

GREATER MANCHESTER GREEN CITY REGION PARTNERSHIP 2020/21
Presentation Pack

DATE: Friday 24 July 2020

TIME: 10.00 am

VENUE: Via Live Microsoft Teams Event

- | | | |
|----|------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1. | ITEM 10 ACHIEVING NET ZERO CARBON IN NEW DEVELOPMENT PRESENTATION BY HELEN TELFER, PLANNING SPECIALIST, ENVIRONMENT AGENCY (10 MINUTES) | 1 - 10 |
| 2. | ITEM 11 PUBLIC BUILDINGS ASSESSMENT AND MARKET TESTING PRESENTATION BY DR JOHN HINDLEY, TWELVETREES CONSULTING (10 MINUTES) | 11 - 22 |
| 3. | ITEM 12 DOMESTIC RETROFIT FOR A CARBON NEUTRAL FUTURE – ANALYSIS PRESENTATION BY DAVID SHEWAN (10 MINUTES) | 23 - 36 |
| 4. | ITEM 14 IMPACT OF THE URBAN PIONEER PROGRAMME REPORT OF LEE RAWLINSON, REGIONAL DIRECTOR, ENVIRONMENT AGENCY (5 MINUTES) | 37 - 68 |
| 5. | ITEM 15 GREATER MANCHESTER ENVIRONMENT FUND REPORT OF MARK ATHERTON, ENVIRONMENT DIRECTOR (5 MINUTES) | 69 - 96 |

BOLTON	MANCHESTER	ROCHDALE	STOCKPORT	TRAFFORD
BURY	OLDHAM	SALFORD	TAMESIDE	WIGAN

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Setting a Pathway for 'Net Zero Carbon' in New Development by 2028

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The Greater Manchester Spatial Framework Evidence Base

Green City Region Partnership Board
24th July 2020

**GREATER
MANCHESTER**
DOING THINGS DIFFERENTLY

Agenda Item 1

Policy and Legal Context

National:

- Climate Change Act 2008 (Amended 2019: Net Zero GH Gas reduction by 2050)
- Planning and Energy Act 2008 (*provision to set higher standards remains!*)
- Written Ministerial Statement (2015) (*update on building regs*)
- Paris Agreement 2015
- Industrial Strategy (2017)
- NPPF 2019 (Para 148)
- Climate Emergency (2019)

Local:

- First Green Summit 2018, commitment to be carbon neutral by 2038 and all new development net zero by 2028
- Draft GMSF Policy (Jan 2019)
- 5 Year Environment Plan Launched at second Green Summit (2019)
- All 10 districts and the GMCA have declared a Climate Emergency (2020)

