

**GREATER MANCHESTER GREEN
CITY REGION PARTNERSHIP**

DATE: Thursday 25 January 2024

TIME: 9.30 am

VENUE: Teams

AGENDA

- 1. Introduction and Apologies (Chair) (3 Minutes)**
- 2. Chair's Announcements and Urgent Business
(Chair) (5 Minutes)**
- 3. Declarations of Interest (Chair) (2 Minutes)** 1 - 4

To receive declarations of interest in any item for discussion at the meeting. A blank form for declaring interests has been circulated with the agenda; please ensure that this is returned to the Governance & Scrutiny Officer at least 48 hours in advance of the meeting.

BOLTON	MANCHESTER	ROCHDALE	STOCKPORT	TRAFFORD
BURY	OLDHAM	SALFORD	TAMESIDE	WIGAN

Please note that this meeting will be livestreamed via www.greatermanchester-ca.gov.uk, please speak to a Governance Officer before the meeting should you not wish to consent to being included in this recording.

For Agreement

- | | | |
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| 4. | To approve the Minutes of the Last Meeting held on 19 October 2024 (Chair) (5 Minutes) | 5 - 10 |
| 5. | Quarter 3 Progress Report - 5 Year Environment Plan (5YEP) (10 Minutes) | 11 - 32 |

Presented by Mark Atherton, Director of Environment, GMCA.

Ordinary Business

- | | | |
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| 6. | Work Programme 2023/24 & Challenge Group Updates (20 Minutes) | 33 - 46 |
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Report and Presentation by Challenge Group Chairs.

For Discussion

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| 7. | Behaviour Insights Research (20 Minutes) | 47 - 70 |
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Presentation by Sarah Mellor, Head of Sustainable Consumption and Production, GMCA.

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| 8. | Greater Manchester Environment Fund and Green Spaces Fund (20 Minutes) | 71 - 128 |
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Presentation by Sam Evans, Head of Natural Environment, GMCA.

9. **Regional Energy System Planning (20 Minutes)** 129 - 142

Presentation by Jonny Sadler, Local Authority Lead Support, ENWL.

For Information

10. **Retrofit of Commercial Buildings in Greater Manchester (5 Minutes)** 143 - 214

Report by Alex Edwards, Bruntwood.

11. **Greater Manchester Trade Mission to Japan and Memorandum of Understanding (MoU) Signings (5 Minutes)** 215 - 218

Report of Sean Owen, Head of Low Carbon Policy, GMCA.

12. **Greater Manchester Net Zero Accelerator (5 Minutes)** 219 - 220

Presented by Mark Atherton, Director of Environment, GMCA.

13. **Date and Time of Next Meeting**

4 April 2024 at 10.30 am to 12.30 pm via Teams.

For copies of papers and further information on this meeting please refer to the website www.greatermanchester-ca.gov.uk. Alternatively, contact the following

Governance & Scrutiny Officer: Jenny Hollamby

✉ jenny.hollamby@greatermanchester-ca.gov.uk

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Declaration of Councillors' Interests in Items Appearing on the Agenda

Name and Date of Committee _____

Agenda Item Number	Type of Interest - PERSONAL AND NON PREJUDICIAL Reason for declaration of interest	NON PREJUDICIAL Reason for declaration of interest Type of Interest – PREJUDICIAL Reason for declaration of interest	Type of Interest – DISCLOSABLE PECUNIARY INTEREST Reason for declaration of interest

Please see overleaf for a quick guide to declaring interest at GMCA meetings.

Quick Guide to Declaring Interests at GMCA Meetings

Please note: should you have a personal interest that is prejudicial in an item on the agenda, you should leave the meeting for the duration of the discussion and the voting thereon.

This is a summary of the rules around declaring interests at meetings. It does not replace the Member's Code of Conduct; the full description can be found in the GMCA's constitution Part 7A.

Your personal interests must be registered on the GMCA's Annual Register within 28 days of your appointment onto a GMCA committee and any changes to these interests must notified within 28 days. Personal interests that should be on the register include:

1. Bodies to which you have been appointed by the GMCA.
2. Your membership of bodies exercising functions of a public nature, including charities, societies, political parties, or trade unions.

You are also legally bound to disclose the following information called Disclosable Personal Interests which includes:

1. You, and your partner's business interests (e.g., employment, trade, profession, contracts, or any company with which you are associated).
2. You and your partner's wider financial interests (e.g., trust funds, investments, and assets including land and property).
3. Any sponsorship you receive.

Failure to disclose this information is a criminal offence

Step One: Establish whether you have an interest in the business of the agenda

1. If the answer to that question is 'No' then that is the end of the matter.
2. If the answer is 'Yes' or 'Very Likely' then you must go on to consider if that personal interest can be construed as being a prejudicial interest.

Step Two: Determining if your interest is prejudicial

A personal interest becomes a prejudicial interest:

1. Where the wellbeing, or financial position of you, your partner, members of your family, or people with whom you have a close association (people who are more than just an acquaintance) are likely to be affected by the business of the meeting more than it would affect most people in the area.
2. The interest is one which a member of the public with knowledge of the relevant facts would reasonably regard as so significant that it is likely to prejudice your judgement of the public interest.

For a non-prejudicial interest, you must:

1. Notify the Governance and Scrutiny Officer for the meeting as soon as you realise you have an interest.
2. Inform the meeting that you have a personal interest and the nature of the interest.
3. Fill in the declarations of interest form.

To note:

1. You may remain in the room and speak and vote on the matter.

If your interest relates to a body to which the GMCA has appointed you to, you only have to inform the meeting of that interest if you speak on the matter.

For prejudicial interest, you must:

1. Notify the Governance and Scrutiny Officer for the meeting as soon as you realise you have a prejudicial interest (before or during the meeting).

2. Inform the meeting that you have a prejudicial interest and the nature of the interest.

3. Fill in the declarations of interest form.

4. Leave the meeting while that item of business is discussed.

5. Make sure the interest is recorded on your annual register of interests form if it relates to you or your partner's business or financial affairs. If it is not on the Register update it within 28 days of the interest becoming apparent.

You must not:

Participate in any discussion of the business at the meeting, or if you become aware of your disclosable pecuniary interest during the meeting participate further in any discussion of the business, participate in any vote or further vote taken on the matter at the meeting.



**MINUTES OF THE
GREEN CITY REGION PARTNERSHIP
HELD VIRTUALLY ON FRIDAY 19 OCTOBER 2023 AT 13.00 AM**

PRESENT:

Councillor Tom Ross (TR)	Portfolio Leader for the Green City Region
Councillor Mike McCusker (MK)	Transport Committee and Planning & Housing Commission Representative (Vice-Chair)
Councillor Steve Adshead (SA)	Waste Committee Representative
Councillor Alan Quinn (AQ)	Bury Council
Nasir Dad (ND)	(for Harry Catherall), Oldham Council
Patrick Allcorn (PA)	Department Energy Security Net Zero
Leigh Broadhurst (LB)	Suez (Vice-Chair Sustainable Consumption & Production Challenge Group)
Steve Connor (SC)	Creative Concern & Business Board
Mark Easedale (ME)	(for Ian Crewe) Environment Agency (EA)
Richard Halsey (RH)	Energy Catapult (Chair Low Carbon Challenge Group)
Paul Hooper (PH)	Manchester Metropolitan University (Chair Sustainable Consumption & Production Challenge Group)
Claire Igoe (CI)	Greater Manchester NHS Integrated Care
Phil Korbel (PK)	Cooler Projects
Carly McLachlan (MC)	University of Manchester (Chair 5YEP Forum)
Ian Rutherford (IR)	Greater Manchester Faith Communities
Jonny Sadler (JS)	(for Steve Cox) Local Authority Support Officer, Electricity
Will Swan (SW)	University of Salford (Vice-Chair Low Carbon Challenge Group)
Nalin Thakker (NT)	University of Manchester

OFFICERS IN ATTENDANCE:

Thomas Addison (TA)	Local Economic Strategy Principal (Low Carbon Economy), GMCA
Mark Atherton (MA)	Director of Environment, GMCA

OFFICERS IN ATTENDANCE:

Rachel Berman (RB)	Principal Researcher (Environment), GMCA
Megan Black (MB)	Head of Logistics & Environment, TfGM
Sam Evans (SE)	Head of Natural Environment, GMCA
Nick Fairclough (NF)	Senior Policy Manager, TfGM
Oliver Fenton (OF)	Assistant Governance & Scrutiny Officer, GMCA
John Gregory (JG)	Head of Service for Environmental Assets, Bolton Council
David Hodcroft (DH)	Infrastructure Lead (Place Directorate), GMCA
Jenny Hollamby (JH)	Governance & Scrutiny Officer, GMCA
Sarah Holland (SH)	Programme & Policy Lead (Energy), GMCA
Martin Lax (ML)	Transport Strategy Director, TfGM
Sarah Mellor (SM)	Head of Sustainable Consumption & Production, GMCA
Garry Parker (GP)	Assistant Director, Environment and Regulatory Services, Bolton Council
Robyn Smith (RS)	Project Manager Environment and Low Carbon, GMCA

Minute No	Resolutions	Responsible
	Blue Links = Link to Livestream (available for 6 month)	
GC/15/23	<u>APOLOGIES FOR ABSENCE</u> Apologies were received and noted from Louise Blythe (BBC), Helen Boyle (Cadent), Harry Catherall (Oldham Council), Steve Cox (ENWL), Ian Crewe (EA), Jon Dyson (Bolton Council), Steph Everett (Homes England), Vernon Everitt (TfGM), Andy Gibson and Liz Price (Manchester Metropolitan University), Bernard Magee (Siemens), Louise Marix-Evans (Quantum), Roger Milburn (Arup), Chris Oglesby (Bruntwood) and Anne Selby (Independent).	Noted
GC/16/23	<u>CHAIR'S ANNOUNCEMENTS OR URGENT BUSINESS</u> 1. That the Challenge Group Chairs, Vice-Chairs, the Environment Directorate, and all those involved be thanked for a successful Green Summit 2023.	Noted

GC/17/23	<p><u>DECLARATIONS OF INTEREST</u></p> <p>1. Councillor Alan Quinn declared a personal interest in Item 6 - Work Programme by virtue of him being a City of Trees Interim Board Member.</p>	Noted
GC/18/23	<p><u>TO APPROVE THE MINUTES OF THE LAST MEETING</u></p> <p>1. That the minutes of the last meeting dated 21.7.23 be approved as a correct record.</p>	Approved
GC/19/23	<p><u>QUARTER 2 PROGRESS REPORT – 5 YEAR ENVIRONMENTAL PLAN (5YEP)</u></p> <p>1. That the progress outlined in the report and latest position set out in the dashboard attached at Annex 01 of the report be noted.</p> <p>2. That the two page summary of Chris Skidmore’s, Independent Review of Net Zero report be circulated to the Partnership.</p>	Noted MA
GC/20/23	<p><u>WORK PROGRAMME 2023/24 AND CHALLENGE GROUP UPDATES</u></p> <p>1. That the progress in developing the Mission Based Approach and the associated Challenge Groups be noted.</p> <p>2. That the State of Nature communications friendly format report to be shared with the Partnership.</p> <p>3. That the Partnership consider a report on 25.1.23 about the GM Environment Fund and Green Spaces Fund, the impact, take up, projects, dispersed communities and the next steps.</p> <p>4. SM to speak to Suez and the Challenge Group about solutions for single use vapes in the waste stream.</p> <p>5. IR to speak to SM and SA about setting up a GM Food Programme Board for the Food Security Action Network.</p> <p>6. Anybody interested in becoming the Vice-Chair of the Green Communications Challenge Group contact LB.</p> <p>7. CM to report back to the Partnership on a Greenwash Free City.</p>	Noted SE SE SM IR/SM/SA All/LB CM

<p>GC/21/23</p>	<p><u>GREATER MANCHESTER 5YEP TRANSPORTATION AND TRAVEL PRESENTATION</u></p> <ol style="list-style-type: none"> 1. That the presentation be received and noted. 2. That the activities undertaken by TfGM to deliver the 5YEP in respect of transport and travel be noted. 3. That climate and transport highlights be reported to the Partnership. 4. That messaging be captured in the 5YEP. 5. That comments about Metrolink refurbishments in terms of safety would be fed back to the Team. 6. That MB and CL continue the conversation around incentivising people out of their cars. 	<p>Noted</p> <p>Noted</p> <p>MB</p> <p>MB/RS</p> <p>MB</p> <p>MB/CL</p>
<p>GC/22/23</p>	<p><u>GREEN SUMMIT REVIEW, 5YEP AND BEHAVIOUR INSIGHTS</u></p> <ol style="list-style-type: none"> 1. That the Partnership noted the progress updates across all presentations. 2. That the Faith Sector be involved in the 5YEP refresh and wider listening events. The Faith and Belief Advisory Board and Our Faith Our Planet to be involved. 3. That the Partnership approved the approach to develop updated carbon emissions pathways as part of the 5YEP refresh with a focus on the actions needed by others with sections on what LAs would do. 4. That CI contact SM about being involved in the Challenge Groups. 5. That the Partnership was comfortable with the planned approach but asked that thought be given to the language used in future communications. 6. That the Partnership agreed the approach to behaviour change being shaped by the insights work and asked that support be provided for individuals. 	<p>Noted</p> <p>IR/SM</p> <p>Approved</p> <p>CI/SM</p> <p>MA and Team</p> <p>MA and Team</p>

GC/23/23	<p><u>INTEGRATED WATER MANAGEMENT PLAN</u></p> <ol style="list-style-type: none"> 1. The Partnership noted the decision made by the GMCA on 30.6.23 and 29.9.23 in relation to the Integrated Water Manchester Plan. 2. The Partnership noted how Scrutiny Committee recommendations would be taken forward through the Integrated Water Management Plan. 3. The Partnership noted the summary of the Annual Business Plan as presented on 11.9.23. 4. That the main outputs to be delivered by March 2023 be noted. 	<p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>
GC/24/23	<p><u>SCHOOLS SOLAR PHOTOVOLTAIC (PV)</u></p> <ol style="list-style-type: none"> 1. That the Partnership noted the contents of the slide deck and resources. 2. That the Partnership promote through their wider network and partnerships. 3. That the presentation be shared with the Partnership. 4. That an update be provided in 12 months' time. 	<p>Noted</p> <p>Members</p> <p>SH</p> <p>SH</p>
GC/25/23	<p><u>PUBLIC SECTOR DECARBONISATION SCHEME VIDEOS</u></p> <ol style="list-style-type: none"> 1. That the Partnership noted the contents of the slide deck and resources. 2. That the Partnership promote through their wider network and partnerships. 	<p>Noted</p> <p>Members</p>
GC/26/23	<p><u>DATES AND TIMES OF FUTURE MEETINGS</u></p> <p>That all meetings be held virtually unless otherwise stated on:</p> <ul style="list-style-type: none"> • 25.1.24 at 1.00 pm • 4.4.24 at 10.30 am 	<p>Noted</p>

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Greater Manchester Green City Region Partnership

Date: **26th January 2024**
Subject: **Q3 PROGRESS REPORT - 5 YEAR ENVIRONMENT PLAN (5YEP)**
Report of: **Mark Atherton, Director Environment, GMCA**

PURPOSE OF REPORT:

The report provides the usual update on progress of the Green City Region Partnership for the third quarter of 2023/24 (Oct – Dec 2023) and key milestones for the fourth quarter (Jan – Mar 2024).

RECOMMENDATIONS:

The Partnership is recommended to:

1. Note and comment upon the progress outlined in this report and latest position set out in the dashboard attached at:
 - a. Annex 01 (5 Year Environment Plan Performance Overview) and available online at: [Five Year Environment Plan \(2019-24\) Progress \(gmtableau\)](#).

CONTACT OFFICERS:

Contact Officer: Mark Atherton, GM Director of Environment
Mark.atherton@greatermanchester-ca.gov.uk

1. OVERVIEW OF PROGRESS

The update at Annex 01 (5 Year Environment Plan Performance Overview) contains a summary of key progress across all areas within the 5 Year Environment Plan. During the last quarter there are a number of key successes to be highlighted, set out below:

1.1 Energy

- The 5-Year Environment Plan target of increasing renewable energy generation by 45 MW before 2024 has been surpassed ahead of schedule. Energy generation will continue to grow as Rochdale's Chamber House Solar Farm is connected.
- DEEP Phase 3 (Heat and Energy Network Opportunity Areas) – AECOM seconded to support the Combined Authority and Districts to progress the five heat network projects through to procurement. All five remain on course with at least four featuring in the national HEAT Network Advanced Zoning Programme.
- Local Area Energy Plans (LAEPs) – KPMG appointed as finance advisors for the next stage, Outline Business Cases (OBC). Service agreement has been signed with UK Infrastructure Bank to support the first OBC focused on Heat Networks.
- Local Energy Advice Demonstrator (LEAD) – LEAD campaign approach developed with agency and social media toolkit launched.
- Go Neutral Smart Energy – Wave 2 consultancy support underway with site surveys and reports completed for Salford, Bury and Oldham. Scoping of procurement strategy and documents for Salford and Bury and second tranche of remaining pipeline development support for Stockport and Rochdale portfolios has commenced.
- Smart Energy – Powering Our Schools campaign and dedicated [webpage](#) with resources and calculator launched at the Green Summit in October 2023. Engagement and training process has commenced with schools and the tender exercise for roof survey work is now complete.
- Energy Innovation Agency (EIA) – Future Homes Project pipeline is progressing. End user pool has been developed with innovator meetings adjusted to include new end users with good interest. Successful engagement with Ministerial visit to promote the agency.

- Trafford Energy Park - Trafford Green Hydrogen selected as one of the 11 successful projects in Round One of the UK Government's Hydrogen Allocation Round (HAR1). This is a major milestone for the project.
- Bee Net Zero (BNZ) - 'Rooftop Revolution' business campaign is continuing (c.85k social media impressions to date) with the communications group expanded to include Local Authority representatives. Plans being developed for employee engagement campaign and launch of the 'Bee Net Zero Commitment' pledge. Commercial Occupier Retrofit Guide launched with CBRE UK to help Greater Manchester businesses in landlord-owned buildings reduce their carbon emissions.

1.2 Buildings

- Social Housing Decarbonisation Fund (SHDF) – SHDF Wave 1 lodgements completed for approximately 820 properties, grant payments to partners underway. SHDF Wave 2 – 200 installations and the majority of retrofit assessments are now complete, with design, co-ordination and tenant engagement milestones progressing. In total over [1,000 homes have received energy upgrades](#) across Greater Manchester with over 6,300 social homes receiving energy efficiency improvements.
- Public Sector Decarbonisation Scheme (PSDS) – PSDS 1 supporting partners in measurement and verification data flows for Salix annual reporting and follow-on technical audit evidence. PSDS 3a single-year delivery programme is on track with majority of buildings due to practical completion by March 2024 (Trafford and Manchester due August 2024.) PSDS 3a multi-year programme in delivery with construction on site. PSDS 3b programme in delivery with partners moving from procurement and design stage into construction. (Manchester NHS Foundation Trust and Salford have dropped out of the programme.) PSDS 3c Greater Manchester Combined Authority led consortium grant application submitted 7th November 2023 circa £9.5M.
- Retrofit GM (Your Home Better) – Focus is on developing the fabric efficiency supply chain for Your Home Better which has led to a reduction in outstanding quotes and number of complaints. Actual deployment levels of retrofit measures have been low.
- ECO4 flex scheme (support for fuel poor/low-income households with home energy efficient upgrades) – Communications package provided to all 10 Districts

for implementation. [NHS referrals guide](#) launched including introduction videos for NHS and general resident audience. ECO4 now embedded within the LEAD project.

- Net zero new development – Continued development of net zero homes pipeline.
- Good Landlord Charter – Public consultation released (closing date 26th February 2024.) The criteria is designed to help deliver on the key characteristics of good renting and includes properties meeting EPC C as a minimum standard.

1.3 Transport

- Active Bee Network – A further 3km of 'Bee Active' Network was completed in quarter three bringing the total to 99.5km (as of 15th October 2023). Network mapping of Bee Network schemes outside of the Mayors Challenge Fund and Active Travel Fund programmes concluded.
- Bike Hire Scheme – The Cycle Hire Recovery Plan remains in place with 650 bikes available in December 2023.
- Salford e-scooter trial – There have been over 900,000 trips conducted by Lime e-scooters in Salford since start of the trial, estimated to have replaced around 230,000 car trips. The scheme is continuing to grow in terms of new users.
- Bus Franchising - Mobilisation of tranche 2 is on track for 24th March 2024 for large, small, and school franchises with lessons learnt from tranche 1 embedded into delivery plans. City Region Sustainable Transport Settlements (CRSTS) Zero Emission Buses – 13.1% of franchised buses in tranche 1 are now zero emission (50 out of a total of 391) – exceeding target of 10%.
- Streets for All - Streets for All design guide adopted by the Greater Manchester Combined Authority at the Bee Network Committee on 23rd November 2023.
- [Taxi EVI project](#) - 42 Taxi EV charging points have been delivered out of 60 in total.
- Electric Vehicle Charging Infrastructure Delivery – Submission made to Local Electric Vehicle Infrastructure (LEVI) funding in November 2023 to support Electric Vehicle Charging Infrastructure delivery.
- Freight Strategy – Freight strategy principals incorporated into Local Transport Plan (LTP) refresh.
- Clean Air Plan – Evidence prepared for the Government that the proposed Greater Manchester investment-led plan can achieve compliance in 2025 through targeting

investment in zero emission buses and taxis as well as local traffic management measures in the regional centre, faster than a benchmarked Clean Air Zone. To be considered by the Air Quality Administration Committee on 20th December 2023.

1.4 Sustainable Consumption and Production

- Scope 3 emissions - Work is progressing on profiling the Combined Authority's carbon footprint scope 3 emissions which includes the emissions of the waste contract and an in-depth breakdown of emissions from spending and investment. All data has been submitted for analysis with initial findings due end of January 2024.
- Consumer behaviour insights – Results from the consumer study to gain insights into residents' attitudes to food waste, plastic waste and packaging and general sustainability challenges are currently being analysed. A second phase will commence in April 2024.
- School's Eco Refill Pilot – Pilot underway with ethical enterprise specialists Pupils Profit to launch eco refill shops within 10 Greater Manchester Schools. The pilot aims to reduce single-use plastics by driving awareness and increasing refill and reuse in the community.
- Refill (City to Sea) – A programme of communications will commence in January 2024 to promote Greater Manchester as a [Refill Destination](#).
- Waste strategy – Work is on-going to consider the further guidance provided by Defra on England's Waste Strategy and whether an interim strategy is required. Scenario modelling is currently taking place.
- [Foundational Economy Innovation Fund](#) – Through the Economy Team grants of up to £10,000 have been awarded to several organisations working in or with Greater Manchester's 'everyday economy' to trial new ideas that support local, sustainable, and circular supply chains. Delivery of the second phase of funding from February 2024 will see selected projects receive an additional £60,000.
- Food waste prevention – A feasibility study is being commissioned to identify surplus food in Greater Manchester and opportunities available for redistribution.
- Recycle for Greater Manchester (R4GM) - [Let's Waste Less This Christmas](#) campaign delivered in December 2023 including advertising on Hits Radio, tram network and in local newspapers. New [Renew online shop](#) launched for cheaper electricals, white goods, bikes and toys.

1.5 Natural Environment

- Local Nature Recovery Strategy (LNRS) – High-level vision and aims broadly agreed and circulated to the steering group, officer groups and tested with other stakeholders. Deep dive workshops on opportunities, priorities and measures undertaken. Habitat and core maps due to be completed in January 2024 with research in progress with Wildlife Trusts to develop the best methodological approach to opportunity mapping. Wider engagement and communications progressing through initiatives including our [local nature champions](#), newsletters, [blogs](#), presentation to developers and planned workshops with farmers/landowners. State of nature research completed with headline infographics due to be published in February 2024.
- Natural Course Phase 3 – Final comments on study of micro plastic contamination of Greater Manchester rivers provided to consultants. Toolkit finalised to identify green infrastructure locations to improve contamination from road runoff. Community Forest Trust ground-truth findings complete including a short-list of locations in Greater Manchester. Co-design workshops held with Greater Manchester planners to scope resource to increase delivery of Water Framework Directive objectives across the Northwest River Basin District with programme of dissemination events planned for February 2024.
- Biodiversity Net Gain (BNG) – National regulations published in November (mandatory date for BNG is not confirmed.) Preparation for off-site BNG on local authority land has continued. Walkden sustainable drainage systems (SuDS) neighbourhood progressing through detailed designs with funding secured from the Environment Agency and Green Spaces Fund to cover increased costs.
- Greater Manchester Environment Fund - Green Spaces [round four grants](#) made in December 2024 with £405,463 awarded to 18 community-led projects. A total of 86 different projects across the city-region have now received funding. Investing in Greater Manchester's Natural Environment event held on 30th November 2023.
- Growth Locations - Project to embed Local Nature Recovery Strategy and Natural Capital principles in Growth Location development and design (using Timperley Wedge as an example) ongoing with Greengage. Draft report out for review, with the project to conclude in February.

- Nature for Health – National Green Social Prescribing (GSP) evaluation report drafted. Interventions continue to grow across GM in absence of the national programme. Work completed in December 2024 with Defra on GSP successor programme with opportunity for Greater Manchester to submit a proposal for a years' worth of additional funding.

1.6 **Green Summit**

- [Green Summit 2023](#) – Post event communications complete including post-event round up and delegate survey. Planning underway for 2024 Green Summit.

1.7 **Greater Manchester 5 Year Environment Plan 2024 onwards**

- Work ongoing with ARUP on the emissions pathway. First drafts of the actions have been developed within GMCA and are now being shared for feedback with partners.
- District surveys have been submitted (all complete apart from 1 waste survey) and analysis underway.

2. KEY ANTICIPATED ACTION IN THE NEXT QUARTER

As a priority, the following activities will be delivered in the next Quarter:

2.1 **Energy**

- Deep Phase 3 – Revise programme to include financial models for each project.
- Local Area Energy Plans (LAEPs) – Department for Energy Security and Zero Net (DESNEZ) accelerator funding focus to be agreed and Memorandum of Understanding to be signed.
- Go Neutral – Commence procurement exercise for Salford and work towards internal capital approval for Bury by mid-March 2024. Complete remaining surveys and reports.

- Smart Energy – Complete roof surveys and confirm pipeline of schools. Scope collective purchase procurement exercise and procure professional services support.
- Energy Innovation Agency (EIA) – Focus on expanding and converting the new end user pool into commercial delivery.
- Trafford Energy Park - Commence work towards final investment decision for the scheme.
- Bee Net Zero (BNZ) – Finalise workplan for the next 12-18 months. Launch Bee Net Zero Commitment and employee engagement campaign before Purdah. Participate in Pro-Manchester’s Green Transformation Conference. Engagement with Electric Vehicle (EV) roundtable shortlist to map out future infrastructure plans.

2.2 Buildings

- Social Housing Decarbonisation Fund (SHDF) – Wave 1 project closure with final administrative tasks completed, all grant payments made to partners, lessons learned logged and reported. Wave 2 continued progress with all milestones, financial year spend target achieved, and installations to commence.
- Public Sector Decarbonisation Scheme (PSDS) – PSDS 1 remobilise Carbon architecture for reporting and conclude financial and technical audits. Continue support of PSDS 3a single-year delivery, setup measurement and verification infrastructure and conclude technical audit. Multi-year to conclude delivery of Rochdale Town Hall and continue support for Oldham. Continue support of PSDS 3b delivery.
- Retrofit GM (Your Home Better) – Focus on building the pipeline of work through increased marketing and linkages with LEAD to increase the number of retrofit assessments provided and to complete a higher volume of works.
- ECO4 Flex scheme – NHS Project Manager to be in post to assist in working with GP surgeries to promote the scheme.
- Net zero new development - Continued development of net zero homes pipeline.

2.3 Transport

- Active Bee Network – Five additional schemes due to complete in the period 15/10/2023 to 15/1/2024, delivering an additional 10.3km of Bee Active Network.
- E-scooters – Trial period extended to May 2026 with announcement and guidance expected in January 2024. TfGM and Salford are keen to expand the operational zone, but this requires Department for Transport approval.
- Bus franchising – Progress procurement for the large and tranche 3 small franchises with award of contracts in March 2024. City Region Sustainable Transport Settlements (CRSTS) Zero Emission Buses - 50 Zero Emission Buses to be deployed at Oldham depot for the start of tranche 2 operations in March 2024. Stockport depot planning application due spring 2024. Delay from previous quarter due to ongoing land assembly and statutory undertaker equipment challenges within the site boundary.
- Bus Fare Evaluation - Summary report (wave 2) to be published online.
- Streets for All – Deliver learning workshops with TfGM, District officers and members. Work to develop supplementary technical guidance underway. Greater Manchester SuDS design guide due to be published Spring 2024.
- Electric Vehicle Charging Infrastructure (EVCI) – Continue roll out of Taxi EVI project and ongoing engagement with the Office for Zero Emission Vehicles (OZEV), with ambition to receive Local Electric Vehicle Infrastructure (LEVI) capital funds in March 2024.

2.4 Sustainable Consumption and Production

- Scope 3 emissions - Complete analysis and begin detailed profiling of the Authority's spend and investments over the last four years. Commence phase 2 development of action plan and toolkit to support reduction of scope 3 emissions.
- Consumer behaviour insights – Complete analysis of phase 1 study and prepare for phase 2.
- School's Eco Refill Pilot – Continue to support the 10 pilot schools with the launch of their eco refill shops and completion of initial enterprise training. Press release and communications to be circulated to participating Districts.
- Refill (City to Sea) – Launch programme of communications to promote Greater Manchester as a Refill Destination including social media campaign and development of toolkit/guide to support businesses to sign up as a refill station.

- Foundational Economy Innovation Fund – Support marking of Foundational Economy Innovation Fund phase 2 applications.
- Food waste prevention – Complete feasibility study to identify surplus food in Greater Manchester and opportunities available for redistribution.
- Climate Change e-learning module – Launch new modules on single-use plastics and GMCA Sustainability Strategy including communications support.
- Textiles – Secure funding to commence material flow mapping in Greater Manchester.
- Recycle for Greater Manchester (R4GM) – Supporting Buy Nothing New campaign by Keep Britain Tidy in January 2024. External survey to be launched in February 2024 to find out how people buy and dispose of vapes to inform communications. Report to be launched (29th February 2024) on research with Keep Britain Tidy, Merseyside Waste Disposal Authority, CIWM, and Suez to inform communications on waste hierarchy and encourage waste prevention. Support for GM Repair week (18-24th March 2024) in partnership with Re-London.

2.5 **Natural Environment**

- Local Nature Recovery Strategy (LNRS) – Begin work on opportunity mapping for nature recovery. Publish State of Nature infographic report. Agree priorities and measures for the strategy and shortlist priority species. Continue communication and commence wider engagement with key target sectors. Commence drafting of the strategy ahead of consultation in the summer.
- Natural Course Phase 3 – Produce final reports on study of micro plastic contamination, River Tame invasive non-native species, and Community Forest Trust ground-truthing and disseminate findings. Deliver green infrastructure intervention in the Cheadle area of Greater Manchester to provide multiple benefits for water. Produce Water Framework Directive resource for planners and dissemination event to be held February 2024. Natural Course end-of-project event to be held on 28th February 2024 with production of Natural Course After LIFE and Layman's reports by 31st March 2024 for project close.
- Biodiversity Net Gain (BNG) – Continue to progress towards Local Authority owned sites being ready for offsite BNG. Complete detailed design work and preparations for delivery of IGNITION legacy Walkden scheme.

- Green Spaces Fund - Evaluation report of the impact of funding to date to be presented to Greater Manchester Combined Authority in March 2024.
- Growth Locations - Report due on review of Timperley Wedge allocation. Disseminate findings and learning to other Growth Locations
- Nature for Health – Submit Green Social Prescribing (GSP) funding proposal to successor programme (outcomes by mid-March 2024). Continue to seek further funding opportunities and engagement with sector to embed GSP into nature recover plans. Look to incorporate GSP into next year’s Integrated Care Board strategy and operational plans.

2.6 Green Summit

- Confirm venue and date for Green Summit 2024. Begin initial communications planning including engagement with the Communications Challenge Group.

2.7 Greater Manchester 5 Year Environment Plan 2024 onwards

- Workshops to be held with the Challenge Groups to review the vision of the plan, draft actions, and gain feedback on the actions their organisations will commit to.
- Elected members survey to be completed following Green City Region Board meeting (February 2024).

3. IDENTIFIED RISKS AND EMERGING ISSUES

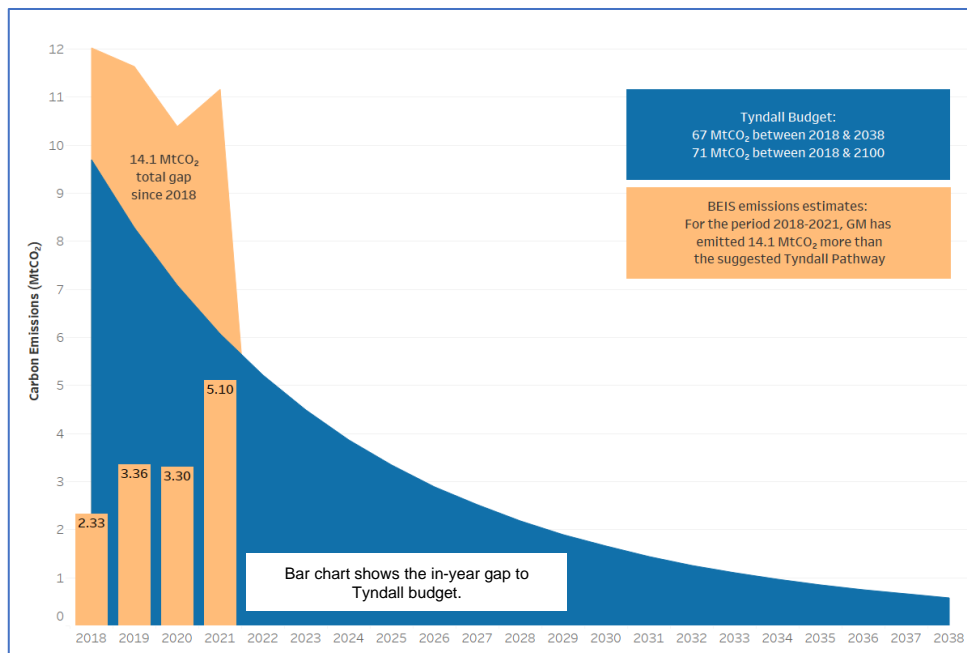
- 3.1 Officers and sub-groups have identified a number of risks to existing, and particularly future, programme delivery. Mitigation of these risks, as far as possible, will be managed by the responsible Accountable Body.

In terms of the priorities set out in the 5 Year Plan, the following areas remain flagged as “red”.

Key risks:

- **Failure of the 5 Year Environment Plan to achieve a step change in reducing carbon emissions.** To achieve the 2038 mission, the GM 5-Year Environment Plan outlines our ‘fair’ carbon budget contribution of 67 mega tonnes for 20 years

(2018-2038). The critical focus is not exceeding our total budget (67MtCO₂). From 2018 to 2021, GM's emissions are 14.1MtCO₂ above the Tyndall budget, i.e. an additional 14.1MtCO₂ savings need to be made on top of the Tyndall budget. This gap has been increasing year on year, with new annual emissions data showing a rebound in emissions in 2021 as we emerged from the pandemic. The key point is that significant cuts must happen now. At our current rate of emissions, we will have exhausted our carbon budget within the next few years.



- **Failure to accelerate decarbonisation of buildings to meet low carbon heating targets.** Measures continue to be implemented with a focus on accelerating decarbonisation and increasing energy generation including the launch of Social Housing Decarbonisation Fund, Public Sector Decarbonisation Scheme, Go Neutral project including schools solar PV offer, and DEEP project delivery to identify Heat and Energy Network Opportunity Areas across Greater Manchester.
- **Level and depth of retrofit required to meet our overall ambitions is highly challenging.** The decarbonisation of Greater Manchester homes through deeper whole house retrofit is being mitigated by the publication of a Retrofit Report that sets the priorities and framework for action and, as part of that the Retrofit Challenge Group along with the Retrofit Taskforce is focused on delivering home and building retrofit at scale. Progress is also being made with the launch of the

'Your Home Better service' and Octopus Heat Pump offer. Greater Manchester has also joined a consortium, led by the UK Green Buildings Council including West Yorkshire, London and the West Midlands and funded by Climate-KIC to develop proposals for city-led retrofit. Additionally, the GM Skills team have produced a Skills Action Plan which, with the newly actioned Low Carbon Finance Challenge Group, complements the exist building and energy Challenge Groups which manage the actions arising from the Greater Manchester Retrofit Task Force, Chaired by the Mayor.

- **Failure to enhance our water bodies against level of ambition.** The GMCA, Environment Agency and United Utilities (through their Tripartite Agreement) have published an Integrated Water Management Plan to draw together a collective vision, objectives, and actions, and identify accountability and resources for delivery. The plan will deliver progressive improvements in sustainable water management, enhancement of the natural environment, accelerate natural flood management interventions and reduce the operation of storm overflows.

Previous areas flagged as “red”.

- **Failure to meet ambitious recycling and waste diversion targets.** Verified figures for 2021/22 show an increase in the recycling rate from 48.4% in 2020/21 to 51.1% in 2021/22 for Greater Manchester. The increase is down to improved recycling facilities across the network of 20 household waste recycling centres operated by SUEZ recycling and recovery UK. This includes new containers for mattresses, carpets, and hard plastics as well as containers where household items can be donated for reuse. Diversion from landfill remains at over 98%. Measures continue to be implemented to increase recycling rates at HWRCs and household kerbside recycling to deliver against 2024 target (55%). This item is now flagged as “amber”.

4.0 RECOMMENDATION

The Partnership is recommended to:

- Note and comment upon the progress outlined in this report and latest position set out in the dashboard attached at:
 - a. Annex 01 (5 Year Environment Plan Performance Overview)

5 Year Environment Plan Performance Overview

Progress Status			
Area	Priorities/KPIs (to 2024)	Status	
Energy	Add at least 45MW of local renewable energy by 2024	↑	Green
	Additional 10TWh of low carbon heating by 2024	↔	Red
	Add at least a further 45MW of diverse and flexible load by 2024.	↔	Green
Buildings	Retrofit 61,000 homes/year (target 305,000 by 2024, 887,000 in total)	↑	Red
	Build 30,000 net zero carbon social rented homes by 2038.	↑	Green
	Reduce heat demand from existing commercial and public buildings	↑	Amber
SCP	38% reduction in industrial emission by 2025.	↓	Amber
	Limiting any increase in waste to 20%.	↑	Green
	Achieve a recycling rate of 55% by 2024, and 65% by 2035.	↑	Amber
Natural Env.	Managing our land sustainably, including planting 1m trees by 2024.	↔	Green
	Managing our water and its environment sustainably.	↑	Red
	Achieving a net gain in biodiversity for new development.	↑	Amber
	Increasing investment into our natural environment.	↑	Green
	Increasing our engagement with our natural environment - Number of Volunteers.	↑	Green
Transport	Reduce car use to no more than 50% of daily GM trips, by 2040 (remaining 50% to be public, or active travel)	↔	Amber
	Support expansion to 200,000 EVs in city region by 2024	↑	Green

2038 Carbon Target	Costs	Resources	Overall Delivery	Risk
Red	Green	Green	Amber	Amber

Key Risks			
Risk Event	Risk	Mitigation Plan	Post Risk
Failure of Environment Plan to achieve a step change in carbon emissions.	Red	Regular reporting to Greater Manchester Green City Region Partnership Board and WLT.	Amber
Level and depth of retrofit required to meet our overall ambitions is highly challenging.	Red	Focus on retrofit accelerator proposals as way of overcoming these barriers in a coordinated way.	Amber
Failure to enhance our water bodies against level of ambition.	Red	Intergrated water plan in place to deliver progressive improvements.	Amber
Failure to add an additional 10TWh of low carbon heating by 2024	Red	Focus on acceleration of Retrofit including the launch of the 'Your Home Better' service, Octopus Heat Pump offer and DEEP project delivery.	Amber

About this dashboard

Greater Manchester faces major environmental challenges that threaten the health and prosperity of our region. We are taking action with the Five-Year Environment Plan, launched in March 2019. The plan sets out our long-term environmental vision – to be carbon neutral by 2038 – and the urgent actions we all need to take between 2019 and 2024 to help achieve this. [You can find the plan here.](#)

This dashboard keeps track of our progress against those actions. It is divided into six pages, with a page dedicated to evaluating progress in each of the plan's priority areas. You can use the menu in the top left to navigate between them, or click on the links in the box below. For more on the data used within each screen, click on the info icon in the top right of each box (eg see the one on this box).

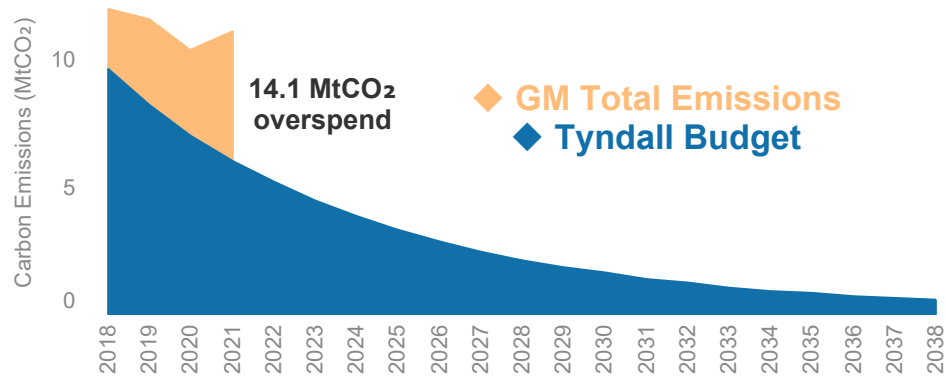
What targets are in the 5YEP and which are being tracked here? (click icon to navigate to page)

Page 26

Emissions		Goal: Be carbon-neutral by 2038	See 'Emissions' page
Energy		E1: Increase local renewable energy (electricity) generation, adding at least 45MW by 2024	See 'Energy' page
		E2: Decarbonise how we heat buildings, adding at least 10TWh of low carbon heating by 2024	See 'Energy' page
		E3: Increase diversity & flexibility of electricity supply, adding at least 45MW of diverse & flexible load by 2024	See 'Energy' page
Transport		T1: Increase use of public transport and active travel, with car use reduced to less than 50% of daily GM trips by 2040	See 'Transport' page
		T2: Phase out fossil-fuelled private vehicles for zero emission (tailpipe) alternatives, with 200,000 EVs in GM by 2024	See 'Transport' page
		T3: Tackle the most polluting vehicles on our roads	In development
		T4: Establish a zero emissions bus fleet, with all buses zero emissions (tailpipe) by 2035	See GMS dashboard
		T5: Decarbonising freight transport and shifting freight to rail and water transport	In development
Buildings		B1: Reduce heat demand from existing homes by retrofitting 61,000 homes per year	See 'Homes' page
		B2: Reduce heat demand from existing commercial and public buildings by 10% by 2025	In development
		B3: Reduce heat demand in new buildings, with all new development net zero carbon by 2028	In development
SCP		SCP1: Produce goods more sustainably, reducing emissions from industry by 38% by 2025 compared to 2018 levels	See 'SCP' page
		SCP2: Become more responsible consumers, with 2024 waste production increased by no more than 20% from 2018	See 'SCP' page
		SCP3: Manage our waste as sustainably as possible, achieving a recycling rate of 55% by 2024	See 'SCP' page
		SCP4: Reduce unnecessary food waste	In development
Natural Environment		NE1: Manage our land sustainably, including planting 1m trees by 2024 and improving greenspace for nature	See 'Natural Env.' page
		NE2: Manage our water and its environment sustainably, enhancing 542km of waterways by 2027	See 'Natural Env.' page
		NE3: Achieve a net gain in biodiversity for new development	In development
		NE4: Increase investment into our natural environment	In development
		NE5: Increase engagement with our natural environment, through volunteering and access to local greenspace	See 'Natural Env.' page

All

How is GM progressing against the 2038 carbon budget?

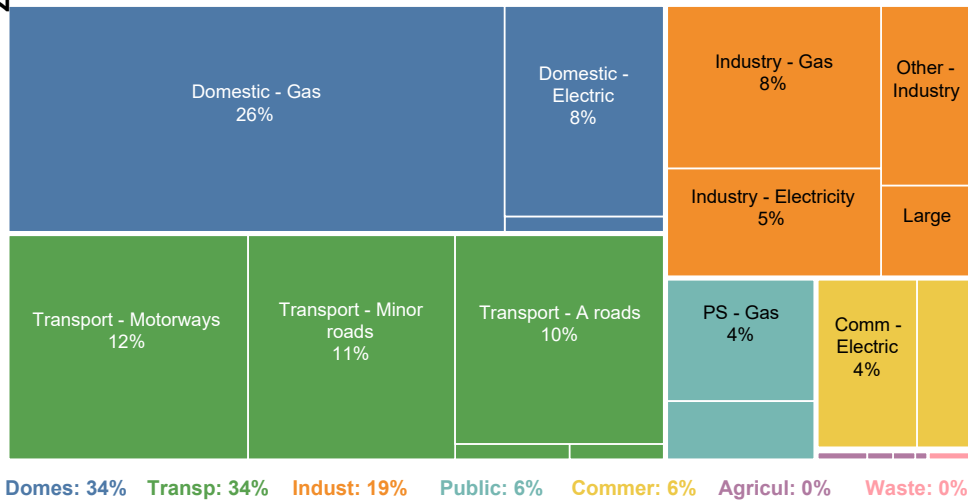


What is GM's 'business as usual' emissions forecast?

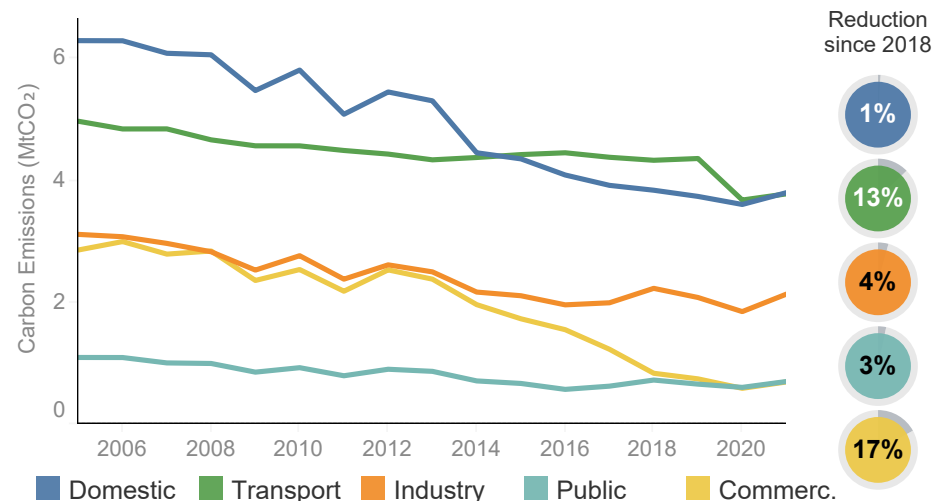


In development

Where are our emissions coming from?



