinate their sustainability targets with those of the borough. In this way, local stakeholders collaboratively develop projects and measures which deliver the ambitious action demanded by the carbon budget. The overall target for the members of the CBA is to achieve carbon neutrality through project work, both internally and in collaboration with other organisations.

Opposite is a suggested roadmap designed to illustrate the requirements and commitments for participants within the CBAM.



Framework Design

CBAM [Case Study](#): London Business Climate Leaders (LBCL)

LBCL is formed of a leadership group of 11 major organisations, each with significant London presence and defined science-based targets.

Each organisation is committed to working with the Greater London Authority, with member businesses convening to map their top three sustainability priorities.

The LBCL was facilitated by key partner organisations such as CDP, C40 & The B Team.

The mapping exercise served to identify common trends and share knowledge and best practice, in order to facilitate areas for collaboration.

The second phase of this initiative intends to reach out to the wider business community within London to scale up potential impacts.



Case Study: Manchester Climate Change Framework 2020-25

The City of Manchester's response to the 2038 target seeks to ensure that the borough 'plays its full part in limiting the impacts of climate change'.

[Published](#) in February 2020, the Manchester Framework is underpinned by the Manchester Climate Change Partnership, a group of 60 organisations collectively responsible for approximately one fifth of the borough's emissions. The City Council formally adopted the targets in the Framework on March 11th 2020, committing to halve the city's emissions by 2025.

The establishment of this devolved partner-led group to shape decision-making processes enables an action-led approach. This is favoured over a strategy developed in isolation by the Council without the enlisted buy-in of key partners.



Framework Design

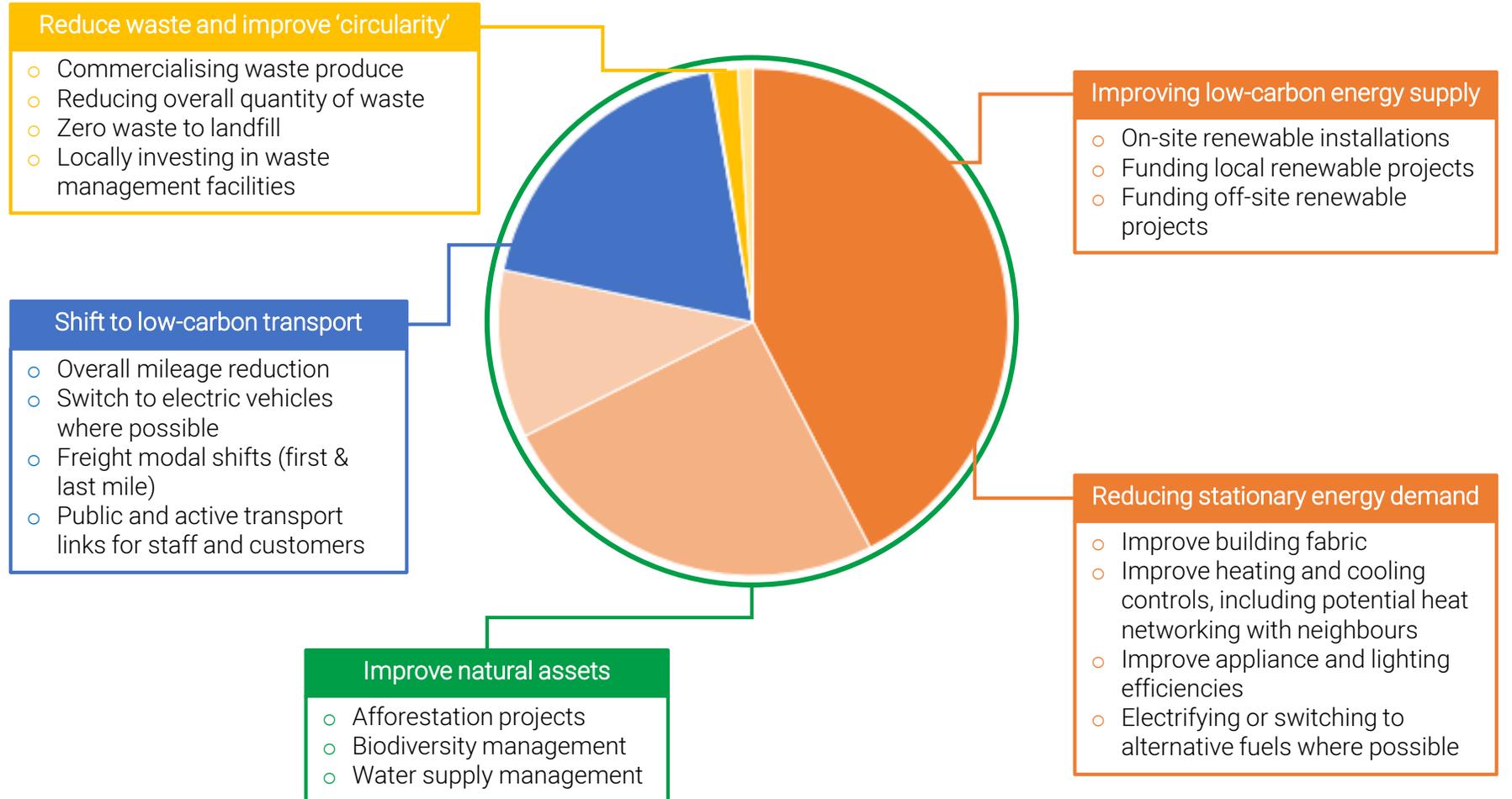
Targeted emissions reductions

The emissions profiles of the organisations across Trafford differ from stakeholder to stakeholder and are the result of a number of factors and contexts.

Finding common areas between organisations on which to collaborate is a key element of the CBAM.

The five areas opposite have been identified as emissions sectors which organisations can directly influence to reduce their own emissions, as well as influencing their supply chains.

Action in these five areas can be monitored through well-established reporting mechanisms at the borough level, such as the SCATTER inventory and/or submission to CDP, since they directly impact a 'slice' of the pie.



Collaborating Differently



Image: Wikimedia

Collaborating Differently

Geographical Clusters

Overview

The CBAM offers a descriptive roadmap for its members and the existing Trafford Partnership forum offers a network of engaged local partners. A geographical cluster approach, set out opposite, acts as a supporting mechanism for project development intended to deliver progress for organisations of all sizes.