<https://www.ukgbc.org/ukgbc-work/sustainability-standards-new-homes/>

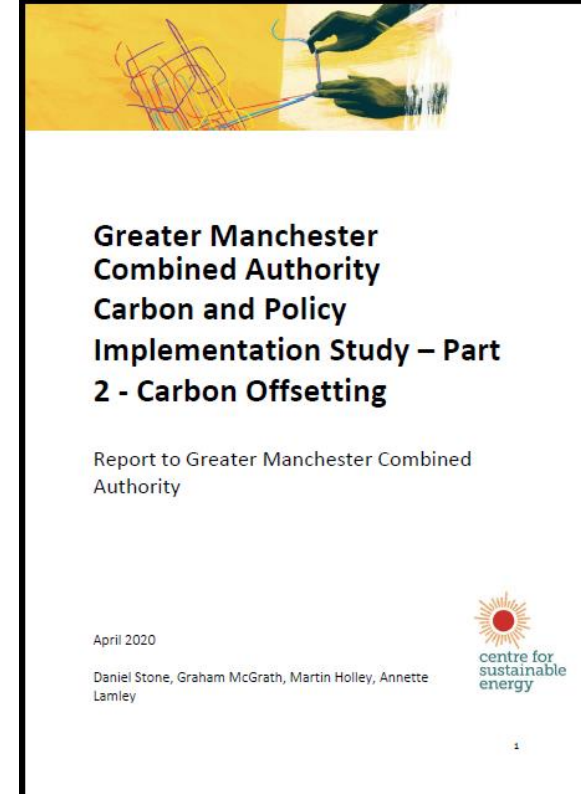
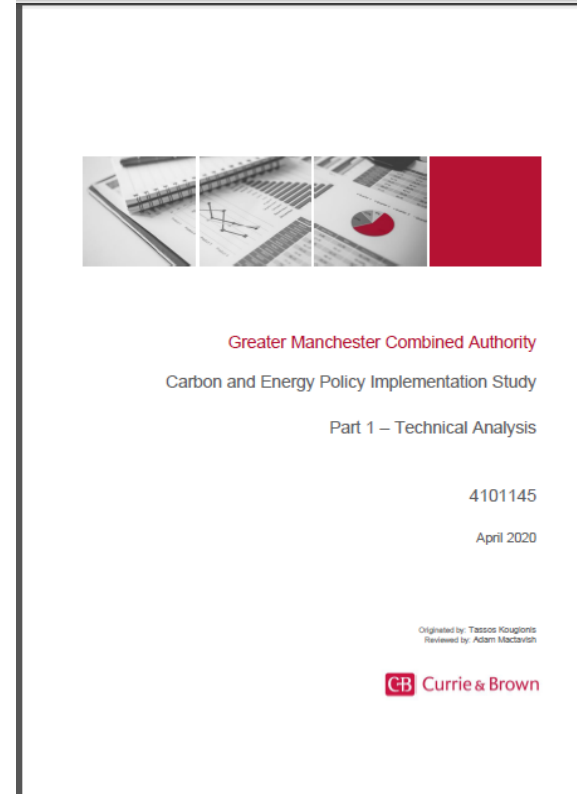


**GREATER
MANCHESTER**
DOING THINGS DIFFERENTLY

Achieving Net Zero by 2028 – Guiding Principles

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- *What do we mean by Net Zero?*
- *What does the pathway to Net Zero look like in policy terms? (GMSF baseline of 19% Part L)*
- *How do we ensure a fabric first approach?*
- *What role will renewable and low carbon technologies play?*
- *How will it relate to recent proposed changes in Building Regulations?*
- *What are the costs to achieving higher standards?*
- *Will carbon offsetting be required?*



What is Net Zero Carbon?

Current Implementation Study

Currie & Brown, 2019

Operational Energy Use – Definitions

Regulated energy demand:

As calculated for compliance with the building regulations. Includes energy used for heating, hot water, installed services and lighting

Unregulated energy demand (report context):

In the case of residential buildings this includes the energy used by the occupant during the operation of the house for everyday needs such as computer/phone charging, refrigerators, washing machines etc.

In the case of commercial buildings this refers to small power (includes computers, server, and on-board specialist medical equipment and other)

Net zero carbon – construction (1.1):

“When the amount of carbon emissions associated with a building’s product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy.”

Net zero carbon – operational energy (1.2):

“When the amount of carbon emissions associated with the building’s operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset.”