How have our emissions changed over time?

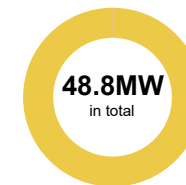
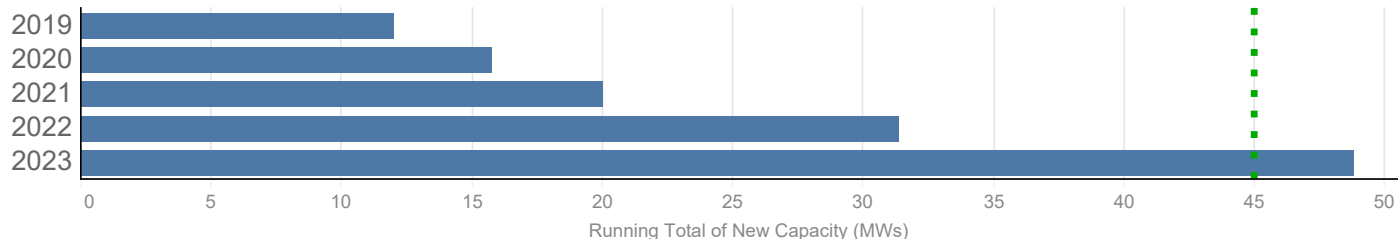


Greater Manchester's Energy Supply

Choose which local authorities to focus on: Greater Manchester

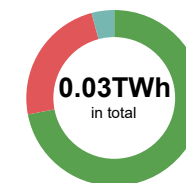
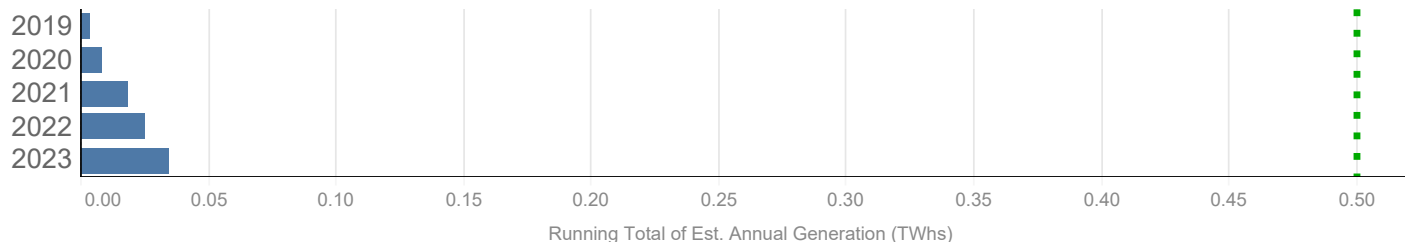
◆ Operational ◆ Under Construction - - - Target

E1: Increase local renewable energy (electricity) generation, adding at least 45MW by 2024



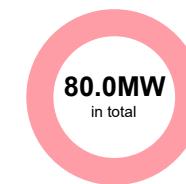
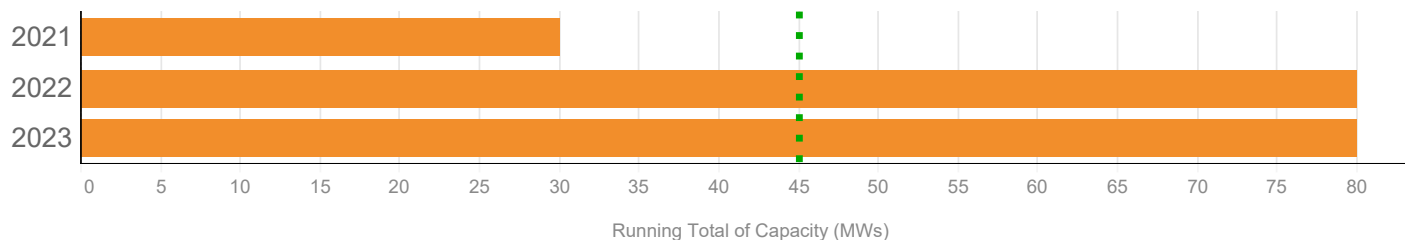
◆ Solar Photovoltaic

E2: Decarbonise how we heat buildings, adding at least 10TWh of low carbon heating by 2024



◆ Ground/Water SHP ◆ Solar Thermal ◆ Air SHP

E3: Increase diversity & flexibility of electricity supply, adding at least 45MW of diverse & flexible load by 2024



◆ Battery

Journey mode

Journey quarter

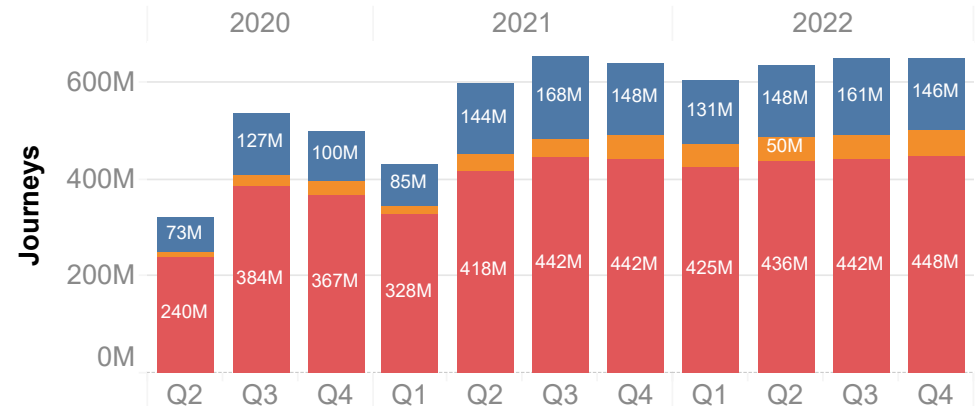
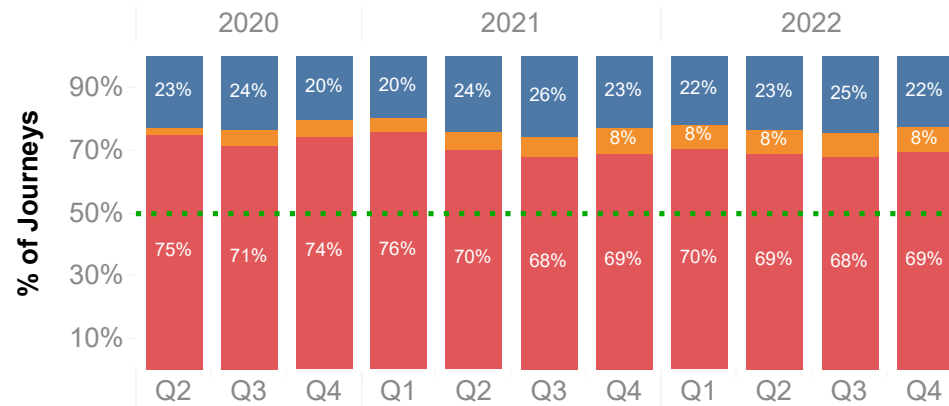
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T1: Reduce car use to no more than 50% of daily GM trips by 2040 (with the remaining 50% made up of public and active travel)

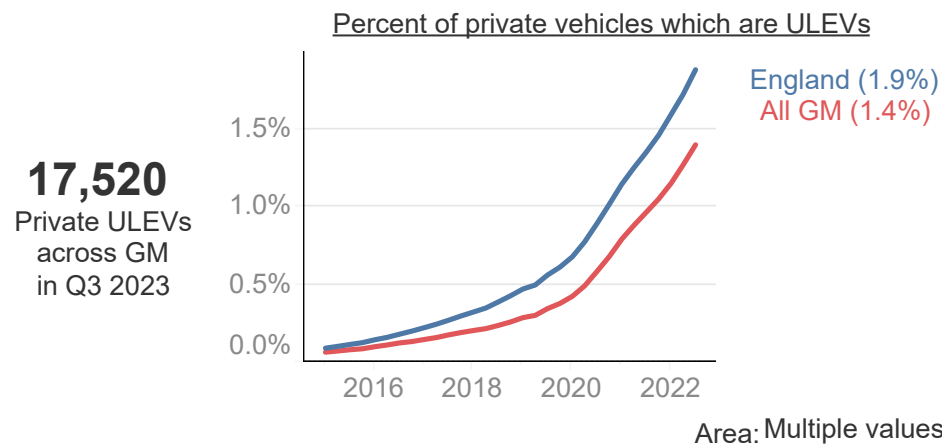


Active travel Public transport Road transport

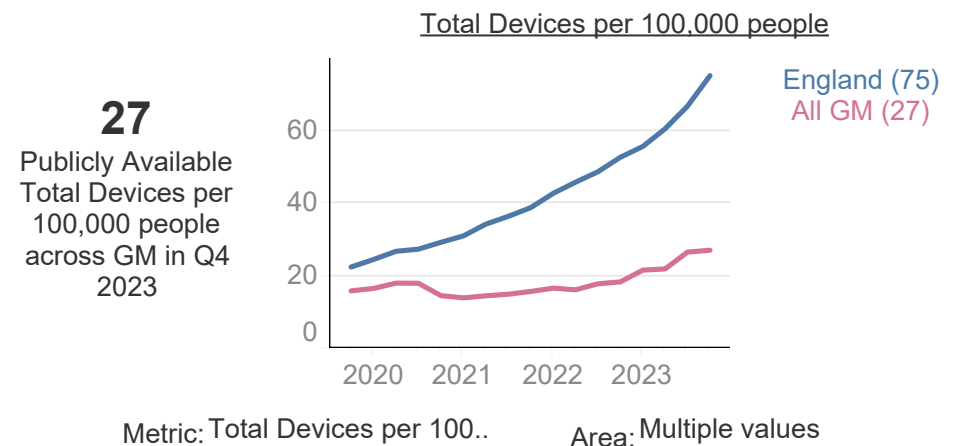


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T2: Support expansion to 200,000 EVs in GM by 2024



T2: Increase the number of publicly accessible EV charging points



Local Authority

Tenure

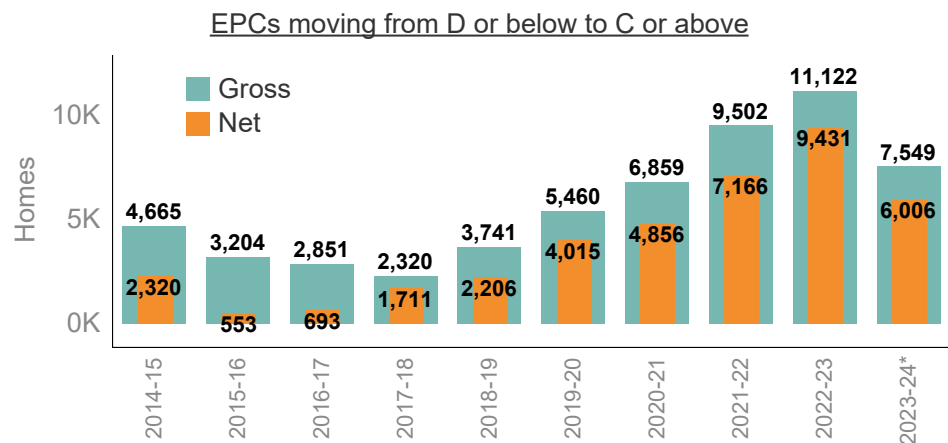
Property Type

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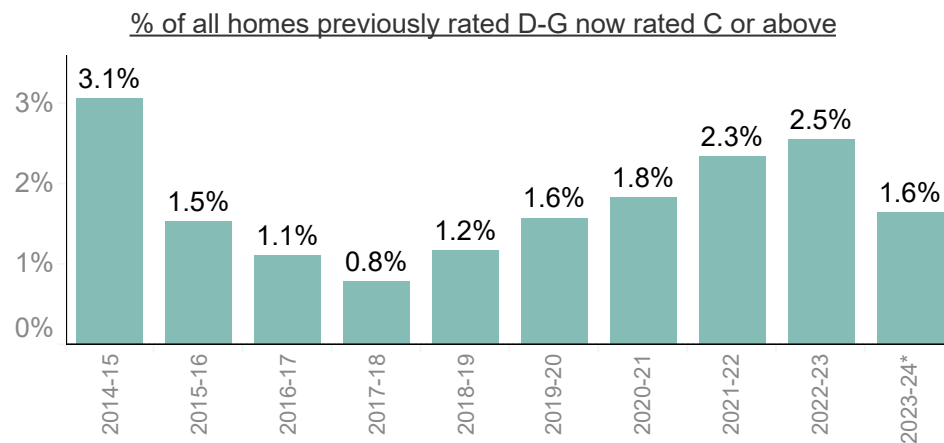
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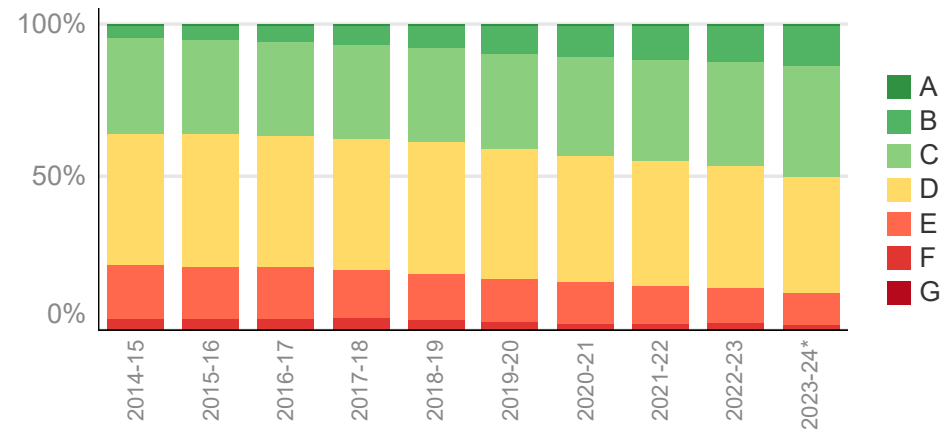
B1: Retrofit 61,000 homes per year (305,000 by 2024)



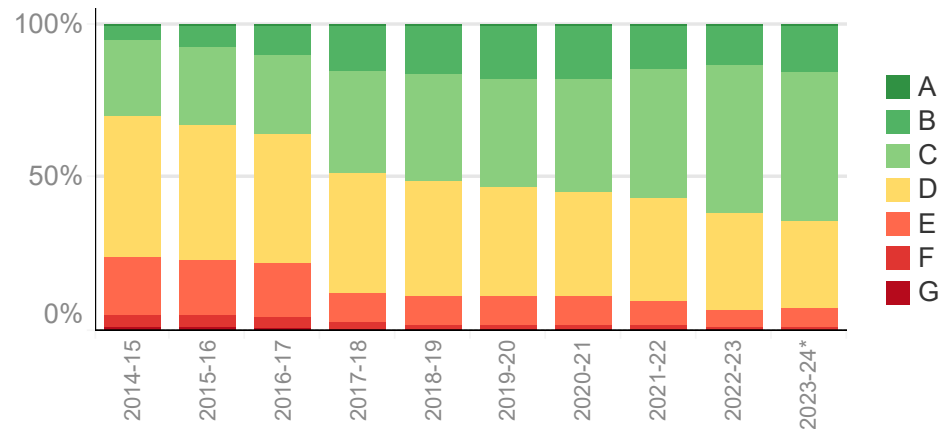
What proportion of inefficient homes are improving each year?



Proportion of EPC certificates in each band (all EPCs to date)

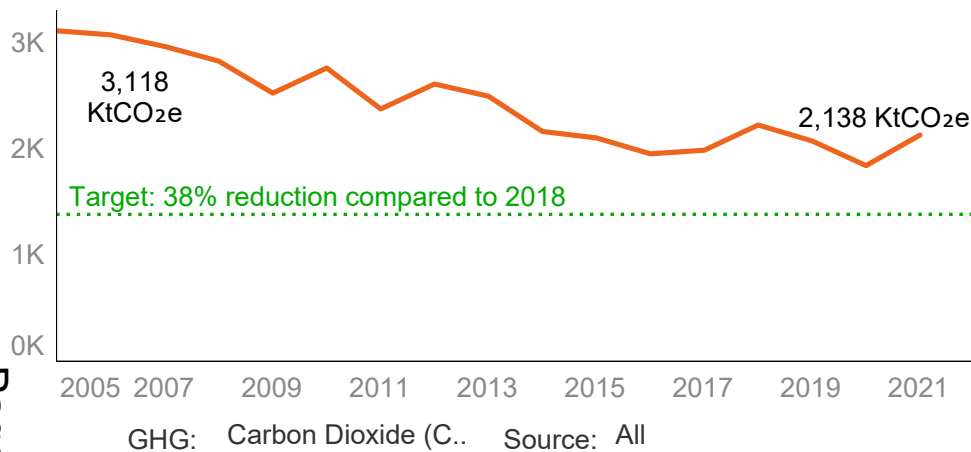


Proportion of EPC certificates in each band (registered in that year)

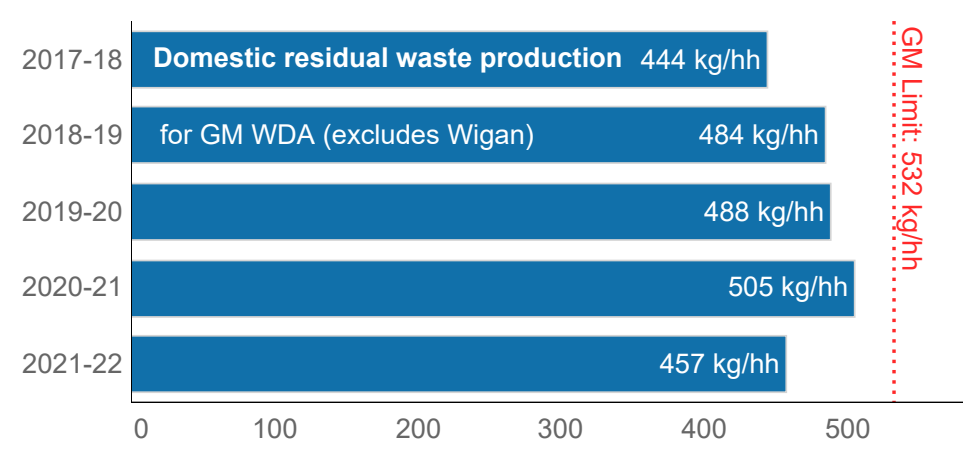


Filter data by area: Greater Manchester

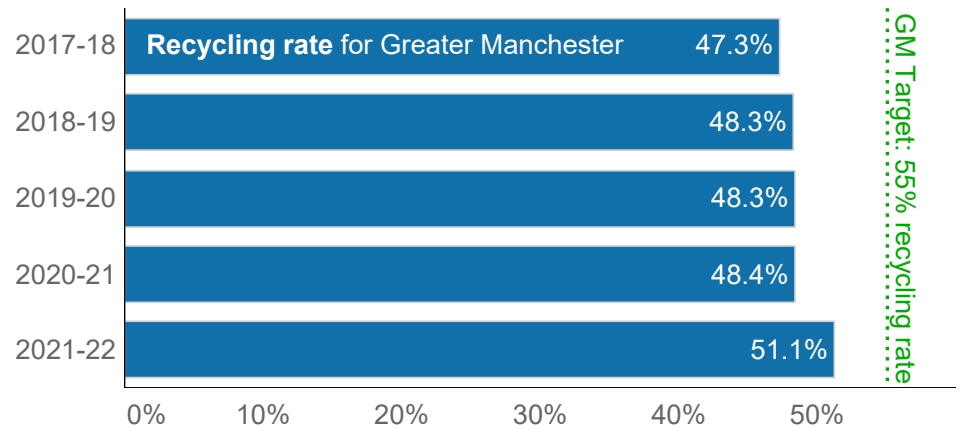
SCP1: Reduce industrial emissions by 38% by 2025



SCP2: Limit any increase in 2018 levels of waste to 20% by 2024



SCP3: Achieve a recycling rate of 55% by 2024

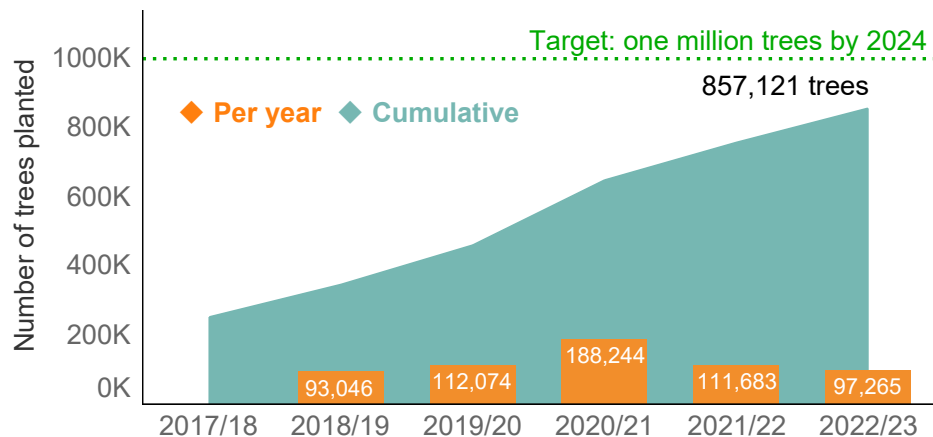


In development

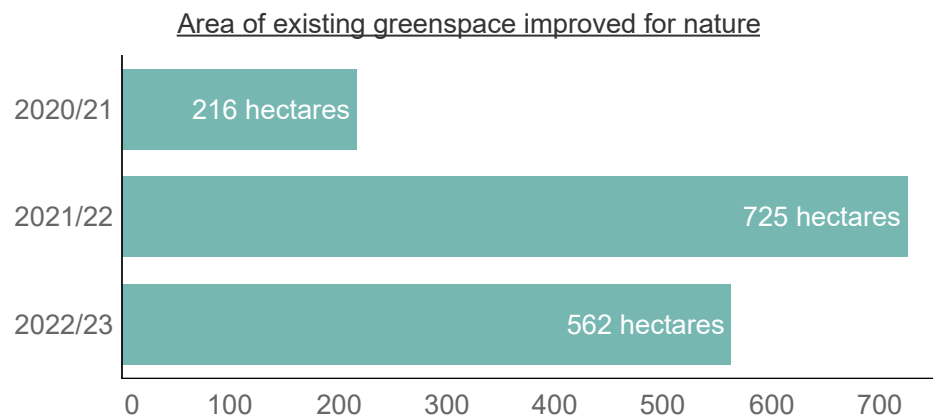


In development

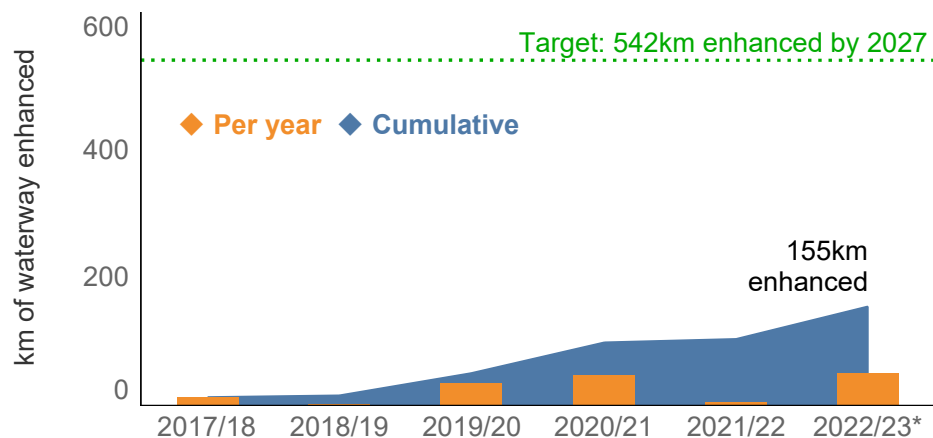
NE1: Plant one million trees by 2024



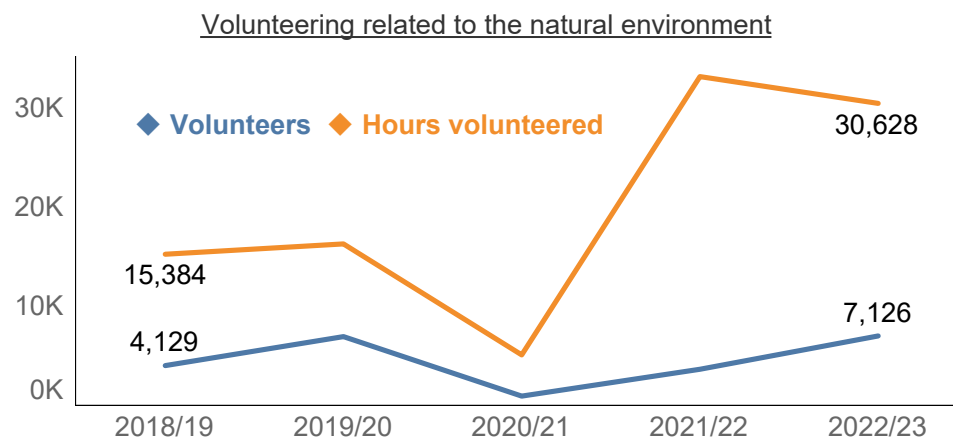
NE1: Improve existing areas of greenspace for nature



NE2: Enhance 542km of waterways by 2027



NE5: Increase engagement with natural environment





Greater Manchester Green City Region Partnership

Date: 25th January 2024

Subject: CHALLENGE GROUP UPDATES

Report of: Challenge Group Chairs/Vice Chairs

PURPOSE OF REPORT:

The purpose of this report is to outline the progress made by the 5 Year Environment Plan (5YEP) Challenge Groups in developing their key priorities through Task and Finish Groups.

The accompanying presentation provides an updated overview of the Challenge Group priorities and how these are being delivered through Task and Finish Groups.

RECOMMENDATIONS:

The Partnership is asked to:

- Note the progress in developing the Mission Based Approach and the associated Challenge Groups.
- Consider any specific issues raised by the challenge group chairs or vice chairs.

CONTACT OFFICERS:

Mark.Atherton@greatermanchester-ca.gov.uk

Robyn.Smith@greatermanchesrer-ca.gov.uk

1.0 INTRODUCTIONS

The purpose of the Challenge Groups are to:

- Deliver the 5YEP work programme
- Report back on progress and key challenges/barriers to the Green City Region Partnership
- Utilise lobbying/influencing function when appropriate to drive agenda.
- Work in collaboration with other challenge groups to identify cross cutting issues.

All challenge groups have given their initial feedback on the development of the next 5 Year Environment Plan, including the existing vision and the draft LA actions. This feedback is now being collated and will be brought to the next round of challenge groups for further discussion.

2.0 GREEN COMMS DELIVERY CHALLENGE GROUP

Topics discussed

Since the last partnership meeting the challenge group has continued its work on two main work streams:

- 1) Audience mapping – a GM mapping document has been produced to understand the reach of the reach of the challenge group and the different communication and engagement activities with different audiences.
- 2) Campaign sharing and amplification – a document has been developed to track all partners campaigns.
- 3) Retrofit Comms – members of the challenge group have worked with the GMCA on the development of the comms plan for the Local Energy Advice Demonstrator.

Challenges/opportunities raised

- Sharing partner's upcoming campaigns, events and good news stories to amplify reach.

Future priorities/work/topics

- Supporting 5YEP communications
- Continuing to utilise each other's channels and networks to amplify communications.
- Set up a task and finish group to develop a 'positive news stories pack' of successful projects across GM.
- Early engagement in the development of the next Green Summit
- Opportunity to look at influencing behaviours e.g. communicating the top 10 actions people can take.

3.0 LOW CARBON

Topics discussed

The last meeting of the challenge group focused on the Carbon and Climate actions in the 5YEP.

A presentation was given to the challenge group on the progress against the current 5YEP and the journey to 2038 set out in the Local Area Energy Plans. The group then took part in a feedback session giving comments on the current 5YEP vision, the challenge statements for each chapter of the next 5YEP and the actions outside of Local Authority control to include in the next 5YEP.

Challenges/opportunities raised

- Several challenge group members suggested that the current chapter structure needed to be rethought. The chapter 'Our Leisure' was challenging to apply to low carbon without overlap with other chapters.

- Key feedback on the actions included: the need to support different types of residents with retrofit i.e. owner occupier vs rented sector, accelerate commercial retrofit and work with specific industrial sectors on decarbonisation.
- Salford University also raised their recent submission of a UKRI bid for integrated green skills development.

Future priorities/work/topics

Retrofit and decarbonisation of heat were identified as the key areas of challenge to explore at future meetings.

4.0 NATURAL CAPITAL GROUP

Topics discussed

The Natural Capital Executive Group's recent meeting included presentations on

- Local Nature Recovery Strategy and the link to the 5YEP.
- Peatland Recovery.
- Natural Environment Engagement.

As with the other challenge groups the NCG also fed back on the vision and actions in the 5YEP.

Challenges/opportunities raised

- The need to ensure the LNRS and 5YEP are linked up and that the role of each is clearly defined.
- To ensure that natural environment, nature recovery and resilience is highlighted alongside carbon reduction in the next 5YEP.
- To ensure that environmental equality runs throughout the actions in the 5YEP.
- To continue to engage the group on the Peatland recover work being led by Natural England.

- To note that a Climate Adaptation Plan is being developed that this group will contribute too.

Future priorities/work/topics

- Continued engagement on the 5YEP.
- A Climate Adaptation Plan is being developed that this group will contribute towards.

5.0 SUSTAINABLE CONSUMPTION AND PRODUCTION

Topics discussed

At the last meeting, the Challenge Group had updates on the following items:

- Behaviours Insights from Public First. The results were shared from the initial focus groups and the plan for the poll was presented.
- Single Use Plastics Task and Finish Group with the Local Authorities.
- GM Fashion and Textiles from MMU.
- The 5YEP and had a chance to feedback on the waste and resources section.

Challenges/opportunities raised

A discussion was held on the new subgroups that are being set up with an ask made to members to consider which task and finish group they would like to join. The membership for the following groups is currently being determined and meetings will be held ahead of the next Challenge Group meeting,

- Plastics
- Food waste
- Behaviour Change

Future priorities/work/topics

The next meeting will pick up the next steps for the sub groups and the 5YEP.

6.0 FIVE YEAR ENVIRONMENT PLAN FORUM

Topics discussed

The last meeting of the Forum focused on the 5YEP and covered the carbon and climate and biodiversity/green and blue spaces actions.

Challenges/opportunities raised

- The need for an element on overall education on climate change being incorporated into communications strategies and stories.
- The group expressed an interest in the future use of the lobbying work previously discussed at the Forum.

Future priorities/work/topics

- Continued engagement on the 5YEP focusing on the waste and resources, air quality and climate adaptation sections of the plan.
- To bring back the lobbying work and discuss next steps.
- Greenwash free city initiatives.

Work Programme Update

ITEM 06a

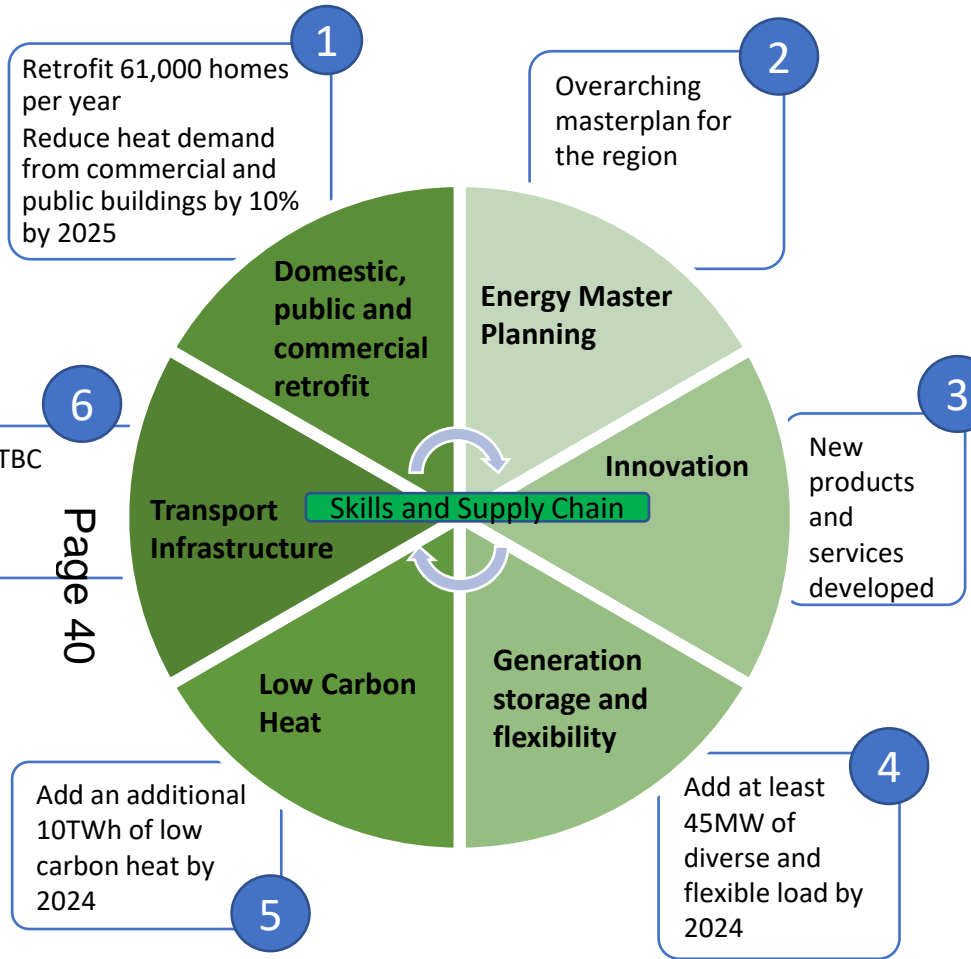
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#GMGreencity

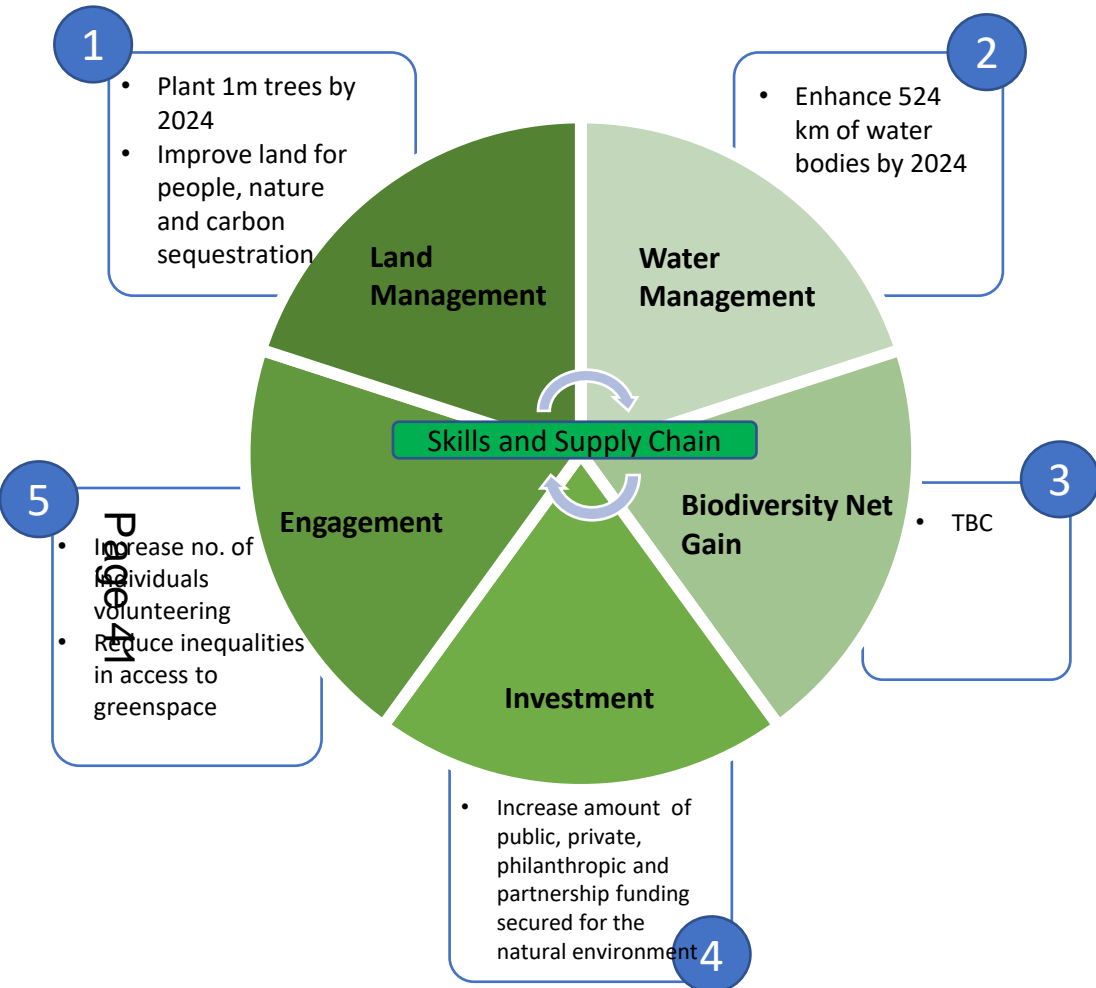
**GREATER
MANCHESTER**
DOING THINGS DIFFERENTLY

Low Carbon



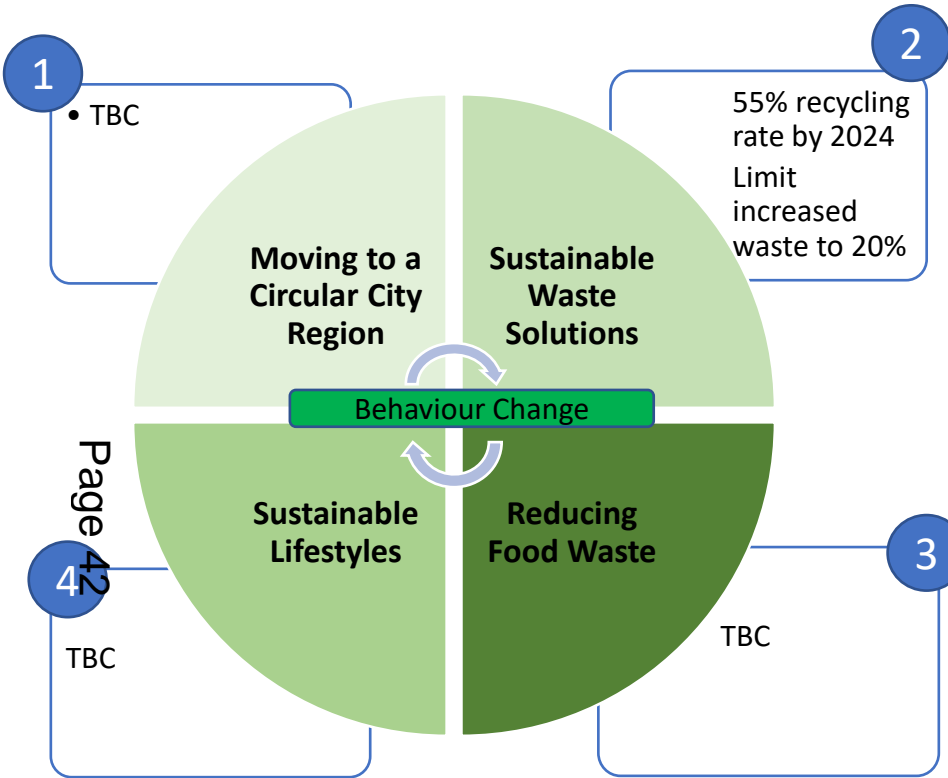
Project/Task & Finish Group	Lead	Priority	Deliverable	RAG
Your Home, Better	GMCA/Retrofit Works	1	Deliver able to pay retrofit scheme	Red
Retrofit Skills T&F	UoS/ Retrofit Taskforce	1	Deliver skills plan for retrofit	Green
Retrofit Finance T&F	GFI/Retrofit Taskforce	1	Work with the retrofit taskforce to deliver finance plan for retrofit	Green
Local Energy Advice Demonstrator	GMCA	1	Deliver energy advice service to residents	Green
Social Housing Decarbonisation Fund Wave 1,2	GMCA/RPs	1	Deliver retrofit measures to 1286 properties wave 1, 23/24 40% of grant funding wave 2	Yellow
ECO 4	GMCA`	1	Deliver whole house retrofit to circa 600 fuel poor/low income homes	Yellow
ERDF Homes as Energy systems	Procure Plus	1	Deliver energy efficiency and technologies measures to GM homes	Green
People Powered Retrofit – One Stop Shop	Carbon Coop	1	Launch of offer for early adopter, owner occupier able to pay	Green
Public Sector Decarbonisation Scheme 3a single/multi and 3b	DoPE Group	1	Complete retrofit measures of public buildings	Green
Commercial buildings	Bruntwood/MCCA	1	Engage with commercial building partners to deliver retrofit programme	Yellow
Energy Innovation Agency (EIA)	Universities/Bruntwood/SSE/GMCA/ Hitachi	3	Support businesses and bring new technologies to market	Green
Hydrogen Fuel cell	MMU/Cadent	3	Explore hydrogen fuel cell innovation	Green
Trafford Energy Park	Carlton Power	3	Local green hydrogen production	Green
Go Neutral & schools solar PV	GMCA	4	Develop pipeline to deliver 85MW of Solar PV	Green
Faith community energy	Diocese of Salford	4	Deliver renewable energy and decarbonisation of faith buildings	Green
Heat Pump Offer	Octopus	5	Heat Pump offer for households	Yellow

Natural Environment



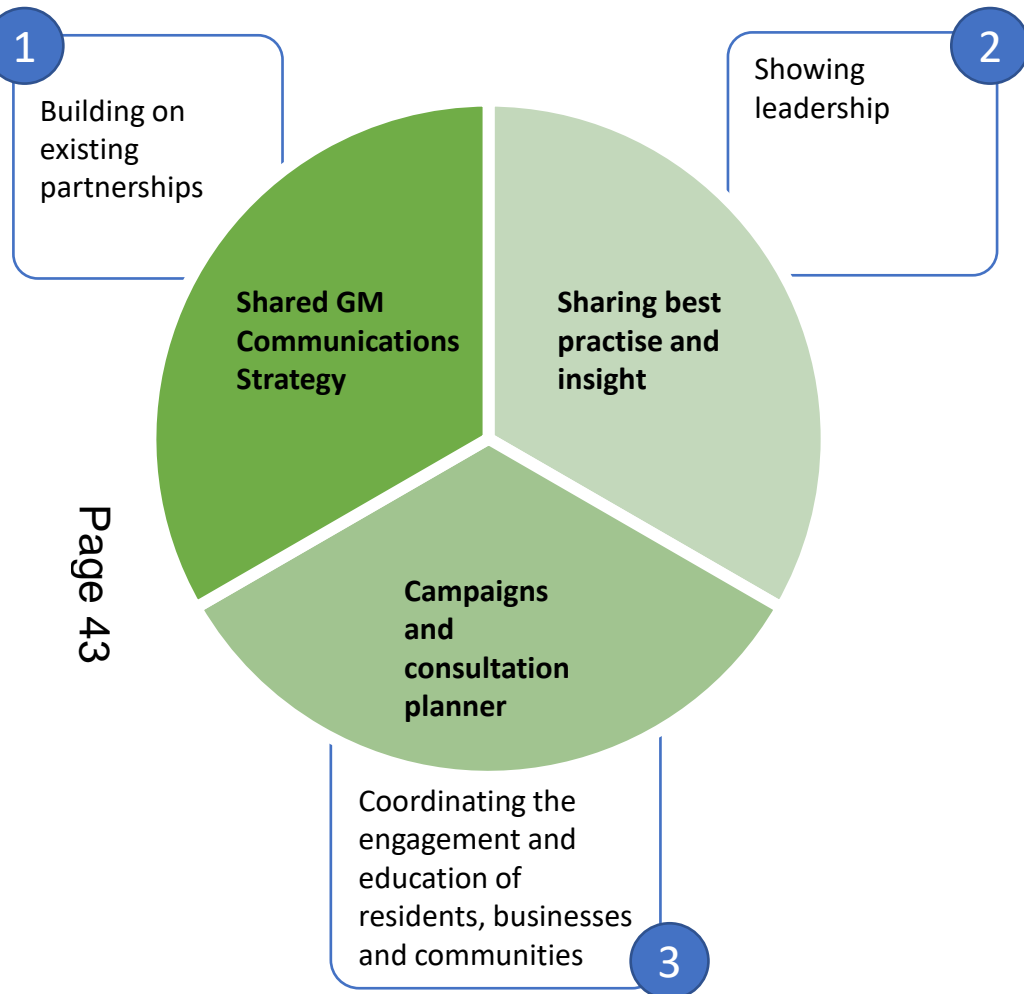
Project/ Task	Organisation	5YEP KPI	Deliverable	RAG
GM Tree and Woodland Strategy	City of Trees	1	Increased tree cover and benefits provided by them, through planting 1m trees by 2024	Green
Peatland restoration	Natural England	1	Re-run the state of the bog work (uplands) Re-run the peat pilot (lowlands)	Yellow
Natural Course	GMCA/EA	2	Develop next stage of INNS following 2022 survey Deliver survey on distribution of otters Deliver microplastic study	Green
Biodiversity Net Gain (BNG)	GMEU	3	Prepare for and support the districts to deliver BNG.	Green
Local Nature Recovery Strategy	GMCA	3	Scope and develop Local Nature Recover Strategy	Green
Nature Based Solutions Delivery	GMCA		Assembly of funding to take forward delivery of SuDS Retrofit on public estate (Project Raincoat)	Red
			Walkden SUDS Neighbourhood detailed design and begin construction	Yellow
			SUDS Design Guide (TfGM)	Green
GM Environment Fund and Green Spaces Fund	GMET	4	Support organisations delivering Green Spaces Fund projects and launch round 4	Green
			Increase public, private and philanthropic and partnership funding	Green
Natural Environment Social Prescribing activity	GMHSCP	5	Increased number of individuals volunteering and with access to green space, facilitated by a programme of green social prescribing	Green

Sustainable Consumption and Production



Project/ Task	Lead	5YEP KPI	Deliverable	RAG
Sustainable Procurement	GMCA	1	Work with procurement team to develop sustainable procurement practices	
Scope 3 emissions	GMCA/LAs	1	Work with LAs on scope 3 emissions plan	
CIRCuit: CE in the Built Environment	ReLondon	1	Deliver innovation interventions looking at circular economy in the built environment	
Resource/consumption mapping (textiles)	MMU	1	Support delivery of textiles sub groups - data mapping, recyclables, productions	
Food roadmap and strategy	GM Food Board	3	Development of food vision and toolkit	
Net Zero Business support programme	Growth Co	4	Support business net zero development	
R4GM	GMCA	4	Deliver waste recycling/Reduction campaigns	
Single Use Plastics	GMCA/LAs	4	Work with local authorities to reduce sups	
Behaviour Insights	GMCA/TfGM	4	Deliver behavioural insights work to inform sustainable lifestyles	
Bee Net Zero	GM LEP	4	Deliver a programme of business support	
Roll out programme of carbon literacy	Carbon Literacy Trust	4	Deliver carbon literacy courses	

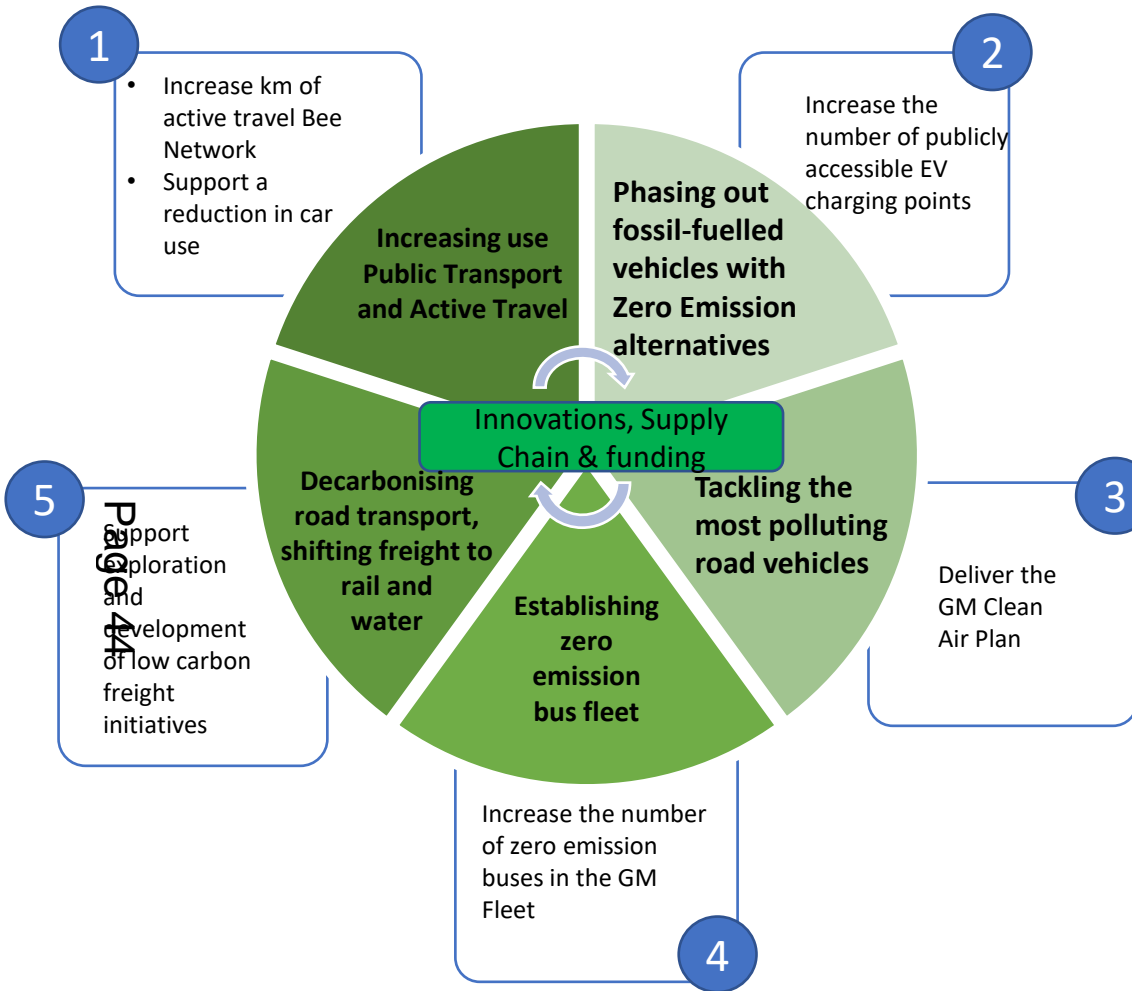
Green Communications Delivery



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Project/Task	Lead	5YEP KPI	Deliverable	RAG
Deliver on shared GM Communications strategy	GMCA	1	Continued sharing / alignment of campaigns across the group	
Map audiences / reach of the challenge group	Challenge group partners	1	Task and finish group set up	
Review green city region shared channels and make recommendations	GMCA/ Challenge group partners	1	Newsletter produced with updated branding, review of social media and website completed.	
Support listening events by supporting events in own organisations	All	1		
Local Energy Advice Demonstrator: external facing campaign targeting different resident audiences. Will incorporate ECO and Your Home Better.	GMCA	3	Campaign look and feel, partner communications toolkit, advertising.	
Powering Greater Manchester: external facing campaign targeting audience groups based on their circumstances (e.g. schools, commercial building owners etc), helping them switch to low carbon energy.	GMCA	3	Campaign look and feel, partner comms toolkit.	
Local Nature Recovery Strategy: campaign driving key stakeholder groups to engage with the development of the LNRS, alongside championing those already setting the standard for nature recovery.	GMCA	3	Campaign social content, case studies, stakeholder update newsletters, project blogs.	