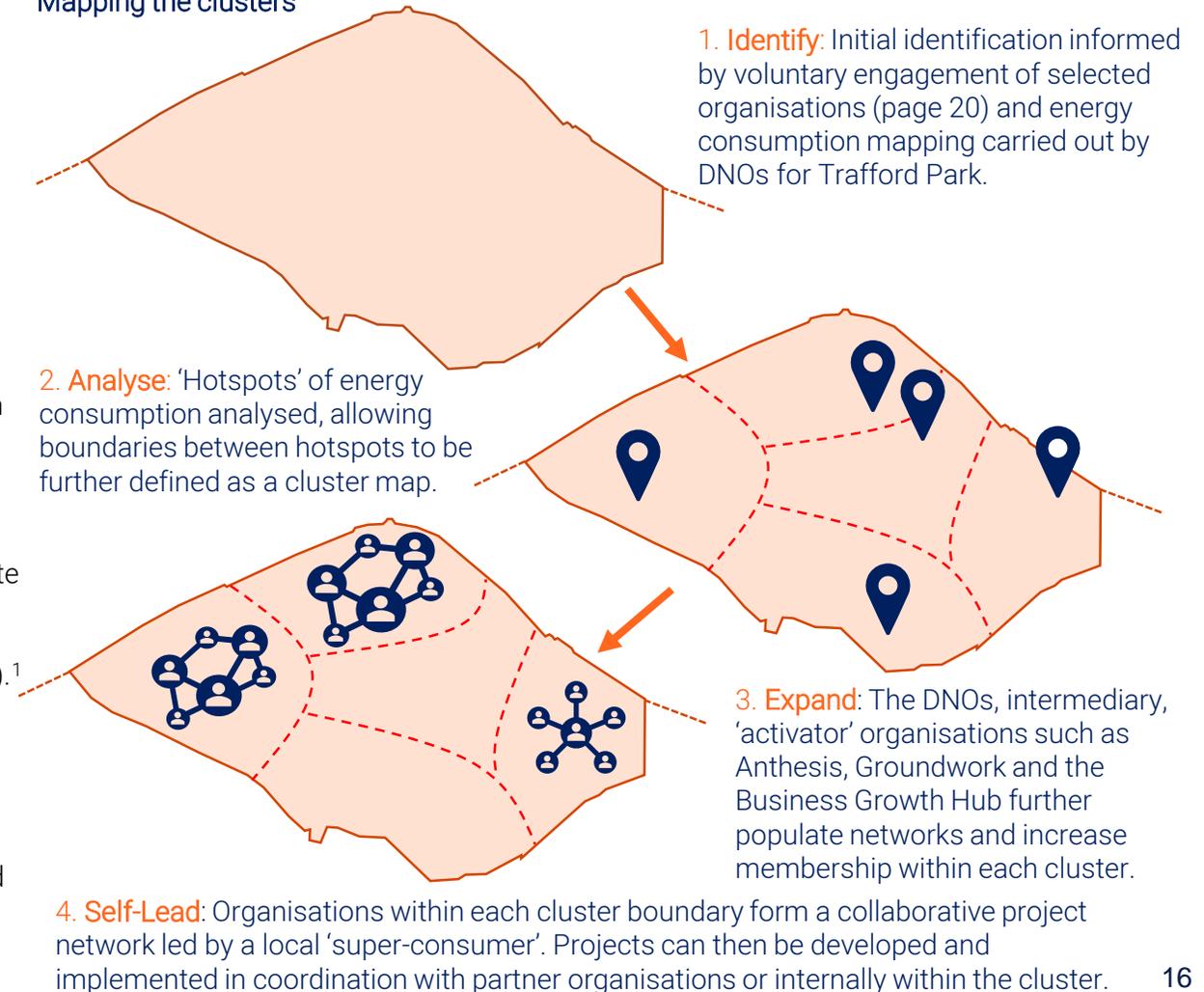
Formally grouping together geographically proximate businesses into collaborative networks enables prominent stakeholders within Trafford Park to:

- **Demonstrate proactive leadership** within the Park and add benefit to the locality by building relationships with local partners and the SME community;
- **Enhance existing projects and schemes** that may lack some crucial element to reach scale and/or viability (e.g. staff resource, technical expertise or finance);
- **Develop new projects** which rely on collaborative partnership to make them commercially viable.

Within the Park, large organisations (e.g. intu, Kellogg, Peel) hold the potential to facilitate project delivery in coordination with neighbouring partners to the mutual benefit of all parties. These collaborative networks ('clusters') are grouped according to regions of high energy consumption as defined by regional Distribution Network Operators (DNOs).¹ The result is a 'cluster map' describing Trafford Park's gas and electricity consumption hotspots.

The Business Growth Hub and Groundwork are optimally placed within Trafford to provide a supportive link between members of the network, in particular SMEs, through existing networks and relationships. The DNO organisations, as well as Growth Hub and Groundwork, can also be consulted upon as a creative platform for project initiatives.

Mapping the clusters



Collaborating Differently

Geographical Clusters

Galvanising the Trafford Park community



The industrial footprint of Trafford Park is evolving. Since 1998, when the Trafford Centre opened, the industrial profile of the Park has changed significantly. As well as the increase in leisure and retail businesses, the emergent professional services sector has demonstrated significant growth, contributing almost 20% of Trafford's GVA in 2016 compared to just over 12% in 1998.

Many Trafford Park businesses no longer rely on large factories and warehouses. Energy and resource demands of SMEs are very different compared to the individual super-consumers in the Trafford Park Core. These businesses now feature in increasing numbers within Wharfside and Trafford Park Village, and represent a departure from the traditional industries of manufacturing and distribution.

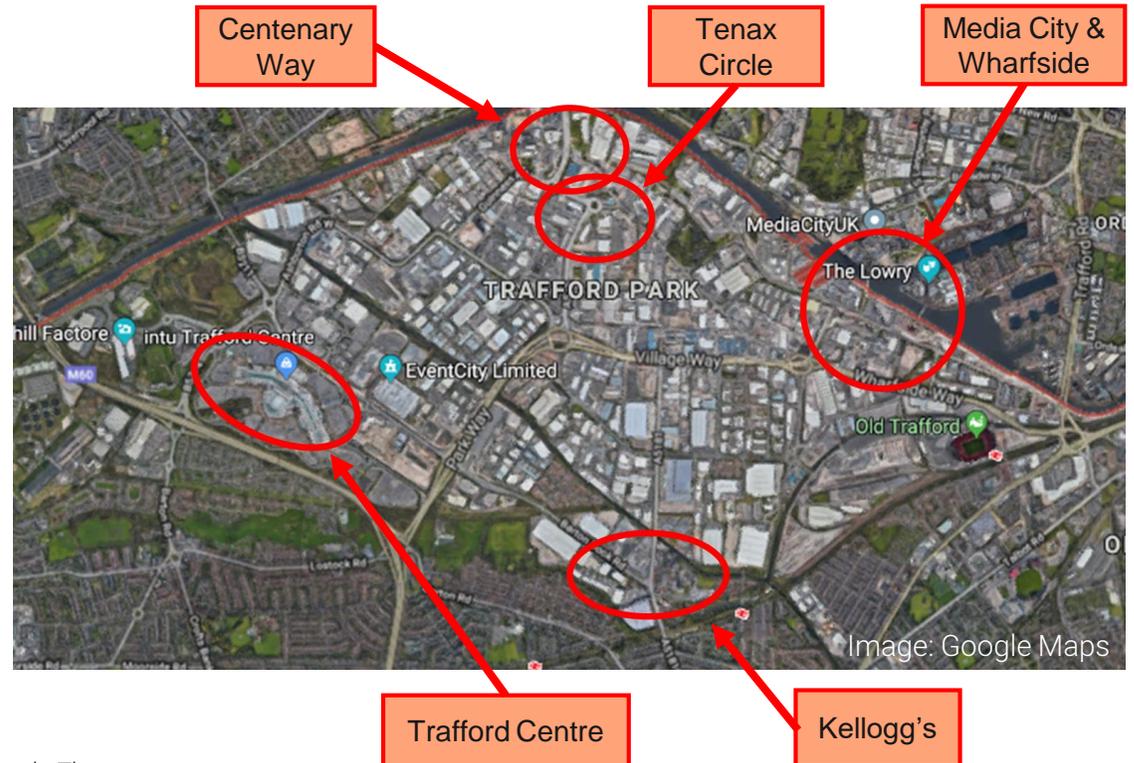
The cluster approach offers a broad potential. Opportunities are diverse for emissions reduction projects across the organisations and sectors within Trafford Park. However, this potential will not be realised without the development of business-led incentives to encourage and maintain buy-in with the agenda.



1 – For reference, there are approximately 90,000 domestic households in the borough. The energy consumption from Trafford Park is on a similar scale to that of the entire domestic sector within the borough.