UK-GBC

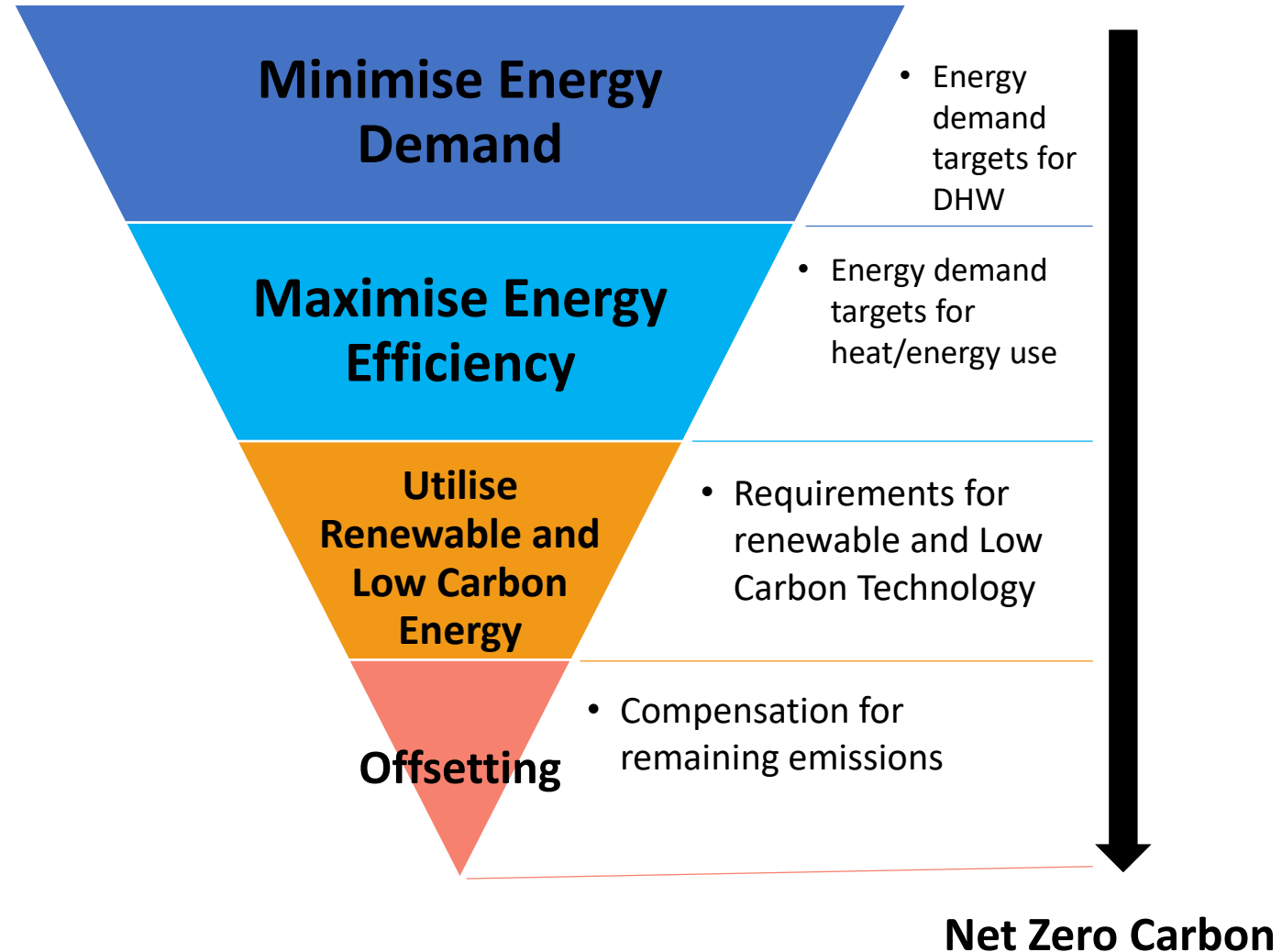
*Net Zero Carbon Buildings:
A Framework Definition, 2019*

Net zero carbon – operational energy is defined as:

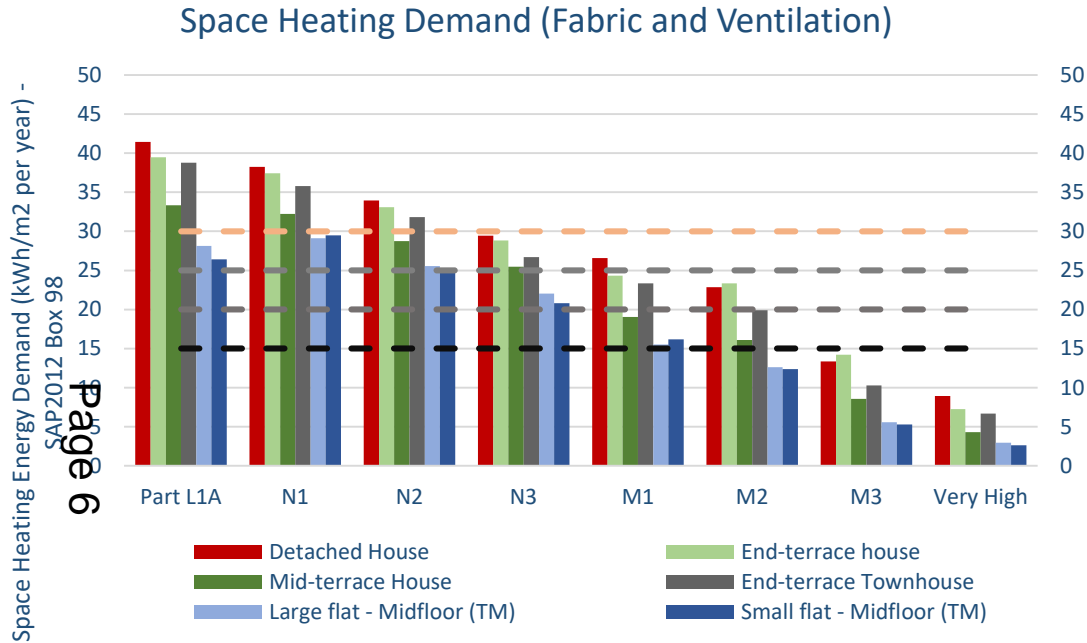
“When the amount of carbon emissions associated with the building’s operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset.”