Transport



Project/Task	Lead	5YEP priority/KPI	Outcome	RAG
Active Travel Bee Network	TfGM	1	To provide cycling and walking routes to get people moving	
GM Bike Hire Scheme	TfGM	1	Promotes and supports modal shift to encourage more walking, cycling and "active" lifestyles	
E-Hubs Pilot – cargo bikes	TfGM	1	To pilot the use of cargo bikes	Complete
E-scooter trials	TfGM	1	Part of DfT trial to see how e-scooter rental schemes can be successfully operated in the UK	
ZEBRA funding	TfGM	2	Introduction of 170 zero emission buses and new electric depot in Stockport	
CRSTS funding	TfGM	2	A third of the bus fleet as zero emission by 2027.	
Clean Commercial vehicle fund: HGV – replacement and retrofit	TfGM	3	Clean Air Plan fund to replace or retrofit HGV vehicles that are not compliant with clean air standards	
Clean Bus Fund: replacement and retrofit	TfGM	3	replace or retrofit buses that are not compliant with clean air standards	
Deliver the GM Clean Air Plan	TfGM	3	tackle NO2 Exceedances at the Roadside by 2026	
EV charging network to support 200k vehicles	TfGM	4	Increased number of publicly owned EV connectors in GM	
Establish how the public sector can best influence the rollout of EVC	TfGM	4	Commission Greater Manchester EVC Study	Complete
Incorporation of Freight Strategy principles and objectives into the next LTP	TfGM	5	Support exploration and development of low carbon freight initiatives	

GREATER MANCHESTER

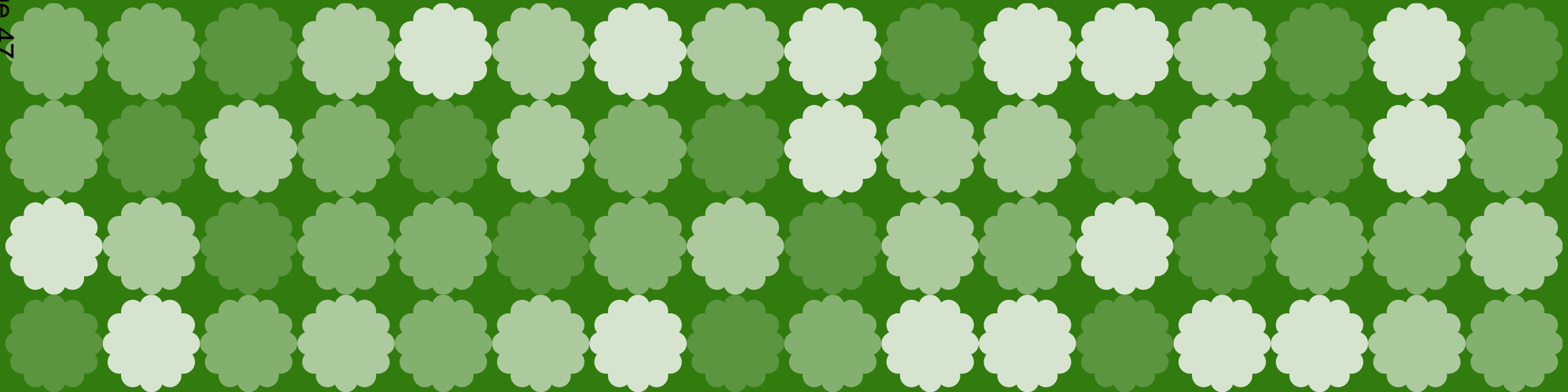
DOING THINGS DIFFERENTLY

@GM GreenCity | #GMGreenCity

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Sustainability – Consumers’ Attitudes Survey- October 2023

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Agenda Item 7

A REMINDER OF THE STUDY



The latest wave of our sustainability study took place in October 2023, with the next wave (wave 10) taking place in April 2024



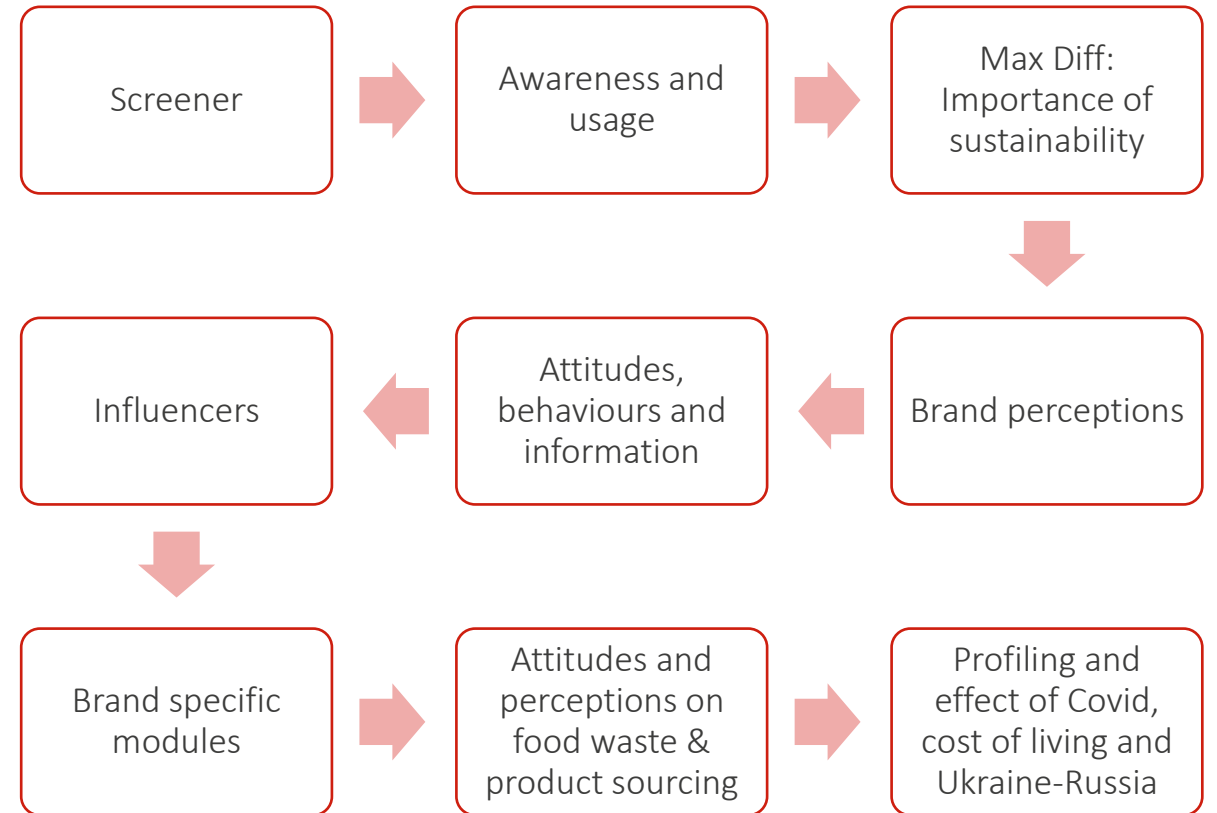
UK study representative of the 16+ population



In the latest wave we spoke to 4,078 people (+ a boost of 500 people in the GMCA region)



The survey takes about 20 minutes to complete



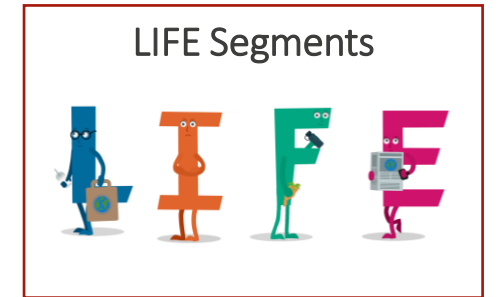
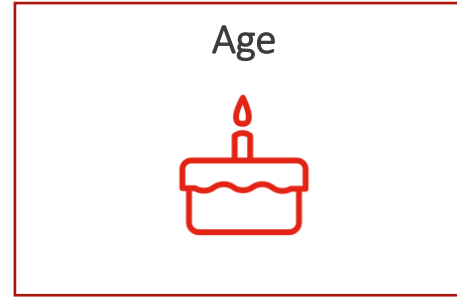
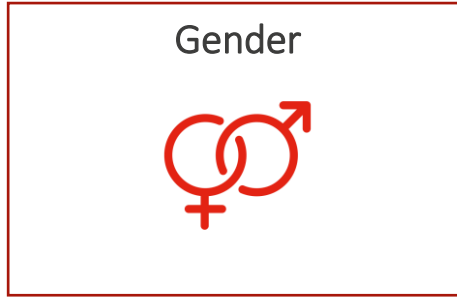
SUB-GROUPS

Throughout this report we have cut the data by several key sub-groups where base sizes have allowed:

Significant sub-group differences within the GMCA sample are indicated by grey boxes, while slides without any differences are indicated as such. In instances where there are a lot of significant sub-group differences, we have shown those which we feel are most relevant to GMCA.

Sub-group differences are only shown if the base size is bigger than 50.

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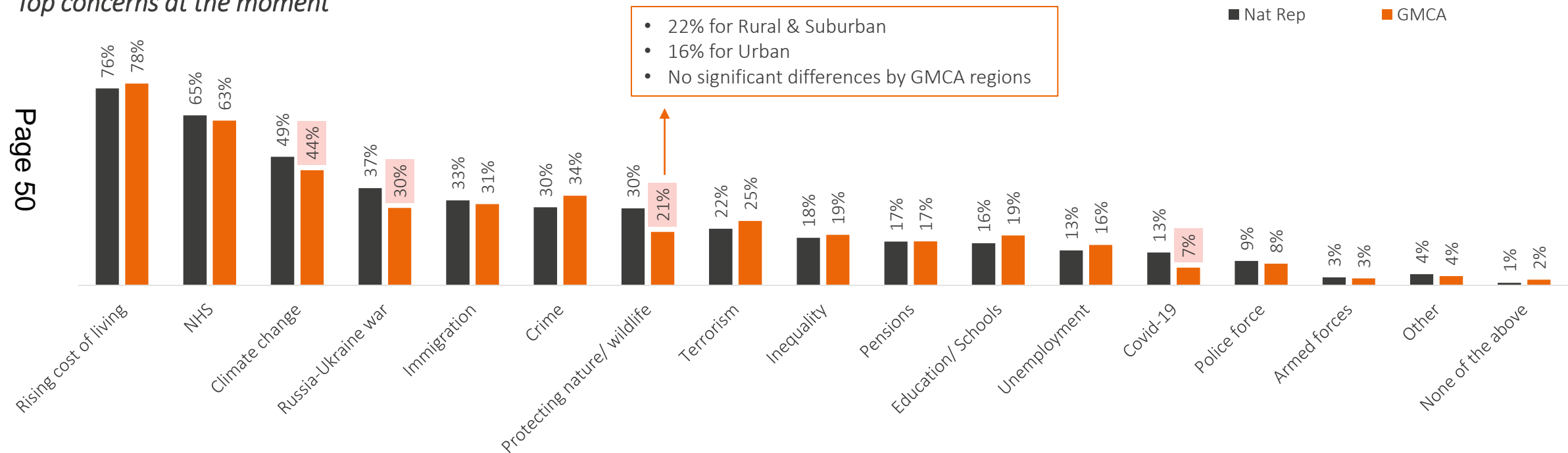


AREAS OF CONCERN

Significantly higher than the UK
Significantly lower than the UK

The rising cost of living is the biggest concern amongst GMCA residents followed by the NHS, in line with the UK. Although climate change is ranked 3rd, it is considered less important compared to the rest of the UK. We see a similar trend with 'protecting wildlife' which also has less strength of support than the UK average.

Top concerns at the moment



65+ GMCA

Were **more likely** to be concerned with the NHS (81%), Russia-Ukraine war (45%), and immigration (50%)

25-34 GMCA

Were **more likely** to be concerned with unemployment (31%) and **less likely** to be concerned about the NHS (48%)

Children in household GMCA

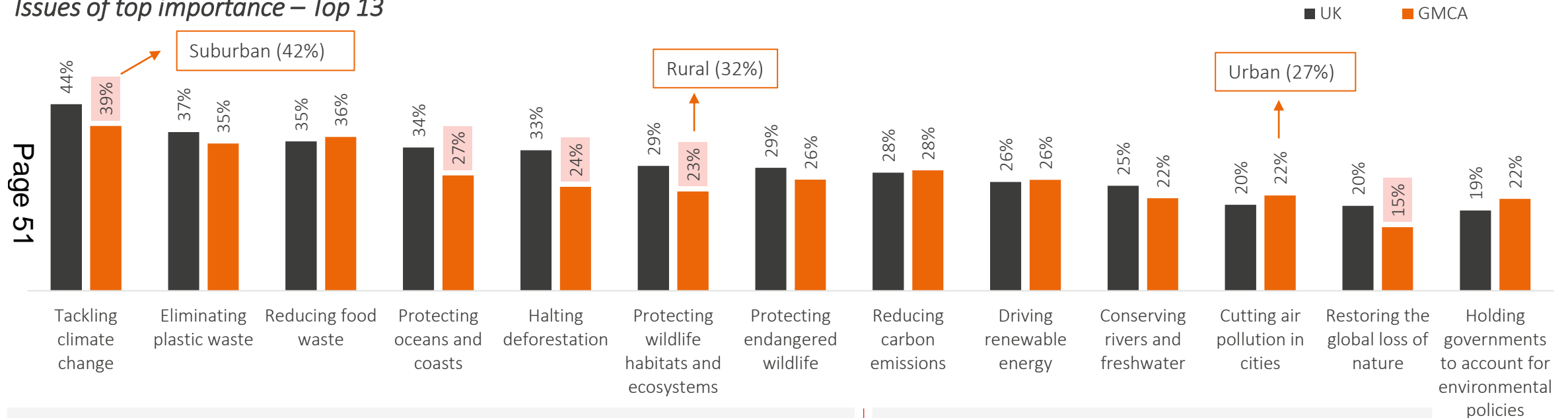
Were **more likely** to be concerned with education (29%) and **less likely** to be concerned about the NHS (50%)

Significantly higher than the UK
 Significantly lower than the UK

GLOBAL ENVIRONMENTAL ISSUES – TOP IMPORTANCE (TOP 13)

Consistent with the UK, tackling climate change is the highest priority amongst GMCA residents, while they are significantly less likely than the UK to feel it's important to protect certain environments, e.g. oceans and forests.

Issues of top importance – Top 13



Females GMCA
 Were **more likely** to say reducing food waste (43%) and **less likely** to say driving renewable energy (17%)

65+ GMCA
 Were **more likely** to say conserving rivers and freshwater (36%)

16-34 GMCA
 Were **more likely** to say reducing the impact of food on biodiversity loss (18%) and **less likely** to say conserving rivers and freshwater (13%) and protecting wildlife habitats and ecosystems (12%)

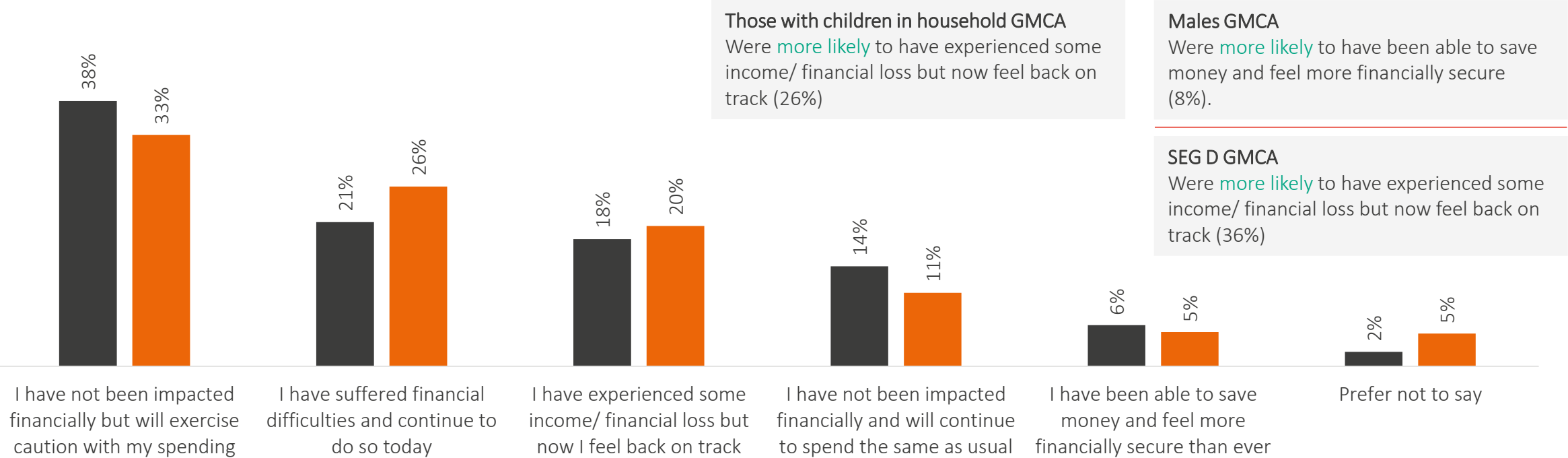
FINANCIAL SITUATIONS OF SHOPPERS

Over a third of consumers have not been impacted financially over the last 3 months but are still being cautious with their spending.

What financial situations have shoppers been in over the past 3 months?

■ UK ■ GMCA

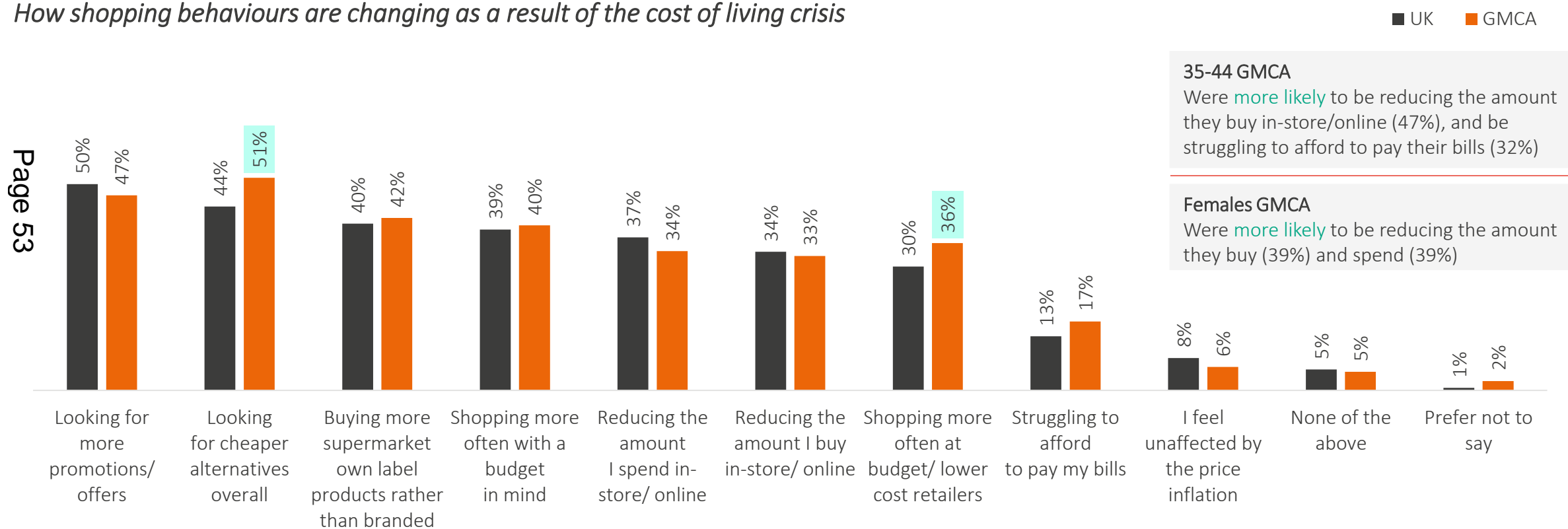
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HOW IS THE COST OF LIVING CRISIS AFFECTING SHOPPING BEHAVIOURS?

Shoppers are looking for promotions and/or cheaper alternatives. GMCA residents are seeing similar behaviour changes, although they are more likely to be looking for cheaper alternatives and shopping more often at budget retailers.

How shopping behaviours are changing as a result of the cost of living crisis



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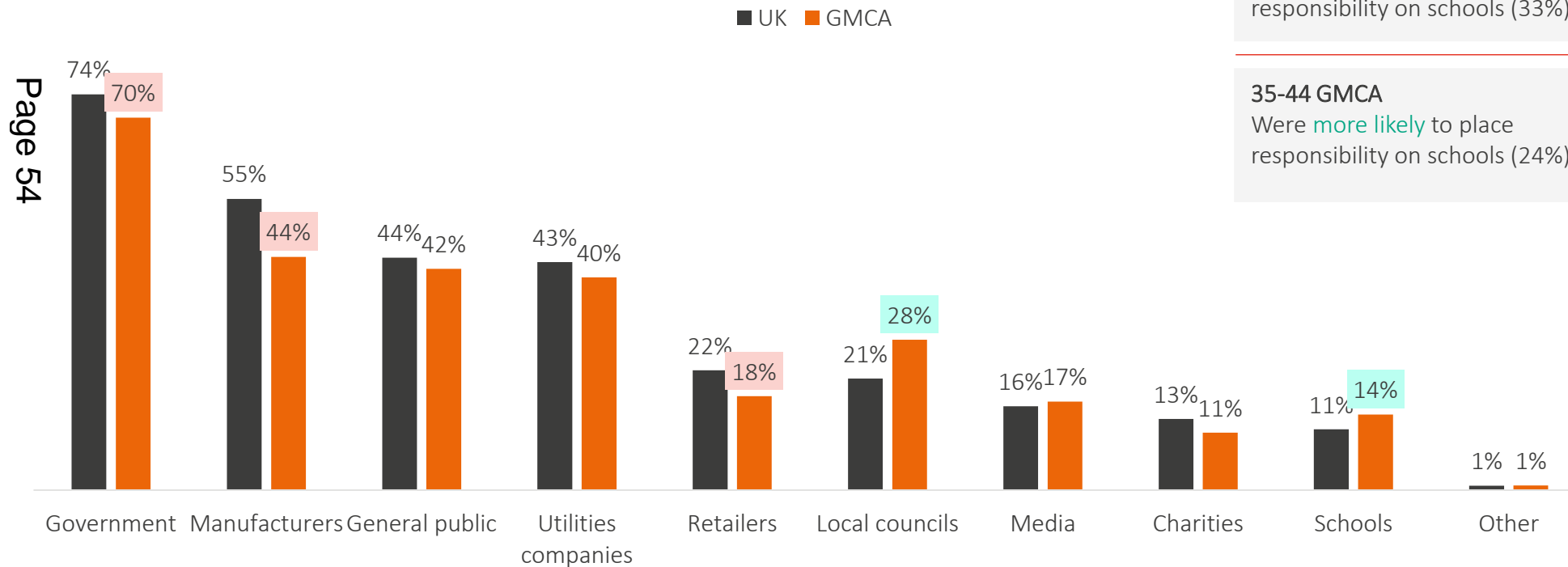
RESPONSIBLE FOR TACKLING CLIMATE CHANGE - PROMPTED

Significantly higher than the UK

Significantly lower than the UK

The Government is deemed most responsible for tackling climate change, consistent across GMCA and the UK. GMCA residents are also more likely to place responsibility on their Local Councils, putting pressure on GMCA to act. Schools are also important, especially amongst the 16-24 age cohort.

Responsibility for tackling climate change



16-24 GMCA
Were **more likely** to place responsibility on schools (33%)

25-34 GMCA
Were **more likely** to place responsibility on media (26%)

35-44 GMCA
Were **more likely** to place responsibility on schools (24%)

55-64 GMCA
Were **more likely** to place responsibility on utility companies (56%)

CONSUMER ATTITUDES (GREEN BEHAVIOURS AND PERCEPTIONS)

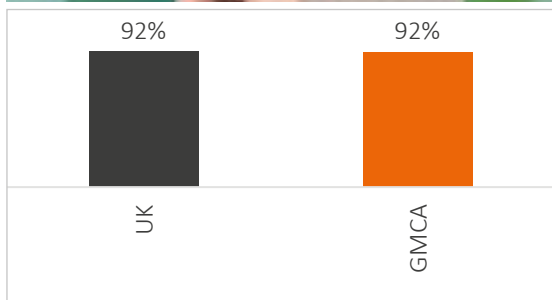
Significantly higher than the UK
Significantly lower than the UK

Recycling is of high priority to the UK and GMCA sample alike. GMCA residents are less likely to be making lifestyle compromises to benefit the environment.

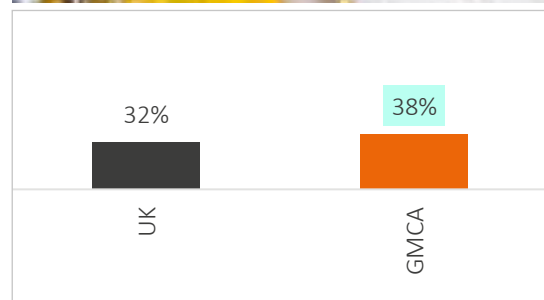
% Agree

I make a conscious effort to recycle *I don't really think about the amount of packaging on the products I buy* *I make lifestyle compromises to benefit the environment* *The environment is low priority compared to a lot of other things*

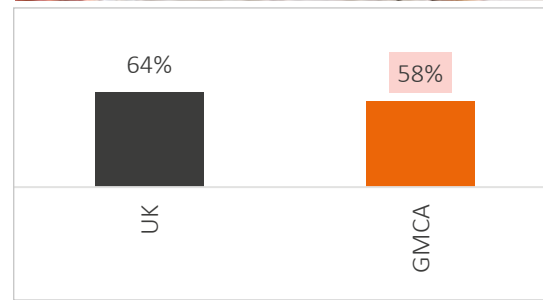
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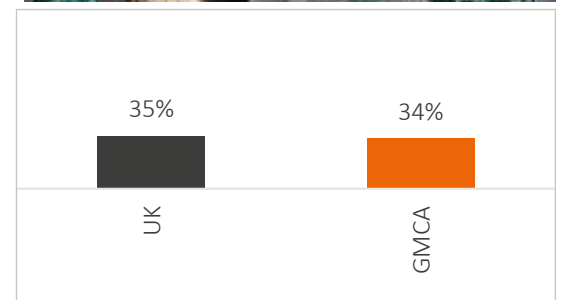
65+ GMCA
Were **more likely** to make a conscious effort to recycle (98%)



25-34 GMCA
Were **more likely** to not really think about the amount of packaging (53%)



Those with children in the household GMCA
Were **more likely** to make lifestyle compromises (65%)



CONSUMER ATTITUDES (ENVIRONMENTAL CONCERN)

Over half of consumers are willing to pay more for products from companies committed to the environment, and are actively looking for information about the environment and climate change. There is no difference between GMCA residents and the UK average.

% Agree

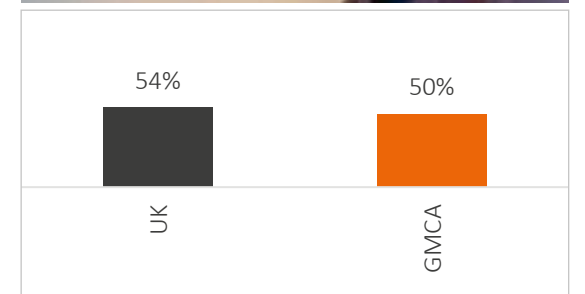
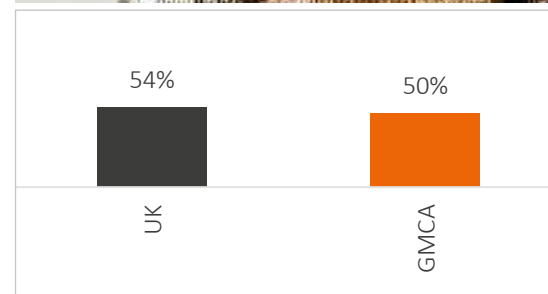
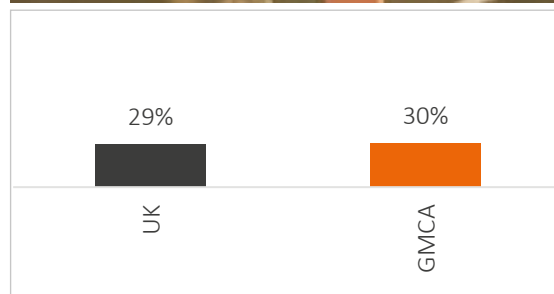
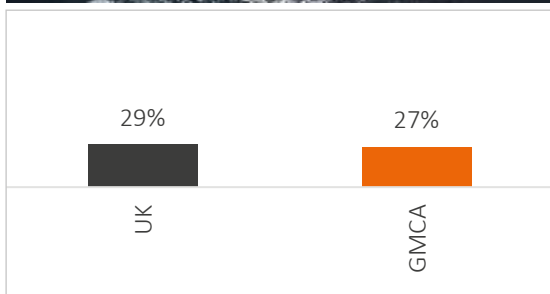
The effects of climate change are too far in the future to really worry me

It's not worth me doing things to help the environment if others don't do the same

I'm willing to pay more for products from companies committed to the environment

I actively look for information about the environment and climate change

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25-34 GMCA

Were **more likely** to be willing to pay more to environmental companies (62%)

25-34 GMCA

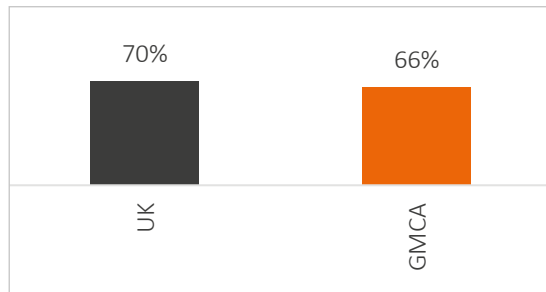
Were **more likely** to actively look for information (60%)

CONSUMER ATTITUDES (SOCIAL POLICIES)

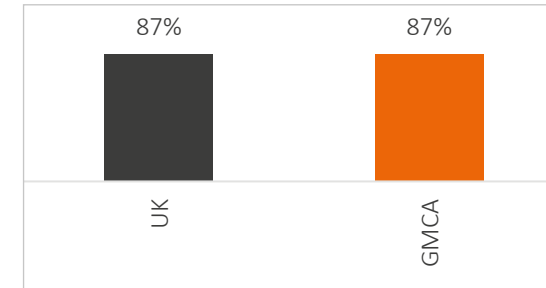
The majority of consumers believe plastic packaging should be banned and there should be greater investment in renewable energy. GMCA residents agree with these attitudes to a similar level as the UK average.

% Agree

The use of plastic in packaging should be banned



There should be greater investment in renewable energy



CONSUMER ATTITUDES (ENVIRONMENTAL BURDEN)

The burden is seen to lie the most with companies & the government to do more, but still consumers admit they could do more to help. The 35-44 age cohort in the GMCA region are most likely to want to do more and are therefore a key audience to engage.

% Agree

The government need to do more to help the environment

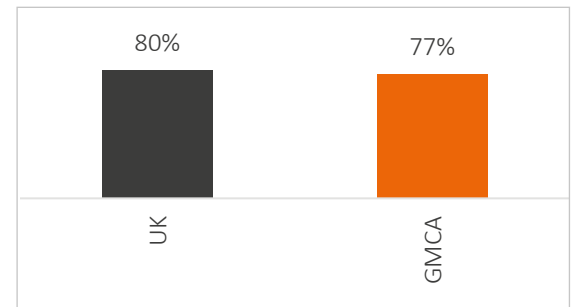
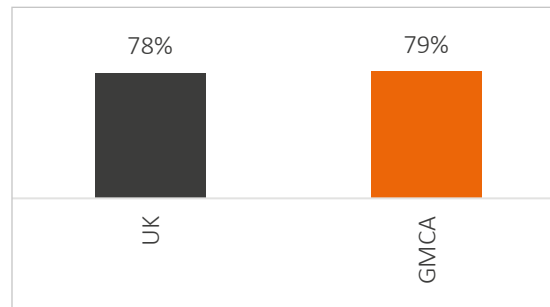
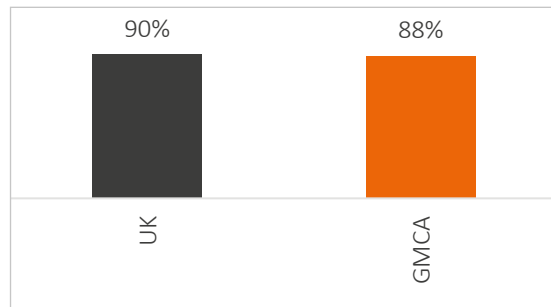
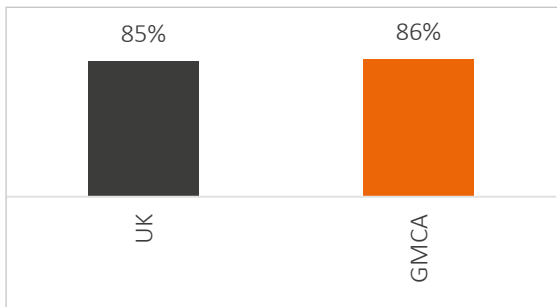
Companies need to do more to help the environment

I could do more to help the environment

I want to do more to help the environment



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65+ GMCA
Were **less likely** to think the government needs to do more (77%)

65+ GMCA
Were **less likely** to think they could do more to help the environment (63%)

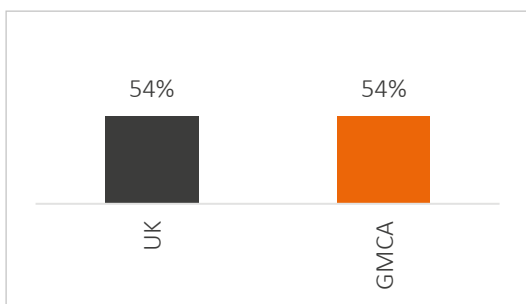
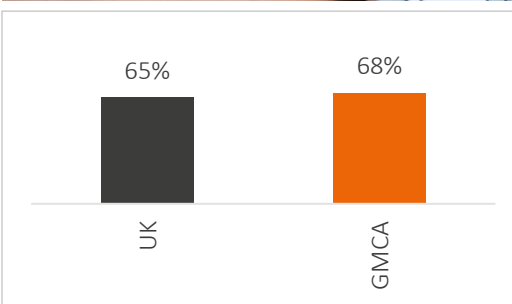
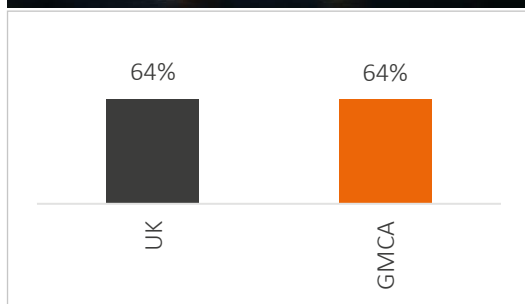
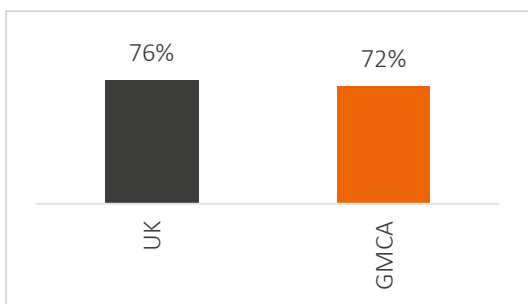
35-44 GMCA
Were **more likely** to want to do more to help the environment (88%)

ATTITUDES TOWARDS CLIMATE CHANGE

GMCA residents have very similar attitudes towards climate change as the rest of the UK, with the majority believing the UK Government needs to take action for any significant change to be made.

% Agree
The only way for any significant change is for the UK government to take action *The UK government doesn't take climate change seriously enough* *I need more information about what I can do to be environmentally friendly* *There is too much conflicting information about the environment and climate change*

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65+ GMCA
 Were **less likely** to agree with the statement above (62%)

65+ GMCA
 Were **less likely** to agree with the statement above (49%)

25-34 GMCA
 Were **more likely** to want more info on what they can do (80%)

16-24 GMCA
 Were **more likely** to agree there's too much conflicting information (71%)

ATTITUDES – TIME, EFFORT AND EASE

Significantly higher than the UK

Significantly lower than the UK

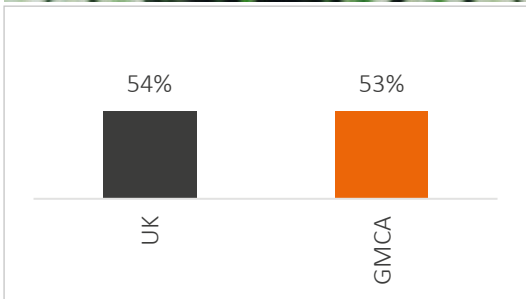
GMCA residents were less likely than the UK average to agree that being sustainable at home is easy. GMCA should focus on how they can support residents in making sustainability accessible at home. The 35-44 age cohort will be challenging due to time constraints, so for them it will be about the quick wins.

% Agree

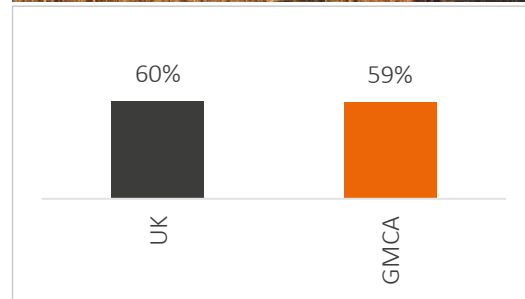
It takes a lot of time to be environmentally-friendly *It takes a lot of effort to be environmentally-friendly* *Being sustainable at home is easy* *Being sustainable outside the home is easy*



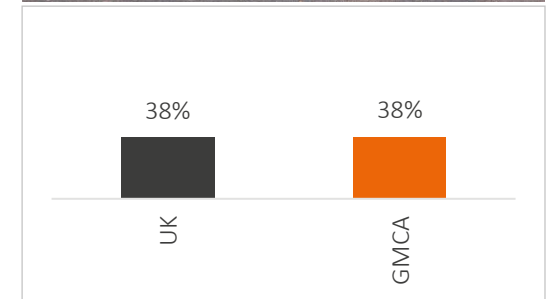
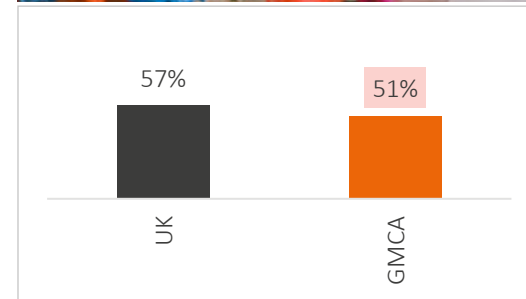
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35-44 GMCA
Were **more likely** to agree with the above statement (67%)



25-34 GMCA
Were **more likely** to agree with the above statement (75%)



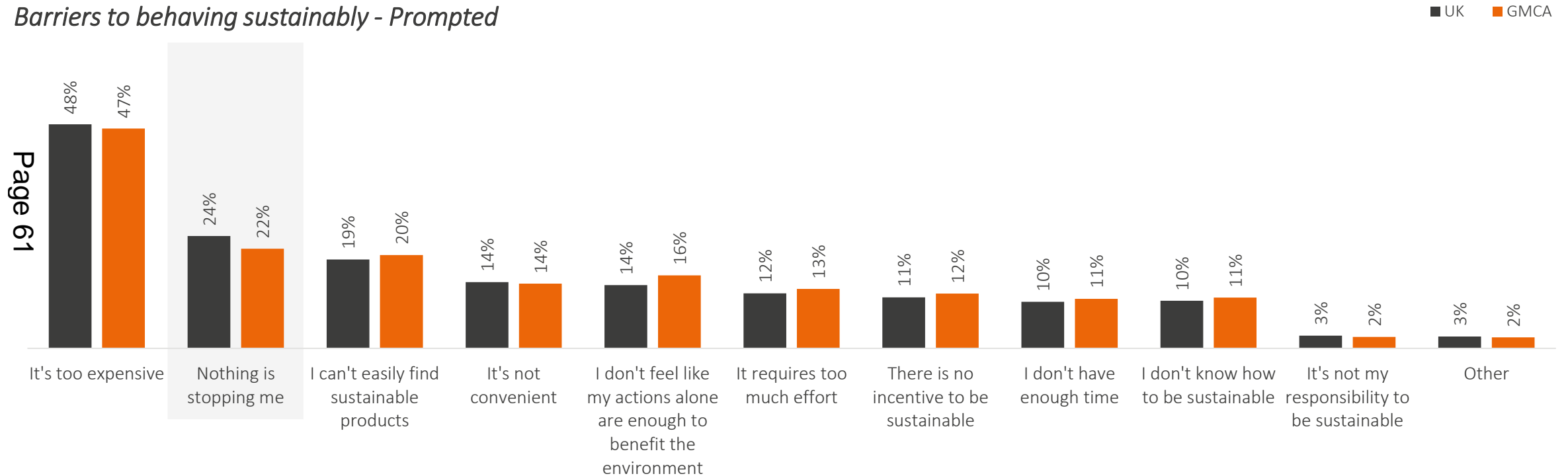
25-34 GMCA
Were **more likely** to agree with the above statement (55%)

BARRIERS TO BEHAVING SUSTAINABLY

Significantly higher than the UK
Significantly lower than the UK

The price of behaving sustainably is the main barrier, with almost half of consumers perceiving sustainable behaviours to be expensive. Almost a quarter feel there is nothing stopping them, suggesting they are open to influence.