Local Area Energy Master Plan

As part of the Greater Manchester target to become [zero-carbon by 2038](#), the Greater Manchester Combined Authority (GMCA) has commissioned a Local Area Energy Master Plan in coordination with Cadent Gas and Electricity North West. Preliminary results from this research show which regions of Trafford Park have been identified as 'hotspots' of significant energy consumption:



Collaborating Differently

Geographical Clusters

Activating the clusters

Should not seek to reinvent the wheel: Utilising existing networks (e.g. The Trafford Partnership and the virtual [Low Carbon Network](#)) should underpin the development of the clusters, making the most of established channels of communication and engagement. Adoption of the CBAM structure is not designed to replace or reinvent existing work, but offer a wider directive approach within which ongoing effort is uplifted and amplified.

Use intermediary partners: There is high likelihood for the need proactively engage and coordinate activity. We have identified and engaged with organisations that, in addition to the Council and Anthesis, could play a big role in stimulating such activity. Involvement of these organisations may also ensure a 'joined-up' approach with GM-wide activities (such as the GM Energy Master Plan) and averts the risk of duplicated efforts and wasted resource.

District Network Operators

Through their research as part of the Local Area Energy Master Planning, the region's DNOs can provide advice and support on practical interventions for improving local energy supply. Cadent's involvement in hydrogen deployment projects provides a basis for decarbonising heating supply and transport, whilst ENW baselining defines the scale of renewable supply required to power Trafford Park.

Case Study: HyDeploy at Keele University

Cadent are piloting a hydrogen-blend gas supply which is compatible with existing appliances. Keele was chosen due to its large consumption demands – similar to that of a small town – and private gas network. In the early-mid 2020s, Cadent will move to a 'large demonstration' to demonstrate utility across representative networks.

Groundwork

Based locally at the Trafford Ecology Park, Groundwork have an extensive network of SME clients across Trafford across various sustainability service offerings. [Ignition](#) develops packages of climate resilience projects for commercial investment.

Case Study: Northwich Business Improvement District (BID)

Within a defined region of Northwich, SMEs collectively invest in and enhance projects which deliver added value and services within the town. The BID is part of a larger [government initiative](#) and is managed by Groundwork through a dedicated BID manager, demonstrating the value 'joined-up' action with existing schemes.

Business Growth Hub

A broad range of support and service packages predicated on encouraging SME business development and in particular the overlap between business and environmental sustainability. Many of the initiatives and schemes for SMEs are fully funded at no direct cost to the client organisation.

Case Study: Qbots Energy

Qbots Energy design data-driven energy monitoring systems in commercial property. Facilitated the Growth Hub Low Carbon Network, they were able to collaborate with Open Control Solutions, facilitating installation and implementation of the Qbots product. This was achieved in partnership with Bruntwood and Manchester Metropolitan University and Qbots targets rollout in 35 businesses in 2020.

Engagement Summary & Next Steps



Engagement Summary & Next Steps

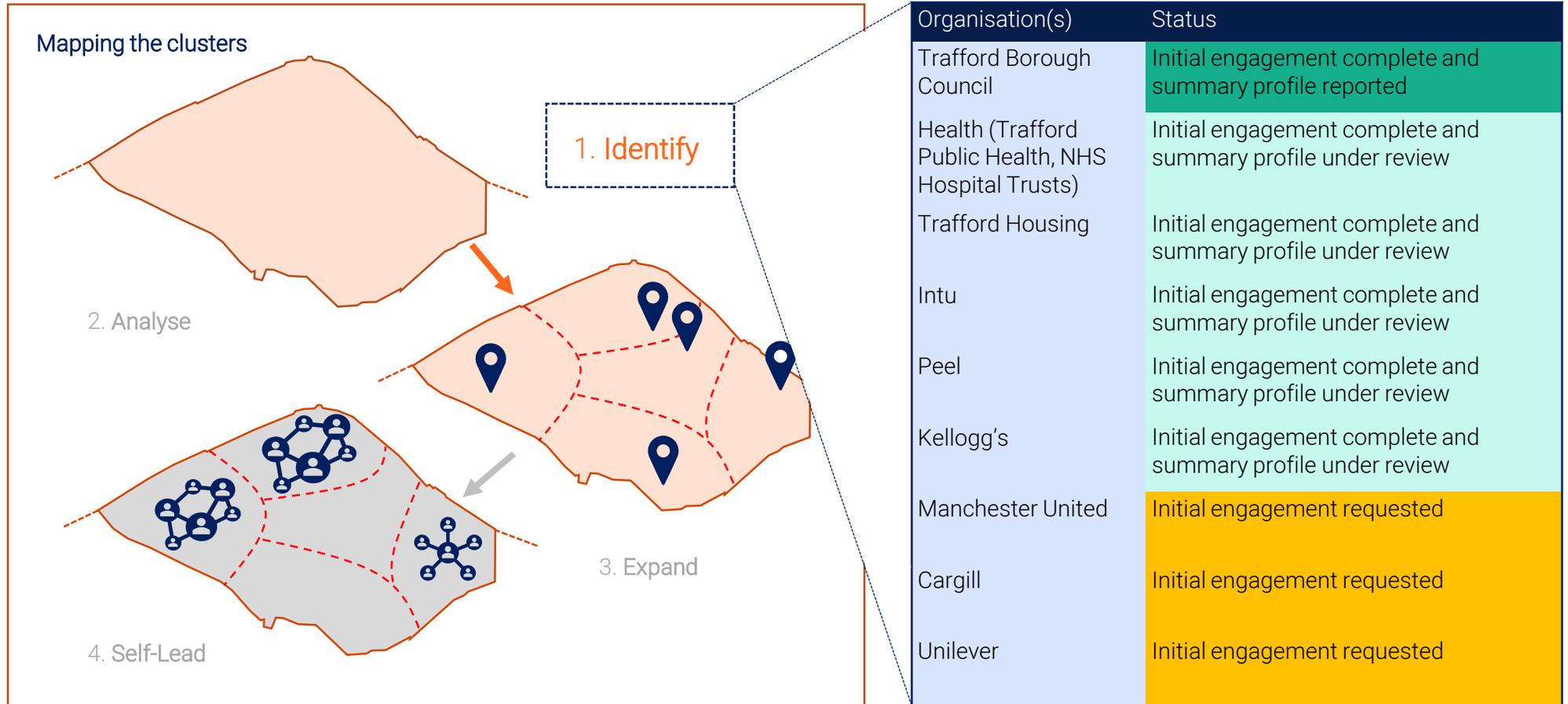
Organisation Overview

Introducing the partners

The following section presents a summary account of engagement with a variety of Trafford based organisations.

These organisations are well-placed to support Trafford Borough Council to accelerate more ambitious low-carbon action.

Due to timing of organisation led review and sign off, only one profile (Local Government – Trafford Council), has been included in this report.



Engagement Summary & Next Steps

Stakeholder engagement programme – summary

Through understanding past successes, current activities, and barriers to activity in the future, we have been able to highlight a series of recommended next steps for local stakeholders. This summary is captured in an “organisation profile”, which can be found as an Appendix to this report to be issued in due course. These next steps are intended to serve as potential opportunities for future collaboration and have been grouped into common themes across different (anonymised) stakeholders:

Planning & Policy

- Consider using business rates to incentivise less mature businesses, reward lower carbon emitters (more relevant to Trafford Park organisations)
- Facilitate planning support if waste heat was needed by others in the borough (more relevant to Trafford Park organisations)
- Formally include more stringent efficiency standards as part of new build development tenders to stimulate the market, for both domestic and non-domestic properties
- Review shared procurement policies to better embed zero carbon
- Maximise the potential of the Metrolink with incentives for increased tram travel

Influence & Lobbying

- Lobby regional and national government for more ambitious efficiency standards and planning powers
- Embed the sustainability agenda at senior level via training and incentives, to increase priority given to low-carbon projects
- Define lobby position to local and national government around long term PFI arrangements, with a view to better influence certain emissions related activities that often fall under a PFI arrangement.