Policy Principles for Net Zero Carbon

- *Adopt a fabric first approach (energy hierarchy)*
- *Energy demand and carbon emissions should be treated together. It shouldn't be about CO2 reductions!*
- *Alignment with building regulations*
- *Post occupancy evaluation and the performance gap*
- *RE targets should focus on generation not energy demand associated with carbon (e.g. PV as % of floor space)*
- *Affordability*
- *Non domestic and use of BREEAM*



Costs of achieving Net Zero Carbon



Domestic Archetype costs (Fabric Only)

Model	Stage 1 <30kWh/m ² Houses <25kWh/m ² Flats		Stage 2 <20kWh/m ² Houses <15kWh/m ² Flats	
	Nat. Vent	MVHR	Nat. Vent	MVHR
Detached	£4,900	£2,600	-	£6,200*
End-terrace	£3,300	£1,900	-	£4,400*
Mid-Terrace	£1,700	£2,100*	-	£2,100
Townhouse	£3,000	£1,500*	-	£2,900
1B Flat	£800	£1,000*	-	£1,000
2B Flat	£1,250	£1,100*	-	£1,150*

* Meets lower heating energy demand targets – see graph

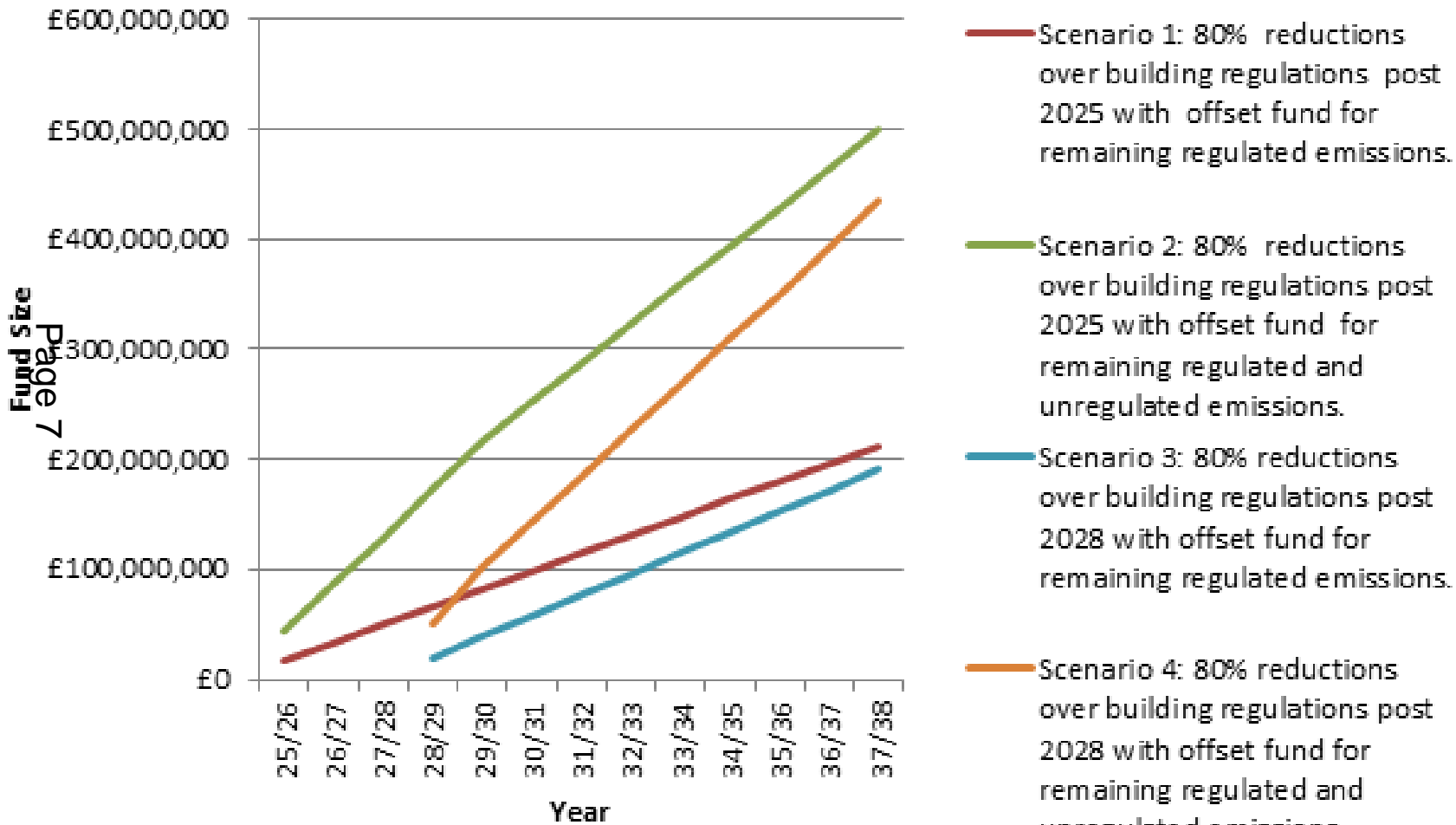
Non-Domestic costs

Standards	Achieves	Cost
Energy Efficiency	Minimum carbon reduction of 15%	<2%
BREEAM	BREEAM Excellent rating	1-2%
Total	<2-4%	

The additional cost of BREEAM Excellent certification may be a 1-2% for measures not associated with delivering energy requirements. In many buildings this additional cost could be under 1% subject to its location, the base design and experience of the design and construction team.

- Meeting the highest modelled fabric standard and including 1.25 kWp of PV and both Wastewater Heat Recycling/Air Source Heat Pump technology does not increase the construction costs in any of the models by more than 6%.
- In absolute terms, meeting the 'Very High' standard at the detached archetype new domestic model was the most expensive uplift, with additional construction costs of around £9000 predicted (excluding installation of PV)