Barriers to behaving sustainably - Prompted



65+ GMCA
Were **more likely** to say nothing is stopping them (39%) and **less likely** to say it's too expensive (27%)

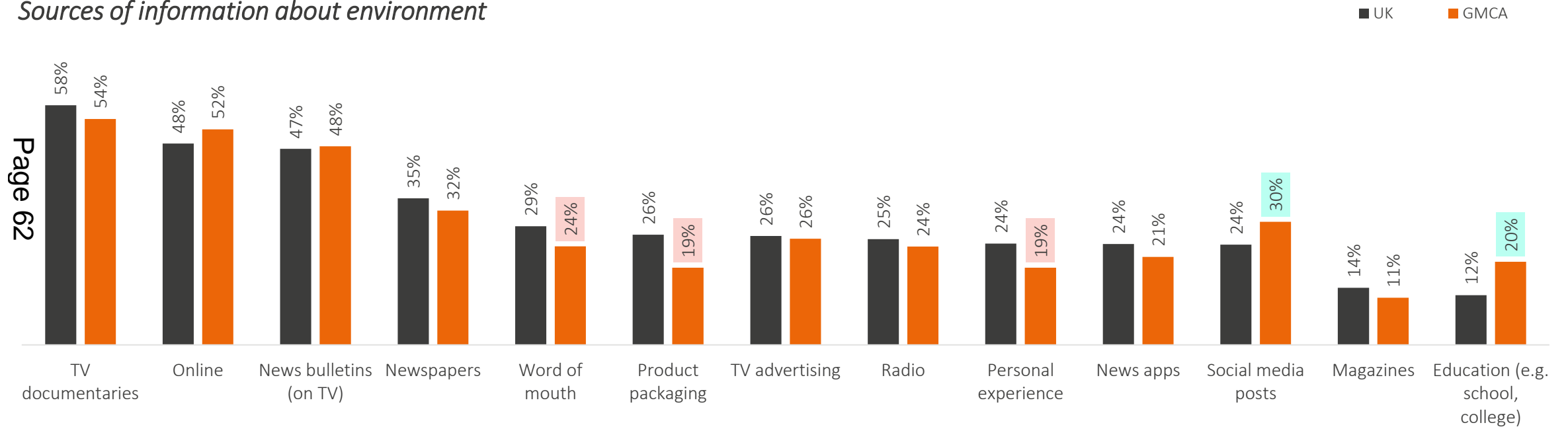
16-34 GMCA
Were **more likely** to say it is too much effort (23%) and they don't have enough time (20%)

SOURCES OF INFORMATION

Significantly higher than the UK
Significantly lower than the UK

While TV documentaries, online channels and news bulletins are used most in the GMCA region (and the UK) for information about the environment, social media and education are also particularly important, and should be utilised to engage residents, especially those in the 16-34 age cohort.

Sources of information about environment



Females GMCA

Were **more likely** to find out about the environment through product packaging (27%)

65+ GMCA

Were **more likely** to find out about the environment through TV documentaries (71%), News Bulletins (76%), and newspapers (61%)

16-34 GMCA

Were **more likely** to find out about the environment through social media posts (41%), education (42%), and social media influencers (24%)

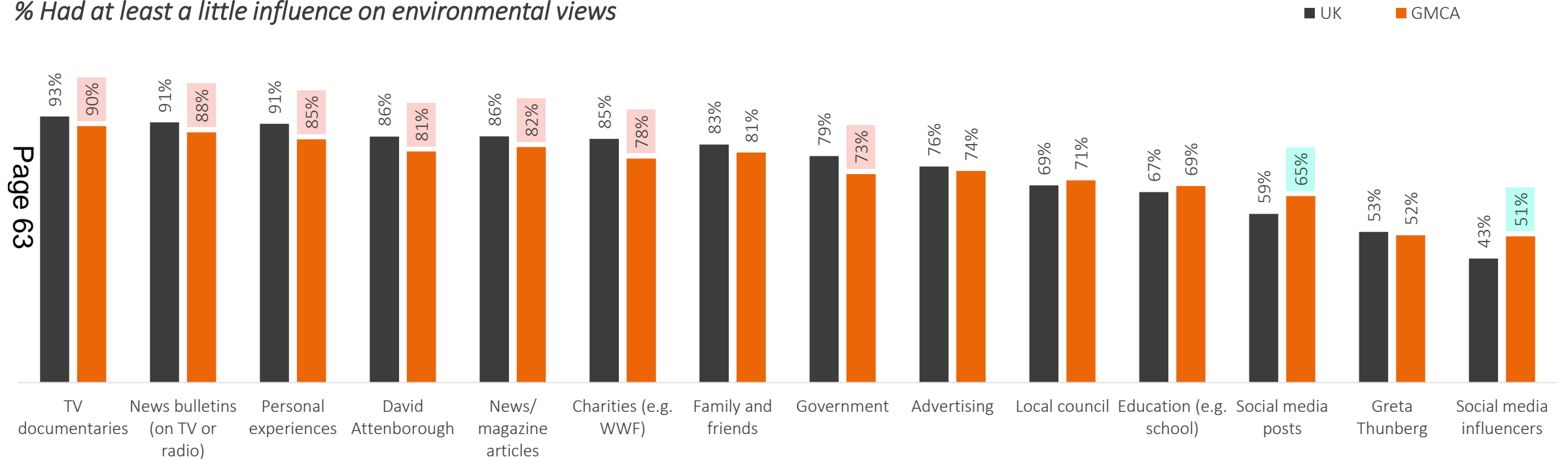
INFLUENCERS ON ENVIRONMENTAL VIEWS

Significantly higher than the UK

Significantly lower than the UK

TV documentaries and news bulletins are the biggest influencers on environmental views. However, local councils still influence around 7 in 10 residents. Once again, we see social media being of importance in the GMCA region.

% Had at least a little influence on environmental views



Age groups GMCA

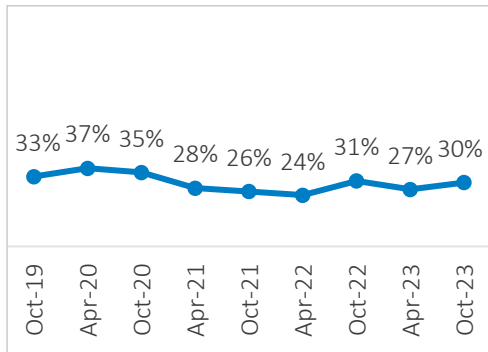
Younger age groups (16-34) were **more likely** to be influenced by education (89% vs 49%), social media (88% vs 43%), and social media influencers (77% vs 30%) than older age groups (50+)

SEGMENT CHANGES FROM OCT-19 TO OCT-23

As part of our analysis, we identified four key segments based on environmental attitudes and behaviours. Data on how the sizes of the segments have changed since October 2019 can be found below.

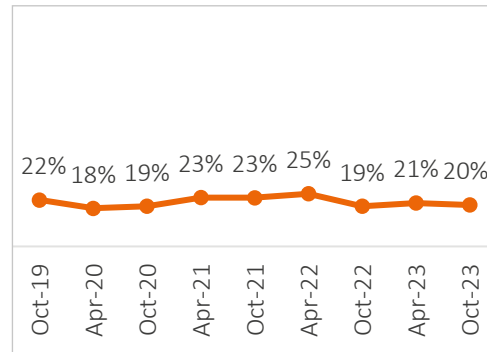
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Light Contributors



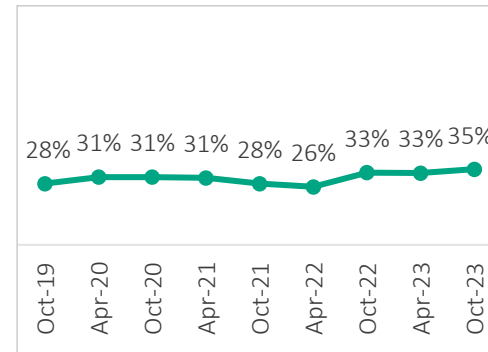
Low knowledge, have more basic environmental behaviours

Inactive Sceptics



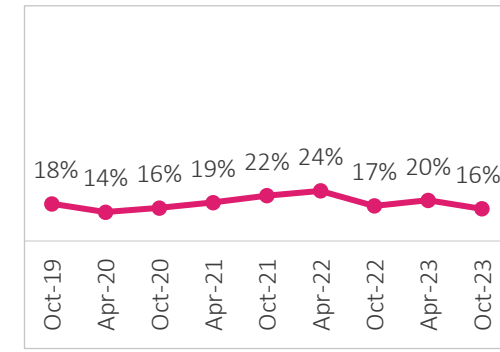
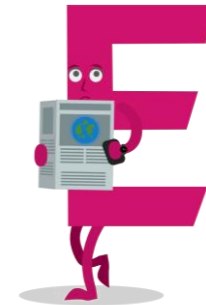
Don't know, don't care

Focused Achievers



Knowledgeable, positive attitudes and moving beyond basic environmental behaviours

Educated Non-Doers



Knowledgeable and positive attitudes, but not following through to action

OCT 23

GMCA 31%

GMCA 23%

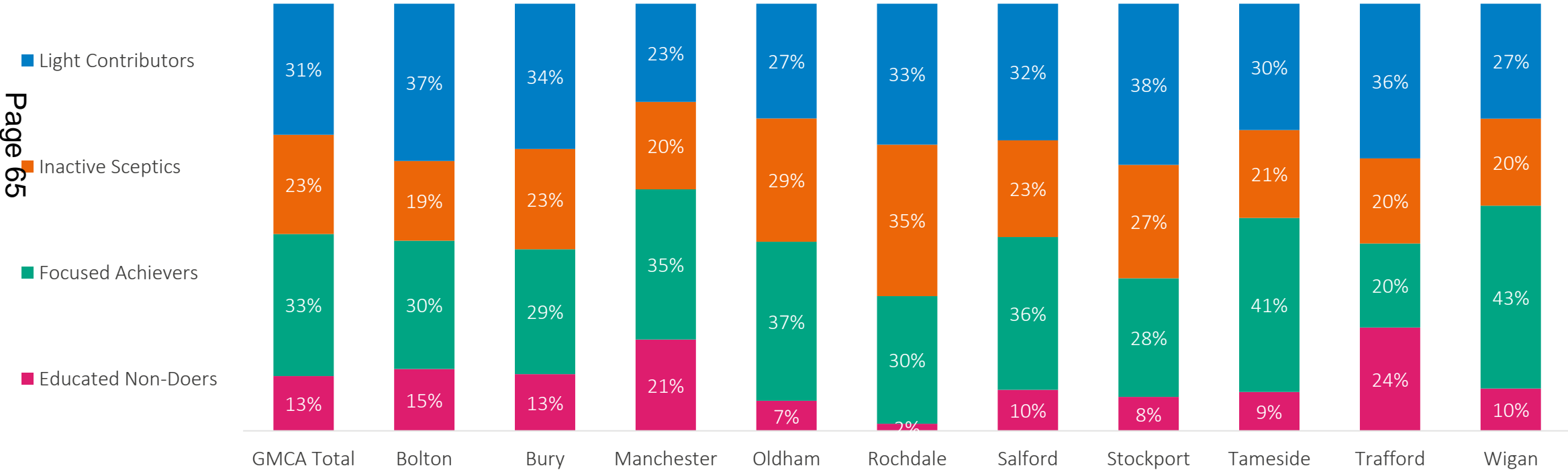
GMCA 33%

GMCA 13%

LIFE SEGMENTS IN GMCA REGIONS

Manchester and Trafford are more likely to have Educated Non-Doers, perhaps driven by having a higher proportion of residents aged 16-35. The Inactive Sceptics are most prevalent in Rochdale, suggesting this area will need the most support in encouraging residents to be more sustainable.

LIFE Segments within each region of GMCA

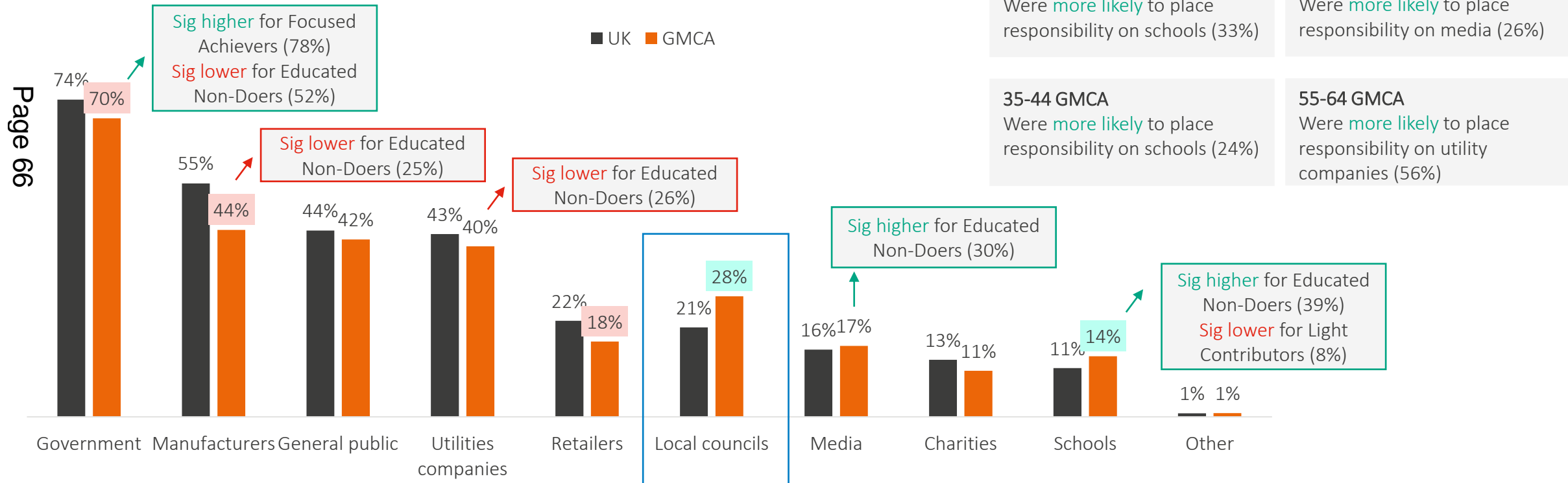


■ Significantly higher than the UK
■ Significantly lower than the UK

RESPONSIBLE FOR TACKLING CLIMATE CHANGE - PROMPTED

The Government is deemed most responsible for tackling climate change, consistent across GMCA and the UK. GMCA residents are also more likely to place responsibility on their Local Councils, putting pressure on GMCA to act. Schools are also important, especially amongst the 16-24 age cohort.

Responsibility for tackling climate change



GLOBAL ENVIRONMENTAL ISSUES BY LIFE SEGMENTS

 Significantly higher than GMCA total sample

 Significantly lower than GMCA total sample

Column %	Total Nat Rep Sample	GMCA Total Sample	Light Contributors (GMCA)	Inactive Sceptics (GMCA)	Focused Achievers (GMCA)	Educated Non-Doers (GMCA)
Tackling climate change	44%	39%	42%	18%	55%	25%
Reducing food waste	35%	36%	42%	36%	32%	34%
Eliminating plastic waste	37%	35%	40%	17%	46%	25%
Reducing carbon emissions	28%	28%	33%	12%	36%	24%
Protecting oceans and coasts	34%	27%	32%	23%	27%	23%
Protecting endangered wildlife	29%	26%	26%	24%	29%	24%
Driving renewable energy	26%	26%	26%	17%	35%	18%
Halting deforestation	33%	24%	24%	22%	28%	20%
Protecting wildlife habitats and ecosystems	29%	23%	21%	18%	31%	18%
Cutting air pollution in cities	20%	22%	24%	13%	26%	27%
Conserving rivers and freshwater	25%	22%	23%	19%	21%	26%
Holding governments to account for environmental policies	19%	22%	19%	10%	31%	23%
Stopping poaching and the illegal wildlife trade	17%	18%	15%	21%	18%	20%
Reducing the public's impact on the environment	17%	18%	18%	8%	25%	18%
Ensuring food is from sustainable sources that protect nature and wildlife	17%	15%	14%	5%	21%	20%
Restoring the global loss of nature	20%	15%	14%	12%	20%	10%
Businesses reducing their environmental impacts	13%	13%	12%	8%	16%	15%
Improving livelihoods in developing countries to reduce environmental impact	11%	12%	9%	7%	18%	14%
Protecting the Arctic Protecting the polar regions	15%	12%	12%	8%	13%	14%
Sustainable mining and use of oil/gas	10%	10%	10%	10%	7%	18%
Reducing the impact that the food we eat in the UK has on biodiversity loss	10%	10%	7%	9%	9%	19%
Driving sustainable fishing that protects fish stocks	11%	10%	6%	11%	13%	9%
Ensuring the palm oil used in the products we consume is from sustainable sources	10%	9%	6%	9%	8%	17%
Ensuring soy produced to feed our livestock is from sustainable sources	3%	5%	3%	5%	4%	13%
None of the above	2%	6%	3%	17%	0%	6%

BEHAVIOURS BY LIFE SEGMENTS

■ Significantly higher than GMCA total sample

■ Significantly lower than GMCA total sample

Column %	Total Nat Rep Sample	GMCA Total Sample	Light Contributors (GMCA)	Inactive Sceptics (GMCA)	Focused Achievers (GMCA)	Educated Non-Doers (GMCA)
Recycle	82%	81%	86%	74%	85%	71%
Use 'bags for life'	80%	79%	87%	79%	83%	50%
Use the heating only when I need to	72%	71%	77%	69%	79%	39%
Hang clothes to dry on the line rather than in a dryer	67%	63%	72%	55%	72%	35%
Only buy what is necessary rather than waste food	63%	60%	58%	47%	78%	41%
Travel by foot (i.e. walk)	62%	59%	59%	53%	68%	49%
Use a refillable water bottle	60%	56%	59%	45%	68%	39%
Use public transport	47%	51%	51%	37%	64%	45%
Buy wonky fruit and veg	57%	51%	50%	44%	66%	31%
Use a smart meter	45%	48%	52%	41%	52%	40%
Buy products with recyclable packaging	55%	43%	44%	22%	65%	20%
Ignore best-by, sell-by and use-by dates	47%	42%	44%	40%	50%	19%
Buy good quality clothes that last longer	48%	42%	39%	28%	54%	40%
Flush the toilet every time you use it	38%	41%	45%	50%	30%	47%
Wash clothes in water less than 30 degrees	41%	40%	32%	29%	57%	35%
Avoid buying single use plastic	41%	36%	28%	14%	62%	27%
Use paper or metal straws	38%	35%	38%	23%	41%	36%
Buy second-hand clothes	35%	34%	30%	29%	46%	24%
Use a reusable coffee cup	34%	33%	30%	14%	47%	36%
Travel by plane	32%	32%	38%	34%	27%	28%
Buy local produce	43%	31%	30%	14%	45%	26%
Eat little or no meat	28%	22%	16%	8%	37%	18%
Use a smart thermostat	17%	18%	21%	9%	22%	15%
Grow your own fruit and veg	23%	15%	14%	8%	20%	17%
Travel by bike	14%	13%	7%	10%	20%	16%
Eat/ drink little or no dairy products	15%	12%	8%	6%	18%	20%
Use a hybrid car	8%	8%	7%	8%	7%	10%
Use solar panels	9%	6%	7%	3%	8%	7%
Use an electric car	5%	3%	4%	3%	4%	2%
None of the above	0%	1%	0%	2%	1%	2%

Next Steps

- Further analysis to be undertaken between behaviour insights research undertaken in May and this survey
- Produce key findings briefings and identify areas within new five-year plan which require further insights to further understand barriers and drivers/incentives to enable change
- Explore with the communications challenge group how the 'LIFE' personas can be used to shape and test future communication campaigns

Recommendations

- That the presentation and next steps be noted.

Greater Manchester Environment Fund



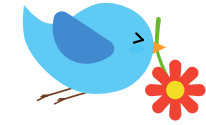
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Investing in Greater Manchester's Natural Environment



Agenda Item 8

THE GREATER MANCHESTER ENVIRONMENT FUND



The need to develop and set up a way of bringing together different funding sources to deploy into GM's natural environment was identified in the 5YEP.

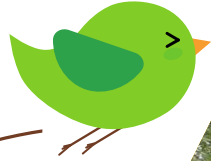
The Greater Manchester Environment was established a year later in 2020 and has developed and grown since then.

GMEF is the biggest city region-based investment opportunity for nature in the UK. It is the first of its kind.

Acting as a central funding source for projects, funds and investment will:

- **Transformational impact,**
- **Demonstrate value for money,**
- **Bring benefits to all involved.**





THE GREATER MANCHESTER ENVIRONMENT FUND

Success So Far

- Co-ordinating GM-wide partnership bids to ensure a joined up approach - **£1.8million** secured through the Green Recovery Challenge Fund **that enabled organisations to lever in a further £15.8million**
- **Providing a platform** for non-profit organisations to raise funds through corporate sponsorships, online public donations and philanthropy – Enterprise Rent-A-Car and Auto Trader were the first to donate!
- **Grant distribution** – managing over £3million through the Green Spaces Fund and Recycle 4 Greater Manchester Community Fund – supporting 137 groups so far
- £199,876 secured to develop **Biodiversity Net Gain investment models, Carbon Off-setting schemes**, and other investment opportunities.





WHY GMEF?

With a transformational impact for 3 million people

We are empowering local groups to take action for our greenspace and net zero targets.

Quality biodiverse rich green space is crucial for everyone:

- Mental Health
- Physical Activity
- Social
- Community cohesion
- Employability
- Clean Air
- Flood Management
- Water Quality
- Carbon savings
- Active Travel Networks

SCALING UP PHILANTHROPIC GRANTS THROUGH COLLABORATION

Increasing biodiversity, green jobs and accessible green spaces

By working **strategically and collaborating**, we can bring in significant funding to enable change at scale.

Within the first 6 months of establishment, GMEF worked with 9 partners to secure **£1.8 million through the Green Recovery Challenge Fund**.

Within the next 12 months **948 hectares** were improved on the most strategic and high priority green spaces as defined through our Local Nature Recovery Strategy.

This work created **30 jobs, 10 traineeships, 31 accessible greenspaces improved, and engaged 5530 days of in-kind support** provided by valued volunteers. For all of our partners the Fund was a springboard to securing more funds – a total **£18,700,000** secured for projects to continue.

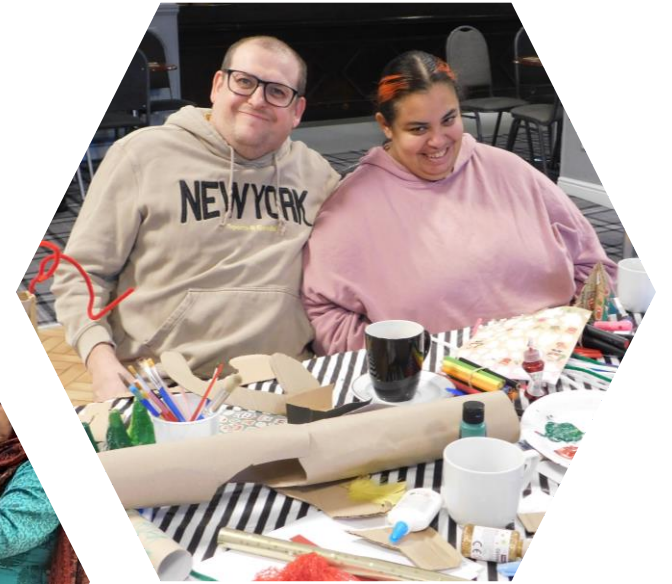


GRANT DISTRIBUTION

Our Current Funding Programmes:

- Recycle 4 Greater Manchester Community Fund
- The Greater Manchester Green Spaces Fund

See Annex for further details



Green Spaces Fund

- The £2.6m Greater Manchester Green Spaces Fund supports community-led projects that increase the amount and quality of accessible, nature rich green space in the city region, particularly in the areas where people need it most.
 - **Funded by the GMCA**
 - **Managed by GMEF**
 - **Four rounds of applications complete**
-
- Two types of grant sizes:
 - Small grants £2,000 up to £15,000
 - Large grants between £15,000 to £40,000



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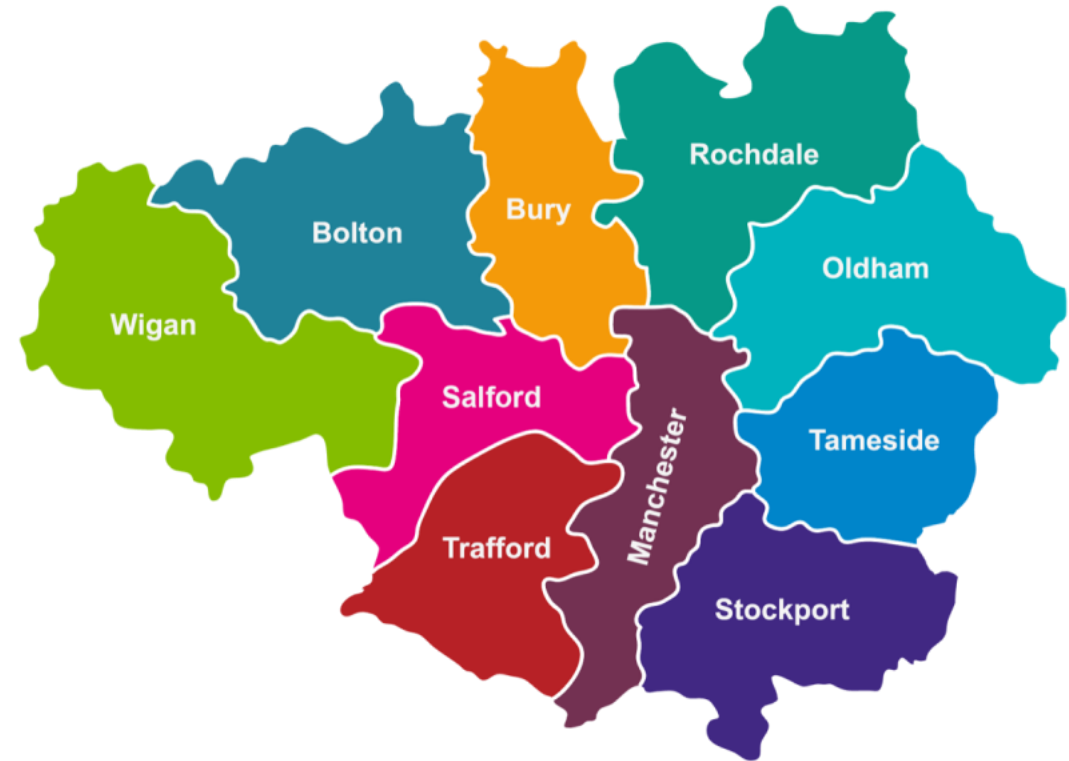


Green Spaces Fund – Districts

Project locations Round 1 – Round 4

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District	Projects
Bolton	8
Bury	5
Manchester	20
Oldham	11
Rochdale	6
Salford	8
Stockport	5
Tameside	5
Trafford	7
Wigan	4
Multi district	7



Over £2 million has been awarded

The benefits for GM

- 86 projects funded
- £795,709 of match funding brought into projects
- 84,141m2 of green space to be created
- 411,141m2 of green space to be enhanced
- 7,557 of trees to be planted
- 10,215 people volunteering and being trained

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BNG AND CARBON PRODUCTS

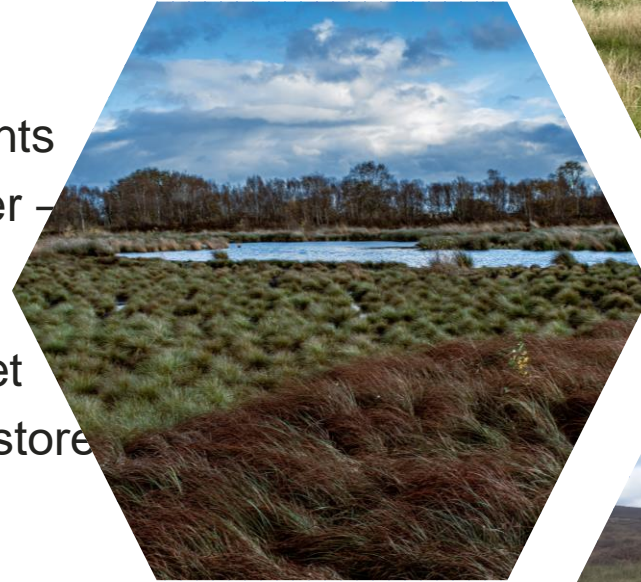
Playing a pivotal role in Greater Manchester's ambition of net zero by 2030

There is huge potential for innovative Green Finance:

Biodiversity Net Gain for new development will become mandatory by November 2023. It is part of a set of tools aimed at reversing the decline in biodiversity. This presents opportunity to fund nature recovery in Greater Manchester – **potentially £5-6m per year from BNG offsetting**

Carbon Offsetting can support companies to become net zero. Peatlands are the world's largest terrestrial carbon store. However, it needs to be managed as peatland to have a positive impact on nature, climate and communities.

GMEF and its delivery partners are seeking to restore these peatland through the sale of voluntary carbon credits to local businesses on a pathway to net-zero. Greater Manchester supports 17,500 ha of peatland, much of which is highly degraded. The potential for **improvements could capture 140,000 tones of carbon alone.**





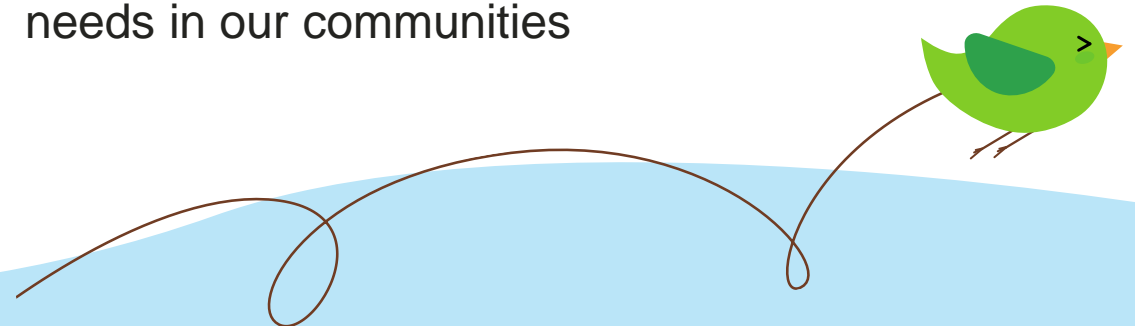
Unlocking opportunities for real transformational change.

WHY SHOULD CORPORATES AND FUNDERS DONATE THROUGH GMEF?

We are...

- Connected to decision-makers in Greater Manchester, benefiting from strong partnerships with influential organisations.
- Actively involved in strategic biodiversity projects, improvements to quality green spaces and creation of green jobs.
- Transforming the lives of 3 million people across the city region.

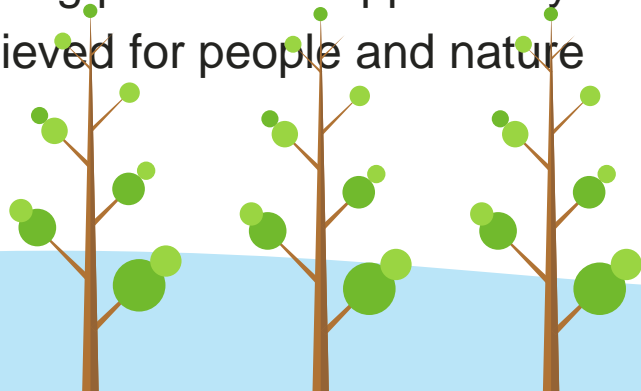
Linked to local projects that address the biggest needs in our communities

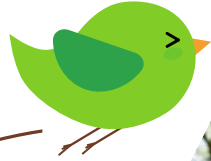


THE GMEF OFFER

GMEF offers transparency, value for money, and ensures funds are spent in the right places, as well as:

- Providing bespoke funding opportunities to meet CSR commitments whether that's social, climate or biodiversity.
- Helping to demonstrate commitment to initiatives such as the Race to Net Zero
- Providing reassurance that precious funds are distributed to the greatest strategic priorities, aligned to evidence of need.
- Acting as a broker for Corporate volunteering days, to help support the communities where businesses are located.
- Raising profile and opportunity to celebrate the benefits achieved for people and nature





NEXT STEPS

What we are doing next:

- Further development to bring BNG and Carbon Offsetting to sale. Build sales to a level where staffing is sustainable and profit generated can be re-distributed back into natural environment projects.
- Approaches to those who may be interested in providing donations for accessible Green Spaces
- Aligning funds to maximise potential for natural environment improvements eg carrier bag charges, disposable coffee cup grant scheme, water and waste / landfill taxes, enforcement undertakings.
- Championing the impact of the Green Spaces Fund for continued commitment beyond May 2023



RECOMMENDATIONS

- Note the progress in the establishment, development and growth of the Greater Manchester Environment Fund to date.
- Provide feedback on the routes to growing the Greater Manchester Environment Fund further, particularly in the routes to securing the contributions from the private sector into initiatives such as the Green Spaces Fund.

Greater Manchester Environment Fund



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Annex – Details on Programmes



Grant programme run by the Greater Manchester Environment Fund



**Recycle for
Greater
Manchester
(R4GM)**



Recycle for Greater Manchester

The Recycle for Greater Manchester Community Fund is a joint R4GM and Suez initiative, administered by the Greater Manchester Environment Fund, to support Greater Manchester community and voluntary sector groups. The R4GM Community Fund comes from money that is raised via the 'Renew' shops and online market.

One round of funding every year. Application window will open again in Spring 2024.

£270,000 is available in total for community and voluntary projects.

- Two types of grant sizes:
 - Community Fund grants: Up to £10,000
 - Innovation grants : £20,000



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What kind of projects does R4GM fund?

- The fund aims to support the GM Community and Voluntary Sector to deliver projects which prevent, reuse or recycle household waste.
- Submitted proposals need to focus on at least one of these four priority areas:
 - Recycling
 - Re-use
 - Waste Prevention
 - Reducing Contamination
- Promote sustainable use of waste and resources.
- Also generate wider social benefits for the community of Greater Manchester.
- The fund has been created by as a means of returning revenue from waste management to the wider community.



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Little Green Sock Project. Manchester, Salford & Trafford.

Round 1 and Round 3 Winner – total awarded: £14,200

They are a children’s clothing & baby bank providing free clothing and essential equipment for families in crisis, by reusing children’s clothing & items donated by the local community. They’re creating a sustainable positive change in public behaviour towards a more circular economy for social benefit.

In less than a year they have supported 350 children with clothing, shoes and essential items and saved local families approximately £35,000 in clothing support and a further £7000 in additional support such as prams/buggies/newborn starter kits.

Funding helps towards the running of the project, with staff security to ensure the legacy of their works.



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Future Directions CIC – Manchester.

Rounds 1 - 3 Winner – total awarded: £37,826



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They have also joined the Every Can Counts Campaign which is a not-for-profit communications programme aimed at raising awareness of the many benefits of recycling drink cans and making it easier for people to recycle their cans. They've placed can recycling boxes in venues across Greater Manchester and have acquired a Waste Carrier Licence so they can collect and recycle them.

Their project involves working with people with learning disabilities, autism, and other complex support needs to promote the importance of recycling.

The Green Superheroes provide training sessions about how to reduce, reuse and recycle. They also provide arts and craft sessions and organise litter picking walks.



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Recycle for Greater Manchester - Districts

District	Projects (R1- R3)
Bolton	5
Bury	6
Manchester	16
Oldham	4
Rochdale	3
Salford	7
Stockport	8
Tameside	3
Trafford	4
Multi district	19



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Over £600k has been awarded to date

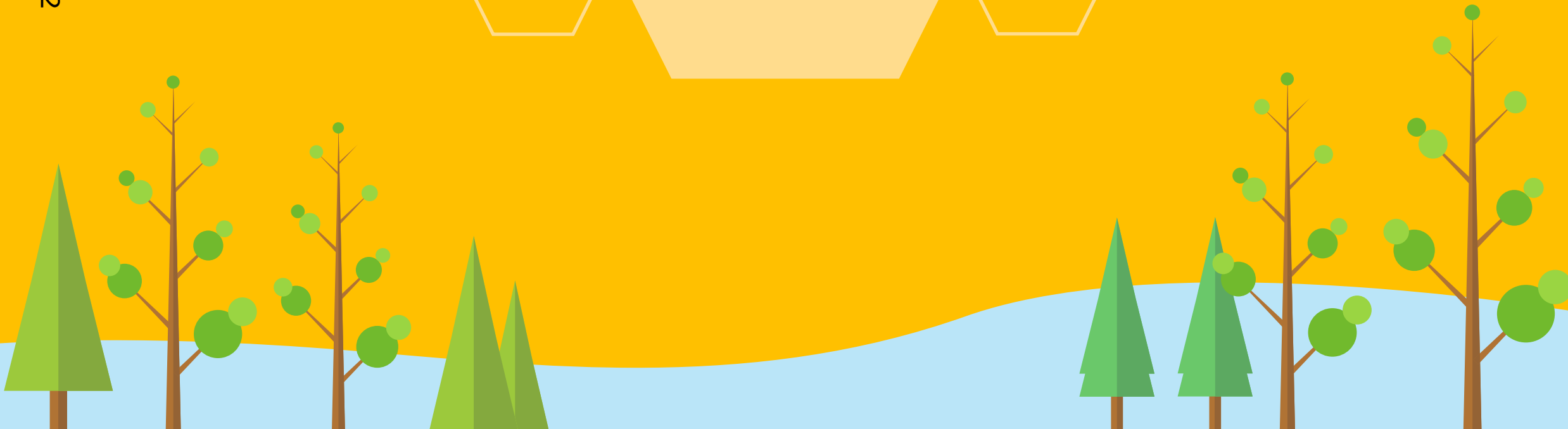
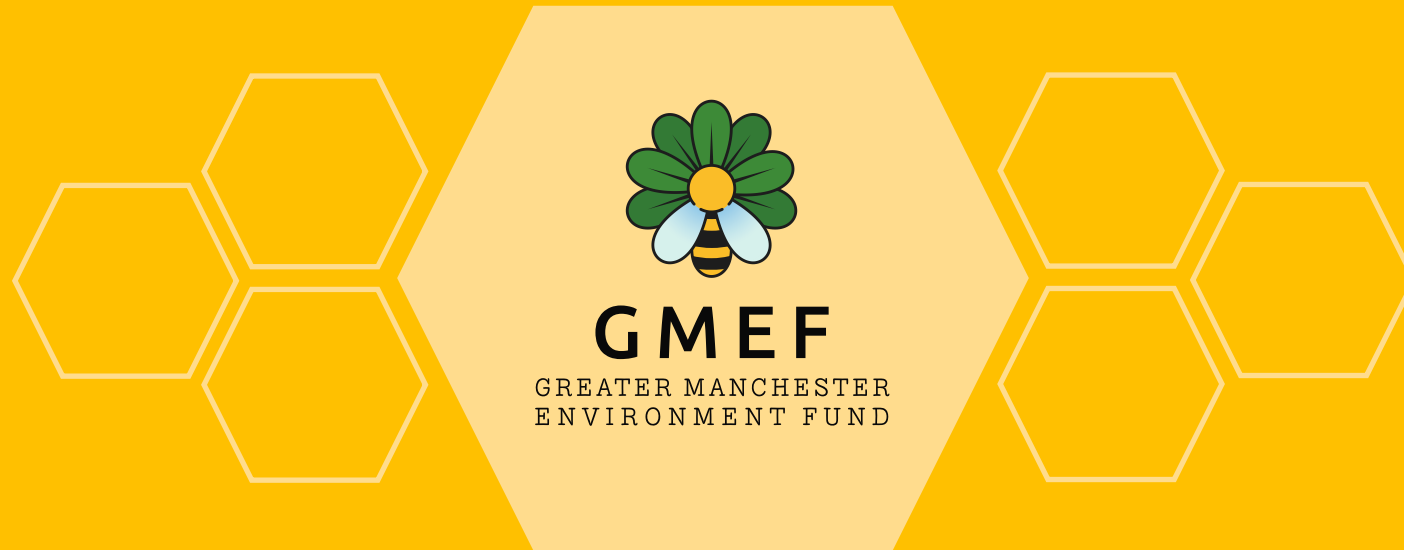


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The Green Spaces Fund



Green Spaces Fund

- The £2.6m Greater Manchester Green Spaces Fund supports community-led projects that increase the amount and quality of accessible, nature rich green space in the city region, particularly in the areas where people need it most.
 - **Funded by the GMCA**
 - **Managed by GMEF**
 - **Four rounds of applications complete**
-
- Two types of grant sizes:
 - Small grants £2,000 up to £15,000
 - Large grants between £15,000 to £40,000



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Aims of the Green Spaces Fund

Aim 1 – Benefitting communities with a lack of quality greenspace

- Reach communities where there is poor access to quality green spaces
- Tackle inequalities including health and wellbeing
- Enable people to have contact with nature

Aim 2 – Tackling our climate and biodiversity emergency:

- Improve GM's green and blue spaces
- Tackle the climate and biodiversity emergencies
- Have a priority fit with GM's priorities for nature recovery and wider environmental ambitions

Aim 3 – Encourage and Empower communities to take positive action for nature

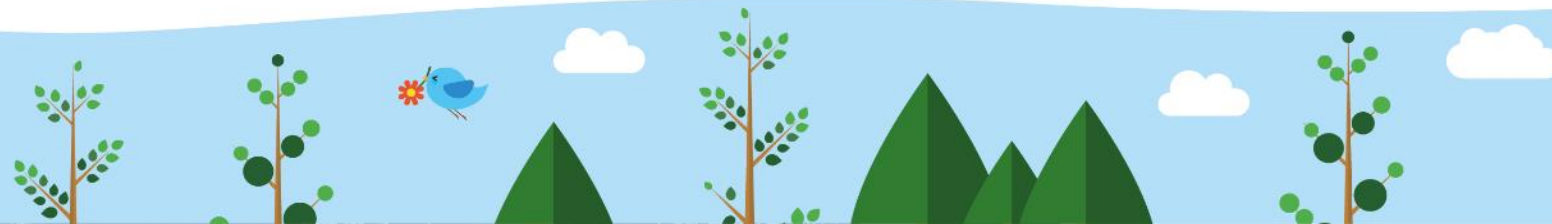
- Opportunities for training & skills through volunteering
- Empower community groups to take actions in their local area





What type of projects have been supported?

- Enhancing or creating publicly accessible green spaces for people and wildlife and engaging communities with these new spaces
- Permanently greening streets or turning unused viable land into green community spaces
- Creating new permanent parklets or pocket parks and engaging people with these new spaces
- Cleaning up and restoring green spaces, streams, rivers, canals or ponds with local communities
- The development of green corridors linking parks, community gardens or other green spaces
- Projects that significantly improve the biodiversity of the area and engaging communities with these new spaces



Green Spaces Fund Advisors



- Empower community groups to take positive meaningful action for nature.
- Targeted engagement: working together with LAs and others, to ensure those who will benefit the most can access the fund
- Ensure ideas generated by community groups are realistic and achievable
- Support groups to apply for GSF and other funding opportunities with the target to raise double the funds of the GSF through community fundraising
- Ensure activity reflects the needs of the wider community and is inclusive to others
- Support groups to develop their skills and confidence in project delivery
- Specialisms from a rich partnership
- Develop the ongoing skills of community groups to ensure sites can be maintained and activities will continue long term

Green Spaces Fund – Districts

Project locations Round 1 – Round 4

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District	Projects
Bolton	8
Bury	5
Manchester	20
Oldham	11
Rochdale	6
Salford	8
Stockport	5
Tameside	5
Trafford	7
Wigan	4
Multi district	7



Over £2 million has been awarded

GRIT Studios – Canal Street Community Garden. Stockport

Round 2 Winner – awarded: £3,460

GRIT Studios were awarded in Round 2 and their project got underway in May 2023. The Community Garden is designed to form a central, accessible space which local residents can take ownership of and use to grow and nurture plants, socialise, and learn and reconnect with nature and each other.



Their project has been warmly received by residents and those who work in the area and the group has found that using street art to teach people about nature is incredibly effective. Some of their engagement events involve hosting paint and plant days.



The group also kindly hosted, Enterprise Car Hire for a corporate volunteer day, further to Enterprise's generous donation to the GMEF. A fantastic, productive day all round where the Enterprise team got stuck into painting, cleaning, planting and building. Also, a great opportunity to spend time with colleagues in a non corporate environment.



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Northern Lily – GROWE Project. Oldham.

Round 2 Winner – awarded: £15,000

The GROWE Project plans to transform a derelict community orchard into an accessible, inclusive, public space for gardening, habitat creation, supporting mental health and wellbeing, and connecting Oldham residents to nature.

This will be an inclusive space for people from different backgrounds and ages to socialise using gardening, nature and green space as a powerful engagement vehicle to connect communities. There will be something for everyone to enjoy including learning opportunities, food growing, rest spaces, a forest school, water sports on the canal, an eco-therapy room, and a place to get refreshments.



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The orchard will create a rich habitat for wildlife, soak up carbon from the atmosphere, improve air quality and reduce flood risk. Compost bays at the site will reduce waste and create a supply of compost. A pond will be created to provide a water source for wildlife and increase the diversity of species in the space. Bird and bat box making sessions will be hosted for the community, with the boxes then used on site to support wildlife in the area.

The Orchard is a natural area in our urban environment that offers a range of activities and facilities for everyone.



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The benefits for GM

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- 411,141m2 of green space to be enhanced
- 7,557 of trees to be planted
- 10,215 people volunteering and being trained

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The benefits for the GMCA

- Profile
- Delivery-focused
- Networks
- Scale
- Governance
- Track record
- Building partnerships
- Adding value

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IMPACT OF OUR GREEN SPACES FUND ADVISORS





ROLE OF THE GSF ADVISORS

The Green Spaces Advisors work closely with community groups.

Some of the support that they offer groups includes:

- Acting as a critical friend to help groups complete their application form, stimulating interest in the fund and generating fund friendly ideas.
- Carrying out community development work in target areas and supporting successful groups with project delivery.
- Carrying out targeted engagement: working in partnership with Public, Private and Voluntary sector organisations, to ensure those who will benefit the most can access the fund.



OUR IMPACT

Over **1,000** Community Groups
connected with across GM



Over **400** Groups supported to
point of application



OUR IMPACT

Supporting the delivery of
over **60** projects



Facilitating applications for over
£1m of additional match funding
and in-kind support



OUR IMPACT

44 Grass Roots Gold Groups submitted an application in Rounds 2, 3 & 4 with advisor support



OUR IMPACT

"GSF is such a wonderful initiative. We are sincerely grateful to the Green Spaces Fund Advisor, Kieron McGlasson of Sow the City, for his unwavering support and encouragement; it is because of Kieron that we applied for the GSF; his support has ranged from support completing the funding application, sourcing match funding, encouraging networking, project planning, sourcing of materials, signposting to organisations that are in a position to equally support our project, arranging for volunteers to support the work and a lot more."

Brotherhood of the Cross and Star
Moss Side, Manchester

"We are very well supported and without help of Emma, we could not manage to apply for the funding. Without your help we could not carry out the project after getting the funding. We appreciate and thank you for your support throughout our Community Garden project."

Deane & Derby Cricket Club
Great Lever, Bolton



OUR IMPACT

"Having a green spaces fund advisor was fundamental to connect community groups the local authority works with to the green spaces fund. Rochdale's advisor was always on hand to advise and support groups to make strong applications, which resulted in several Rochdale groups being successful for each round."

Rochdale Borough Council Officer

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"Ongoing support from our Green Spaces Fund advisor has been a major factor in the successful delivery of our projects. Our monthly meetings have given the opportunity for guidance in areas and access to networks and people that have driven and evolved our overall aims and quality of our project."