Collaboration & Connectivity

- Work in partnership with GM housing providers to develop a mechanism by which they can recoup some of the investment for energy efficiency measures
- Facilitate connection with other Trafford Park partners, such as local commercial property developers and re-wilding specialists (that can connect partners to projects such as Ignition); to help overcome certain barriers
- Encourage Trafford Park partners to develop a list of approved low-carbon suppliers that can be recommended to others
- Explore potential partnerships between Council & housing providers to share the added marginal costs of low-carbon standards, in exchange for discounts on land sold for development
- Assist in the delivery of underlying data for Trafford Park which defines the impact of operations locally, particularly tenant impacts not currently accounted for by property landlords
- Provide a mechanism to identify projects with locally based partners (e.g. a knowledge share platform for the Trafford Park clustering or insetting mechanism)
- Improve communication around collaborative opportunities, in particular those which utilise Trafford Park as a pilot test bed

Council asks to all engaged partners

- Identify which actions and projects can be joined up at the GM level (e.g. procurement within the health sector)
- Continue the development of collaborative partnerships with local actors

Engagement Summary & Next Steps

Key challenges

Empowering local stakeholders with the responsibility of leadership in responding to the Climate Emergency Declaration poses several significant challenges:

- **Continuation of the ambition of historic action will not deliver success.** The deep-cutting and ambitious changes required to reach carbon neutrality are without precedent. Collective buying power, shared expertise and improvements to local policy are all facilitated through an open platform of communication between local stakeholders and the Council.

Committed partnerships between stakeholders and the Council have facilitated higher levels of ambition and strengthen the delivery impact of any local climate action.

- **Defining project delivery in the language of carbon savings can be ineffective.** Environmental sustainability is not deeply embedded enough within the culture of local stakeholders to deliver sufficient carbon savings; an alternative means of communicating the agenda is necessary. Alongside its Climate Emergency Declaration, Trafford Council also adopted the following position: "*Council believes that as well as large-scale improvements in health and wellbeing around the world, bold climate action can deliver economic benefits in terms of new jobs, economic savings and market opportunities.*" Articulating the wider impacts and benefits beyond the metrics of 'carbon emissions savings' is therefore a crucially important motivator.

A positive response from local stakeholders must be led by added economic value and/or social benefit.

- **Collaborative structures will not easily self-organise and sustained engagement must be maintained.** Existing networks and forums will be necessary to encourage the necessary buy-in for local stakeholders.*

Sustained engagement, building upon existing structures, is crucial to any long-term

target delivery.

- **The decisive window for action is small, and rapidly closing.** Carbon budget research from the Tyndall Centre indicates that Trafford must make deep cuts in emissions if it is to keep in line with the Paris Agreement. The Council must adopt a more proactive approach to this agenda and view the response to this agenda as a higher priority than previously.

Engagement Summary & Next Steps

Immediate next steps

1. Formalise Commitment:– Leader of the Council and Chief Executive write to each member organisation to obtain a more formalised 'Commitment to Act' (see Appendix 3).

2. Allocate dedicated resource: Review the Council's resource constraints and better define its future convening role with resource available. This closely links to step 5.

3. Analyse & expand the cluster partners: Review GM Energy Masterplan & identify further partners and stakeholders who are willing to engage with the Framework model.

4. Realise 'quick wins' within council own estate:

- Reflect on the Decarbonisation of the Public Estate work and join commission across GM to measure the footprint of council owned and controlled assets.
- Deliver Council-developed Action Plan to achieve deep carbon reductions against Council's own operations.

5. Act on Partner feedback: Define the role of the Council in stimulating and facilitating the projects that are close to being enabled and act on feedback themes gathered during this process. This could include:

- Local Policy Asks.
- Supporting a local funding mechanism.
- Delivering various 'quick wins' along with longer term projects on the Council's own estate.
- Endorse and support the development of Authority Based Insetting.

Illustrative Sector & Organisation Profile



Illustrative Sector & Organisation Profile

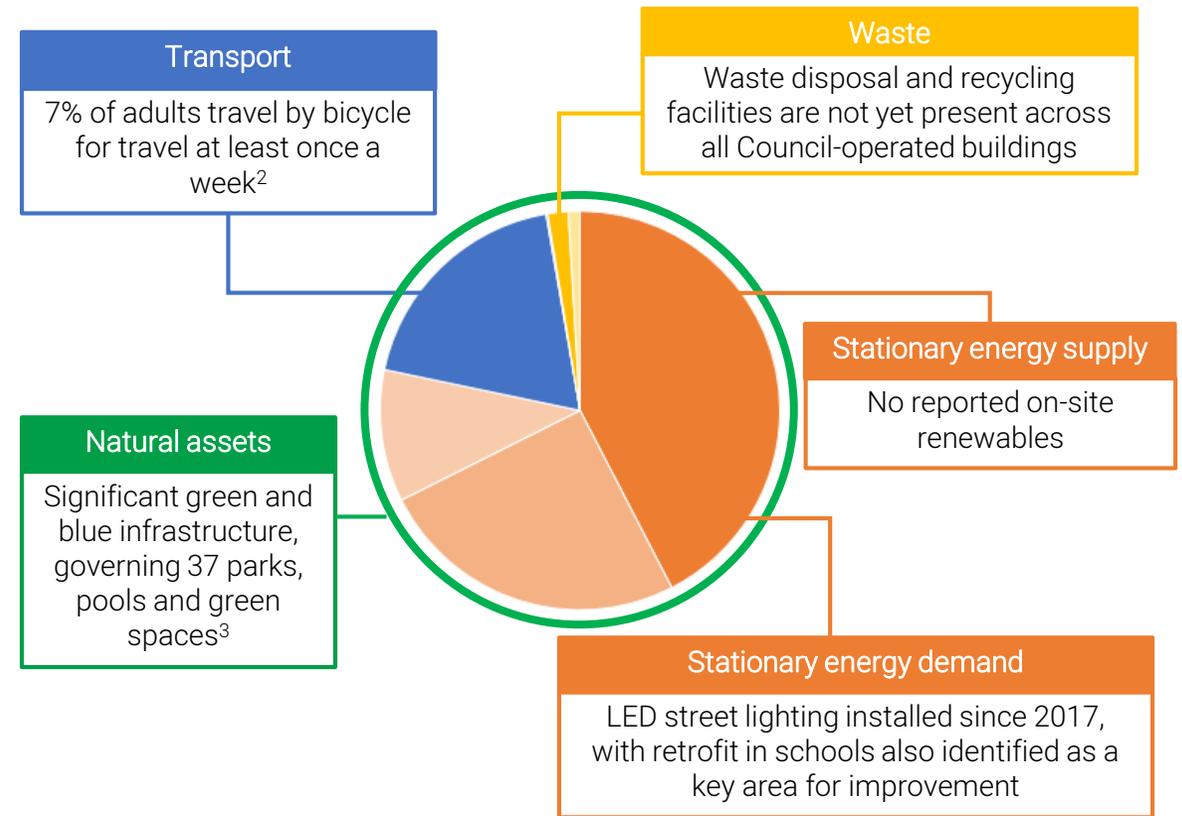
Local Government - Trafford Council

Trafford Council

- Represent the borough's citizens and residents as one of ten local authorities within Greater Manchester
- Committed to the region-wide target of becoming zero carbon by 2038
- One of the first local authorities to declare a Climate Emergency in November 2018
- Have appointed a Sustainability and Climate Change Officer in response to this declaration

In numbers

- Employs over 2,000 staff in governance of over 235,000 local residents
- Hosts over 1,300 businesses located within Trafford Park
- Institutional buildings¹ were responsible for approximately 393 ktCO₂e (25% of borough emissions)



Resources:

[Climate Emergency Declaration](#)
[Trafford Partnership Annual Report 2018/19](#)
[Trafford Data Lab](#)

[ONS labour market profile](#)
[Sustainability and Climate Change Officer Role Profile](#)
[FOI request](#) for LED project

Illustrative Sector & Organisation Profile

Local Government - Trafford Council



Stakeholder strengths

Committed to action: Strong political will shown with Climate Emergency Declaration

- Trafford Council has committed its staff to being held accountable in reducing its emissions
- Director-level engagement, as well as introducing a lead Executive member, has so far encouraged buy-in amongst Council leaders
- Appointment of a Sustainability Officer will allow the Council to coordinate their response through a dedicated resource

Influential powers: Working with regional stakeholders to reduce organisational emissions

- At borough level the Council have the means to enable and accelerate actions from regional stakeholders through direct policy changes
- Influence stretches beyond the Council's own direct and indirect emissions and represents a significant proportion of Trafford's overall profile
- Influence also involves a lobbying role for regional and national initiatives and measures
- Council also has the role of engaging with and 'joining-up' various strands of business-led activity within the borough

Residents' emissions: Promoting carbon reductions at residential level

- Through direct policy instruments at community level the Council has a strong influence over residents' transport and waste emissions (e.g. planning policy in efficiency standards)
- Achieving behavioural change through awareness raising and campaigning
- Communications and engagement strategy provides resources for Council's own staff as well as provision for residents at libraries, schools and other Council-operated buildings

Own estate: Well-defined project pipeline

- Opportunity to garner some 'quick wins' on projects which have comparatively short payback times (i.e. accessing 'low-hanging fruit')

Case study: The Trafford Pledge

Originally launched within Partington in 2013 before being rolled out across Trafford a year later. Signatory businesses are matched with people seeking employment or work experience who are otherwise disadvantaged in the labour market. In 2017/18 this scheme helped over 400 people (c. 10% of those unemployed) into employment and represents the potential successes that are driven by collaboration between Council, committed businesses and local residents.



Illustrative Sector & Organisation Profile

Local Government - Trafford Council



Stakeholder barriers



Short-term political cycles inhibit long-term direction:

- Councillors are elected in four year cycles, with elections taking place in three out of every four years
- Establishing robust, long term plans that are resistant to changes in administration is a challenge
- Rotation of decision-making members leads to a lack of continuity and a constant demand for securing political buy-in
- Paybacks and potential benefits of climate-related measures often operate on a longer timescale than political cycles, which encourages political inertia in this area when compared to other agendas

Limited weighting given to 'climate-proofing' procurement and project spend:

- The current social value assessment criteria used by procurement does not consider future emissions reductions in a way that is ambitious enough or aligned with the science.
- Consideration of this criteria could radically improve the feasibility of some projects (e.g. active travel proposals) and drastically reduce the feasibility of others (e.g. some highway maintenance projects).
- Carbon KPIs that are used to hold the suppliers to account are often weakened during contract negotiations or not as well enforced as they could be.

Council stake in Manchester Airport is a pillar within the operating budget:

- As with many other boroughs within Greater Manchester, Trafford holds an equity stake in Manchester Airport
- In the long term, discouraging aviation in order to reduce emissions may increase pressure on local budgets as investment returns in the airport are diminished
- In order to mitigate this, Council could consider divestment from the Airport into low-carbon industries that could provide alternative source of income for the council

Illustrative Sector & Organisation Profile

Local Government - Trafford Council



Recommended Next Steps

Restructure procurement policy: Include the carbon impact of a project

- Help establish a more robust procurement criteria for GM. Consulting with Stockport, Tameside and Rochdale who share a procurement framework (STAR Procurement)
- Consult with Stockport Metropolitan Borough Council who are developing a low carbon appraisal tool to understand carbon impact along side financial impact of projects
- Consider enablers for giving carbon impact more weighting in the executive decision making process; including carbon literacy training.

Create action plan across Council operations:

- Use the Ashden 31 Climate Actions for Councils document as a basis for developing projects to achieve deep carbon reductions against Council's own operations

Accelerate project delivery: Realise efficiency savings earlier

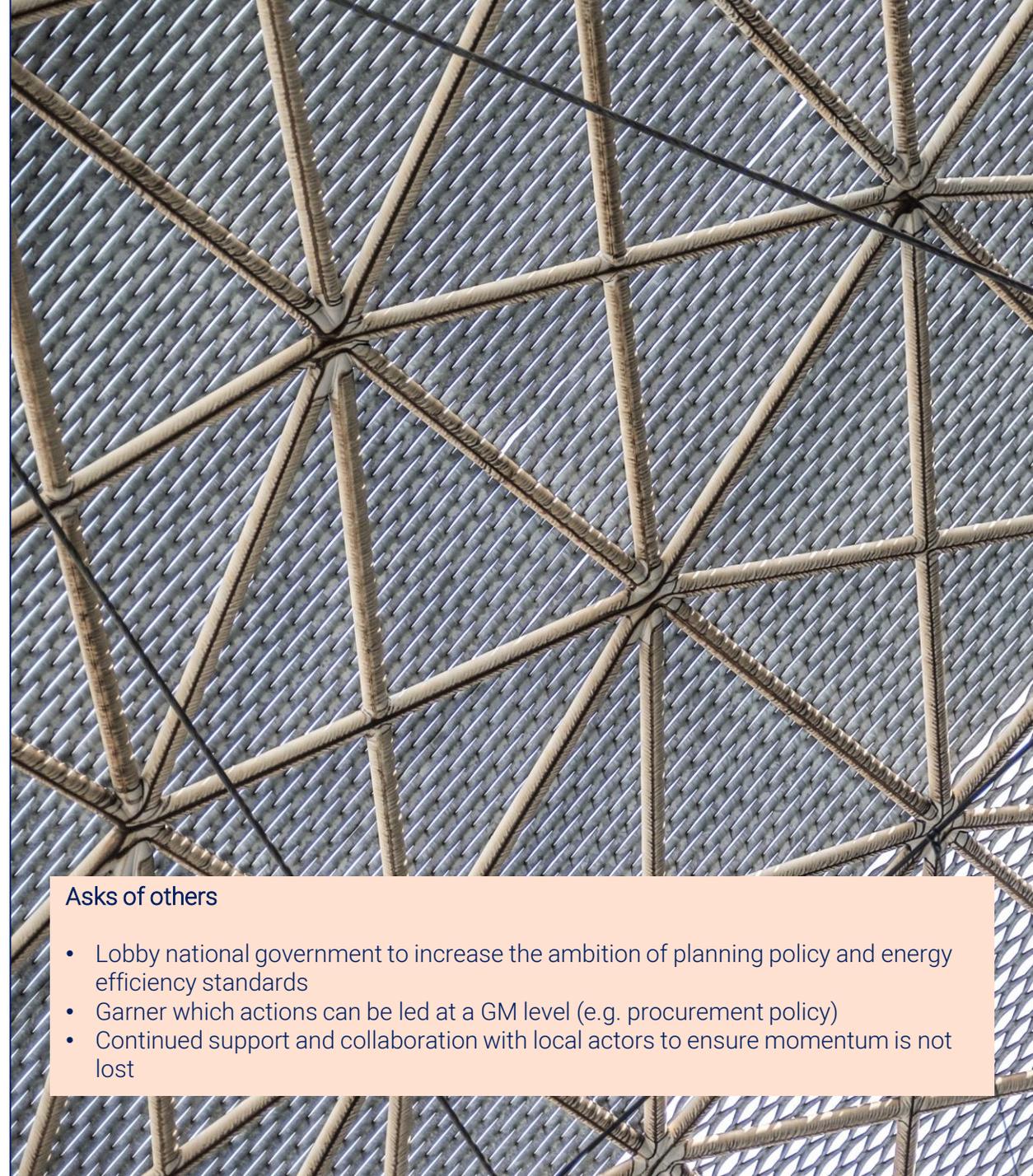
- Consider budgeted capital refurbishment spend over the short, medium and long terms understand where timelines can be adjusted to better realise carbon savings
- Avoid treating low-carbon agenda as mutually exclusive from other targets – integrate low-carbon agenda with other planned maintenance or other projects