Ardwick Climate Action

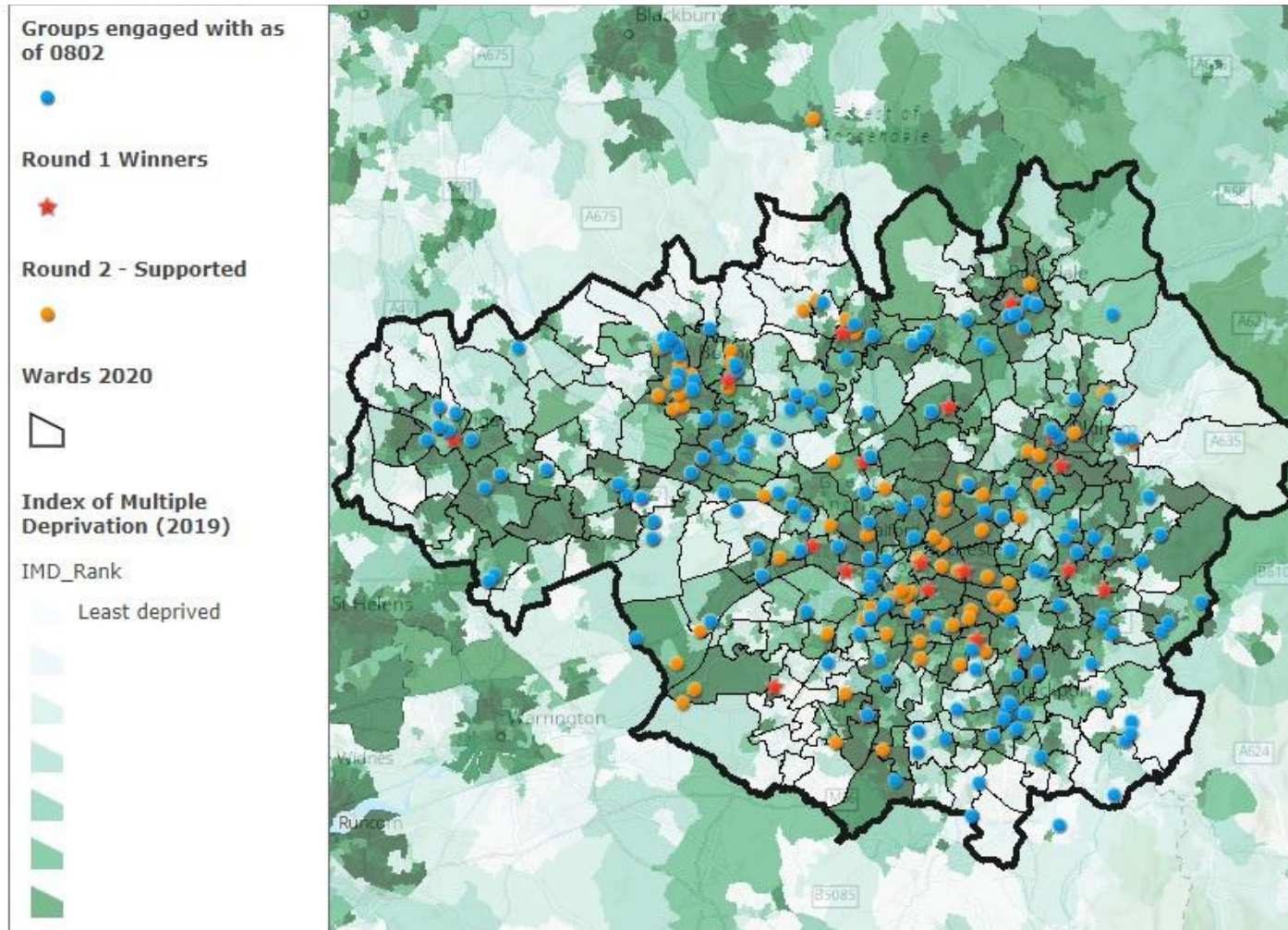
Ardwick, Manchester



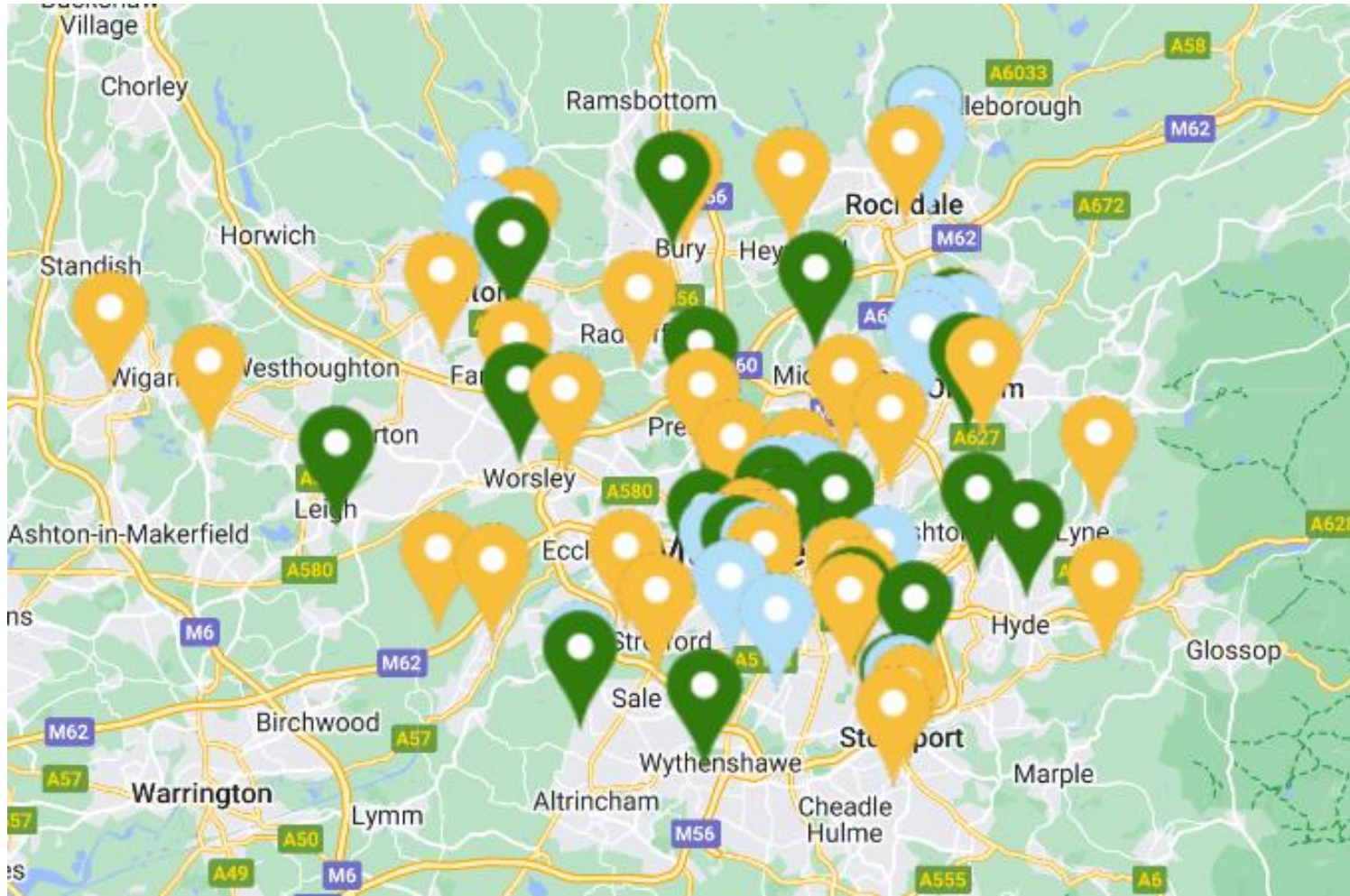
OUR IMPACT PARTNERSHIP WORKING



OUR REACH



OUR REACH



OUR GROUPS - A CASE STUDY

FRIENDS OF IRLAM LIBRARY



OUR GROUPS - A CASE STUDY

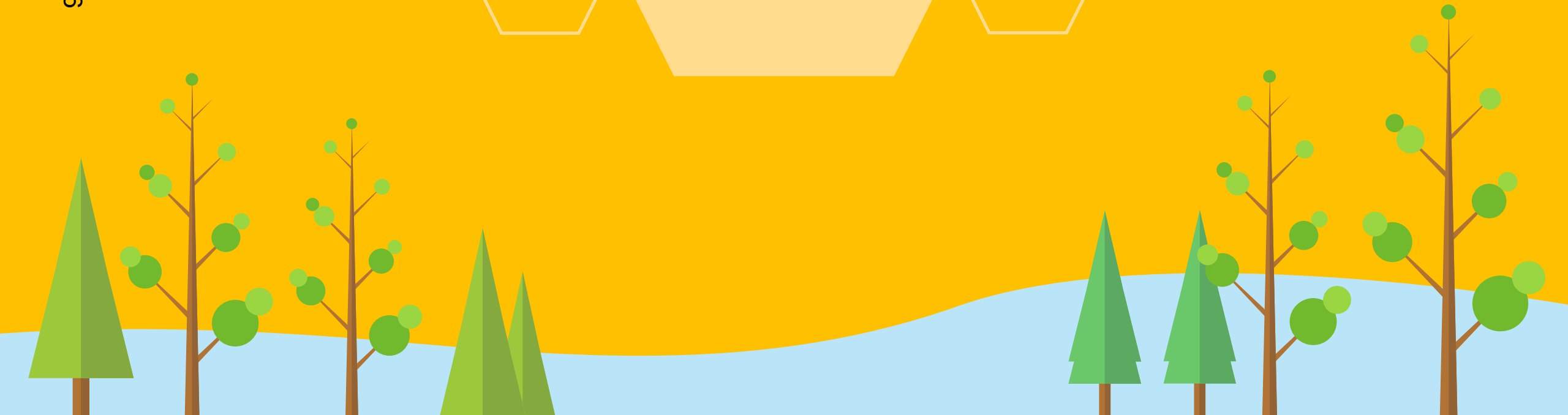
ROCHDALE GROUPS



A HEALTHY, GREEN CITY BOOSTS PRODUCTIVITY, ATTRACTS INVESTMENT, AND IMPROVES WELL-BEING FOR BOTH PEOPLE AND THE ENVIRONMENT



Next steps for Greater Manchester Environment Fund



MAXIMISING FINANCE IN GM

The medium term targets within our Investment Strategy specifically target Biodiversity Net Gain.

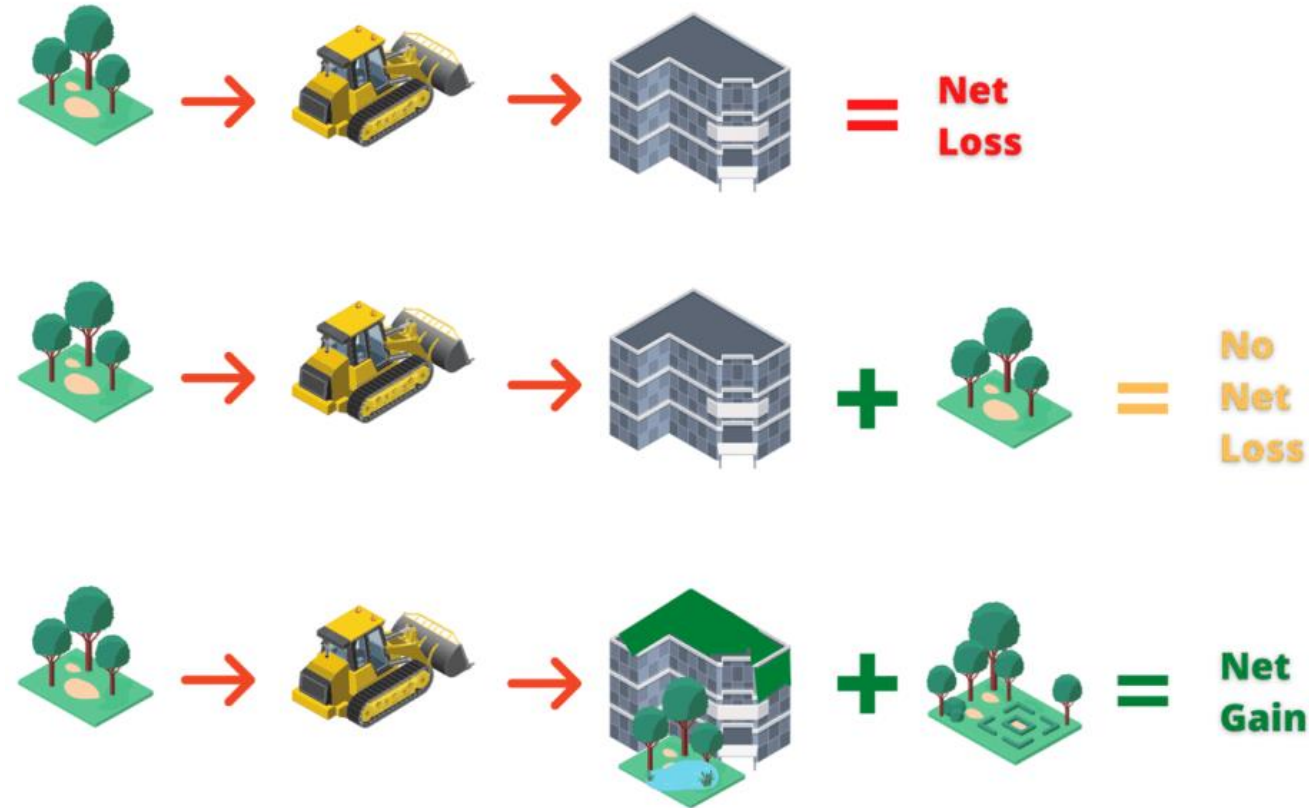
- Secure support and resource to develop a GM BNG Investment Facility
- Support Local Authorities to secure offsite Biodiversity Units on their land

Deliver strategic sites for GM



WHAT IS BIODIVERSITY NET GAIN?

- An approach to development that means leaving biodiversity in a measurably better state than beforehand.
- From January 2024, all new development with a few exceptions will need to deliver a measurable uplift in biodiversity of at least 10% compared to the baseline beforehand.
- BNG must first be delivered on the development site itself, through avoidance, minimising loss and seeking restoration on-site.
- Where this cannot be achieved, any remaining BNG will need to be delivered off-site, through 'offsetting'.



RAILWAY VIEW FARM, SALFORD

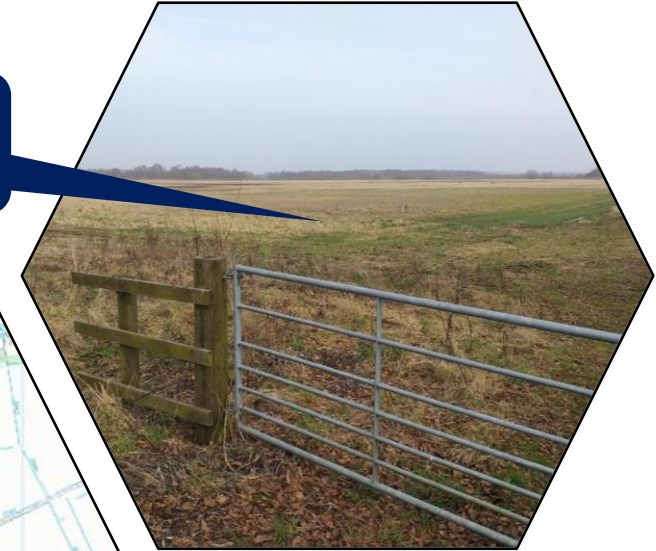
- GMEF secured ca. £95k from DEFRA to help test finance models for carbon and BNG income at Railway View Farm, Salford.
- Collaborative study between Finance Earth, GMCA, SCC and LWT
- Significant learning and insights into viable and preferred financial models

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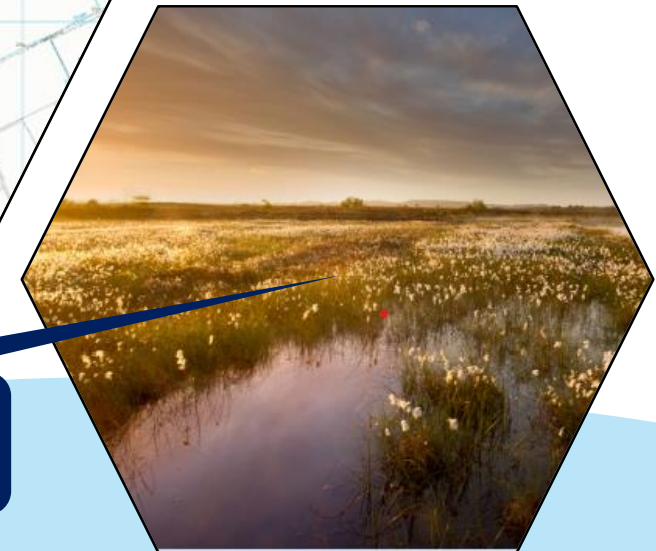
Provided some valuable learning for Local Authorities. However...

- “Cropland to lowland raised bog” not representative of LA land
- Private ownership meant transferrable learning associated with governance and delivery model for LAs not achieved

We want to transform this...

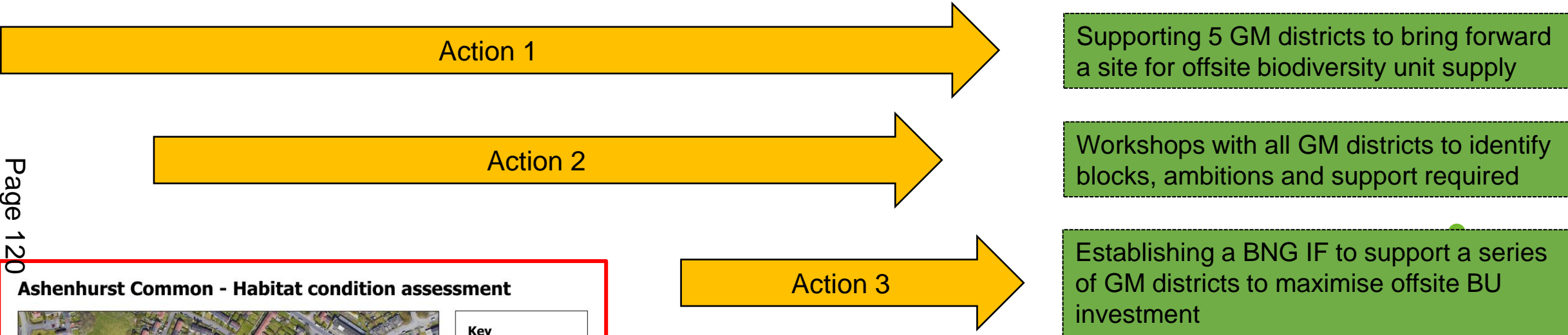


...into this!

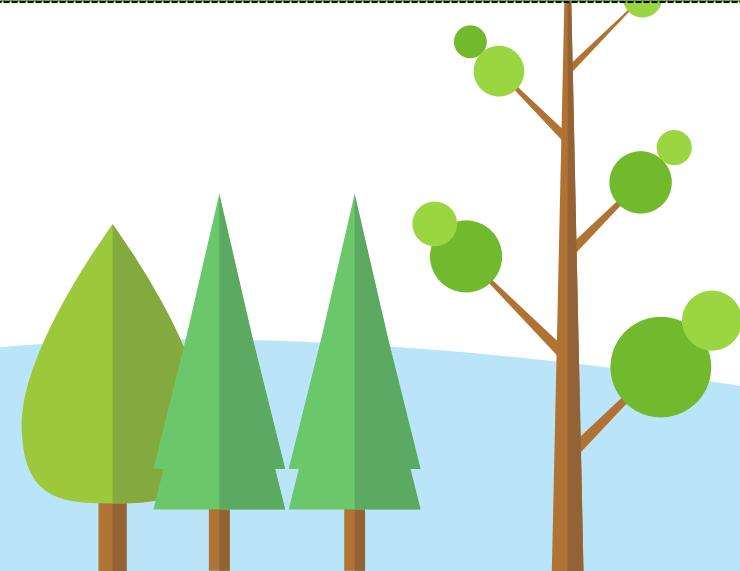
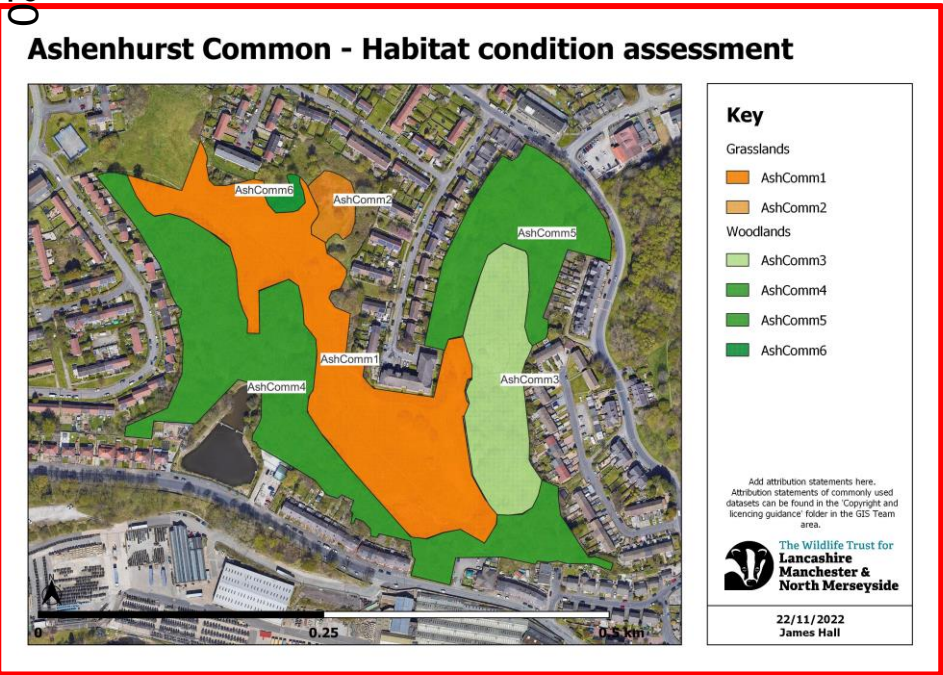


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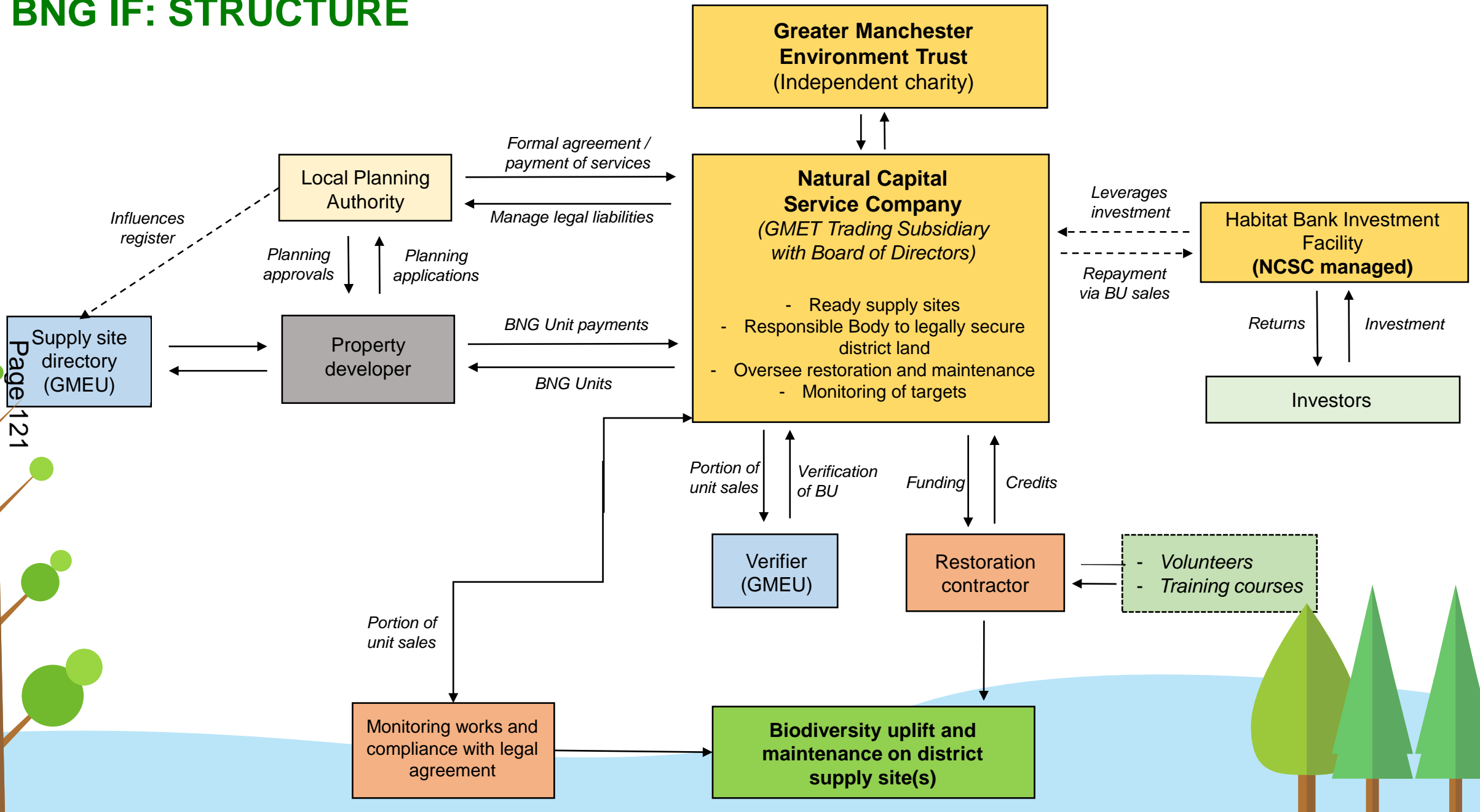
DEFRA funding focused on maximising offsite BNG investment at a GM level, specifically on land owned by Local Authorities.



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BNG IF: STRUCTURE



OUR PROGRESS

- 5 districts committed to enter into agreements with our BNG IF
 - Regular dialogue with other districts.
- Significant focus on identifying potential sites and undertaking preparation work.

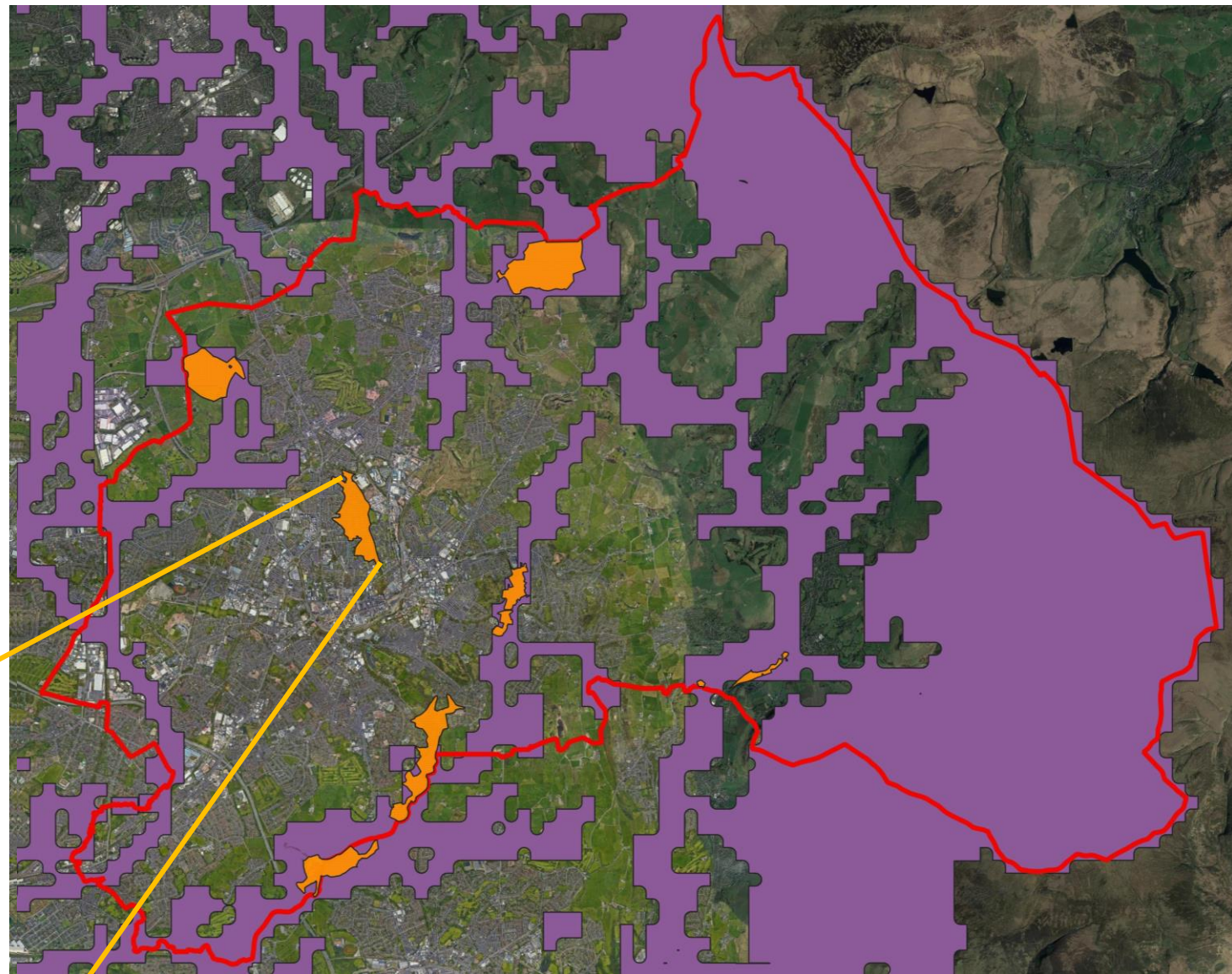
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FOCUS ON OLDHAM

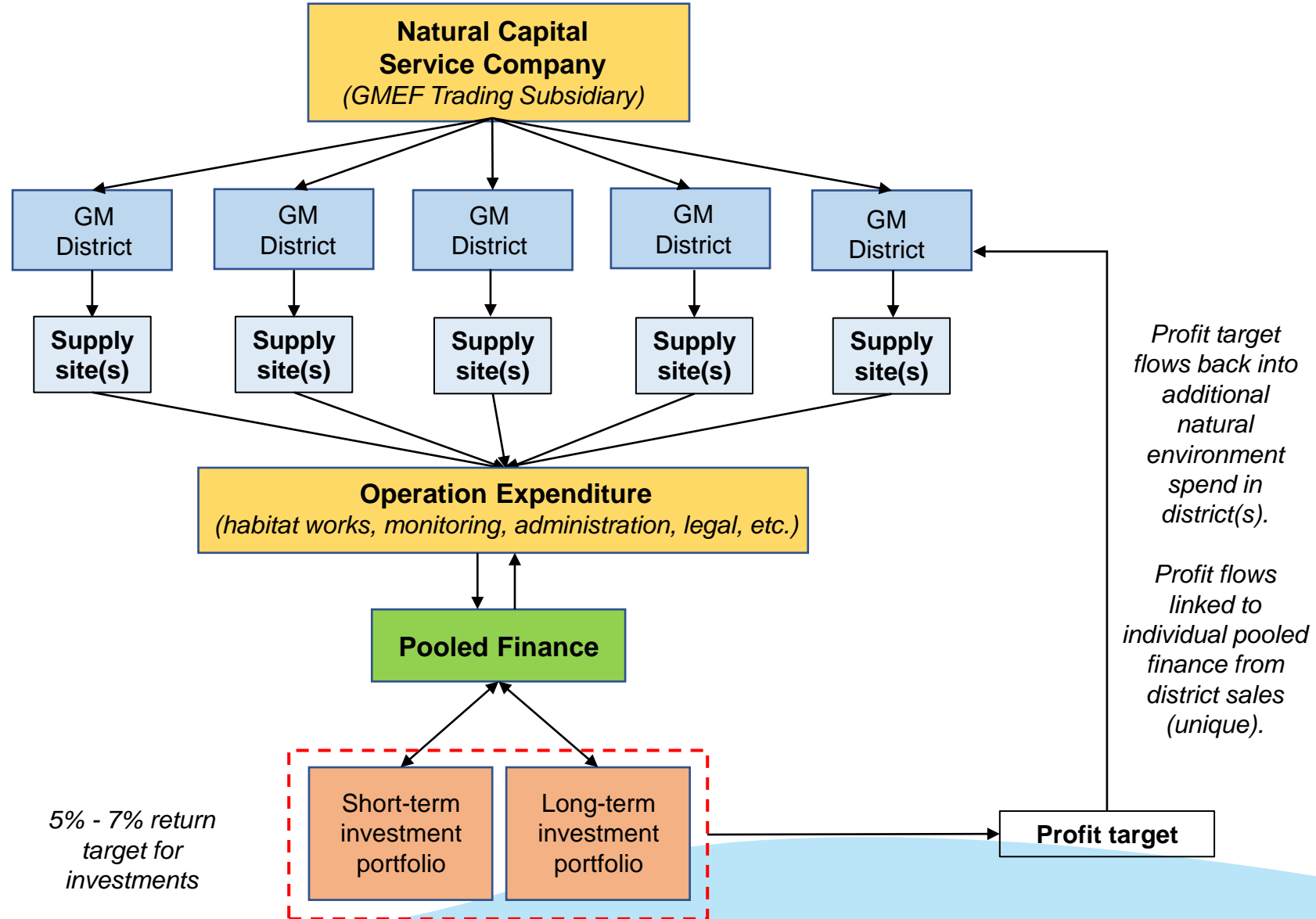
- 8 sites being readied
- Focus on blend of habitat units, priority on low – medium distinctiveness
- Assessment of river units within one of the sites
- Clear priorities within the 8 sites which will be brought forward incrementally

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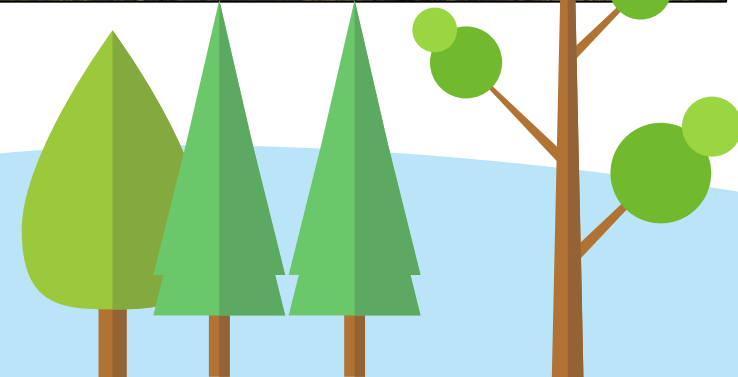
OUR PROGRESS

- Purpose of GMEF is to flow investment into GM natural environment. Working to build financial model which realises this.
- Medium-term staffing model and discussions with eNGOs regarding managing agent work.
- Working with districts on legal advice to secure governance arrangements
- Responsible Body application to DEFRA



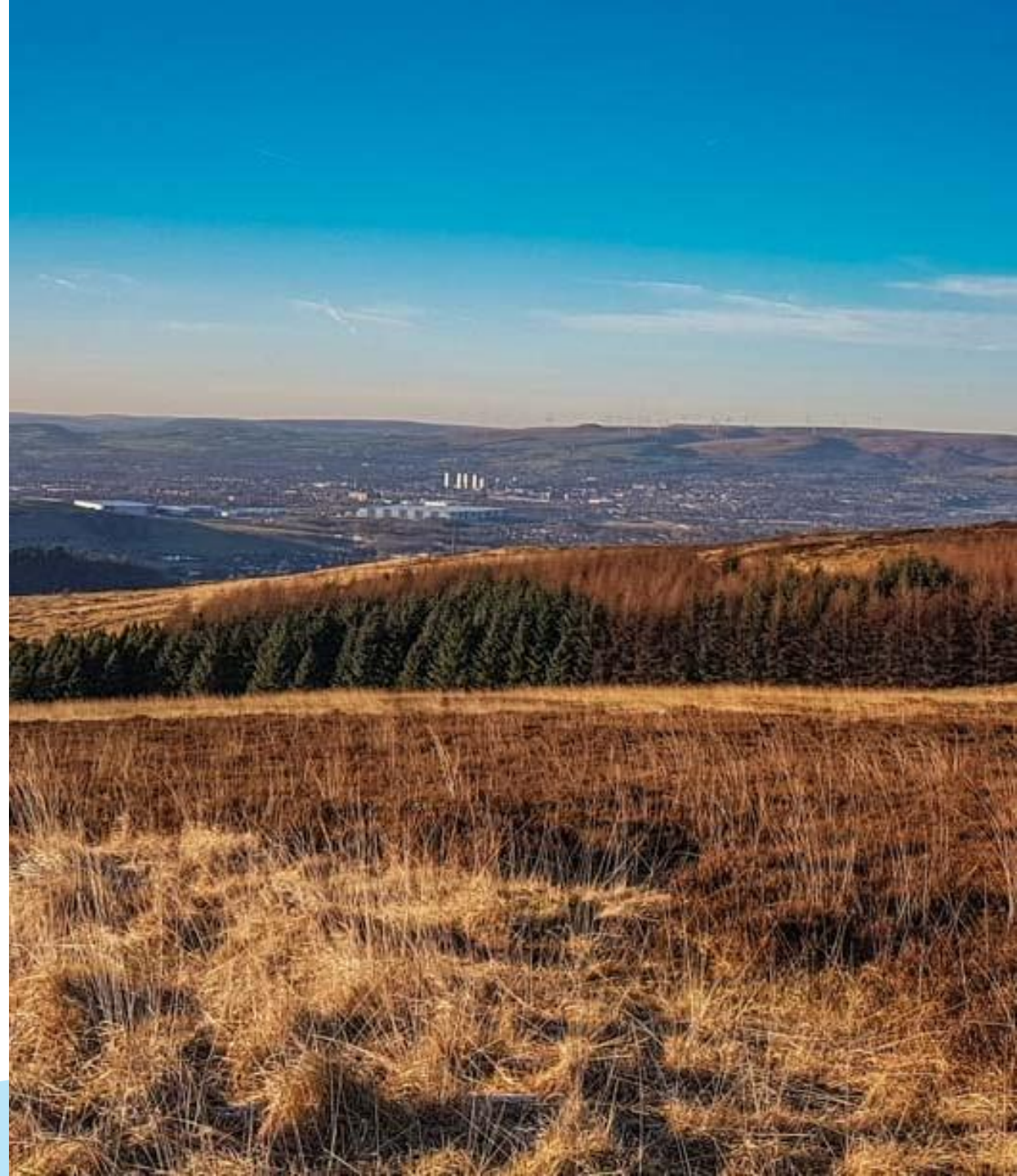
THE CHALLENGES OF BNG

- Capacity – districts and GMEF (DEFRA)
- Suitability of local authority sites
- Bugged down in unit prices and which supply sites – restricted progress on governance
- Is our BNG IF financially viable? Can we flow investment back into districts?
- Uncertainties of the wider supply market
- Lack of legal agreements restricting ability to secure investment



TOUCHING DISTANCE.....

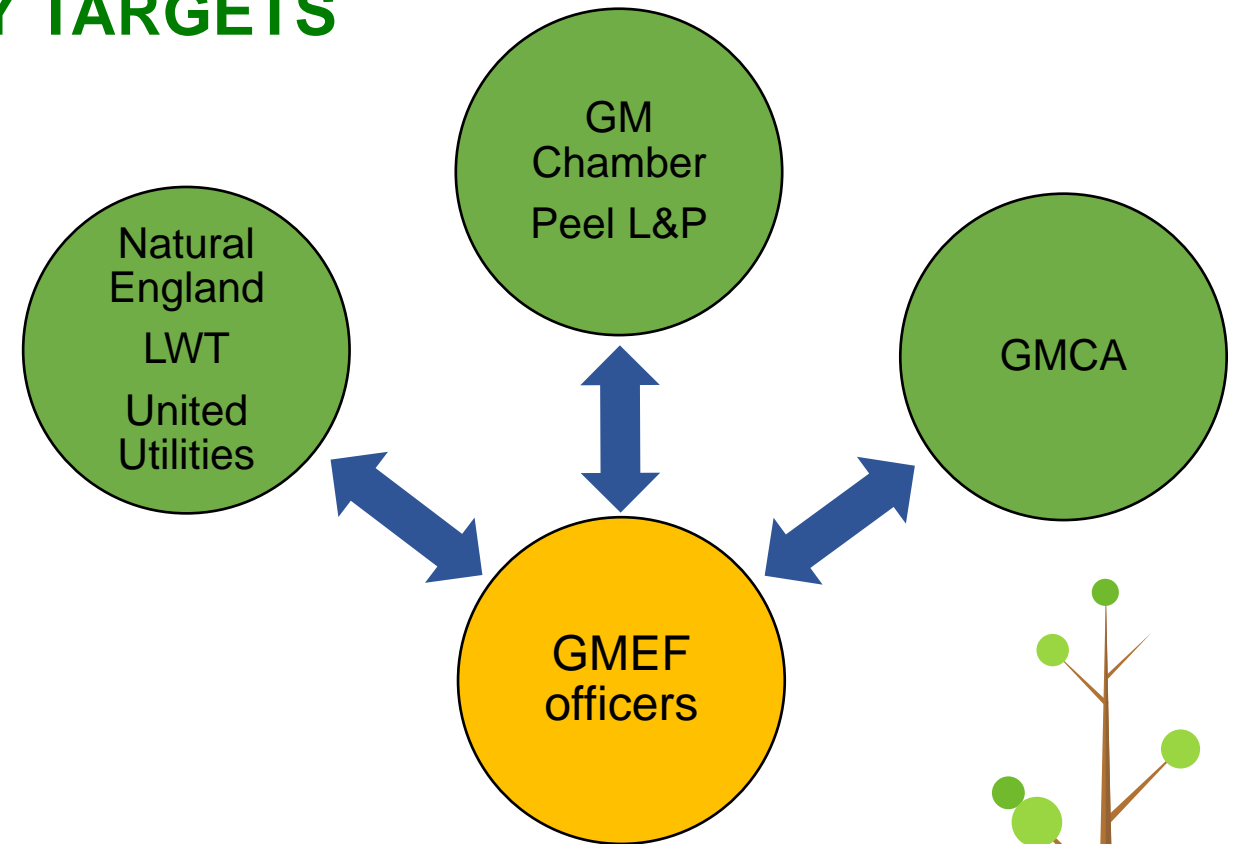
- 5 GM districts committed
- 4 GM districts still considering option
- Lancashire districts have expressed ambition to partner with GMEF BNG IF where viable
- Third party landowners, including other public bodies have queried option to work with GMEF
- Governance progressing



FOUNDATION FOR WIDER STRATEGY TARGETS

- Investment into natural environment of GM is our primary purpose.
- Not the case for organisations offering similar service.
- Significant scrutiny, challenge and support from our board members – pushing us to maximise benefits for nature recovery and social outcomes; as well as available and high integrity units for developers
- BNG IF will be the foundation on which other strands of our Investment Strategy can build on.

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Regional Energy Strategic Planners: Briefing for Local Authorities

January 2024

Jonny Sadler, Strategic Decarbonisation Manager

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www.enwl.co.uk

Objectives for session



1. Overview of the recently announced 'Regional Energy Strategic Planners'
2. Overview of the next steps
3. Initial discussion on the issues arising

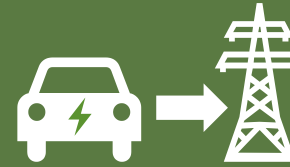
1. Introduction to ENWL



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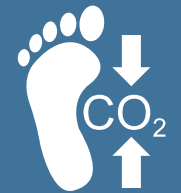
Our Business Plan 2023-28 – Leading the North West to Net Zero



1) **Enabling** –
network
capacity &
reliability



2) **Leading by**
example



3) **Helping** our
customers take
action on net
zero

Business

Domestic

Community

2. In a nutshell



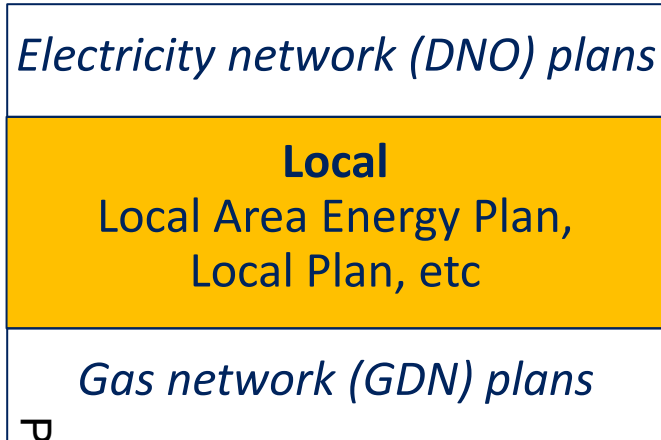
Regional Energy Strategic Planners (RESPs) will ensure that electricity and gas/hydrogen infrastructure is in place where and when it's needed, to enable local and regional net zero objectives to be met...

...building on the work electricity and gas networks already do with LAs.

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3. Enabling local net zero plans – current position



Page 13

Current Position

1. LA plans already directly inform ENWL forecasts and plans
2. But, currently no formally agreed process for how electricity (DNO) and gas network (GDN) operators factor in LA plans
3. From 2023 ENWL created a new team to support the development and facilitation of Local Area Energy Plans (LAEPs) and other local developments – currently supporting over two-thirds of LAs

3. Enabling local net zero plans – future position



Page 134

Current Position

1. LA plans already directly inform ENWL forecasts and plans
2. But, currently no formally agreed process for how electricity (DNO) and gas network (GDN) operators factor in LA plans
3. From 2023 ENWL created a new team to support the development and facilitation of Local Area Energy Plans (LAEPs) and other local developments – currently supporting over two-thirds of LAs

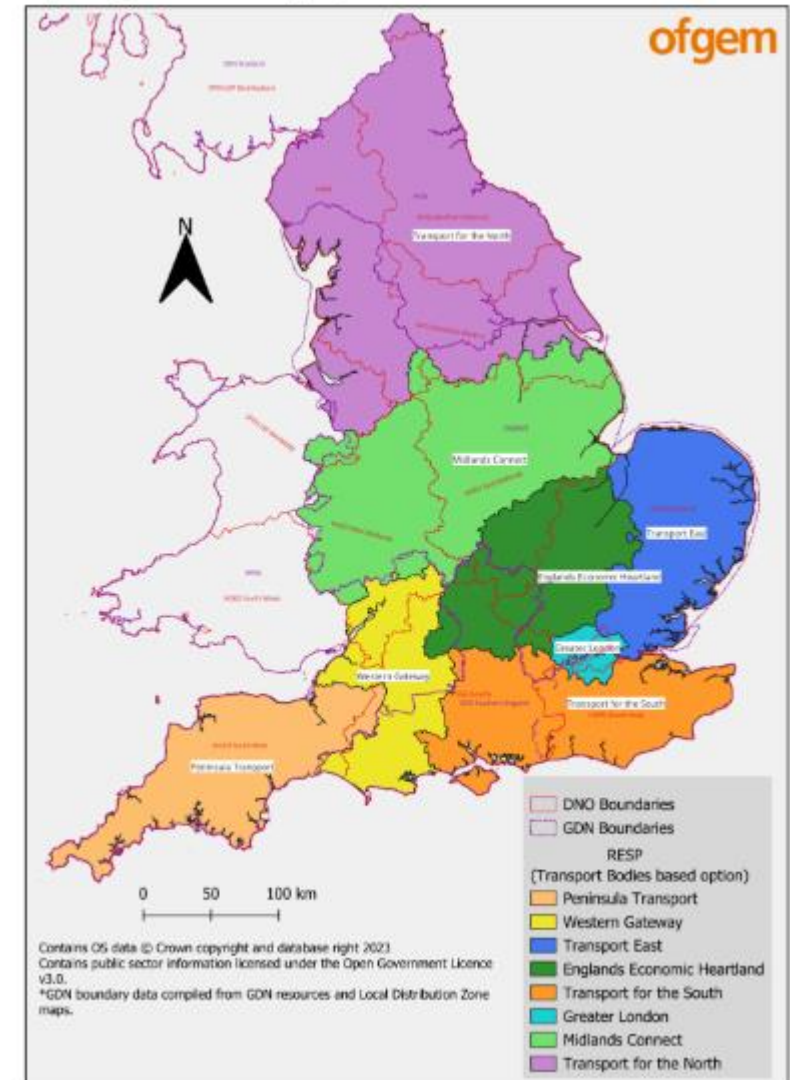
Future Position

1. LA plans will continue to directly inform DNO and GDN plans – but RESPs will establish a consistent process
2. DNOs and GDNs will need to also align with new Regional Plans
3. RESPs will resolve any conflicting views between the actors

4. How this will be achieved – RESPs boundaries



- 10-13 RESPs proposed:
 - 1 in Wales
 - 1-2 in Scotland
 - 8-10 in England
- England:
 - Based on 8 existing Sub-national Transport Bodies' areas
 - Transport for the North (TfN) and Midlands Connect (MC) deemed may be too big
 - May be appropriate to split TfN and MC so each has:
 - 2 RESPs, or
 - 1 RESP with 2 plans
- Administrative/democratic boundaries to take precedence over DNO and GDN boundaries
- Agreeing boundaries part of detailed design phase



4. How this will be achieved – RESPs potential activities



1. **Strategic planning - produce 'Regional Strategic Energy Plans':**

- Develop an aggregated regional view using a wide range of inputs – e.g. national forecasts, electricity and gas network operator data, heat networks, local plans (e.g. Local Area Energy Plans, Local Plans) and other relevant inputs
- 'Cross vector' / 'whole system' i.e. electricity and gas/hydrogen

2. **Technical coordination:** resolve any conflicting views of the actors

3. **Place-based engagement and coordination:** ensure all local actors are involved

4. **Support to local actors:** including 'proportionate' support to LAs

5. Governance – overview & LA input



1. RESPs will be established by the new Future System Operator
2. Each RESP will *‘formalise the process for how those with a democratic mandate interact with and influence the more technocratic aspects of energy planning, and vice versa’*

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Parties to the *‘governance mechanism to ensure regional democratic accountability’*:

- Local authorities
 - Electricity: Distribution Network Operators (DNOs)
 - Gas/hydrogen: Gas Distribution Networks (GDNs)
 - ‘Other relevant actors’
4. Local plans & insights will be key inputs (won’t prescribe ESC Local Area Energy Plan methodology)
 5. RESP will provide ‘proportionate’ support to LAs



6. Detailed Design Phase



1. Metro Mayor workshop 30th November 2023

<https://www.ofgem.gov.uk/publications/metro-mayors-back-major-regional-energy-planning-reform>

2. 30th January 2024 – Ofgem meeting/call with stakeholders to kick off detailed design phase

3. Three workstreams expected:

- Functions: including strategic planning, cross-vector technical coordination
- Governance mechanism
- Boundaries

4. Trials – ‘where appropriate we will also explore the possibility of trial projects’



7. Recommendations



It is recommended that the Green City Region Partnership:

1. Note Ofgem's the recently announced 'Regional Energy Strategic Planners' proposals and the detailed design phase; and
2. Comment and discuss the issues arising



Further Information

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1. Work to date by Ofgem – ‘The Future of Local Energy Institutions and Governance’:
 - Call for Input - April 2022
 - Consultation – March 2023
 - Decision – November 2023

2. Reason for Ofgem’s work:
 - Reaching net zero requires accelerated decarbonisation of heat and transport, and renewable energy generation
 - Enabling these technologies requires radical changes to the way the energy system is planned, invested in and operated, at national, regional and local levels
 - Operators of the local electricity (DNO) and gas (GDN) networks currently produce ‘single vector’ plans for electricity and gas – no formal coordination between the two, nor formal processes for local stakeholder input

3. Three key areas in scope of Ofgem’s decision:
 - ‘Regional energy strategic planning’ – focus for this slide pack
 - ‘Market facilitation of flexible resources’
 - ‘Real time operations’



1. The current 'Electricity System Operator' (ESO) is run by National Grid
2. The ESO will move into public ownership in 2024 and become the 'Future System Operator' (FSO) – enabled by the Energy Act 2023
3. The FSO will be an independent body, with statutory duties and will be licensed and regulated by Ofgem
4. The FSO will be the responsible delivery body for the new RESP function and will discharge its duty by the creation of multiple regional RESPs across GB





Greater Manchester Green City Region Partnership

Date: 25th January 2024

Subject: RETROFIT OF COMMERCIAL BUILDINGS

Report of: Alex Edwards, Bruntwood on behalf of Manchester Climate Change Agency and GMCA

Purpose of Report

This paper provides an opportunity for the Green City Region Partnership to comment upon a draft report aimed at accelerating the retrofit of commercial buildings in Greater Manchester to support reducing the city-region's direct carbon emissions. The report (Annex 01) provides a clear set of deliverable recommendations that, if adopted, will make meaningful change in the commercial property sector across GM and could also lead national standards.

The production of the report has been led by Bruntwood for Manchester's Climate Change Partnership (MCCP) and GMCA, working with industry experts from a range of relevant sectors. An earlier version of the report was presented to the GM Retrofit Taskforce on 3rd October.

Recommendations

The Green City Region Partnership is asked to:

- Note and comment upon the draft report;
- Test the appetite of GM Local Authorities to accept those recommendations which would require an update to Local Plans and Local Planning Powers;
- Provide any detailed feedback on the report to Bruntwood.

Contact Officers

Alex Edwards alex.edwards@bruntwood.co.uk

Sam Nicholson samantha.nicholson@manchesterclimate.com

Mark Atherton mark.atherton@greatermanchester-ca.gov.uk

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ACCELERATING NET ZERO RETROFIT OF COMMERCIAL BUILDINGS IN GREATER MANCHESTER

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1.0 EXECUTIVE SUMMARY

We are not on track to achieve the climate change targets that have been set at a local, regional, national, and global level. Urgent action is needed in all sectors to help ensure we keep global warming to below 2°C above pre-industrial levels, in line with the Paris Agreement.

In Greater Manchester we have a science-based target of being carbon neutral by 2038, whilst staying with a carbon budget of 67MtCO₂ between 2018 and 2038.

Work completed by the Tyndall Centre for Climate Change Research has identified that emissions from 2018-2020 significantly exceeded the targeted budget, to the extent that if emissions continue at the current rate, the entire 67MtCO₂ budget will be exhausted this decade - see Figure 1 below.

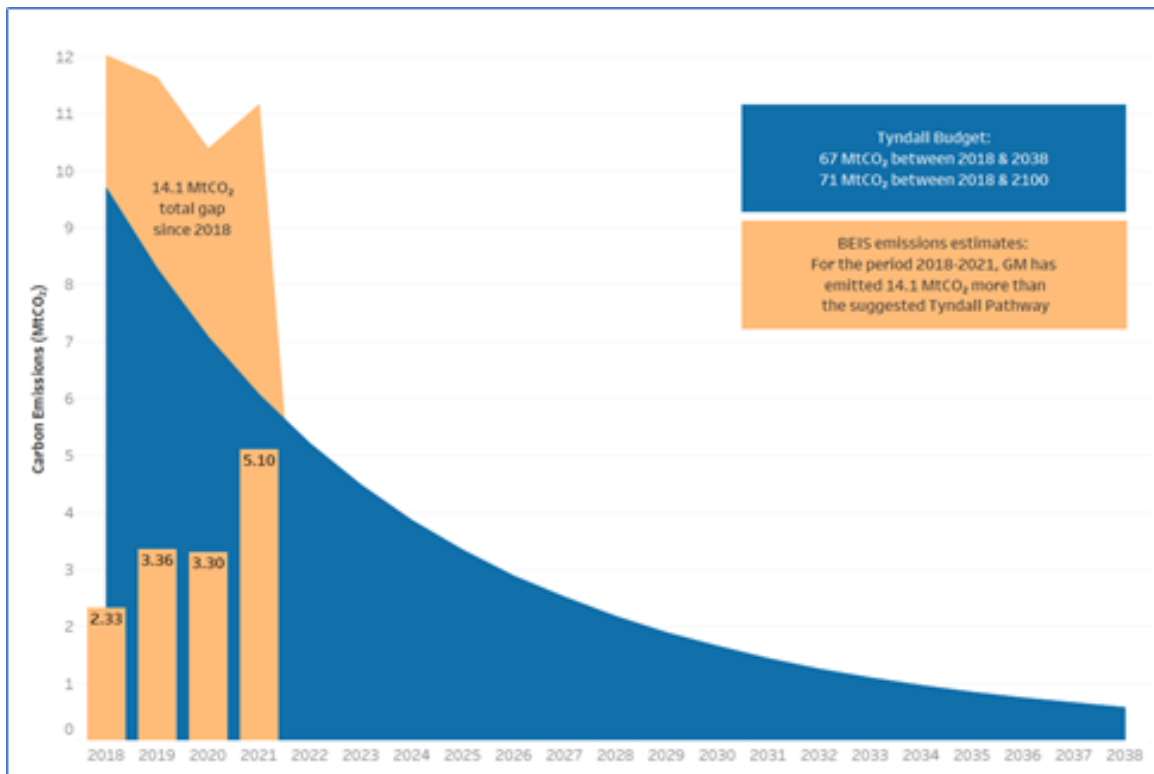


Figure 1 - Greater Manchester Carbon Budget

Manchester’s Climate Change Partnership (MCCP), working with Bruntwood, Manchester Climate Change Agency, Greater Manchester Combined Authority (GMCA) and industry experts from a range of relevant sectors, created a City Challenge Task & Finish Group to focus on accelerating retrofit action in the commercial building sector to help reduce the city-region’s direct emissions.

1.1 Why Focus on Retrofit of Commercial Buildings

The UK Green Building Council (UKGBC) estimates that 80% of buildings that exist today will still be here in 2050. The majority of these buildings, including commercial buildings, were constructed to much lower energy efficiency standards than required to hit carbon reduction targets and therefore need to be retrofitted to improve performance.

The emissions modelling done for the 2022 Update of the Manchester Climate Change Framework showed that energy consumption in commercial buildings is responsible for 12% of the city's emissions. Action to reduce emissions from this sector, therefore, would make a significant contribution to the overall target.

It is important to note that we cannot achieve this reduction in emissions by demolishing existing commercial buildings and constructing new ones. This would be a high carbon strategy due to the high embodied carbon associated with new build, with embodied carbon meaning the carbon associated with the manufacture, transportation of construction materials and the process of construction.

Figure 2 below brings this to life by showing the whole-life-carbon (WLC) impact of retrofit versus new build. The analysis was completed for one of the case studies included in this report (see Appendix B), whereby four scenarios were modelled for a retrofit project at Pall Mall, Manchester.

The 'Do Nothing' scenario where the building is left unimproved, unsurprisingly, has the highest emissions of all options, while the lowest whole-life-carbon option is the extensive retrofit scenario, even when compared with new build construction to exemplar standards of low carbon performance.

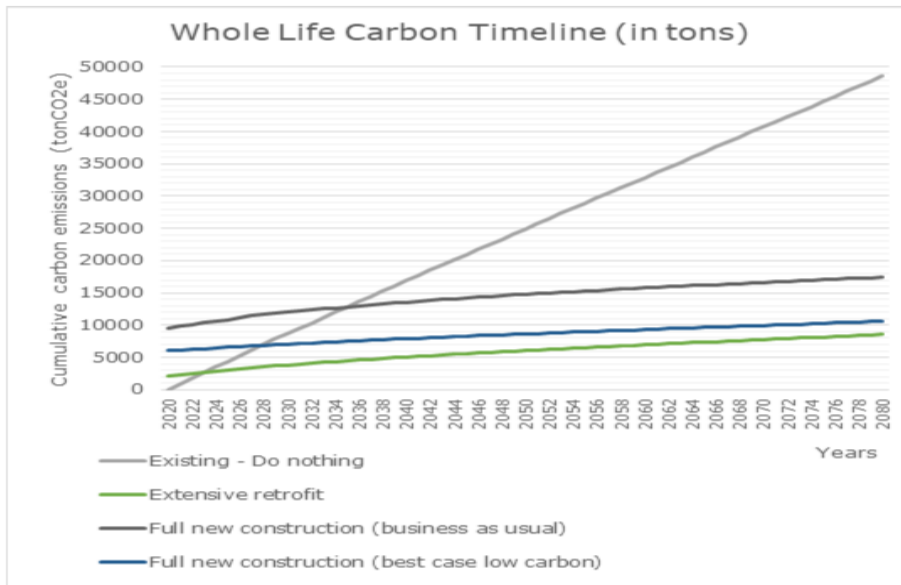


Figure 2 - Whole Life Carbon Timeline of Scenarios, Pall Mall, Manchester

1.2 Size Matters

It's important to note that the commercial building sector includes a range of different sizes building, and that these different sizes have very different scales of carbon impact.

According to the [UK Government¹](#), while only 7% of non-domestic buildings are over 1,000m², they account for approximately 50% of the floor space and total energy used in non-domestic buildings.

Utilising the EPC database for offices in Manchester, it's estimated that only 4% of buildings are over 10,000m² but they account for 63% of the emissions from this sector. If buildings over 5,000m² are included, this means that 9% of the buildings are responsible 63% of the emissions.

Floor Area	Number of Buildings	Proportion of Buildings	Estimated Emissions (tCO2)	Proportion of Emissions
Greater than 10,000m ²	78	4%	66,032	44%
5,000m ² - 10,000m ²	89	5%	28,930	19%
2,500m ² - 5,000m ²	140	7%	23,338	16%
1,000m ² - 2,500m ²	269	14%	16,003	11%
Less than 1,000m ²	1358	70%	15,724	10%

Table 1: Emissions by Floor Area for Offices in Manchester

¹ <https://assets.publishing.service.gov.uk/media/605210218fa8f55d37fca70b/performance-based-policy-framework-ci-buildings--strategy-paper.pdf>

1.3 The Task & Finish Group

A task and finish group of public and private sector industry experts including landlords, developers, consultants, agents, contractors, and policy makers was established in November 2022 to examine the barriers currently limiting commercial retrofit and to develop recommendations for how these can be overcome to accelerate the decarbonisation of this vital part of our built environment.

Members of the Group brought expertise from across the commercial building sector including, asset owners, property agents and consultants, contractors, developers, designers, planners and policy makers.

- ARUP
- Bruntwood (Chair)
- Buro Happold
- Caddick Construction
- Deloitte
- EcoSpheric
- EY
- GMCA
- Green Economy
- Hilson Moran
- JLL
- M&G
- Manchester City Council
- Manchester Climate Change Agency
- Muse
- Peel
- Turner & Townsend
- UKGBC

The Group identified four key components of the challenge and organised itself into four sub-groups to tackle each in detail. Each sub-group had a lead organisation, with Bruntwood providing oversight across the sub-groups as chair of the Task Group, with support from Manchester Climate Change Agency.

1. Finance & Viability - The Commercial Case, led by GMCA
2. Policy - Drivers to Encourage Action, led by Turner & Townsend
3. Technology & Skills - Delivering Solutions, led by Arup
4. Monitoring & Verification - Ensuring Successful Delivery, led by Buro Happold

1.4 Summary of Key Barriers

The key barriers and challenges identified by the sub-groups that are limiting commercial retrofit are:

Finance & viability:

- The burden for investment in retrofit sits with the landlord or asset owner, whereas the benefit of retrofit typically goes to the tenant (e.g. reduced energy bill).

- An uplift in asset values is not yet fully compensating for the investment in retrofit. Greater Manchester is lagging behind the London in terms of brown discounts and green premiums affecting market values and incentivising retrofit action. This is worsened by current market conditions which according to CBRE² UK saw commercial property capital values decrease by 13.3% as a whole in 2022.
- It can be challenging to finance retrofit projects as in isolation such works don't necessarily create direct revenue streams. This has been made more challenging by recent interest rate increases, which have significantly increased the cost of borrowing.
- Recent inflationary pressures on construction materials and labour costs exacerbate all other issues. Recent research by JLL shows that construction costs are up 30% on pre-Covid levels.

Policy:

- Current Minimum Energy Efficiency Standards (MEES) for operational energy efficiency in commercial buildings are too low to accelerate retrofit at the pace required – currently minimum standard for MEES is EPC E, which is a very inefficient building.
- Looks unlikely that government will implement proposals to strengthen MEES Regulations whereby EPC C would be required by 2027 and EPC B by 2030.
- Current planning policy and supplementary planning documents do not mandate high enough performance standards.
- Planning rarely impacts existing buildings and is therefore a fairly ineffective level to implement minimum operational efficiency standards.
- There are conflicts within planning policy and supplementary planning documents which can disincentive building retrofit, e.g. 'sound' targets are often exceeded by low carbon heating.
- The duration of Local Plans, sometimes lasting for 15 years, makes them inflexible to changing requirements, standards, and market trends, including retrofit.
- Conflicts on listed buildings where energy efficiency measures may interfere/alter historic features within the building.

Technology & skills:

- While technical solutions exist to improve operational efficiency of most buildings they are often costly and disruptive.
- There is a heavy reliance on fossil fuels for heating, heat pump technology has developed significantly in recent years, however are significantly more expensive and present several technical challenges.
- The retrofit supply chain is underdeveloped, with a lack of clear policy/market signals and limited access to growth capital acting as constraints to its development.

² CBRE Monthly Index

- Retrofit projects often require specialist materials, smaller orders and non-traditional construction phase scheduling which require specialist skills, knowledge and capacity to deliver.
- Optimal solutions for retrofit are not widely understood and clients often perceive that a new build will offer more value/better returns than a retrofitted building.

Monitoring & verification:

- Lack of effective metering in many existing buildings.
- Inconsistent approach to energy data management and analysis.
- Current mainstream certification schemes (EPC and BREEAM) don't measure the actual performance of a building once occupied and can be shown to be an ineffective measure of building energy efficiency.
- The variety of voluntary standards available (e.g. BREEAM, NABERS) creates uncertainty and inertia in the market, slowing the uptake of retrofit action.
- There is a knowledge gap in building owners and tenants on the installation and interpretation of energy metering, which is disincentivising retrofit action.
- A lack of mandates or incentives to publish building performance data means the market cannot develop in a way that would incentivise energy efficiency and increase retrofit projects (i.e. driving green premiums).

1.5 Summary of Key Recommendations

Recommendation 1: Set a Clear Decarbonisation Pathway

The following table sets out a pathway of increasing operational energy efficiency standards, linked to building size, which would help to ensure the commercial building sector reduces its carbon emissions at an appropriate rate to support Greater Manchester to stay within its carbon budget.

This pathway is in line with 'Paris Proof' targets proposed by multiple expert bodies including the UK Green Building Council.

Building Size	2027	2030	2035	2038
Greater than 10,000m ²	EPC C NABERS	EPC B NABERS 5*	EPC A NABERS 5.5*	EPC A NABERS 6*
5,000m ² - 10,000m ²	EPC C NABERS	EPC B NABERS 4.5*	EPC A NABERS 5*	EPC A NABERS 5.5*
2,500m ² - 5,000m ²	EPC D	EPC C NABERS	EPC B NABERS 5*	EPC A NABERS 5*

1,000m ² - 2,500m ²	EPC D	EPC C	EPC B	EPC A
Less than 1,000m ²	EPC E	EPC D	EPC C	EPC B

Table 2: Proposed Decarbonisation Pathway / Minimum Energy Efficiency Standards

It is unclear if there is a regulatory lever to enforce this pathway for all existing buildings, therefore the implementation of these standards may have to be encouraged through influencing measures, from policy makers and the industry itself, rather than through statutory powers. Note that stricter standards are proposed for buildings that are subject to planning applications – see Recommendation 3.

It is also recommended to lobby the government to ensure the adoption of proposed changes to the MEES Regulations so EPC C rating is required by 2027 and EPC B by 2030 and to promote the use of performance based certification such as NABERS.

Recommendation 2: Establish a Best Practice Cohort

Create a coalition of asset owners (actively targeting those with properties over 10,000m²) and industry specialists to work collaboratively to accelerate action across Greater Manchester. The Cohort would:

- Openly share their own best practice and lessons learned in reducing operational and embodied carbon through retrofit.
- Set up a scheme whereby commercial buildings share data (similar to existing schemes in Copenhagen and Washington DC). This could also include a league table to support improvement through competition.
- Promote the recommended Decarbonisation Pathway and disseminate wider best practice (e.g. guidance from UKGBC or buildings outside Greater Manchester) to other asset owners in and outside the cohort.
- Support engagement with, and capacity building in, the local supply chain.
- Reach out to building tenants to drive energy efficiency (e.g. through Bee Net Zero), promoting and further developing the CBRE Commercial Occupier Retrofit Guide³.
- Support the adoption of green leases
- Feedback to local planning departments to support the development and application of consistent, clear requirements.
- Promote the Decarbonisation Pathway identified in Recommendation 1 for existing commercial buildings to improve their energy efficiency performance over time, in line with best practice.

³ www.greatermanchester-ca.gov.uk/media/8719/gmca_occupierguidance_cbre_noversioncontrolsheet.pdf

Recommendation 3: Update Local Planning Powers in Each District

Use local planning powers (e.g. spatial frameworks, Local Plans, supplementary planning documents) to improve the energy performance of commercial buildings that go through planning across Greater Manchester. For example:

- Explore how the powers associated with devolved government could be used to implement local standards for building energy efficiency that go beyond national planning policy.
- Include in Local Plans that for planning applications submitted for deep retrofit of existing building over 2,500m²:
 - Require mandatory completion of whole life carbon assessment.
 - Using NABERS Design for Performance, require design to achieve a minimum 4.5* rating, improving to 5.5* rating by 2030. Requirement to complete NABERS Base Build in use assessment for a minimum of 6 years once occupied.
- Include in Local Plans that for new build planning applications for commercial offices over 1,000m²:
 - Where there is an existing building, require mandatory completion of whole life carbon assessment including a deep retrofit scenario.
 - Using NABERS Design for Performance, require design to achieve a minimum 5* rating, improving to 6* rating by 2030. Requirement to complete NABERS Base Build in use assessment for a minimum of 6 years once occupied.

Recommendation 4: Explore Potential for Local Fiscal Instruments to Incentivise Retrofit

Examine the business case for utilising available local fiscal powers (e.g. business rates, business improvement districts or innovation districts) to incentivise the retrofit of commercial buildings. For example:

- Identify the options available and quantify the costs and benefits (both financial and carbon and the benefit-recipient) of rewarding energy efficient commercial properties, and the scale of impact such measures could achieve on our carbon targets.
- Understand how market forces (e.g. from NABERS), as stimulated by new local policy instruments, would enhance, or stifle this business case.
- Consider how business improvement districts, innovation districts or a new 'retrofit innovation zone' could be used to trial concept testing of fiscal instruments and testing of new retrofit technologies.
- Explore how a league table of energy performance could support such local powers.

Recommendation 5: Develop Novel Investment Mechanisms

Explore opportunities to attract new investment into commercial retrofit in novel ways. For example:

- Work with the Green Finance Institute on new product development to mirror emerging products for the domestic market.
- Work with the UK Green Investment Bank on novel ways to bundle and scale activity.
- Work with partners through the Innovate UK Net Zero Pathfinder Places programme on capturing financial, environmental, and social returns from retrofit projects to support future investment.

Recommendation 6: Supply Chain Development

Build on existing assessments of local skills capacity and future needs, to target support appropriately. For example:

- Develop existing domestic ‘retrofit coordinator’ course to include commercial office building elements to fill an identified gap in the supply chain, vital to complex projects which are common in large-scale commercial office building retrofit.
- Develop financial business support products that provide growth capital to enable the local retrofit sector to scale up capacity and activity, helping retain economic benefits within the city region.
- Connecting asset owners with retrofit project pipelines to local suppliers, e.g. through Green Economy⁴.
- Ensure the supply chain are an integral part of the Best Practice Cohort as per Recommendation 2.
- Create a best practice library/service to support property owners and occupiers reduce energy consumption and decarbonisation, which connects and promotes delivery supply chain with owners and occupiers.

⁴ <https://gi.greeneconomy.co.uk>

2.0 INTRODUCTION, BACKGROUND & CONTEXT

2.1 Local Policy Context

The Manchester Climate Change Partnership (MCCP) and Agency (MCCA) are responsible for ensuring that Manchester sets and maintains climate change targets, informed by science and in line with the Paris Agreement. These are set out in Manchester's Climate Change Framework (2020-25) and its 2022 Update⁵.

The Framework states that: *'Manchester will play its full part in limiting the impacts of climate change and create a healthy, green, socially just city where everyone can thrive. Its vision is for a green city with walkable neighbourhoods, clean air, good jobs in successful businesses, warm homes and affordable energy, safe cycling routes and a public transport system that works for everyone.'*

The Framework used a science-based targets approach to set a zero-carbon date of 2038 and a carbon budget of 15m tCO₂ for the period 2018-2100 for the city.

This is in line with the Greater Manchester science-based approach, its 2038 target date for carbon neutrality and its carbon budget of 67m tCO₂ for the whole city region, all of which is outlined in the city region's 5-Year Environment Plan⁶.

2.2 Commercial Buildings

According to government statistics⁷, in the UK, there are presently 1.62 million registered commercial buildings comprising approximately 180 million square metres of commercial space. In Manchester, the commercial building sector includes almost 2,000 buildings of varying sizes. In Greater Manchester, the figure rises to around XXX.

In 2022, Manchester updated its [Climate Change Framework](#) to identify specific targets for the decarbonisation of buildings and transport that would enable the city to achieve a 50% cut in its direct energy-related emissions, an important milestone along the decarbonisation pathway.

To establish the reduction target for commercial buildings, the 2022 Update analysed current emissions to establish a baseline. For commercial buildings, this showed that:

- 12% of Manchester's total direct CO₂ emissions are from commercial buildings.
- 52% of commercial building emissions are from lighting and appliances.

⁵ www.manchesterclimate.com/content/2022-update

⁶ www.greatermanchester-ca.gov.uk/what-we-do/environment/five-year-environment-plan/

⁷ www.gov.uk/government/statistics/non-domestic-rating-stock-of-properties-including-business-floorspace-2023

- 48% of commercial building emissions are from space heating and hot water.
- 67% of heating is powered by gas and 32% by electricity.

Figure 3, taken from the 2022 Update, illustrates how direct emissions are generated from different sections of the built environment in Manchester, including commercial buildings. It highlights how energy is used for heating or for lighting and appliances, and whether the source of energy is gas or electricity.

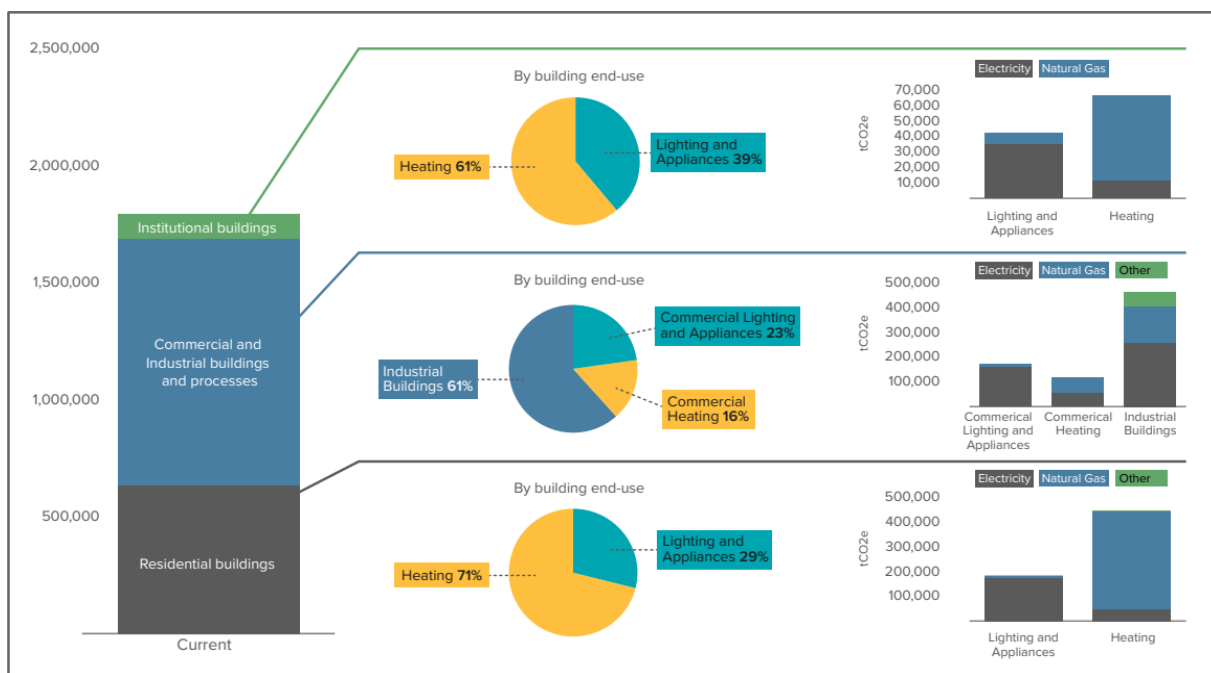


Figure 3 - Emissions breakdown for the Built Environment (from [Manchester Climate Change Framework \(2020-25\) - 2022 Update](#))

From this baseline position, to support the city to halve its emissions, it was identified that commercial buildings would need to deliver a 61% reduction in overall energy demand.

2.3 Commercial Retrofit Task Force

MCCP identified retrofit as a key aspect of achieving the 61% reduction in emissions from commercial buildings and engaged with Partnership members and strategic partners, including Greater Manchester Combined Authority (GMCA), to consider how low carbon commercial retrofit can be accelerated.

A task and finish group of public and private sector industry experts including landlords, developers, consultants, agents, contractors, and policy makers was established in November 2022 to examine

the barriers currently limiting commercial retrofit and to develop recommendations for how these can be overcome to accelerate the decarbonisation of this vital part of our built environment.

The group was chaired by Bruntwood, supported by Manchester Climate Change Agency, and its work forms part of the Greater Manchester Retrofit Taskforce. Group members are listed in Appendix A.

The intention of the group is to help increase the number of commercial retrofit projects taking place in Manchester and the Greater Manchester city region, thus increasing the number of highly energy efficient commercial buildings available and supporting a shift in the market that makes low carbon credentials more attractive to occupiers, tenants and investors. Such a shift would stimulate demand for retrofit skills, products, and technologies, enabling growth in the local supply chain, and creating new economic opportunities for local people. It would help to cement Manchester and Greater Manchester's positions as climate leaders and an attractive target for low carbon investments.

The group identified four key areas and organised into four sub-groups to explore the barriers and opportunities posed by each, and to propose recommendations for inclusion in this report. The sub-groups were:

1. Finance & Viability - The Commercial Case, led by GMCA
2. Policy - Drivers to Encourage Action, led by Turner & Townsend
3. Technology & Skills - Delivering Solutions, led by Arup
4. Monitoring & Verification - Ensuring Successful Delivery, led by Buro Happold

The sub-groups worked individually for several months, drawing in best practice and research from around the UK and internationally, and convened on multiple occasions to discuss and challenge emerging findings and to agree the recommendations and contents of this report.

A similar group was established by MCCP at the same time to examine how Manchester's Local Plan could help to increase delivery of low carbon new buildings, considering both operational and embodied energy in all sectors. These two cohorts collaborated throughout delivery to ensure their recommendations were consistent and supportive of each other.

2.4 Retrofit - An Optimal Solution

According to the UK Green Building Council (UKGBC), 80% of buildings that exist today will still be here in 2050, the target date for the UK to reach net zero, and twelve years later than the date set by Manchester and Greater Manchester.

Most of these buildings were constructed to lower energy efficiency standards than would be required today, and so their performance needs to be improved to support the transition to carbon neutrality. However there are multiple barriers and challenges preventing retrofit at the scale required to hit net zero targets.

It's important to recognise the solution is not to build new buildings to replace existing stock due to the high levels of embodied carbon associated with new build construction. Embodied carbon refers to the greenhouse gas emissions arising from the extraction, manufacture, transport, installation, maintenance, and disposal of building materials. The industry has only recently started to focus on embodied carbon, consequently, whole life carbon (WLC) assessments are starting to become common practice, which look at both embodied and operational carbon emissions throughout the life of a building.

Existing buildings represent a significant volume of embodied carbon already emitted, therefore when retrofit is compared against new build, the WLC of retrofit is often found to be lower than new build. This can be seen in the case of Pall Mall, Manchester, where Bruntwood have completed a WLC comparison of a number of four different scenarios (see detailed Case Study in Appendix B) assuming a 60 year life:

1. **Do Nothing:** Building has original single glazed windows, minimal wall/roof insulation, gas fired heating, separate cooling, inefficient lighting and mechanical ventilation system with no heat recovery.
2. **Extensive Retrofit:** Comprehensive strip out and installation of new high performance glazing, high efficiency air source heat pumps providing heating and cooling with heat recovery, high efficiency.
3. **New Build - Business as Usual:** Demolition of existing building and construction of new building of same floor area, built to current Building Regulations Part L, with air source heat pumps providing heating and cooling and utilising typical construction materials.
4. **New Build - Exemplar Low Carbon:** Demolition of existing building and construction of new building of same floor area, designed to exemplar standards and constructed utilising low carbon materials.

Figure 4 examines the WLC emissions of the four options on a per square metre basis. It separates out operational and embodied carbon, further breaking embodied carbon into upfront and in use / end of life carbon, and groups emissions by the construction stages identified in BS EN 15978:2011 (e.g., A1 - A5) which sets out the calculation method for assessing the environmental performance of a building.

This assessment illustrates how significant the operational energy use is in the 'Do Nothing' scenario for the existing, inefficient building, which has gas-fired heating systems and having low levels of insulation in their building fabric, which is typical of many commercial buildings.

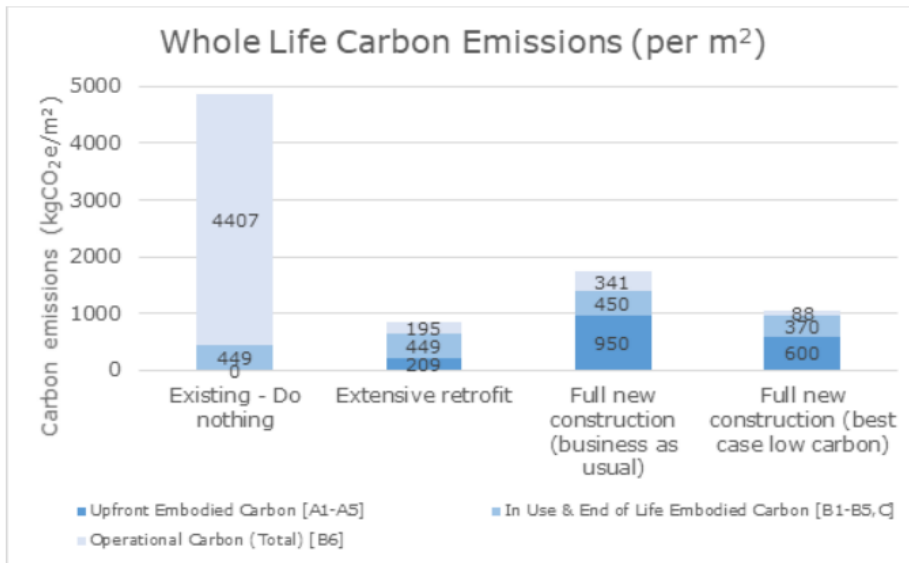


Figure 4 - Whole Life Carbon Emissions per square metre for Four Scenarios, Pall Mall, Manchester

Figure 5 shows the WLC assessment of the four options over the building lifetime. Again, the ‘Do Nothing’ scenario stands out as the worst performing, highest carbon option by far when compared to the retrofit and new build options.

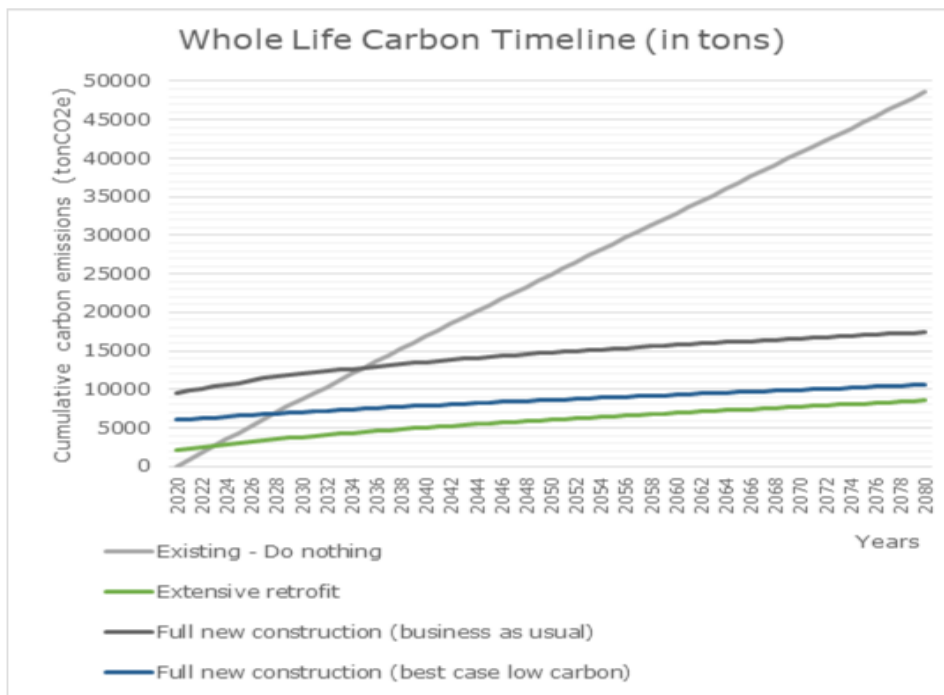


Figure 5 - Whole Life Carbon over Building Lifetime of Four Scenarios, Pall Mall, Manchester

The best performing option is Extensive Retrofit; even though it has higher operational carbon emissions than the 'New Build - Exemplar Low Carbon' option, the higher embodied carbon associated with construction of this option means that its overall emissions are higher than the retrofit option.

Whilst it is important to recognise that other factors will come into play when making decisions about the future of existing buildings, including site utilisation, floor to ceiling height, and flexibility, this case study, and the emerging application of WLC assessments shows that the optimum solution in terms of carbon may well be retrofit.

2.5 Drivers of Retrofit

2.5.1 Effectiveness of Current Regulatory Landscape

The industry recognises that existing policies are insufficient to drive the change required to achieve net zero in the commercial property sector.

While there may be plans to amend national policy, including strengthening the MEES Regulations and introducing performance-based buildings certification (assessing actual energy consumption), it seems unlikely that anything will be implemented quickly enough to create the step change needed to help Manchester and Greater Manchester meet their climate change targets.

The most relevant areas of policy worth highlighting are:

- **Planning:** Unless a significant change to a building is being carried out, existing buildings rarely need to engage with local planning departments, so this local policy lever has limited ability to increase retrofit activity in the commercial buildings sector and cannot deliver the step change needed to retrofit our commercial buildings at pace and scale. Where a significant change to a building is planned, however, it is important that Local Plans use this opportunity and mandate high standards of energy efficiency as part of the permissions process.
- **Energy Performance Certificates (EPCs) & Minimum Energy Efficiency Standards (MEES):** Barring a couple of exceptions, it is a legal requirement for all buildings to have an EPC at the point of sale or letting. For commercial properties this is therefore an effective policy lever as it captures the majority of buildings. To support energy reduction, the UK government introduced the MEES Regulations which have slowly tightened over time and currently require landlords of commercial properties to have an EPC rating of E or above for all leases (new and existing, except where certain exemptions apply), however an EPC E rating is an very inefficient building and therefore is not sufficient to achieve net zero targets. In 2021, the Government issued a consultation on future updates to the MEES

Regulations, which proposed raising minimum standards for the commercial rental sector to require an EPC rating of C by 2027 and EPC B by 2030. If adopted, such standards would help to accelerate retrofit activity in this sector, however with recent roll backs by the government roll backs on net zero it is not expected to be implemented in 2027 and 2030 as recommended in the 2021 government recommendation report.

- **Building Regulations:** Lots of commercial refurbishment activity is covered by the Building Regulations. In terms of how these drive energy efficiency see 'Part L, Conservation of fuel and power', with Volume 2 covering commercial property. There is a requirement to make 'consequential improvements' if there is an extension or installation/increased capacity of new fixed building services (other than renewable energy generators). Consequential improvements include upgrading HVAC or lighting, installation of metering, improving thermal fabric and on-site energy generation. While this is a good requirement given building services are typically replaced every 20-25 years, the improvements are insufficient to deliver the scale of energy reductions required.

2.5.2 Comparative Analysis of Existing Certification Schemes

Certification schemes can play a critical role in driving change and are a critical element of policies, enabling standards to be set and measured. There are several different certification schemes relevant to building energy efficiency, the key ones of relevance to this report are:

- Energy Performance Certificates (EPCs)
- Display Energy Certificates (DECs)
- Building Research Establishment Environmental Assessment Methodology (BREEAM)
- National Australian Built Environment Rating System (NABERS)

EPCs are the de facto certification scheme and a legal requirement for all property sale and rental agreements (with some minor exceptions) via the MEES regulations, covered earlier in this section.

While the theory of EPCs is good, in practice there are a couple of fundamental issues:

1. They only assess regulated loads (HVAC, hot water, and lighting) while unregulated loads (plug in equipment, servers and lifts) are omitted. As highlighted by the UKGBC⁸ and in Figure 6, unregulated can be a significant proportion of whole building energy and in the case of leased office space, something which the landlord has little control over.
2. There is no measurement of actual energy consumption of the regulated loads, so this is often found to be significantly underestimated. This is commonly referred to as the 'Performance Gap' which is well documented in the property industry.

⁸ www.ukgbc.org/wp-content/uploads/2020/01/Energy-performance-targets-for-offices-technical-report.pdf

These issues mean that the actual energy consumption of a building is often higher than the EPC rating would imply. CIBSE research⁹ estimates that new buildings typically consume between 50% and 150% more energy than originally expected. It's fair to assume this same inaccuracy can be extended to existing buildings. This is highlighted in Figure 6 which compares the estimated energy consumption from the Part L model (EPC model) with the actual energy consumption in use. Note Figure 8 compares energy consumption utilising energy use intensity (EUI) which is the total annual energy consumption divided by the floor area, which is an important metric for comparing energy consumption in different buildings.

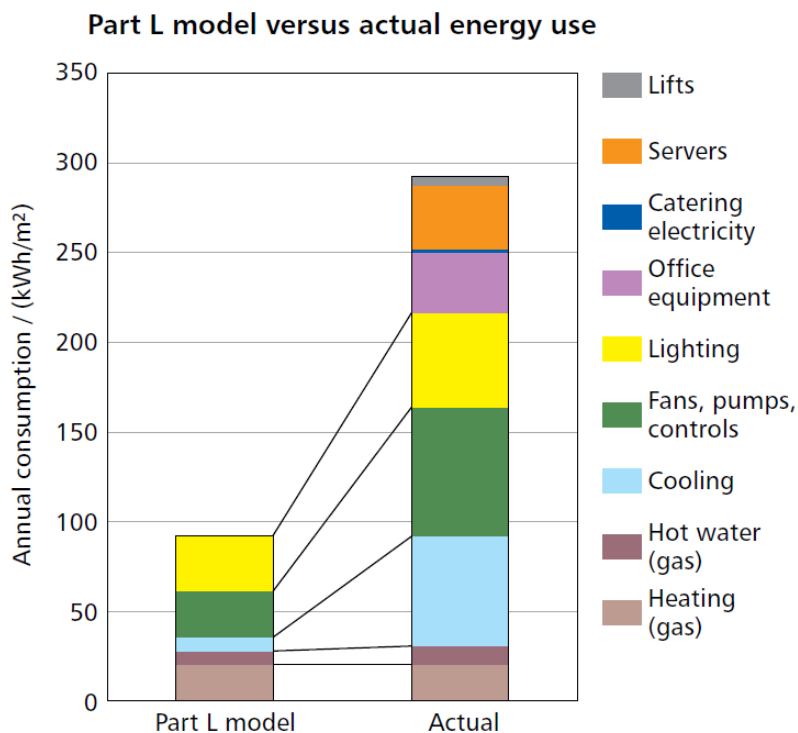


Figure 6 - EPC Model vs Actual Energy Consumption (taken from CIBSE¹⁰)

The Better Building Partnerships (BBP) collect actual energy consumption data for commercial buildings and has mapped EUI against EPC rating. This data is shown in Figure 7, with the EUI of individual buildings shown in the grey vertical bars, grouped by EPC band. The data clearly shows that there is little correlation between a building's EPC rating and its EUI, with a mix of low and high energy use intensity in each EPC band.

⁹CIBSE TM54 Evaluating operational energy performance of buildings at the design stage

¹⁰ CIBSE TM54 Evaluating operational energy performance of buildings at the design stage

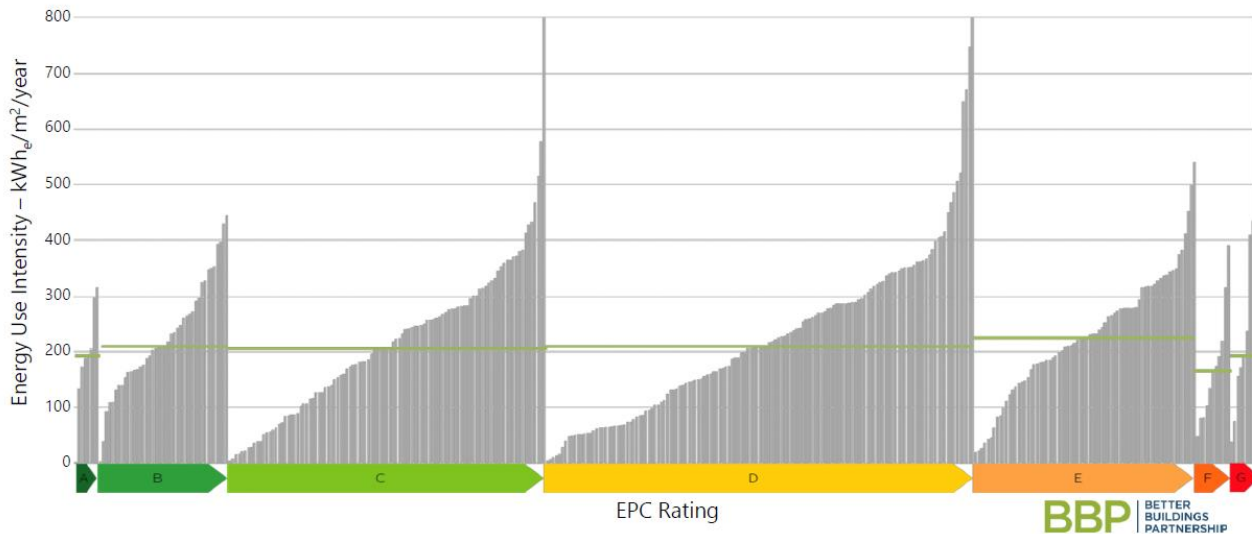


Figure 7: BBP Data Comparing EPC Rating and Energy Use Intensity

DECs do measure actual energy consumption and are mandatory for public buildings; however, they have not become mainstream in the commercial property sector and so their impact is limited in driving the uptake of retrofit.