Use new capacity to boost engagement within the borough:

- Lead engaged stakeholders and onboard new local actors to the project
- Liaise with specific organisations to understand in detail their policy needs
- Manage policy expectations through clear communication and use legislation to stimulate and drive areas of the market

Build cross-political buy-in: Mitigate against the election cycle

- Improve resilience of longer term initiatives by establishing a bipartisan task force



Asks of others

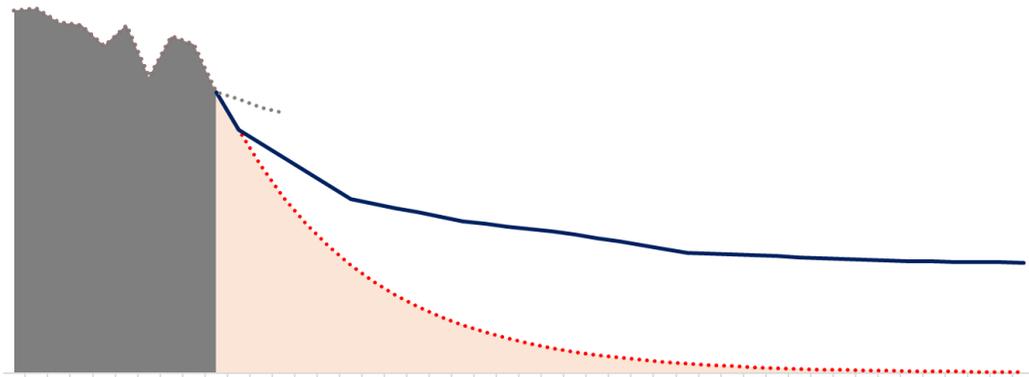
- Lobby national government to increase the ambition of planning policy and energy efficiency standards
- Garner which actions can be led at a GM level (e.g. procurement policy)
- Continued support and collaboration with local actors to ensure momentum is not lost

Appendices



Appendix 1

About the SCATTER model



- **SCATTER Modelled Pathway** – Describes the future emissions pathway of the borough, given a proscribed set of interventions at a given level of ambition. This line actually plots the lowest level of ambition within the tool. It still requires significant action around ‘greening’ of local energy supply and decarbonization of the National Grid.
- **Tyndall Paris Aligned Budget** – The finite, cumulative amount that the region should emit between now and 2050, based on research performed by the Tyndall Centre for Climate Change Research.²
- **Tyndall Paris Aligned Pathway** – The yearly totals that must reduce c.13% on average each year to keep within the budget. Note: Unlike the SCATTER Pathways, this does not specify what tangible measures could achieve this pathway, rather, it sets out what science (IPCC³) indicates we need to aim for.
- **Historic Emissions** – Previous emissions totals as reported within the BEIS Local Authority Emissions data sets.⁴

This graph demonstrates a future emissions pathways over time as modelled by the SCATTER pathways tool. This tool focuses on energy system (fossil fuel consumption) emissions reductions within the local authority boundary. Each measure can be scored according to four levels of ambition, with each level corresponding to an increased level of action and thus increased carbon emissions reductions. The pathway opposite represents the lowest level of ambition within the tool. The pathways do not represent reductions outside of Trafford’s district boundaries (i.e. consumption based emissions).

SCATTER pathways can be compared against the Tyndall Centre for Climate Change Research’s Paris Aligned Budget. This is derived from climate science³ and applies a method for scaling down global carbon emissions budgets that are ‘likely’ to keep temperature change “well below 2°C and pursuing 1.5°C”, to local authority regions. Unlike the SCATTER pathways, this is based on climate science, not tangible energy supply and demand measures in region. The cumulative nature of CO₂ reinforces the need for to take a ‘budget’ approach, where any annual shortfalls accumulate over time. This Pathway is just one way of allocating a finite, carbon budget (the area underneath the curve). Alternatively, the same budget would last 6-7 years if emissions remain at current levels.

What do ‘Carbon Neutral’ and ‘Net Zero’ mean?

‘Carbon neutral’ or ‘net zero’ typically mean the same thing: that some carbon/GHG emissions remain but are then ‘netted off’ or off-set through carbon dioxide removal. Such removal may occur due to Negative Emissions Technologies (NETs) such as biomass energy with carbon capture and storage, or, natural sequestration via means such as afforestation. The UK’s Net Zero target includes all GHGs (not just those from within the energy system).

See also, a [recent blog](#) by the Tyndall Centre for Climate Change Research on the various related terms that may often get confused or used interchangeably with ‘Carbon Neutrality’.

Appendix 1 (cont.)

About the SCATTER model

SCATTER is intended to serve as one of many information sources to help users inform their priorities for emissions reduction. Specifically with reference to the forward looking pathways modelling element, it is intended to focus on the 'what' rather than the 'how'.

It is important to note that SCATTER does not intend to prescribe certain technologies or policies, and similarly does not intend to discount other methods of arriving at the same outcome, just because they do not feature in the model. The SCATTER pathways serve as 'lines in the sand', and give users an indication of whether they are likely to be on-target or off-target for a carbon neutral trajectory through the adoption of interventions to drive the transition to a low carbon economy.

Basic principles

Sir David MacKay's '[Sustainable Energy - Without Hot Air \(2009\)](#)' underpins the basis for the pathways modelling. As a scientific advisor to the Department for Energy & Climate Change (DECC), now BEIS, MacKay's work led to the development of the [2050 Pathways calculator](#). An open source, [Microsoft Excel version](#) of this tool was published by DECC which we used as the foundation for SCATTER.

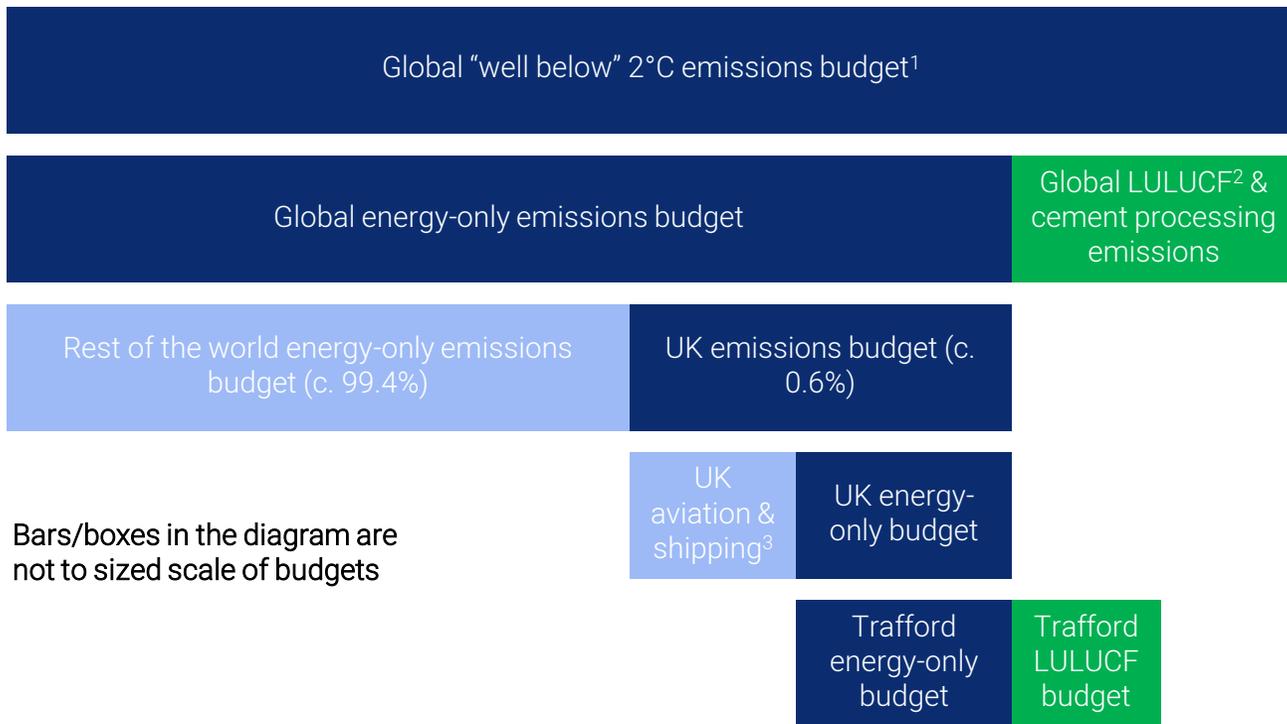
Two key modifications were made by Anthesis:

- 1) **We scaled it down for sub-national regions:** Scaling assumptions and localised data sets were built into the tool so that results were representative of cities and local authority regions, rather than the UK as a whole.
- 2) **We pushed ambition further:** Technology specifications changes were reviewed and updated where judged to be out of date and constraining ambition. Given that almost a decade had passed since MacKay's publication and the release of the 2050 Pathways tool, we sought the counsel of a technical panel to make these updates. The technical panel comprised subject matter experts from Arup, BEIS, Electricity North West, GMCA, The Business Growth Hub, The Energy Systems Catapult, The Tyndall Centre and Siemens. We also referenced the 2050 [Wiki](#) page during the course of the update.

Many other sector specific aspects of modelling treatment and assumptions have required consideration and interpretation as we have applied the model to various cities and local authorities.

Appendix 2

Derivation of the Trafford Carbon Budget



Bars/boxes in the diagram are not to sized scale of budgets

1 - Budget derived from IPCC AR5 synthesis report and represents a 66-100% probability of global warming not exceeding 2°C (“well below”). Due to the inertia in our energy systems and the amount of carbon we have already emitted, the Paris 1.5°C commitment is now only likely to be viable if negative emissions technologies (NETs) prove to be successful at a global scale. If the 15% emissions reduction rates for Trafford are achieved and NETs are deployed at the scales assumed in the global models, then the targets adopted may be considered as a 1.5°C compatible. This also expressly assumes that other carbon cycle feedbacks, such as methane released due to melting permafrost etc., do not occur, and that an overshoot of 1.5°C does not result in increased feedbacks that further accelerate warming at lower budgets than the IPCC budgets currently estimate.

2 - Land Use, Land Use Change & Forestry

3 - UK Aviation & Shipping is accounted for at the national level. If emissions due to aviation and shipping increases, then a smaller proportion of the UK-wide budget is available for the energy-only budget and vice versa.

Trafford’s budget

The carbon budget (9,500 ktCO₂ for the period 2020-2100) sets out a finite emissions limit that should not be exceeded in order that Trafford remains in line with the Paris Agreement. The budget itself is derived from a ‘scaling-down’ approach – a full methodology is [available to view](#) in the full print version of the Tyndall Centre’s research.

The Tyndall Centre for Climate Change Research have based this budget on a 2°C global average temperature rise, on the basis that:

1. The Paris Agreement commits us to limiting warming to this level.
2. Global modelling for both 1.5°C and 2°C assume planetary scale negative emissions.

Negative Emissions Technologies (NETs)

NETs remain a highly speculative and uncertain development and are leaned upon heavily in IPCC models. Large-scale NETs are not likely to be viable within the boundary of Trafford due to the profile of emissions.

If research, development and demonstration of NETs shows that they may work at scale, and then they are rolled out globally at unprecedented rates, 1.5°C may theoretically be achievable. However this is only made possible if rapid, deep 2°C mitigation begins now and additional feedbacks do not occur.

Appendix 2 (cont.)

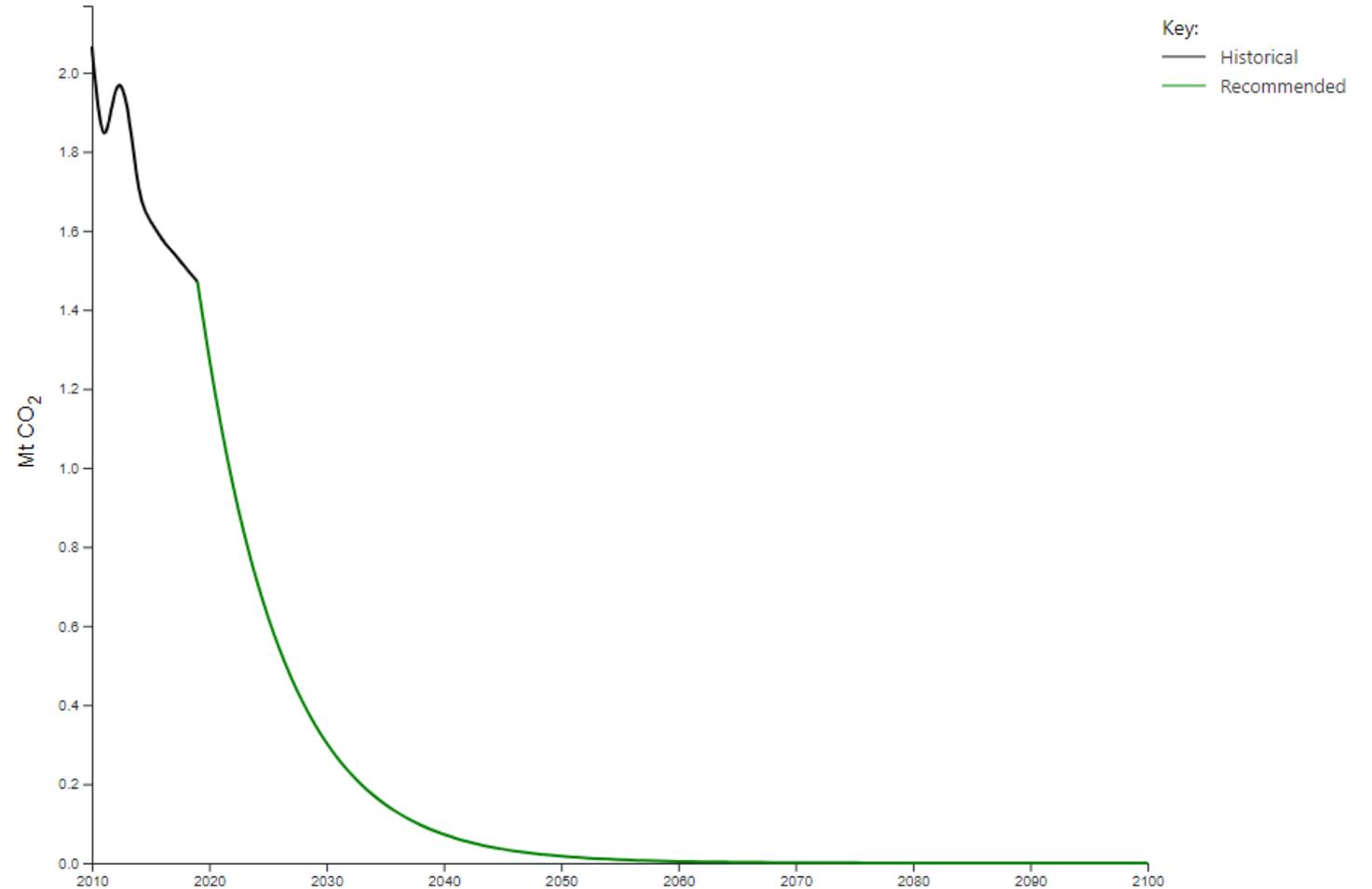
Derivation of the Trafford Carbon Budget

Trafford's budget

Opposite is the graphical representation of Trafford's carbon budget as defined by the Tyndall Centre's research.

The green line represents the annual percentage reductions necessary to remain within the 9,500 ktCO₂ threshold.

Note that the 'Tyndall-aligned science-based budget' depicted in the SCATTER pathways graph is defined by a different baseline year to the Tyndall graph opposite. Both represent the same annual percentage reductions.



Appendix 3

Example Commitment to Support

We, [organisation name] _____ commit to:

- Contributing towards limiting Trafford's emissions below 9.5MtCO₂ by taking responsibility for emissions from business activities,
- Delivering on common ambitious targets through accelerating existing activity,
- Contributing to Trafford's resilience to the threats posed by climate change and improving the quality of life for Trafford's residents and support local communities,
- Defining what help is needed from others and what support can be offered to, or received from, local collaborators,
- Supporting this framework to work and deliver benefits for the short and longer term.

Signed: [individual name] _____ [Date] _____

Appendix 4

Authority Based Insetting

Authority Based Insetting (ABI) – A new type of carbon insetting

Based on feedback received from stakeholders interviewed during this work and within other regions; we believe there is strong opportunity to build on well established principles used by existing carbon offsetting and insetting standards, and tailor these in a way that is much better aligned to the needs of Local Authority and organisations within the same local authority boundary. We will refer to this as Authority Based Insetting or 'ABI' from here on in, and will need to be further developed beyond the scope of this work.

But what was the *old* type of insetting?

To date, use of the term "Insetting" primarily relates to businesses that are looking to save carbon and generate value to stakeholders within their own supply chains. Value is increased either in the direct form of cost savings (that the supplier is able to pass on), or indirectly by increasing productivity and/or supply chain resilience.

The International Carbon Reduction & Offset Alliance (ICROA) define insetting as "a carbon reduction project, verified by an offset standard, which occurs within a company's supply chain or supply chain communities".¹

Insetting within a district boundary within may provide a more appealing alternative to offsetting or supply chain insetting as:

- Retains investment locally
- Encourages low carbon co-benefits to be realised locally (e.g. health, jobs)

Evidence of need

We heard from stakeholders:

- Currently, investments are made or are being considered in offsets that would see money being spent outside the borough of Trafford
- If there was a mechanism that allowed Trafford organisations to better demonstrate local impact and retain a demonstrable carbon benefit, this would be more appealing for the organisation and easier to sign off
- Scrutiny has really increased with regards to traditional offsets, where doubts have emerged over additionality and permanence of carbon impact
- External capital finance is required to stimulate various low carbon projects that organisations cannot currently secure funding for internally.

How could it work?

Authority Based Insetting would need to do two key things:

- 1) **Report carbon impact:** Provides a consistent, transparent framework for reporting local initiatives that may occur outside of the council's organisational boundary (but within the Local Authority Boundary).
- 2) **Match investment to projects:** ABI could connect into an existing funding mechanism or serve as the basis for a new, future low carbon funding mechanism, matchmaking investment with low carbon projects, that may offer a return on Investment (ROI).

Appendix 4

Authority Based Insetting

Current progress

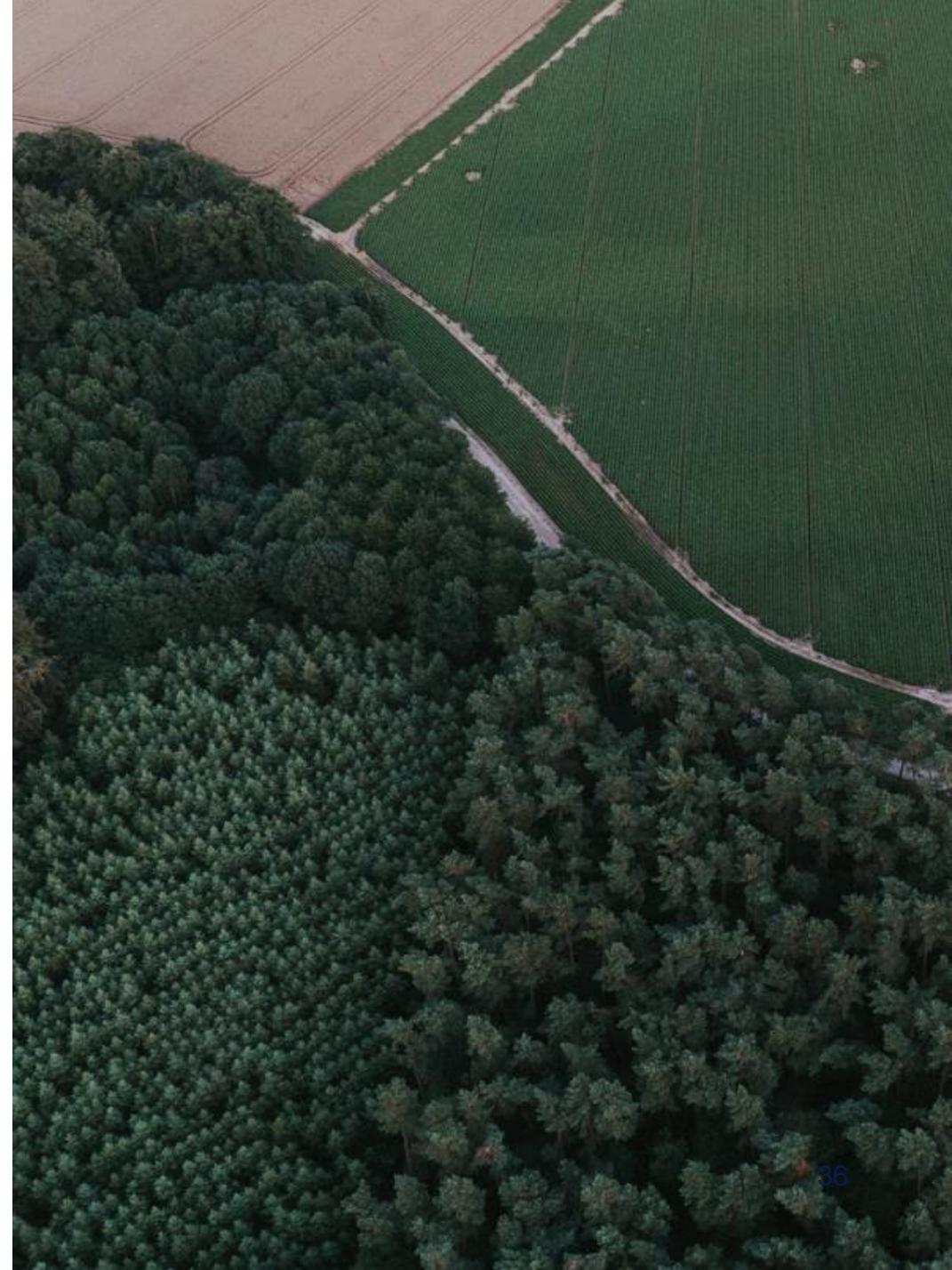
- Anthesis are co-developing the key principles and approach with Cheshire East Council.
- We have received formal interest to support from:
 - A further 19 city councils/local authorities
 - 1 Low Carbon Asset Investor & Fund Manager
 - 1 Major Trafford organisation

Next steps

- Engage relevant NGOs / Carbon Accounting Standard
- Engage with existing, regional based investment fund managers (e.g. Bristol Energy, Low Carbon Hub Oxford), which we know are likely to have a vested interest in supporting development of such a concept.
- Refine and further develop principles and standards
- Seek adoption within Greater Manchester / Trafford

The ask of Trafford stakeholders

If you are interested to support, help co-develop or interested to get further information, please contact matt.rooney@anthesisgroup.com



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