BREEAM looks at a broad range of different sustainability related aspects such as transport, wellbeing, resilience, water, and energy; while energy carries the highest proportion of the overall score, as with EPCs it only looks at theoretical energy efficiency and therefore does not address the Performance Gap highlighted above and therefore subject to inaccuracies of estimated vs actual energy consumption.

In 2005 a new certification scheme was launched in Australia called NABERS (National Australian Built Environment Rating System). It has had a transformational impact on the Australian commercial property market. It was initially a mandatory requirement for government leases, however subsequently more widely adopted, with mandatory disclosure introduced in 2011. In a nine year period there has been a 35% reduction in the average EUI. There has also been a number of other benefits resulting from better NABERS ratings - see Figure 8.

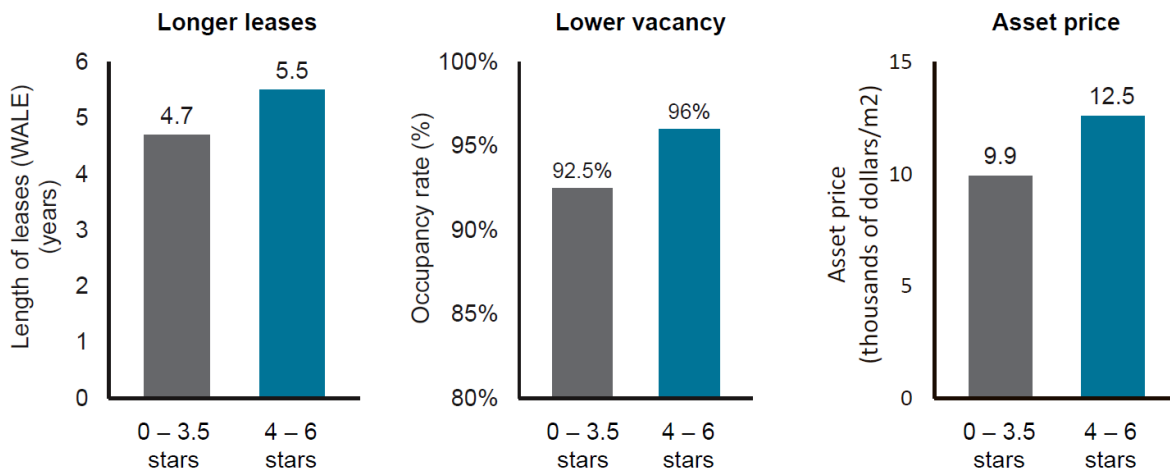


Figure 8: Market Demand for Buildings with Better NABERS Ratings (source BBP)

The success of NABERS is underpinned by a number of key principles:

1. **Actual Energy Measured:** While it is possible to get a predicted rating, once in operation NABERS rating is based on actual measured energy consumption from meters.
2. **Simple Rating System:** By using a 1 to 6 star scale rating, investors, owners and occupiers can easily understand how a building is operated over a year. Star ratings as follow:
 - 1 Star = Poor
 - 2 Stars = Below Average
 - 3 Stars = Average
 - 4 Stars = Good
 - 5 Stars = Excellent
 - 6 Stars = Market Leading
3. **Technically Robust:** The certification is very technically robust and includes adjustments for operational hours and equipment density so buildings are not penalised for these factors.
4. **Responsibility aligns with Party in Control:** Acknowledging landlord and tenant are in control/responsible of different energy demands, NABERS has three different rating options (also see Figure 9):
 - **Base Building:** Buildings can be rated based on their central services like heating and cooling systems, lifts and lobby lighting.
 - **Tenancy:** Enables energy used by the tenant to be rated, typically for lighting and power, plus special tenancy requirements or local a/c.
 - **Whole Building:** Provides assessment of energy used by office tenancies and by Base Building services to lettable and common spaces.

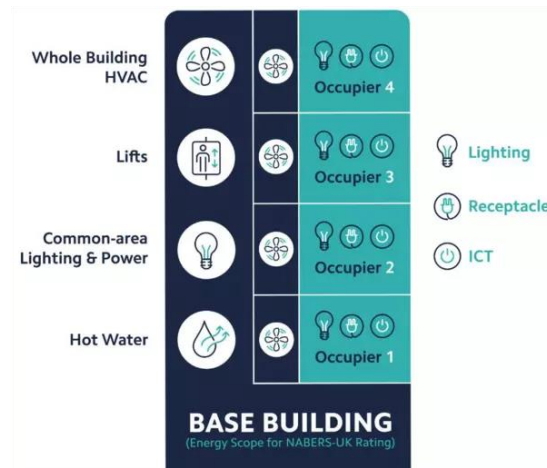


Figure 9 – NABERS Rating Options: Base Building / Tenant / Whole Building

Recognising the success in Australia, in November 2020 NABERS UK was launched for use in the UK, with the hope that it has a similar impact here, although at present there are fairly low adoption rates and the BRE recently announced they are withdrawing as administrator, although NABERS are working on finding a new administrator.

2.6 UKGBC Commercial Retrofit Programme

Recently, a growing consensus has emerged in the UK around the concept of net zero carbon buildings. A key moment was the publication of the Net Zero Carbon Buildings Framework in 2019 by a UK Green Building Council (UKGBC) industry task group, and a growing body of resources which are helping the built environment sector better understand the key requirements for net zero carbon new buildings, such as performance targets developed by LETI and RIBA.

In May 2022 the UKGBC launched its [Delivering Net Zero: Key Considerations for Commercial Retrofits](#) and are currently in the process of developing this further with a live project called 'Closing the gap towards net zero carbon commercial retrofit' which should launch early 2024.

Members from the MCCP Commercial Retrofit Project have been part of the live project and endorse the work being completed which focuses on two main aspects:

1. Methodology for retrofit
2. Evidence for retrofit measures based on case studies

2.6.1 Methodology for Retrofit

2.6.2 Evidence for Retrofit Measures based on Case Studies

3.0 KEY FINDINGS & RECOMMENDATIONS

3.1 Summary of Key Barriers

The key barriers and challenges identified by the sub-groups that are limiting commercial retrofit are:

Finance & viability:

- The burden for investment in retrofit sits with the landlord or asset owner, whereas the benefit of retrofit typically goes to the tenant (e.g. reduced energy bill).
- An uplift in asset values is not yet fully compensating for the investment in retrofit. Greater Manchester is lagging behind the London in terms of brown discounts and green premiums affecting market values and incentivising retrofit action. This is worsened by current market conditions which according to CBRE¹¹ UK saw commercial property capital values decrease by 13.3% as a whole in 2022.
- It can be challenging to finance retrofit projects as in isolation such works don't necessarily create direct revenue streams. This has been made more challenging by recent interest rate increases, which have significantly increased the cost of borrowing.
- Recent inflationary pressures on construction materials and labour costs exacerbate all other issues. Recent research by JLL shows that construction costs are up 30% on pre-Covid levels.

Policy:

- Current Minimum Energy Efficiency Standards (MEES) for operational energy efficiency in commercial buildings are too low to accelerate retrofit at the pace required – currently minimum standard for MEES is EPC E, which is a very inefficient building.
- Looks unlikely that government will implement proposals to strengthen MEES Regulations whereby EPC C would be required by 2027 and EPC B by 2030.
- Current planning policy and supplementary planning documents do not mandate high enough performance standards.
- Planning rarely impacts existing buildings and is therefore a fairly ineffective level to implement minimum operational efficiency standards.
- There are conflicts within planning policy and supplementary planning documents which can disincentive building retrofit, e.g. 'sound' targets are often exceeded by low carbon heating.
- The duration of Local Plans, sometimes lasting for 15 years, makes them inflexible to changing requirements, standards, and market trends, including retrofit.

¹¹ CBRE Monthly Index

- Conflicts on listed buildings where energy efficiency measures may interfere/alter historic features within the building.

Technology & skills:

- While technical solutions exist to improve operational efficiency of most buildings they are often costly and disruptive.
- There is a heavy reliance on fossil fuels for heating, heat pump technology has developed significantly in recent years, however are significantly more expensive and present several technical challenges.
- The retrofit supply chain is underdeveloped, with a lack of clear policy/market signals and limited access to growth capital acting as constraints to its development.
- Retrofit projects often require specialist materials, smaller orders and non-traditional construction phase scheduling which require specialist skills, knowledge and capacity to deliver.
- Optimal solutions for retrofit are not widely understood and clients often perceive that a new build will offer more value/better returns than a retrofitted building.

Monitoring & verification:

- Lack of effective metering in many existing buildings.
- Inconsistent approach to energy data management and analysis.
- Current mainstream certification schemes (EPC and BREEAM) don't measure the actual performance of a building once occupied and can be shown to be an ineffective measure of building energy efficiency.
- The variety of voluntary standards available (e.g. BREEAM, NABERS) creates uncertainty and inertia in the market, slowing the uptake of retrofit action.
- There is a knowledge gap in building owners and tenants on the installation and interpretation of energy metering, which is disincentivising retrofit action.
- A lack of mandates or incentives to publish building performance data means the market cannot develop in a way that would incentivise energy efficiency and increase retrofit projects (i.e. driving green premiums).

3.2 Size Matters

According to a [Government publication from June 2021¹²](#), commercial offices in the UK account for circa 11% of energy consumption from non-domestic buildings; however, while only 7% of non-domestic buildings are above 1,000m², they account for approximately 50% of the total floor area and used an estimated 53% of the total energy used in non-domestic buildings.

¹² BEIS Introducing a Performance-Based Policy Framework in large Commercial and Industrial Buildings in England and Wales 2021

Further analysis, using data from the EPC Register for 'B1 Offices and Workshop businesses' in Manchester shows that the city's larger commercial buildings, over 5,000 square metres, make up less than 10% of the stock but are responsible for nearly two-thirds of the emissions from this whole sector (63%). Table 3 shows this data in more detail, grouping buildings into five size categories according to floor area.

Floor Area	Number of Buildings	Proportion of Buildings	Estimated Emissions (tCO2)	Proportion of Emissions
Greater than 10,000m ²	78	4%	66,032	44%
5,000m ² - 10,000m ²	89	5%	28,930	19%
2,500m ² - 5,000m ²	140	7%	23,338	16%
1,000m ² - 2,500m ²	269	14%	16,003	11%
Less than 1,000m ²	1358	70%	15,724	10%

Table 3: Emissions by Floor Area for Offices in Manchester

Table 4 then shows the data for Greater Manchester...

Floor Area	Number of Buildings	Proportion of Buildings	Estimated Emissions (tCO2)	Proportion of Emissions
Greater than 10,000m ²				
5,000m ² - 10,000m ²				
2,500m ² - 5,000m ²				
1,000m ² - 2,500m ²				
Less than 1,000m ²				

Table 4: Emissions by Floor Area for Offices in Greater Manchester

In terms of targeting energy efficiency improvements, or implementing minimum energy efficiency standards for commercial buildings it is clear that action by a small number of large buildings will deliver a greater impact than if the same actions are taken by a large number of small buildings. In addition, large buildings are more likely to be in an ownership structure that should be better prepared for the implementation of such activity/higher standards.

3.3 Summary of Key Recommendations

Recommendation 1: Set a Clear Decarbonisation Pathway

The following table sets out a pathway of increasing operational energy efficiency standards, linked to building size, which would help to ensure the commercial building sector reduces its carbon emissions at an appropriate rate to support Greater Manchester to stay within its carbon budget.

This pathway is in line with 'Paris Proof' targets proposed by multiple expert bodies including the UK Green Building Council.

Building Size	2027	2030	2035	2038
Greater than 10,000m ²	EPC C NABERS	EPC B NABERS 5*	EPC A NABERS 5.5*	EPC A NABERS 6*
5,000m ² - 10,000m ²	EPC C NABERS	EPC B NABERS 4.5*	EPC A NABERS 5*	EPC A NABERS 5.5*
2,500m ² - 5,000m ²	EPC D	EPC C NABERS	EPC B NABERS 5*	EPC A NABERS 5*
1,000m ² - 2,500m ²	EPC D	EPC C	EPC B	EPC A
Less than 1,000m ²	EPC E	EPC D	EPC C	EPC B

Table 2: Proposed Decarbonisation Pathway / Minimum Energy Efficiency Standards

It is unclear if there is a regulatory lever to enforce this pathway for all existing buildings, therefore the implementation of these standards may have to be encouraged through influencing measures, from policy makers and the industry itself, rather than through statutory powers. Note that stricter standards are proposed for buildings that are subject to planning applications – see Recommendation 3.

It is also recommended to lobby the government to ensure the adoption of proposed changes to the MEES Regulations so EPC C rating is required by 2027 and EPC B by 2030 and to promote the use of performance based certification such as NABERS.

Recommendation 2: Establish a Best Practice Cohort

Create a coalition of asset owners (actively targeting those with properties over 10,000m²) and industry specialists to work collaboratively to accelerate action across Greater Manchester. The Cohort would:

- Openly share their own best practice and lessons learned in reducing operational and embodied carbon through retrofit.
- Set up a scheme whereby commercial buildings share data (similar to existing schemes in Copenhagen and Washington DC). This could also include a league table to support improvement through competition.
- Promote the recommended Decarbonisation Pathway and disseminate wider best practice (e.g. guidance from UKGBC or buildings outside Greater Manchester) to other asset owners in and outside the cohort.
- Support engagement with, and capacity building in, the local supply chain.
- Reach out to building tenants to drive energy efficiency (e.g. through Bee Net Zero), promoting and further developing the CBRE Commercial Occupier Retrofit Guide¹³.
- Support the adoption of green leases
- Feedback to local planning departments to support the development and application of consistent, clear requirements.
- Promote the Decarbonisation Pathway identified in Recommendation 1 for existing commercial buildings to improve their energy efficiency performance over time, in line with best practice.

Recommendation 3: Update Local Planning Powers in Each District

Use local planning powers (e.g. spatial frameworks, Local Plans, supplementary planning documents) to improve the energy performance of commercial buildings that go through planning across Greater Manchester. For example:

- Explore how the powers associated with devolved government could be used to implement local standards for building energy efficiency that go beyond national planning policy.
- Include in Local Plans that for planning applications submitted for deep retrofit of existing building over 2,500m²:
 - Require mandatory completion of whole life carbon assessment.
 - Using NABERS Design for Performance, require design to achieve a minimum 4.5* rating, improving to 5.5* rating by 2030. Requirement to complete NABERS Base Build in use assessment for a minimum of 6 years once occupied.
- Include in Local Plans that for new build planning applications for commercial offices over 1,000m²:
 - Where there is an existing building, require mandatory completion of whole life carbon assessment including a deep retrofit scenario.
 - Using NABERS Design for Performance, require design to achieve a minimum 5* rating, improving to 6* rating by 2030. Requirement to complete NABERS Base Build in use assessment for a minimum of 6 years once occupied.

¹³ www.greatermanchester-ca.gov.uk/media/8719/gmca_occupierguidance_cbre_noversioncontrolsheet.pdf

Recommendation 4: Explore Potential for Local Fiscal Instruments to Incentivise Retrofit

Examine the business case for utilising available local fiscal powers (e.g. business rates, business improvement districts or innovation districts) to incentive the retrofit of commercial buildings. For example:

- Identify the options available and quantify the costs and benefits (both financial and carbon and the benefit-recipient) of rewarding energy efficient commercial properties, and the scale of impact such measures could achieve on our carbon targets.
- Understand how market forces (e.g. from NABERS), as stimulated by new local policy instruments, would enhance, or stifle this business case.
- Consider how business improvement districts, innovation districts or a new 'retrofit innovation zone' could be used to trial concept testing of fiscal instruments and testing of new retrofit technologies.
- Explore how a league table of energy performance could support such local powers.

Recommendation 5: Develop Novel Investment Mechanisms

Explore opportunities to attract new investment into commercial retrofit in novel ways. For example:

- Work with the Green Finance Institute on new product development to mirror emerging products for the domestic market.
- Work with the UK Green Investment Bank on novel ways to bundle and scale activity.
- Work with partners through the Innovate UK Net Zero Pathfinder Places programme on capturing financial, environmental, and social returns from retrofit projects to support future investment.

Recommendation 6: Supply Chain Development

Build on existing assessments of local skills capacity and future needs, to target support appropriately. For example:

- Develop existing domestic 'retrofit coordinator' course to include commercial office building elements to fill an identified gap in the supply chain, vital to complex projects which are common in large-scale commercial office building retrofit.
- Develop financial business support products that provide growth capital to enable the local retrofit sector to scale up capacity and activity, helping retain economic benefits within the city region.

- Connecting asset owners with retrofit project pipelines to local suppliers, e.g. through Green Economy¹⁴.
- Ensure the supply chain are an integral part of the Best Practice Cohort as per Recommendation 2.
- Create a best practice library/service to support property owners and occupiers reduce energy consumption and decarbonisation, which connects and promotes delivery supply chain with owners and occupiers.

¹⁴ <https://gi.greeneconomy.co.uk>

APPENDIX A: PROJECT SUB-GROUPS

As part of the work of this Commercial Retrofit Project, group members were split into four sub-groups, which were chosen as discrete areas with specific challenges and barriers. The sub-groups and their members were:

Finance & Viability - The Commercial Case

Members: Laura Blakey - Sub Group Lead (GMCA), Rob Edwards (GMCA), Richard Wharton (JLL), Laura Jockers (M&G) and David Lord (Manchester City Council)

Policy - Drivers to Encourage Action

David Kemp - Sub Group Lead (Turner & Townsend), Paige Johnson (formerly Turner & Townsend, now Anthesis), Richard Cohen (Manchester City Council), Sarah Darch (formerly EY, now Homes England), Ellen Sanderson-Clark (Deloitte) and Todd Holden (GMCA)

Technology & Skills - Delivering Solutions

Rick Lee - Sub Group Lead (ARUP), Craig Havenhand (ARUP), Tom Waterson (ARUP), Ben Edwards (Caddick Construction), Kit Knowles (EcoSpheric), Katherine Burden (Green Economy), Emma Payne (Muse) and Joseph Crolla (GMCA)

Monitoring & Verification - Ensuring Successful Delivery

Ben Jones - Sub Group Lead (Buro Happold), Andy Hart (Hilson Moran), Lizzie Norman (Buro Happold), Jo Holden (formerly Peel) and Etienne Humphries (Bruntwood)

Sub-groups were asked to identify barriers, as well as opportunities and recommendations, which are outlined in the next section and have fed into the main body of the report.

Finance & Viability - The Commercial Case

Context

Up and down the country there are some significant finance and viability challenges facing commercial retrofit. Within the industry we are seeing some value in more energy efficient buildings, often referred to as 'green premium vs brown discount'.

Retrofit to achieve high energy efficiency often requires 'deep retrofit' which may involve significant interventions such as replacement/comprehensive upgrade of building facades and HVAC systems. These interventions are extremely disruptive and may require a completely vacant building. As such in the current market when viewed through the lens of commercial viability, the costs associated with retrofitting a building to achieve a highly efficient building are viewed as cost prohibitive, certainly without any financial support to do so and the current financial conditions in property exacerbate the issues.

Barriers

Lack of Policy

The lack of policy driving more energy efficient commercial buildings has an impact on the financial viability that will drive green premium / brown discount. Until we see some sort of policy, for example the proposed changes to MEES, then it's highly unlikely that we will see a shift in the pace of commercial retrofit driven by financial incentive.

Insufficient Brown Discount / Green Premium

In the current GM market the uplift in values are not yet fully compensating for the investment required for energy efficiency measures required to meet GM energy targets. Generally the view is that premium markets (e.g. London, Manchester city centre etc) landlords are starting to see the investment in retrofit come through in increased values, however other areas are lagging behind in this respect. Evidence to support this is as follows:

- Knight Frank has found an 8% to 18% price premium for green-rated offices compared to those without any sustainability certification, with a 13% premium on rents and 10.5% on sales prices on BREEAM outstanding and excellent rated buildings in central London.
- Nareit shows in the US REIT market that green certified buildings can translate into a 31% increase in sales values, 23% higher occupancy rates and an 8% increase in rental incomes. However there is insufficient data within the commercial retrofit market.

There is however insufficient evidence yet of the scale of brown discounts / green premiums and the impact of location on these parameters. Initial views from the market in GM are that whilst demand for 'green' buildings is increasing, this is not necessarily matched with a willingness to pay more. Furthermore, the impact of brown discounts, where landlords start to see a depreciation in values due to the energy efficiency of their buildings has not yet materialised and is unlikely to do so at scale until effective policy is in place.

Landlord Investment - Tenant Energy Saving

In a tenant occupied commercial building it's often the landlord that makes the financial investment in energy efficiency measures, with the tenant benefitting through lower operational energy costs. Typically the landlord would hope to receive an increased rental income for a more energy efficient building, however this rental premium does not as yet cover the investment required.

Current Economic Pressures

Over the last 12-24 months external financial market pressures have had a further negative impact on the financial viability of retrofit projects, namely:

- **Reduction in Asset Values:** In 2022 according to CBRE¹⁵ UK saw a 13.3% reduction in commercial property capital values.
- **Increased Cost of Borrowing:** Over the past 18 months interest rates have increased by circa 5%, which have significantly increased the cost of borrowing.
- **Inflationary Pressures:** Recent inflationary pressures on construction materials and labour costs exacerbate all other issues. Recent research by JLL shows that construction costs are up 30% on pre-Covid levels.

These conditions make it even more difficult for energy efficiency commercial retrofit to provide the financial returns required.

Which Interventions to Choose?

When it comes to commercial retrofit there are a wide number of possible interventions, however many developers are unclear as to what the optimal solution to commercial retrofit is. There are many options to reduce the carbon impact of a building, generally combining high efficiency windows, wall and roof insulation, removal of fossil fuels for heating, efficient HVAC systems, LED lighting and on-site energy generation are viewed as the most beneficial measures available, however landlords/developers need to take into account the impact to the cost/benefit analysis,

¹⁵ CBRE Monthly Index

level of disruption to the existing occupiers, potential statutory consents and whether electricity infrastructure upgrades would be required to implement the options.

All of the above can leave landlords/developers uncertain on which potential measures to choose and inevitability leading confusion over picking the most impactful measures to select.

General Funding Constraints

As retrofit programmes in isolation do not currently capture any revenue streams they can be challenging to finance unless the developer's wider banking facilities fit within the established parameters (pre-lets / LTV% etc). The market needs to evolve to remove this barrier, either through innovative new banking products or retrofit-related revenue opportunities such as green leases becoming more mainstream. Even where a suitable product can be leveraged in, these generally rank behind an existing lending product and amortise in line with the elongated payback period of the retrofit, achieving reasonable pricing levels continues to prove challenging.

The low interest rate environment of recent years was a perfect opportunity to deliver retrofit at scale, however, the current higher level of interest rates is unlikely to materially fall in the short term and as such, will likely be prohibitive to already marginal programmes. Institutions that look to take a long term payback view (such as pension funds) would typically need to see a portfolio of retrofit to deliver the scale of funding requirement that would be appealing to them.

Opportunities

Shifting Green Premium / Brown Discount

We are starting to see evidence of a shift in the market in recent years with regards to green premium / brown discount. This shift is being driven by a number of factors:

- Investor/lending pressure
- Expected future policy
- Occupier demand
- Employee expectation

Knight Frank has found an 8% to 18% price premium for green-rated offices compared to those without any sustainability certification, with a 13% premium on rents and 10.5% on sales prices on BREEAM outstanding and excellent rated buildings in central London.

Nareit shows in the US REIT market that green certified buildings can translate into a 31% increase in sales values, 23% higher occupancy rates and an 8% increase in rental incomes.

If this shift continues then hopefully market forces drive further retrofit activity, however it likely needs some stimulation, particularly outside the premium market areas such as Manchester city centre.

Explore Potential for Local Fiscal Instruments to Incentivise Retrofit

Through the devolved government within GM, there is an opportunity to implement local fiscal powers through the devolved government which would financially incentivise landlords/developers to make commercial buildings more energy efficient.

This might be through business rates and/or business improvement districts and/or other mechanisms depending on what levers are available to the devolved government.

Develop Novel Investment Mechanisms

Considerable work on domestic retrofit funding has already been completed by the Green Finance Institute, UK Green Investment Bank and Innovate UK Net Zero Pathfinder Places on novel investment models. Given there are similar challenges in commercial retrofit, this existing work could be repositioned to explore opportunities to attract new investment into commercial retrofit in novel ways.

New Funding Mechanisms

There is an opportunity to develop new funding mechanisms (potentially via the UK Infrastructure Bank) which support retrofit projects through access to financial incentives / local planning policy changes to incentivise these early adopters to share this knowledge. Furthermore, Local Authorities with property portfolios could utilise their access to Public Works Loan Board funding to fund the retrofit of their own stock to assist with this knowledge gathering exercise.

Knowledge Sharing

As some developers at the forefront of the net zero agenda deliver more retrofit programmes, there is an opportunity to share insights with others which could then provide exponential returns to the wider development community. This can support case studies which provide a pathway for developers to follow and answer some of the pertinent questions set out above.

Green Leases

With green issues seemingly higher on the agenda for consideration by potential lessees, the option of introducing Green Rental Agreements and/or green lease clauses which seek to address some of the issues identified earlier, is an opportunity. These agreements are in their relative infancy and would require some trial and error and as with the optimal solution point, the sharing of knowledge in this space would be key to progressing. Often the concept is better for lessees than the contract and it will require either a few trailblazing lessees to take a risk or further incentives to be issued in support of these terms.

Investor Pressure

Increased importance is being placed on property owners by investors and funders with regards to ESG metrics, with ESG KPIs now fairly commonplace within commercial property related finance, which might be KPIs on such things as carbon use intensity reductions, EPC rating improvements, number of EV charges etc. KPIs are then linked to financial incentives within the finance arranges for example reduced interest rates for loans.

Furthermore, requirements of the Task Force on Climate Related Financial Disclosures (TCFD) requires companies to provide information to investors about steps being taken to mitigate the risks of climate change and governance transparency. It will become mandatory for companies to report on these disclosures by 2025 in the UK, although some companies will have to report earlier.

Supply Chain Growth Capital

Consideration also needs to be given to developing the supply-chain across the region, access to skills is high on the agenda but these businesses will also need growth capital to invest in gearing up operations ahead of a growth in commercial retrofit.

Recommendations

Theme	Barriers	Recommendations (short term)	Recommendations (long term)
New funding mechanisms	General funding constraints / landlord funding – tenant saving	<ul style="list-style-type: none"> Explore the role of UK Green Investment Bank, Green Finance Institute and others can play in the funding of retrofit Explore how landlord recovers cost of investment where tenant benefits 	<ul style="list-style-type: none"> Support the creation of new financial products for commercial retrofit similar to those being developed for domestic retrofit Consider supporting reduced interest rates for low carbon schemes from public sector funds Single pot settlement
New fiscal instruments	Insufficient brown discount / green premium	<ul style="list-style-type: none"> Explore available fiscal powers (e.g. business rates or new tax) to incentivise energy efficient buildings Explore how innovation districts and/or business improvement districts could support potential trial of fiscal instruments 	<ul style="list-style-type: none"> Use local tax regime to drive positive change, offering incentives to energy efficient buildings / businesses Financial incentives for early adopters Use innovation districts and/or business improvement districts as trial for fiscal instruments
Sharing best practice	Lack of knowledge	<ul style="list-style-type: none"> Establish a best practice forum to share best practice and lessons learned Promote and further develop CBRE Commercial Occupier Retrofit Guide¹⁶ Establish true green premium / brown discount across Greater Manchester and compare with other parts of UK Promote the use of green leases 	<ul style="list-style-type: none"> Develop standard green lease for commercial tenants

¹⁶ www.greatermanchester-ca.gov.uk/media/8719/gmca_occupierguidance_cbre_noversioncontrolsheets.pdf

Policy - Drivers to Encourage Action

Context

Policy initiatives are widely recognised as having the potential to influence a positive change on the rate of commercial building retrofit that we see across the Manchester City Region.

When considering policy, the initial response is one of punitive or target driven initiatives such as supplementary planning documents that require actions from those looking to undertake construction projects or set particular standard that must be achieved for a construction project or activity to take place e.g., Minimum Energy Efficiency Standards to be met for the letting of commercial buildings.

Policy drivers do not always need to take the form of 'sticks' to achieve changes in behaviour or action. Initiatives that encourage competition, create desirability around an issue and foster collaborative working can also drive positive retrofit related outcomes.

Barriers

The barriers to commercial retrofit that relate to local, regional and national policy initiatives are myriad. These are not necessarily intentional challenges and in some cases are linked to the legislative framework surrounding the planning system.

The system which is designed to ensure suitable development takes place can, in itself, present barriers to facilitating and encouraging commercial building retrofit. The challenges referred to below are present in, but not unique, to the Greater Manchester (GM) city region.

Lack of Policy Driving Minimum Standards/Retrofit of Existing Buildings

Much of the policy that drives building efficiency standards is connected to planning, however existing buildings rarely go through planning unless they are connected to a deep retrofit project at which point it's likely that essential measures such as upgrading fabric to NZC standards and replacing gas boilers with heat pumps will be included; but what policy is in place to force the hand of existing building owners to implement the measures

EPCs are a statutory requirement impacting commercial buildings and as part of the MEES Regulations from April 2023 it will be unlawful to continue to let a commercial property with an F or G EPC rating unless a specific exemption applies.

In 2021, the Government issued a consultation on future updates to the MEES regime, which recommended improving standards for commercial properties so that an EPC C would be required by 2027 and EPC B by 2030. In September 2023 Prime Minister Rishi Sunak announced the government scrapped proposed MEES requirements impacting the residential sector, however it is unclear if there will be changes to the commercial sector affecting the proposed changes in 2027 and 2030, however it is expected that the 2021 proposals will be delayed.

Local Plan Considerations

While we need a lever outside of planning to drive minimum standards in existing buildings, the Local Plan is still an important element of policy governing commercial retrofit as it sets the tone for minimum efficiency standards for commercial buildings. The following are considered as barriers in respect of the Local Plan:

- **Longevity:** It takes a considerable amount of time to develop a Local Plan and they typically remain valid for a period of 15 years. While this provides certainty to the development community and building owners regarding what is expected of them in relation to developing new buildings or works to existing buildings that fall under planning, it does prevent regular reviews of the Plan and the accommodation of amendments in response to changing social, economic or environmental circumstances. Supplementary Planning Documents (SPD) can be developed, reactively, to address emerging issues however the need for an initial policy 'hook' within the Local Plan remains for SPD to be an effective tool.
- **Policy Setting/Implementation Ambiguity:** It is unclear as to the specific powers that local/regional government bodies have at their disposal to support commercial retrofit activity. Often there are examples where new build projects must achieve higher energy efficiency or carbon emission targets than those laid out in the Building Regulations and the national planning policy framework. This equally could apply in the GM context with strategic, Greater Manchester Combined Authority (GMCA) level planning policy alongside district Local Authority policies.
- **Which Certification Scheme:** Where a planning authority has the ability to require higher levels of building performance in return for planning approval, often this what should that level look like? In many cases an improved EPC rating and/or BREEAM is required, however as outlined elsewhere in this report neither EPC or BREEAM look at actual energy consumption and therefore would NABERS be more appropriate as it is arguably a simpler and more effective accreditation if the overall aim is energy reduction and decarbonisation as it places a particular emphasis on energy efficiency. Choice is good, but it also drives inertia if the market is unsure which one to explore and clients uncertain as to which to require.
- **Policy Conflict:** There are examples of where policies brought in by local planning authorities conflict with others that are related to retrofit or sustainable construction. An example of

this is related to noise levels associated with air source heat pumps (ASHPs), which are the primary technology available for decarbonisation of heat in commercial buildings. It is a requirement to meet stringent noise related targets if an installation is not classed as permitted development and requires planning approval. For commercial buildings in quieter or residential areas, this is a major barrier for roll out of ASHPs and is counterintuitive because the existing technology, gas boiler systems, may not meet these stringent targets themselves (gas boiler flues are noisy), however as this technology is unlikely to require planning permission, it is not a consideration for the planning authority.

Other Relevant Statutory / Regulatory Requirements

There are several initiatives linked to existing buildings that might be applicable to commercial building owners and occupiers including; Energy Saving Opportunities Scheme (ESOS); Streamlined Energy and Carbon Reporting (SECR); Corporate Sustainability Reporting Directive (CSRD); and, Taskforce on Climate-related Financial Disclosures (TCFD). Some or all of these may be relevant to commercial buildings in GM and will in some instances drive commercial retrofit, however alone then will not drive the improvements required for GM to be carbon neutral by 2038.

Listed / Historic Buildings

Greater Manchester has a rich history and is fortunate to have a number of amazing historic buildings, lots of these buildings are listed and it is important to preserve these buildings, which is often through having them 'listed'. Listed buildings often present another layer of complexity when it comes to retrofit, however it's also essential to improve energy efficiency in these buildings or they risk becoming stranded assets.

Opportunities

Although there are a number of challenges to supporting commercial retrofit activity across the GM city region, there are equally several actions that could help overcome them. These actions can be taken by the GMCA and stakeholder local authorities, commercial building owners and businesses themselves, or collectively in collaboration with each other.

The Power of the Devolved Government

Strong indicators are that there will not be national policy in place to support GM's ambition of being carbon neutral by 2038. So in the absence of national policy, what is the power of the devolved government in Greater Manchester in relation to improving the efficiency of existing buildings?

While there are some issues with EPCs, the proposed changes to MEES Regulations whereby a minimum of EPC C by 2027 and EPC B by 2030 was seen as a significant step in the right direction. Assuming this is not put into national policy, does the devolved government have the power to implement something similar at a local level? How much power does GM have in setting more stringent targets for projects that go through planning?

Once confirmed clear communication from GMCA as to the powers that it and its local authority stakeholders have in relation to setting more challenging targets will make explicit to building owners in GM that as a city region, GMCA and its authorities understand what they can or cannot do in this space. Articulating these powers also acts as a statement of intent which may reduce the strength of any argument opposing a requirement to deliver augmented energy efficiency performance targets.

Planning Policy Update

As shown in the Pall Mall Case Study (see Appendix B), retrofit is considerably lower carbon when compared with new build - even best in class low carbon new build, therefore there is an opportunity to favour retrofit over new build as part of planning applications where the planning application includes the demolition of an existing building.

It's essential that retrofit projects that go through the planning process achieve an enhanced energy efficiency standards and other initiatives, which would encompass:

- An improved EPC rating
- Obtaining a performance based certification e.g. NABERS
- Participation in collaboration initiatives

Key target areas of GM experiencing demand for new commercial development could be listed as 'innovation' or 'regeneration' districts within planning policy frameworks so as to intertwine commercial retrofit with new commercial development. There are limited examples of this in GM, with the most comparable being the Oxford Road Corridor regeneration initiative.

The consistent use of planning policy powers across all GM districts would support implementation of minimum operational energy standards for all buildings.

Business Improvement Districts / Innovation Districts / 'Retrofit Innovation Zones'

There are a number of areas across GM that have been identified as a Business Improvement District (BID), which are business-led partnerships that deliver additional services to local businesses. They directly involve local businesses working with local authorities to improve the local

trading environment. A BID sees business within a defined geographical area paying a levy on all business rate payers in that area which is used to develop projects, agreed by the BID that will benefit local businesses. Historically, BID have been used to improve the physical environment of an area e.g. with hard and soft landscaping or additional street cleansing, although there is no limit on what projects or services can be provided through a BID.

In recent years there has been an emergence of Innovation Districts where are urban geographies of innovation where academic institutions, business and other private actors develop integrated strategies and solutions to develop thriving innovation ecosystems—areas that attract entrepreneurs, start-ups, and business incubators.

GMCA and local authority stakeholders could encourage the creation of commercial retrofit focused BID or Innovation District to create a 'Retrofit Innovation Zone' in key locations through identification of and support given to local business champions that could drive interest amongst other commercial building owners and businesses. The Retrofit Innovation Zone could be a good opportunity to trials financial mechanisms to support commercial building retrofit and which engenders a 'safety in numbers' mentality amongst building owners. A Retrofit Innovation Zone would enable retrofit to take place at a lower cost and without unduly distorting the commercial rental market within its boundary.

Recommendations

Theme	Barriers	Recommendations (short term)	Recommendations (long term)
Planning policy review	Lack of policy driving minimum operational efficiency standards	<ul style="list-style-type: none"> Explore how the powers associated with devolved government can be used to implement local standards for building energy efficiency that go beyond national planning policy. Update local planning powers to promote retrofit and improve energy efficiency, to include: <ul style="list-style-type: none"> Mandatory whole life carbon assessment for buildings over a certain size Promote the use of NABERS Design for Performance and in use certification for a period post completion Undertake a review and assessment of current planning policies and supplementary planning documents to identify any and all areas of conflict As condition of planning approvals, require building developer to engage with knowledge sharing proposal When the time comes to refresh the GMCA Places For Everyone Joint Development Plan, the principles of building re-use, embodied carbon, energy demand and other considerations that promote existing building retrofit should be embedded within SPD alignment: Review existing and agree (or develop new) a suite of GM wide SPD which require or support commercial retrofit during new build or refurbishment projects 	
Devolved government powers	Lack of policy driving minimum operational efficiency standards	<ul style="list-style-type: none"> Ascertain powers of the devolved government to implement local policy to improve the minimum operational efficiency standards 	<ul style="list-style-type: none"> Implement local policy/policies to improve performance of commercial buildings in GM
Retrofit Innovation Zone	Business Improvement Districts / Innovation Districts /	<ul style="list-style-type: none"> Retrofit Innovation Zone – concept testing: Through engagement and outreach, identify areas across GM or cluster of commercial building owners / occupiers with a common interest in retrofit that may be suitable for a retrofit innovation zone – possibly an existing BID or Innovation District 	<ul style="list-style-type: none"> Retrofit Innovation Zone – proof of concept: Encourage and support development of a retrofit focused ‘Retrofit Innovation Zone’ trialling financial mechanisms to incentivise commercial building owners and occupiers to reduce energy consumption
Proposed MEEES changes	Lack of policy driving minimum operational	<ul style="list-style-type: none"> Lobby government to implement proposed MEEES Regulations changes that would see minimum EPC C by 2027 and EPC B by 2030 	<ul style="list-style-type: none"> Continue to push for higher standards utilising the most effective certification scheme(s) available

	efficiency standards		
Energy performance standard	Ambiguity over preferred energy performance standard	<ul style="list-style-type: none"> • Research and agree a preferred energy performance standard(s) that, where relevant, new, retrofitted and existing commercial buildings must achieve • Agree GM specific energy performance standard to be used together with grade required and agree how this is applied to existing commercial buildings and for commercial building projects that must secure planning permission 	<ul style="list-style-type: none"> • Continually review and update preferred scheme and grade required, with a view that grades improve over time
Knowledge sharing	Lack of knowledge	<ul style="list-style-type: none"> • Information dissemination campaign: Develop and disseminate to commercial building owners and occupiers, via a dedicated communications campaign, information on the relevant legal obligations / regulations relating to carbon reporting and reduction as well as benefits of retrofit to them and options / solutions open to them. • Award initiative: Create a high profile, GM commercial building owner and occupier focused award initiative (for both new build and refurbishment projects) to showcase excellence in building design and retrofit. 	<ul style="list-style-type: none"> • Commercial building focused advice service: Initiate and host a dedicated commercial building owner / occupier facing advice service that is able to provide impartial information on national and regional legislation, planning policy changes and wider benefits to be realised from retrofitting and occupying commercial buildings with better environmental performance. • Best practice club: Support creation and delivery of a collaborative best practice club that enables commercial building owners and occupiers to share experiences and ideas and which allows direct engagement with GM policy and decision makers to help address challenges to retrofit.
Listed/historic buildings	Conflict with preserving historic buildings and energy efficiency	<ul style="list-style-type: none"> • Engage with Historic England and local Conservation Officers to discuss conflicts with preserving historic buildings and energy efficiency to agree how to move forwards 	<ul style="list-style-type: none"> • Develop recommendation report on principles to be applied to historic buildings when considering energy efficiency/decarbonisations

Technology & Skills - Delivering Solutions

Context

There are significant technical challenges facing commercial retrofit, however the good news is that most of the solutions already exist, so if we can overcome these issues there is the opportunity to significantly reduce emissions from commercial buildings.

With regards to skills, the construction industry already has a significant skills deficit, according to the GM Retrofit Action Plan¹⁷, there is a shortfall of approximately 7,000-8,000 construction workers over the next 5 years. This is expected to increase due to changes needed to decarbonise and improve the efficiency of buildings for example an increase in the number of heat pumps installed and need to add wall insulation to existing buildings.

Barriers

Reliance on Fossil Fuels for Heating

Until relatively recently fossil fuels have been the primary source of energy for heating which is often the dominant load in many existing buildings due to historic lower standards of construction i.e. single glazed windows, walls and roofs with little/no insulation.

In recent years we've seen the development of heat pump technology as an alternative solution for heating. As heat pumps are electrically driven and offer an efficiency of circa 300%, given the significant decarbonisation of the grid, they are a key component of our race to net zero. There are however there are a number of challenges relating to heat pumps:

- **Operating Temperatures:** Generally speaking the temperatures delivered by heat pumps are lower than fossil fuels, presenting an issue when it comes to direct replacement as it's possible that other components e.g. pipework and radiators require replacement. There are however high temperature heat pumps on the market, however they are costly.
- **Performance in Low External Temperatures:** Performance output reduces when outside temperatures drop, which means systems are most inefficient when heat is needed the most.
- **Cost:** Capex is significantly more expensive than direct fossil fuel replacement. Depending on operational temperatures and relative gas/electricity prices, heat pumps may also be more expensive to run.

¹⁷ www.greatermanchester-ca.gov.uk/media/6018/retrofitgm.pdf

- **Availability of Space:** Air source heat pumps are the dominant heat pump technology. To function they need outdoor space, which in some buildings, particularly historic buildings with pitched roofs, there is a lack of suitable outdoor space.
- **Fugitive Emissions:** Heat pumps rely on the use of refrigerant gases which if lost to the atmosphere, have the impact of many thousands of times the impact of carbon dioxide. Unfortunately, whilst the best endeavours are made to eliminate any losses and new less damaging refrigerants entering the market, there are inevitable incidents that occur that result in their escape.
- **Planning:** There are potential planning issues associated with the installation of air source heat pumps and ideally this should be addressed as part of permitted development.

Fabric Improvements are Essential but Challenging

In order to achieve net zero / zero carbon it's essential to not only decarbonise, but also significantly reduce energy demand so that the overall energy demand meets the predicted zero carbon energy supply, which is predicted to be significantly lower than the current energy demand for the UK, see Figure A-1 below.

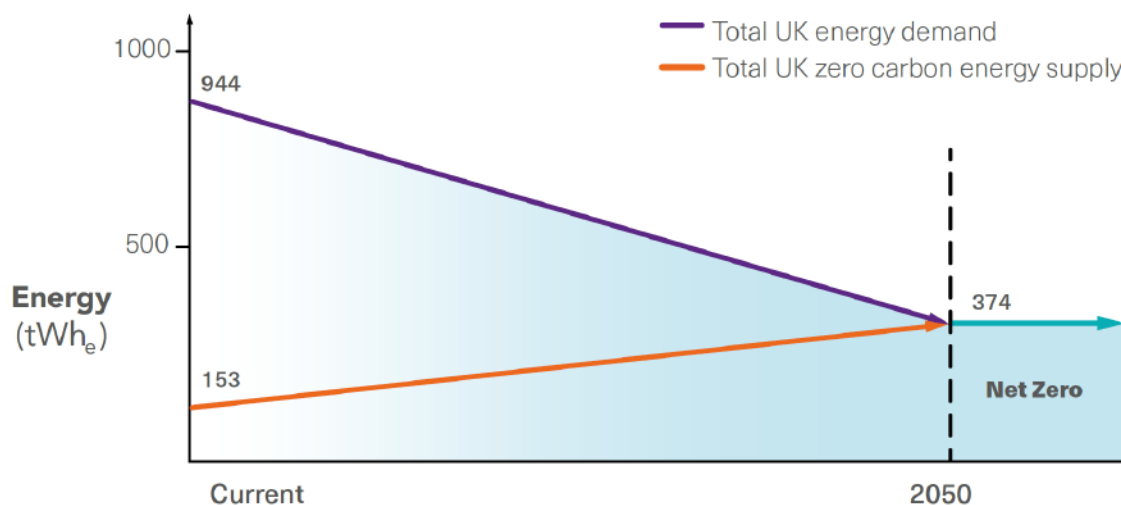


Figure A-1: Graph showing UK Energy Demand vs Zero Carbon Energy Supply to achieve Net Zero ([UKGBC Energy Performance Targets For Offices Technical Report, Jan 2020](#))

To achieve the energy reduction required, upgrading thermal fabric where it is significantly below existing standards will be essential, however there are some barriers which don't make this straightforward:

- **Disruption:** Replacing key building components in particular windows and curtain walling can be extremely disruptive, to the extent that often it is most practical to do this in a vacant building, which may not be feasible due to overlapping tenancies.

- **Costs:** Fabric upgrades are often very expensive and offer little/low rental uplift and long paybacks in respect of energy efficiency.
- **Loss of NIA:** Some solutions in particular wall insulation may result in loss of net internal area (NIA), which obviously building owners/landlords won't want.
- **Technical Coordination:** When specifying fabric upgrades it's important to have a good technical understanding to mitigate issues such as interstitial condensation, thermal bridging, fire engineering and water ingress.

Skills Shortages

According to the Civil Engineering Contractors Association 75% of contractors have issues recruiting skilled operatives, with 96% of suppliers impacted by labour shortages relating to net zero skills. The Construction Skills Network has identified that 225,000 new construction workers are needed by 2027. The skills are split into two categories: Construction Workers and Design Team:

Construction Team:

- There are already significant skill gaps at every level with regards to sustainable construction and little sign this is being resolved with little capacity to train. At this stage it seems unlikely that Greater Manchester will find the 55,000 new construction professionals/workers it needs to deliver the green revolution.
- With an industry wide shortage of skilled tradespeople, there is limited drive to reskill to obtain work and not enough people are moving into the industry with a desire to develop skills in sustainable construction.
- With no shortage of work already for a reputable construction company, there is limited impetus to take on a project they associate as higher risk unless it offers significantly higher returns. This leads to sustainable projects receiving artificially high tenders.
- Lack of knowledge and experience to coordinate low carbon commercial retrofit.

Design Team:

- To complete a successful commercial retrofit design, it's essential that the design team has a well-rounded knowledge of lots of different aspects so that the different aspects are coherently coordinated without issues such as heat pump design considerations, smart technology, interstitial condensation, thermal bridging and metering.
- There are significant skills gaps across all the design disciplines. What specialism there is, is often unregulated and largely focused on operational carbon without consideration of embodied.
- A lack of building physics knowledge makes it difficult for designers / specifiers to navigate their way confidently through the unregulated industry greenwash and perpetuates their reluctance to specify new technologies.

- Sustainability is often not considered at an early enough stage, it needs to form part of the project brief and not a bolt on in due course when often key decisions and budgets are already made/approved. Achieving sustainability goals then becomes more challenging and less effective if 'strap on' technologies and product substitutions are then considered. When cost savings are required part way through a project, these substitutions and strap on technologies are often the first to go.

Preference for New Build

The industry has a general preference for new build developments, with retrofit seen as lower in quality and less appealing. Newer buildings are often associated with higher building standards (latest building codes, regulations etc.) and the incorporation of energy-efficient systems, smart technology, advanced materials etc. that enhance comfort, energy performance, and overall functionality of the space. Hence whilst the upfront cost (monetary and carbon) of new build may be higher than with a retrofit, it is often deemed worthwhile for the perceived increased value of new build.

Traditional Solutions are Low Risk

Traditional solutions are tried and tested resulting in known costs, timescales and risk. Sustainable solutions take time to research and specify, the lack of time allowed for means traditional/pre-existing solutions are often chosen, stifling innovation.

Existing supply chains are often unable (or unwilling due to lack of demand) to supply the products required in sustainable retrofit. These 'specialist materials' therefore often need to be imported through smaller suppliers which poses a risk in terms of supply chain stability as well as not attracting the same level of discount.

Opportunities

Sharing Best Practice

From a technical point of view, the solutions to deliver a low carbon commercial retrofit exist, however for one reason or another these solutions are not always adopted, even when they are adopted the success/failure is not documented/shared.

If there is better sharing of best practice then this should increase the number of projects demystify solutions, methods to overcome challenges, address misconceptions and promote good practice.

By giving real world examples of exemplary commercial retrofit it will be possible to demonstrate the benefits of retrofit from an environmental, cultural and social value aspect.

Support greater collaboration across the value chain by creating a community of installers, designers and practitioners that can transfer knowledge, share learnings and best practice from one discipline to another.

Innovation / Technological Development

If we can build momentum in the commercial retrofit sector, this will drive opportunities for technical innovation and availability of data to help focus the industry on delivery of retrofit projects and continuing to improve.

The digital industry is developing at a rapid pace and this provides opportunities in the built environment for increased digitalisation of the process and more sophisticated modelling. This will allow decisions to be made on more in-depth interpretation of data and more efficient project delivery through every stage, including post completion.

Greater Manchester has a strong history of public/private partnerships and specifically in commercial retrofit can we engage with the sector to make them aware of the business support organisations that can help to drive innovations i.e. encourage closer working with the Energy House, Energy Innovation Agency and Catapult to ensure that innovators have access to the support they need to research, demonstrate, commercialise and scale.

Skills / Skills to Drive a Greater Manchester Green Revolution

The increasing momentum of demand via the green revolution gives opportunity for supply chains to expand and adapt to meet increasing demands at regional, national and international level. This investment can then in turn encourage further innovation and efficiency.

Specific opportunities include:

- **Retrofit Coordinator:** Within the domestic sector there is a specific 'Retrofit Coordinator' qualification. Given the crossover between commercial and domestic retrofit, it would seem logical to expand this course/create a new course which covers commercial retrofit.
- **Learning through Case Studies:** With an increasing number of retrofit case studies there is opportunity to share and learn best practice and also things that didn't go so well. The key to maximising the learning opportunities from case studies is sharing and awareness.
- **Digital/Data Skills:** There is opportunity for the industry to develop skills around the fast developing digital and data availability to reduce carbon impact throughout the design process.

- **Industry/Education Collaboration:** There is opportunity for industry and education sectors to collaborate and share knowledge to allow best practice and experience from delivering retrofit projects to be fed into the skilling up of the future generations that will deliver retrofit in the future and will face even tighter environmental targets.
- **Younger Generation Passion:** There is a strong passion for retrofit in the younger generation and tackling the climate crisis head on. These will drive opportunities within the built environment to attract strong talent into the sector to drive change.

Recommendations

Theme	Barriers	Recommendations (short term)	Recommendations (long term)
Promote incentivise energy efficient retrofit	Challenging technical solutions e.g. heat pumps / fabric improvements	<ul style="list-style-type: none"> Develop incentive strategy (e.g. business rates relief for efficient buildings, tax that penalises poor performing buildings or grant funding), that promotes energy efficient/low carbon solutions such as heat pumps and fabric improvements and leverages green premium / brown discount Share best practice low carbon retrofit within commercial office community so others can learn best practice solutions 	<ul style="list-style-type: none"> Implement incentive strategy, perhaps within small area of Manchester as trial that could be tested first before a bigger roll out across GM Create some sort of best practice library or service to support property owners and occupiers reduce energy consumption and decarbonisation, which perhaps partners with delivery supply chain
Perception that retrofit projects come at a higher risk than new build projects	Lack of knowledge / knowledge sharing	<ul style="list-style-type: none"> Introduce a myth-busting programme for commercial retrofit across Greater Manchester to demystify solutions, address misconceptions and promote good practice 	<ul style="list-style-type: none"> Build a library of case studies to benefits of retrofit from an environmental, cultural and social value aspect. Support greater collaboration across the value chain by creating a community of installers, designers and practitioners that can transfer knowledge, share learnings and best practice from one discipline to another
Technological development	Lack of benchmarking within the retrofit industry	<ul style="list-style-type: none"> Promote the use of low carbon technology at the early project stages that will assist in the overall retrofit cycle. This could be surveys, calculation packages etc. Help to strengthen innovation and collaboration by using the public / private estate to test and trial new innovations. Engage with the sector to make them aware of the business support organisations that can help to drive innovations to ensure that innovators have access to the support they need to research, demonstrate, commercialise and scale 	<ul style="list-style-type: none"> Encourage software and hardware vendors to focus on the real needs of the industry. Research into how to attract this kind of product / methodology development: how to make it attractive, profitable and exciting. Ensure the industry's needs are clearly stated, in order for rapid digital progression. Sharing digital features between software packages such as optimisation engines

Skills	Lack of necessary skills in sustainable retrofit	<ul style="list-style-type: none"> • Work with local and national partners to develop and maintain a centralised case study database for the retrofit community to promote best practice and showcase projects that consider the whole life cycle carbon of a building • Development of innovative procurement assessment techniques for commercial portfolios or specific projects aims to raise the standards by encouraging sustainability-conscious suppliers 	<ul style="list-style-type: none"> • Development of training / education for secondary education and apprenticeships should be prioritised. Development of new curriculum should be discussed with industry to ensure Secondary education and apprenticeships key to upskilling and training
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Monitoring & Verification - Ensuring Successful Delivery

Context

One of the key aspects of ensuring successful retrofit of buildings is to instil a robust process for monitoring and verification of building performance post retrofit.

Currently, demonstration of existing building energy performance is only required when letting a space. In 2015, new laws in the UK set Minimum Energy Efficiency Standards (MEES), stating that private rented property in England and Wales must have an EPC rating of E or above. These came into force on 1 April 2018 for new tenancies, and on 1 April 2020 for existing tenancies. The UK government has proposed to improve this to EPC C by 2027 and EPC B by 2030, however this is yet to be implemented as part of national policy.

Whilst this provides an incentive for landlords to improve the energy efficiency of their buildings above a minimum standard, it is widely accepted that EPC outputs provide a crude metric for the efficiency of a building, often not bearing much similarity to the actual energy consumption of the buildings. Also, the current EPC minimum standard of E and the proposed 2025 standard of C set a minimum standard only, and do not provide a “Paris-proof” demonstrable year-on-year carbon reduction that would align with the UKs legally binding carbon budgets.

In Australia, the NABERS certification scheme for commercial buildings has proved that target setting combined with ongoing monitoring and improvement of buildings can yield year-on-year savings. The scheme also sets out metering and monitoring protocols to ensure accurate data is used. It is these principles which Manchester should look to for its existing commercial stock.

Barriers

Energy Certification

Certification schemes can play a critical role in driving change and are a critical element of policies, enabling standards to be set and measured. There are several different certification schemes relevant to building energy efficiency, the key ones of relevance to this report are:

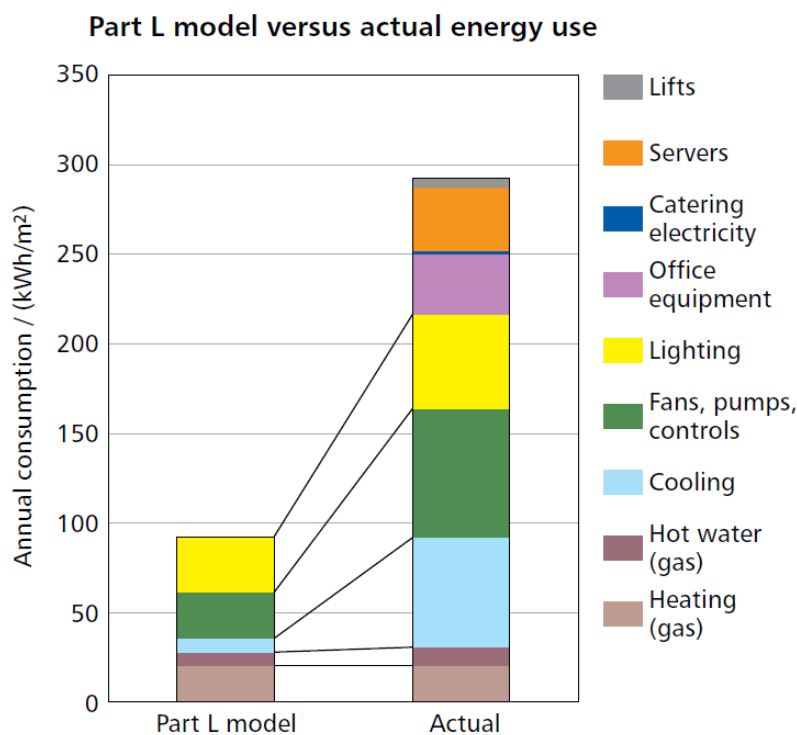
- Energy Performance Certificates (EPCs)
- Display Energy Certificates (DECs)
- Building Research Establishment Environmental Assessment Methodology (BREEAM)
- National Australian Built Environment Rating System (NABERS)

EPCs are the de facto certification scheme and a legal requirement for all property sale and rental agreements (with some minor exceptions) via the MEES regulations, covered earlier in this section.

While the theory of EPCs is good, in practice there are a couple of fundamental issues:

3. They only assess regulated loads (HVAC, hot water, and lighting) while unregulated loads (plug in equipment, servers and lifts) are omitted. As highlighted by the UKGBC¹⁸ and in Figure 6, unregulated can be a significant proportion of whole building energy and in the case of leased office space, something which the landlord has little control over.
4. There is no measurement of actual energy consumption of the regulated loads, so this is often found to be significantly underestimated. This is commonly referred to as the 'Performance Gap' which is well documented in the property industry.

These issues mean that the actual energy consumption of a building is often higher than the EPC rating would imply. CIBSE research¹⁹ estimates that new buildings typically consume between 50% and 150% more energy than originally expected. It's fair to assume this same inaccuracy can be extended to existing buildings. This is highlighted in Figure 6 which compares the estimated energy consumption from the Part L model (EPC model) with the actual energy consumption in use. Note Figure 8 compares energy consumption utilising energy use intensity (EUI) which is the total annual energy consumption divided by the floor area, which is an important metric for comparing energy consumption in different buildings.



¹⁸ www.ukgbc.org/wp-content/uploads/2020/01/Energy-performance-targets-for-offices-technical-report.pdf

¹⁹ CIBSE TM54 Evaluating operational energy performance of buildings at the design stage

Figure 6 - EPC Model vs Actual Energy Consumption (taken from CIBSE²⁰)

The Better Building Partnerships (BBP) collect actual energy consumption data for commercial buildings and has mapped EUI against EPC rating. This data is shown in Figure 7, with the EUI of individual buildings shown in the grey vertical bars, grouped by EPC band. The data clearly shows that there is little correlation between a building’s EPC rating and its EUI, with a mix of low and high energy use intensity in each EPC band.

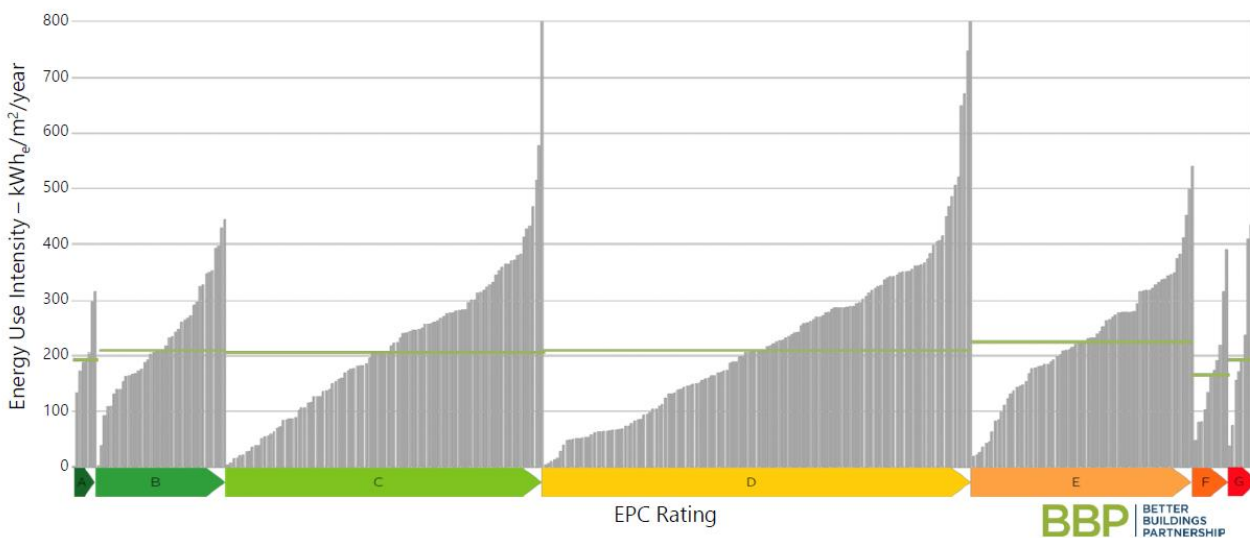


Figure 7: BBP Data Comparing EPC Rating and Energy Use Intensity

DECs do measure actual energy consumption and are mandatory for public buildings; however, they have not become mainstream in the commercial property sector and so their impact is limited in driving the uptake of retrofit.

BREEAM looks at a broad range of different sustainability related aspects such as transport, wellbeing, resilience, water, and energy; while energy carries the highest proportion of the overall score, as with EPCs it only looks at theoretical energy efficiency and therefore does not address the Performance Gap highlighted above and therefore subject to inaccuracies of estimated vs actual energy consumption.

In 2005 a new certification scheme was launched in Australia called NABERS (National Australian Built Environment Rating System). It has had a transformational impact on the Australian commercial property market. It was initially a mandatory requirement for government leases, however subsequently more widely adopted, with mandatory disclosure introduced in 2011. In a

²⁰ CIBSE TM54 Evaluating operational energy performance of buildings at the design stage

nine year period there has been a 35% reduction in the average EUI. There has also been a number of other benefits resulting from better NABERS ratings - see Figure 8.

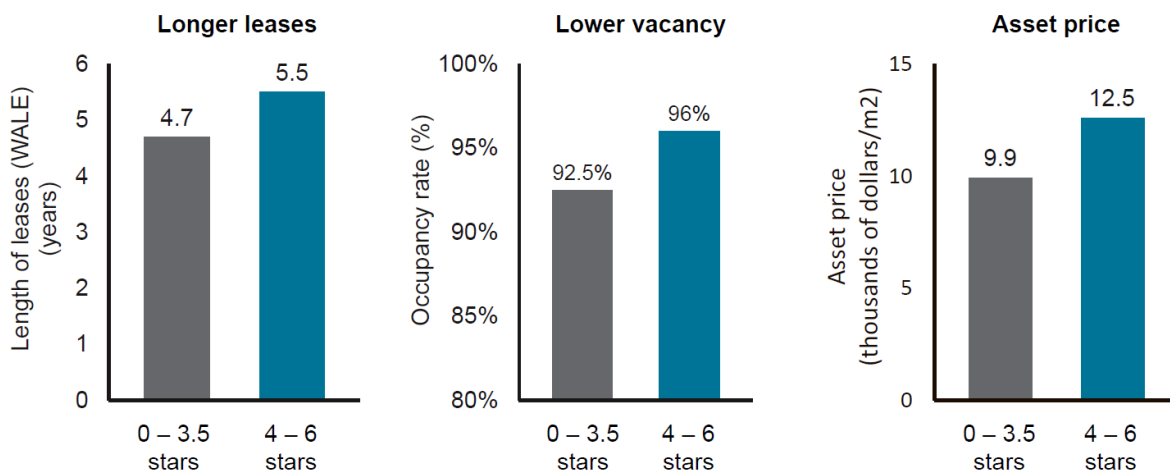


Figure 8: Market Demand for Buildings with Better NABERS Ratings (source BBP)

The success of NABERS is underpinned by a number of key principles:

5. **Actual Energy Measured:** While it is possible to get a predicted rating, once in operation NABERS rating is based on actual measured energy consumption from meters.
6. **Simple Rating System:** By using a 1 to 6 star scale rating, investors, owners and occupiers can easily understand how a building is operated over a year. Star ratings as follow:
 - 1 Star = Poor
 - 2 Stars = Below Average
 - 3 Stars = Average
 - 4 Stars = Good
 - 5 Stars = Excellent
 - 6 Stars = Market Leading
7. **Technically Robust:** The certification is very technically robust and includes adjustments for operational hours and equipment density so buildings are not penalised for these factors.
8. **Responsibility aligns with Party in Control:** Acknowledging landlord and tenant are in control/responsible of different energy demands, NABERS has three different rating options (also see Figure 9):
 - **Base Building:** Buildings can be rated based on their central services like heating and cooling systems, lifts and lobby lighting.
 - **Tenancy:** Enables energy used by the tenant to be rated, typically for lighting and power, plus special tenancy requirements or local a/c.
 - **Whole Building:** Provides assessment of energy used by office tenancies and by Base Building services to lettable and common spaces.

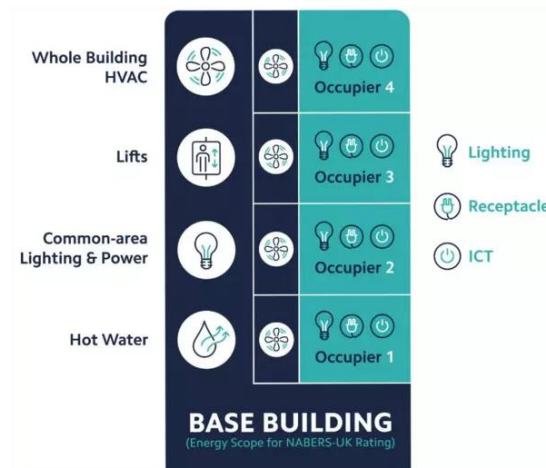


Figure 9 – NABERS Rating Options: Base Building / Tenant / Whole Building

Recognising the success in Australia, in November 2020 NABERS UK was launched for use in the UK, with the hope that it has a similar impact here, although at present there are fairly low adoption rates and the BRE recently announced they are withdrawing as administrator, although NABERS are working on finding a new administrator.

Metering

The key technical barrier to the visibility of energy consumption within buildings is metering. Historically, sub-metering of energy consumption within buildings is insufficient or entirely absent. Furthermore, meters that are installed are often not calibrated or corrected as required, or the data is not stored or monitored.

In order to obtain a clear picture of energy consumption within a building, metering should allow monitoring of:

- The whole building energy consumption with main meters on incoming utilities.
- Energy consumption of any tenants, separate from energy consumption of landlord areas.
- Energy consumption of discrete items consuming large quantities of energy such as chillers, boilers, heat pumps etc.
- Energy consumption of energy intensive areas such as kitchens or large server rooms.
- Energy generated by renewable sources.

Any further sub-metering of electrical circuits would also provide further visibility as to the energy consumption characteristics of the building.

Data should also be visible on a BMS or energy management system, with historic consumption data stored to allow trends to be analysed across the seasons.

It is important that the accuracy of meters is checked and validated. Meters should be validated by an energy professional, with guidance set out in the following document: [NABERS UK The Rules - Metering and Consumption](#).

Data Analysis

With building owners and energy managers currently adopting a range of different approaches to energy management and analysis, consistency and interpretation of data will be challenging. Factors such as the scope of measurement, format of data and frequency of measurement will change from building to building. Thus careful interpretation of the data will be crucial to ensure an accurate picture of the buildings can be produced.

Transparency of data will be another key challenge. In order to establish momentum with retrofit across the city, a number of landlords will need to offer up their energy consumption for the scheme such that a clear and robust picture of energy performance of the commercial buildings across Manchester can be assessed. This will allow for realistic yet aspirational targets to be set, and for participants to understand where they sit in relation to other similar buildings across the city. However the office market in Manchester is very competitive, thus landlords may be reluctant to give away such data due to their building(s) potentially being exposed as poor performing vs. competing buildings. This should be acknowledged and to mitigate this, incentivising and encouraging landlords to participate will be key, citing the collaborative nature of the project for public good, the operational cost and carbon benefits that could be realised and the resulting positive marketing as incentives. However, the privacy of the data should ultimately be respected should landlords wish to anonymise data or to not participate.

Benchmarking & Governance

It must be understood that the gathering of data, validation, benchmarking and auditing will require significant time and resource. The quality and accuracy of raw data received from landlords cannot be relied upon and an individual with experience in the energy sector would be required to ensure data reliability. An appropriate data platform will also be required which would need a custodian, as well as an independent reviewer/auditor.

The same rigour would need to be applied when setting targets for improvement. Landlords could challenge benchmarks or targets if their building appeared to perform poorly, in which case a clear understanding is required of the methodology undertaken to establish the targets, and how and where they apply to each building. The NABERS UK certification scheme gives a robust and industry accepted framework with which to approach energy benchmarking so it is advised that this is used as a template.

Opportunities

MEES

While there are some issues with EPCs, if the proposed changes to MEES were implemented, it still represents a significant opportunity to reduce energy consumption across Greater Manchester. If the government fails to implement the proposed changes then there might be an opportunity to implement across GM through the powers of the devolved government, which given commercial property owners should be gearing up to the changes, shouldn't cause too much of an issue.

Performance Based Certification

Given the impact NABERS has had in the Australian market, there's a clear opportunity to implement a performance based certification scheme to reduce consumption of commercial buildings.

Ideally this would be incorporated for all buildings, however acknowledging there may be limited powers to implement into local policy, then GM should prioritise incorporating performance based certification (preferably NABERS) as part of planning applications for both new building and retrofit projects that go through planning. This will hopefully drive increased knowledge and skills in the area and hopefully set an expectation within the market for all buildings.

Best Practice Cohort

There are significant opportunities to create a more informed and motivated commercial sector in the city, who are aware of how their building should be performing in the context of their city, and how to reduce their energy and carbon consumption over time. A collaborative space could be facilitated so those participating can share stories and guidance, also serving as a positive and collaborative space for the sector.

City Data Challenge

Taking learning from other forward thinking cities like Copenhagen and Washington DC, GM could look to set up a scheme whereby all commercial buildings share data. The first stage of this would be establishing a best practice cohort, as described above, who are keen to be involved and share data on a voluntary basis. Following this, reporting and benchmarking of energy performance of buildings could potentially be mandated through law. For example, in the US Washington DC (via the District of Columbia Department of Energy and Environment) have brought into law the requirement for all privately owned buildings greater than 25,000sqft to report their energy

performance, with results publicly displayed on a [building performance map](#). Buildings are given a star score based on performance, and this has demonstrated significant improvements in building efficiency across the city.

As an alternative to, or incorporating elements of, a centralised information sharing initiative, peer to peer learning and collaboration amongst commercial building owners, occupiers, GMCA and stakeholders may deliver faster and more effective outcomes than hierarchical and dictatorial planning policy changes.

The retrofit and green building agenda is being driven, in no small part, as a response to increasing consumer demand, be that residents expecting a response to the climate emergency from their local authority, customers of a business wanting to buy products or services that have a lesser impact on the environment or financial institutions wanting to ensure their investments are contributing to rather than hampering their own climate and carbon reduction related objectives. Councils want to support change; commercial occupiers are pushing for buildings with green leases; and, commercial building owners and investors want assurances that investments made are both commercially viable and meet the needs of both customers, councils and their own climate targets.

Sharing information, best practice and practical examples amongst a common community of interest can help all parties to achieve their objectives. For example, Copenhagen's 'Energy Leap' is a partnership among municipality, private building owners, developers, and other relevant organisations to achieve a significant reduction in energy consumption in buildings. Similarly, taking advantage of already established and well-connected networks such as C40 to share knowledge and tools is beneficial for everyone involved.

No business wants to be associated with being less capable than its peers and competitors. This applies equally to commercial building owners and their occupier customers. Be it via a formal, annual awards, the publishing of energy performance ratings and or accreditation of commercial buildings or the invitation to participate in policy development and other such 'influencing' forum and initiatives with GMCA and stakeholder local authorities for owners of better performing buildings, a desire to be seen to be leading the field would support commercial retrofit.

The most appropriate form of competition for GMCA would need to be identified considering stakeholder views and the policy landscape surrounding commercial retrofit. For example, a 'name and shame' league table of performance would be incongruous if delivered alongside a collaborative, partnership-based knowledge sharing initiative supported by the GMCA.

Green Leases

A key opportunity for landlords could be to accelerate the use of green leases to incentive tenants (and the landlords themselves) to reduce their energy consumption. These are lease agreements which contain a series of additional provisions, which at its simplest could comprise a memorandum of understanding between tenant and landlord to reduce energy consumption, or could go as far as setting energy targets for tenants to adhere to.

Recommendations

Theme	Barriers	Recommendations (short term)	Recommendations (long term)
Governance	Benchmarking and governance	<ul style="list-style-type: none"> Establish roles and responsibilities for driving the programme and governance roles Establish an energy benchmarking and performance grading system 	<ul style="list-style-type: none"> Embedding energy performance requirements in local planning Establish energy reduction pathway for all commercial stock across the city, with clear guidance as to incentives for overachieving and penalties/guidance for underachieving
Energy data & analysis	Metering & data analysis	<ul style="list-style-type: none"> Agree best practice approach to metering standards – suggest using NABERS ‘base building’ and ‘tenancy’ approach as preferred standard Promote benefits of effective metering for building owners and occupiers e.g. reduced service charge, ability to implement energy reduction through analysis, incentivises party in control to reduce consumption etc. Trial installation of new metering and data analysis on trial council buildings Establish “quick win” energy savings potential for initial participants Agree best practice reporting metrics and most effective visualisation Review potential for city scale energy data sharing platform and develop proposals for the scheme including benefits and what building owners, in particular, should expect Develop a strategic implementation strategy - key data streams and platforms should be proposed, as well as resource, timescale and cost 	<ul style="list-style-type: none"> Partner with supply chain partners to link consultants and contractors with building owners and occupiers Promote benefits of effective metering and analysis through case studies where it has been adopted for example proposed trial council buildings Establish city scale data sharing platform together with league table of performance Growth in participants and communication of energy band performance of buildings (i.e. via a star system or similar) Gain better understanding of actual energy consumption of commercial building across Manchester and Greater Manchester

Preferred energy certification scheme	Energy certification	<ul style="list-style-type: none"> • Confirm preferred energy certification scheme(s) and grades to be used for any minimum efficiency standards for planning permissions and existing buildings • Lobby government to implement performance based certification and proposed changes to MEES to improve minimum EPC rating to EPC C by 2027 and EPC B by 2030 	<ul style="list-style-type: none"> • Continually review and update to ensure GM is utilising the most effective certification scheme and that standards ratchet over time
Best practice cohort	Knowledge sharing	<ul style="list-style-type: none"> • Establish a best practice cohort - including sharing of portfolio best practice metering installations and energy data analysis • Release guidance - retrofit guidance for landlords and tenants including technical and financial guidance • Release guidance –It should also set out key guidance regarding retrofit including practical considerations, financing and funding options and case studies. It could also include advice regards setting up green leases. 	<ul style="list-style-type: none"> • Establish a league table of performance and/or annual awards for those • Share case studies of examples where effective metering and data analysis have resulted in energy reduction • Seek landlord/tenant commitments and establish a task group of scheme curators and willing participants from the sector.

APPENDIX B: CASE STUDY - PALL MALL, MANCHESTER (BRUNTWOOD)

PALL MALL



Office typology: Constructed 1964-84
Location: Manchester City Centre
Type of retrofit: Deep
Partners: Client: Bruntwood, Architect: Sheppard Robson, MEP & Sustainability Consultant: Ramboll, Planning Consultant: Deloitte, Main Contractor: Dragonfly
Design status: Construction
Expected completion: Early 2025
Project size: NIA = 85,000sqft

PLANNING & OPTIMISATION

LIGHT RETROFIT

DEEP RETROFIT

PROJECT OVERVIEW

> Context

Pall Mall is located on King St and sits in the heart of Manchester City Centre. Originally constructed in 1969, it is Grade II listed and was acquired by Bruntwood in October 2021 having sat mostly vacant for four years.

> Retrofit Strategy

The property will include 85,000 sq ft of office and hospitality space across three interlinked tower blocks. The building is structured using a reinforced concrete frame with original single-glazed windows and time-expired building services. As part of the redevelopment, the glazing and building are being replaced alongside a complete internal refurbishment.

> Planning considerations

Initially, the planning / listed building application to replace glazing was refused, however, off the back of the energy modelling and net zero targets for the building, planning / listed building consent was successfully obtained for replacing existing curtain walling. Due to the listing, the curtain walling needs to replicate the existing layout and the mosaic tiling to the cores must remain untouched. This results in a slightly compromised building fabric performance, however, a significant reduction in energy demand can still be achieved compared with the original building.

RETROFIT DRIVERS

> Net zero in operation

The key sustainability targets for Pall Mall is that it is net zero in operation with low energy consumption. Bruntwood are aiming for all electricity supplied to the building to be derived from renewable sources, and intelligent building management technology will also be incorporated throughout. Once complete, Pall Mall will be targeting BREEAM 'Very Good' certification and an EPC B rating.

> Attract new occupiers

The upgrade is intended to appeal to new occupiers as the building was vacant when we purchased it, meaning it was a great opportunity for us to undertake a deep retrofit and bring it up to modern sustainability standards. Bruntwood's target audience is organisations with strong sustainability credentials, to create a sustainable business 'hub' at Pall Mall.

> Risk of becoming a stranded asset

There were concerns that if the building's glazing wasn't replaced quickly then it may become a stranded asset, which is why this was a fundamental requirement for the redevelopment of the building.

> Social impact

The site contained an existing area of public realm which was under-utilised and a target for anti-social behaviour, thus the reimagining of this space as a draw to the building and for societal benefit was required.

> Improved rental value

The condition of the building on acquisition was very poor and would have only realistically achieved a rental value of circa £12-15 per square foot, however on completion of the scheme we expect in the region of £35-37 per square foot.

SUSTAINABILITY OUTCOMES

➤ Switch from gas heating to lower carbon heating

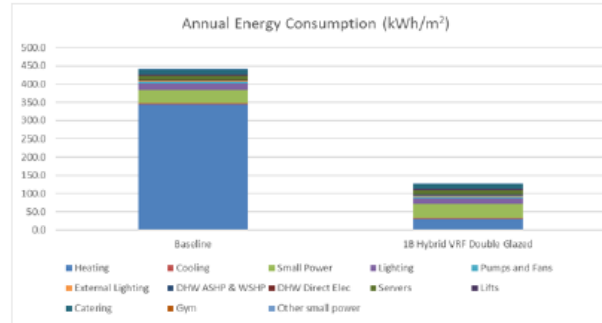
A switch from gas heating to hybrid variable refrigerant flow (VRF), with air source heat pump (ASHP) serving domestic hot water and air handling unit (AHU) coils has dramatically reduced the overall carbon emissions and set the building on a trajectory for zero carbon as the grid emissions reduce. Note that full net zero carbon (NZC) was not possible due to the existing nature of the building and the listed status, as certain elements of the fabric were required to remain.

➤ Improved airtightness and façade replacement

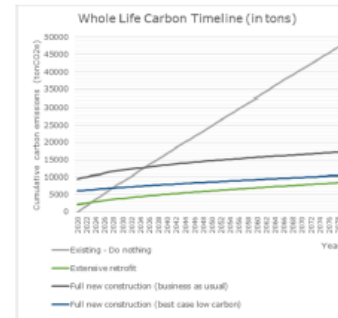
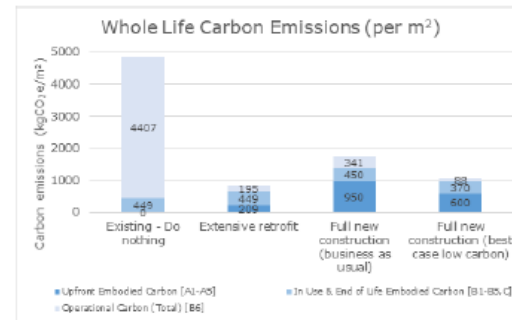
A focus on air tightness and façade replacement, within the constraints of the listed building status provided a significant energy consumption improvement.

➤ Choosing a deep retrofit over new build

Whole life cycle carbon was a fundamental driver for the building. The decision to retain and perform a deep retrofit was determined through detailed assessment, balancing operational and embodied carbon. The adjacent graphs show the outcome from the decision-making process.



Scope	Metric	Stage 3	Stage 3 Excluding Gym, car park and Retail/Café	Stage 3 Excluding Gym, car park, Retail/Café & assumes Tenant Energy of 70kWh/m2 NLA is achieved
Whole building energy	kWh/m²(NLA)/yr	397	173	159
	kWh/m²(GIA)/yr	127	118	108
Base building energy	kWh/m²(NLA)/yr	116	93	89
	kWh/m²(GIA)/yr	75	63	63
Tenant energy	kWh/m²(NLA)/yr	81	81	70
Target Achieved				2020-2025



KEY LEARNINGS

➤ Significant reductions in operational carbon can be achieved for Grade II listed buildings despite planning constraints

Although it was not possible to achieve 'Paris Proof' targets for operational carbon on this project due to existing building constraints, particularly listed façade, a significant reduction on operational carbon can be achieved.

➤ Retrofitting results in much lower embodied carbon compared to new build

➤ Data on net zero carbon and clear net zero strategy can assist in gaining planning approval

Using operational carbon data and highlighting net zero aspirations can help persuade conservation officers to agree to planning applications e.g. replacing the windows after an initial refusal.

WIDER IMPACT AREAS



Resource use: the fit-out of Pall Mall will breathe new life into the old building, utilising a circular economy approach through its use of recycled and reclaimed furniture and materials, to create Bruntwood's most sustainable serviced and leased office space to date, incorporating details such as timber partitions and reclaimed raised access floors. What's more, through retaining the existing structure, Bruntwood have avoided the need to rebuild which would have resulted in approximately 7,900 tonnes of additional carbon emitted - equivalent to around 16,000 flights from London to New York.



Climate change adaptation: the new façade and glazing system has been designed to limit the solar gain to the building and thus limit the energy required to cool it. At the same time, it will allow the building to respond to increasing external temperatures over time.



Health, Well-being and Social Value: the provision of the new high quality public realm offers the external space back to the community for societal benefit. Additionally, new gym and café spaces within the building (including external roof terraces) provide wellness facilities to the building users.

APPENDIX C: USEFUL LINKS

MACE Retrofit [*Transform & Renew - Making non-domestic buildings fit for a low carbon future*](#)

PAS 2038:2021 Retrofitting non-domestic buildings: <https://www.bsigroup.com/en-GB/standards/pas-20382021/>

Retrofit Pattern Book: Allows designers and manufacturers to show their best practice details to others <https://retrofit.support/>

[The Merton Rule](#)

<https://www.constructionenquirer.com/2023/12/13/retrofit-first-policy-floated-for-city-of-london-schemes/>

UKGBC

www.greatermanchester-ca.gov.uk/media/8719/gmca_occupierguidance_cbre_noversioncontrolsheets.pdf

Guide for Occupiers

APPENDIX D: UKGBC Retrofit Guidance

APPENDIX E: NABERS

NABERS UK



What is NABERS UK?

NABERS UK, which launched in 2020 following the success of the Australian scheme, provides a scheme that measures, verifies and discloses the actual energy use of existing offices, helping building owners and the wider market to accurately measure, target and communicate the energy performance of commercial offices.

The scheme is governed and backed by a Steering Group that includes the BBP, BCO, BPF, BRE, BSRIA, CIBSE, IWFM, RIBA, RICS and UKGBC.

NABERS UK offers two products:

NABERS UK Design for Performance

Design for Performance is a process whereby a developer or owner commits to design, build and commission a new office development or major refurbishment to achieve a specific NABERS energy rating.

NABERS UK Energy for Offices

Energy for Offices measures the energy efficiency of an operational office building and rates its performance. Offices can be rated in three different ways: Base building, tenancy and whole building.

New developments certified under 'Design for Performance' must use the annual 'Energy for Offices' rating to ensure that the design ambitions are met in practice. Over 100 new developments have been registered in the UK since the scheme's launch, representing a significant proportion of major office developments in the UK, which will all go through the 'Energy for Offices' process once built, let and in operation.

'Energy for Offices' ratings can be applied to any existing office, and buildings do not have to have been through the Design for Performance process in order to be rated. Ratings can be public or private, and in either case are intended to support offices in a process of continuous improvement of their operational energy efficiency.

The assessment process associated with these two products is explained in more detail on the following page, along with details of how to get started with your development or project or existing building/portfolio.

NABERS UK PROVIDES A RATING FROM ONE TO SIX STARS FOR OFFICES. THIS PROVIDES BUSINESS OWNERS WITH A BENCHMARK FOR PROGRESS.



Benefits of a NABERS UK Energy for Offices rating

- Compare - Provides a benchmark for a building's energy efficiency, enabling comparison across the industry.
- Validate and communicate - Provides cost-effective, high-trust and independent validation of energy data, ensuring confidence in reporting.
- Track progress - Annual ratings enable owners to understand whether interventions have delivered real performance improvements.
- Understand and improve - Provides an accurate assessment of energy consumption and efficiency so that owners can understand performance and improve buildings.
- Competitive edge - Lower environmental impact, lower running costs and simple communication gives owners a competitive advantage with investors and occupiers.
- Demonstrate good practice - NABERS UK is integrated into several industry standards including the BCO Guide to Specification for Offices.
- Gain recognition - NABERS UK can provide owners with credits under BREEAM and GRESB.

DESIGN FOR PERFORMANCE

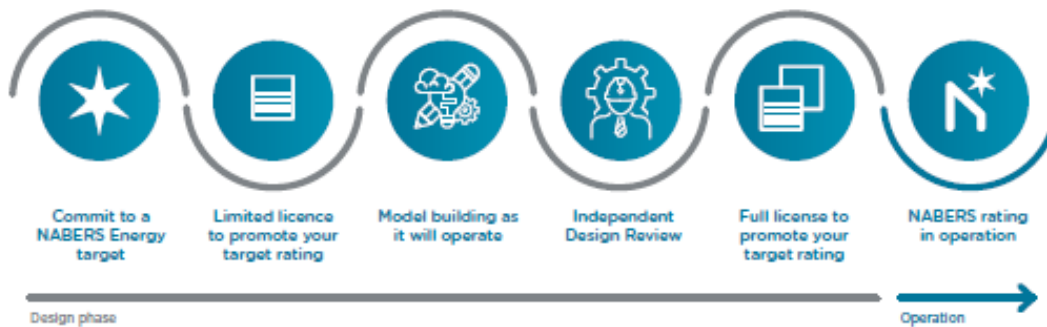
What is Design for Performance?

The UK has a design-for-compliance culture which has led to the well-known performance gap that exists between original design intent and how a building truly performs in-use.

Design for Performance is a process that overcomes this, where a developer or owner commits to design, build and commission a building to achieve a targeted NABERS UK Energy rating.

If you are a developer or owner, you can register any new office development or major refurbishment by signing a Design for Performance Agreement. Your target NABERS UK Energy rating must be 4 stars or above. The Agreement spans a number of years and remains in effect until the building has received its NABERS UK Energy Rating, after 12 months of operation.

THE DESIGN FOR PERFORMANCE PROCESS:



ENERGY FOR OFFICES

What is Energy for Offices?

Energy for Offices measures the energy efficiency of an operational office building and rates its performance. The energy rating works by comparing the energy consumption of a building against a set of benchmarks.

The benchmarks have been developed using actual performance data from offices in the UK to set the median and the star rating takes into account both location and occupancy.

Offices can be rated in three ways:

Base Building: Buildings can be rated based on their central services like heating and cooling systems, lifts and lobby lighting.

Tenancy: Enables energy used by the tenant to be rated, typically for lighting and power, plus special requirements or local a/c.

Whole Building: Provides assessment of energy used by office tenancies and by base building services.

STEPS TO A RATING



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Greater Manchester Green City Region Partnership

Date: 25th January 2024

Subject: GREATER MANCHESTER MISSION TO JAPAN AND MOU SIGNINGS

Report of: Sean Owen, Head of Low Carbon, GMCA

Purpose of Report

This paper provides an update on the recent GM trade mission to Japan and the ensuing Memorandum of Understanding (MoU) agreements that have, or are in the process of, being signed.

Recommendations:

The Green City Region Partnership is requested to:

1. Note the report and progress arising from the recent mission to Japan;
2. Note the potential for furthering closer ties through the opportunity that the Osaka World Expo in 2025 provides;
3. Note the scale and innovation potential of the collective signatories of the MoUs which have the potential to accelerate GM's low carbon transition.

Contact Officers

Sean Owen sean.owen@greatermanchester-ca.gov.uk

Rory Mathews rory.mathews@greatermanchester-ca.gov.uk

1. Greater Manchester Mission to Japan

- 1.1. The Greater Manchester mission to Japan in mid-December 2023, led by Mayor Andy Burnham and Cllr Bev Craig, built on the success of the officer-level trip to Japan in 2022 and a visit from Osaka city delegates in January 2023.
- 1.2. The trip aimed to strengthen bilateral ties in: diplomacy; trade and investment; net zero; innovation; culture & sport and the possibility of closer cooperation via the Osaka Expo 2025.
- 1.3. From a low carbon perspective, the trip included: visits to Daikin's headquarters (to build on the success since signing the MoU with them in February 2023); a visit to Panasonic's RE100 fuel cell solution demonstration site; plus exploring ways to further develop renewable deployment with SSE Energy, Pacifico, Eliiy Power (a medium sized battery manufacturer), Hitachi, Kansai Electric Power (part owner of Electricity North West), Mitsui and Nippon Electric Glass.
- 1.4. In addition to the above, visits also took place to Deloitte, Mitsubishi, Toshiba, Mizkan and Keidanren, as well meetings with the Mayors of Tokyo and Osaka.

2. Memoranda of Understanding (MoUs)

- 2.1. As a result of the trip, several MoUs are being agreed to forge partnerships to assist with GM's goal of reaching carbon neutrality by 2038. They include:
- 2.2. Signing a new partnership deal at a city-level between Greater Manchester and Osaka to deliver on net zero targets, promote trade and investment, and boost innovation and education links between universities. The deal is the first of its kind between a UK city-region and Japanese counterpart since the UK agreed a trade agreement with Japan in 2020.
- 2.3. Signing an MoU with a consortium led by Panasonic on 15th January, to help prove the real-world application of their innovative RE100 technology hydrogen fuel cell, which can provide renewable heat and power to larger energy users such as hospitals. This will bring several stakeholders together to collaborate: GMCA, Panasonic, Manchester Metropolitan University, Carlton Power, SSE Energy and Electricity North West Ltd.

- 2.4. Ties were strengthened with Daikin, following the MoU signed with them in February 2023. Since which Daikin have installed over 300 heat pumps across the city-region, are providing training to ~45 college trainers to be able to deliver the Low Carbon Heat Technician apprenticeship and are working with their local installer network on an innovative, UK-first heat pump installation offer through the GM Retrofit Portal.
- 2.5. Work is ongoing with Hitachi who are keen to sign an MoU with the GMCA and TfGM to further investigate a range of technology solutions within their portfolio, covering rail, low carbon technology and digital (data).
- 2.6. The trip also stimulated further discussion between the GMCA and SSE Energy to further crystalise this relationship with an MoU to investigate areas of mutual interest in the deployment of energy solutions.

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Greater Manchester Green City Region Partnership

Date: 25th January 2024

Subject: GM NET ZERO ACCELERATOR

Report of: Mark Atherton, Director of Environment, GMCA

Purpose of Report

This paper provides an update on the recent announcement of a partnership between DESNZ and GMCA to develop a Local Net Zero Accelerator pilot. The pilot will seek to develop a place-based net zero investment strategy and test this with the investment market. Subject to agreement of a suitable business case, GMCA will receive between £6-7m over the coming 24 months to deliver the pilot.

Recommendations:

The Green City Region Partnership is requested to:

1. Note of the report.

Contact Officers

Mark Atherton mark.atherton@greatermanchester-ca.gov.uk

Sean Owen

sean.owen@greatermanchester-ca.gov.uk

1. INTRODUCTION

Following discussions with Department of Energy Security and Net Zero (DESNZ) and the GMCA in Q3, Government announced Net Zero Accelerator pilots with both GMCA and West Midlands CA in November 2023. The pilots will run as part of the GMCA's devolution deal to work together on net zero and will seek to develop a place-based net zero investment strategy and test this with the investment market.

2. FURTHER DETAIL

The two Local Net Zero Accelerator pilots will help drive investment in multiple green projects across key sectors such as energy, housing and transport. The pilot programmes will help the selected combined authorities unlock private investment, speed up our efforts to tackle climate change and help the UK reach its net zero target, whilst supporting skilled jobs, building out supply chains and growing our economy.

Councils have faced barriers to attracting private sector investment in smaller net zero programmes and one-off projects. The pilots will be designed to tackle this to secure investment at scale to deliver a range of green initiatives and expand decarbonisation work in the years to come. The pilot will test the approach of developing an aggregated bundle of projects across multiple net zero sectors, including not only projects that can readily provide a financial return for commercial investors but also projects which would be difficult or impossible to finance commercially on their own, but for which it may be possible to attract commercial investment as part of an investment bundle.

As part of the overall programme there will also be a Local Net Zero Finance Support Service pilot which will provide expert support to GMCA to help develop the pilot. The overall programme will be administered on behalf of DESNZ by the Greater South-East Local Net Zero Hub. The pilots will run until March 2026.

3. NEXT STEPS

Work has commenced to develop the required Business Case, to include detailed work programmes, outputs, outcomes, milestones and budgets.