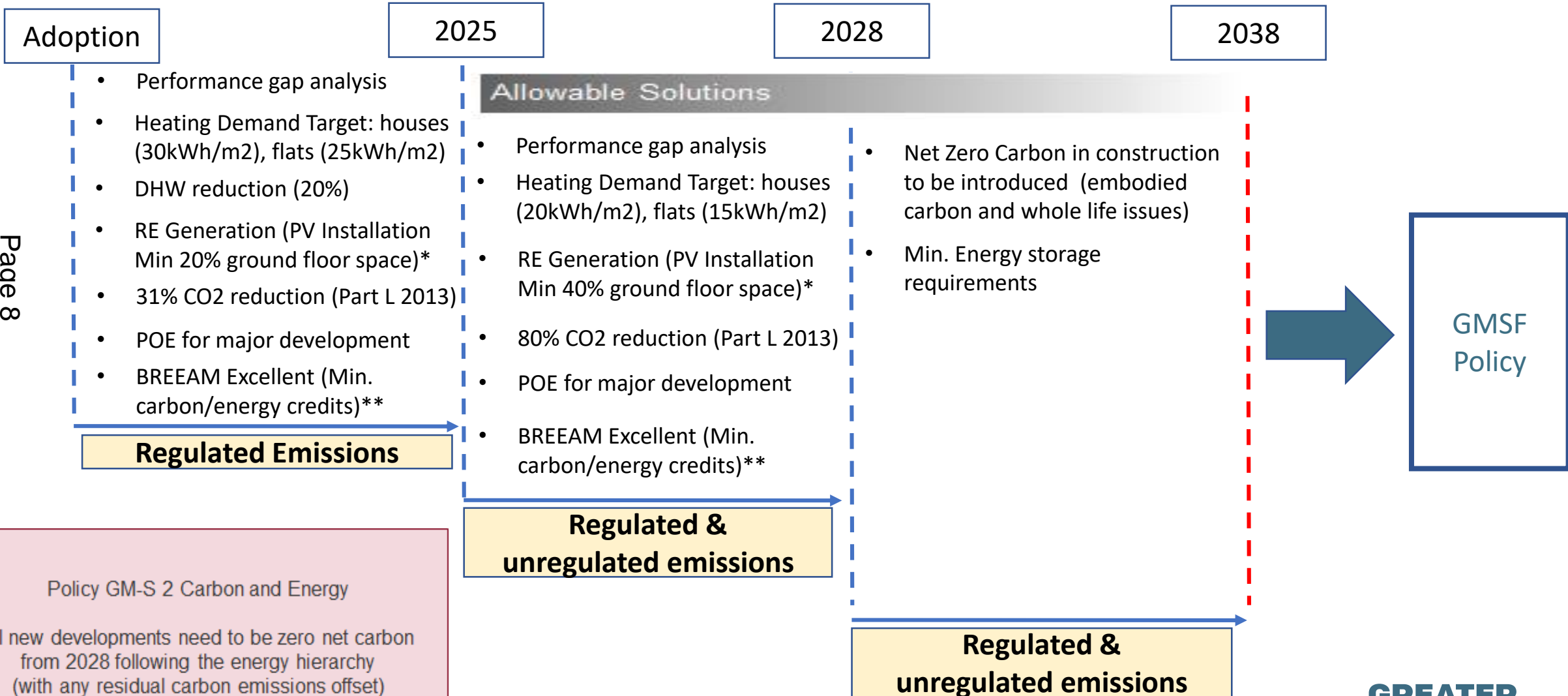
Carbon Offsetting



- *The approach provides a way to offset reductions not achieved in development*
- **It is the last resort!**
- *GM Carbon Price should be greater than HMT Green Book to meet 2038 commitment (2025: £200, 2028: £234)*
- *Verification and monitoring is critical.*
- *Alignment with the **GM Environment Fund***

The Net Zero Carbon Pathway

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Key considerations

- *Legal challenges and future proofing*
- *How do we cover the more technical detail of the policy requirements? District guidance vs GM wide?*
- *Post occupancy monitoring: should we follow the London approach for central reporting?*
- *Further work needed for carbon offsetting and linking up to the Environment Fund (Carbon price, assessment criteria, monitoring and evaluation)*
- *Skills and resources to check sustainability statements, s106 agreements? District or central resource?*

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DR JOHN HINDLEY
DIRECTOR



DECARBONISATION OF GREATER MANCHESTER PUBLIC ESTATE

GREEN CITY REGION PARTNERSHIP
JULY 2020

AIMS

- Update on the GMCA Soft Market Testing

SOFT MARKET TEST AIM

- To support GMCA's thinking around the objective of decarbonisation of the public estate leading to carbon neutrality by 2038.

SOFT MARKET TEST OBJECTIVES

- Engage with 4 Suppliers to carry out the Soft Market Test exercise
[Ameresco](#), [Engie](#), [ENWL](#), [UKPN](#)
- Focus on 12 'mandatory' buildings into 2 groups of 6 buildings with scope for optional buildings to be looked at.
- Application of learnings across and applied to top 100 Assets.

SOFT MARKET TEST TARGETS

- At least a
- 30% reduction from current energy usage by 2024
- 50% reduction by 2030
- A stretch target of 80% reduction in buildings carbon emissions by 2030

INTERVENTION TYPE

- Optimisation/replacement of building services
- Decarbonisation of heating energy conservation measures/fabric improvements
- On-site diversity and flexibility – optimisation and controls
- On-site Energy Generation (e.g. maximising opportunities for PV, Solar thermal)
- On-site low carbon mobility infrastructure (e.g. EV charging)

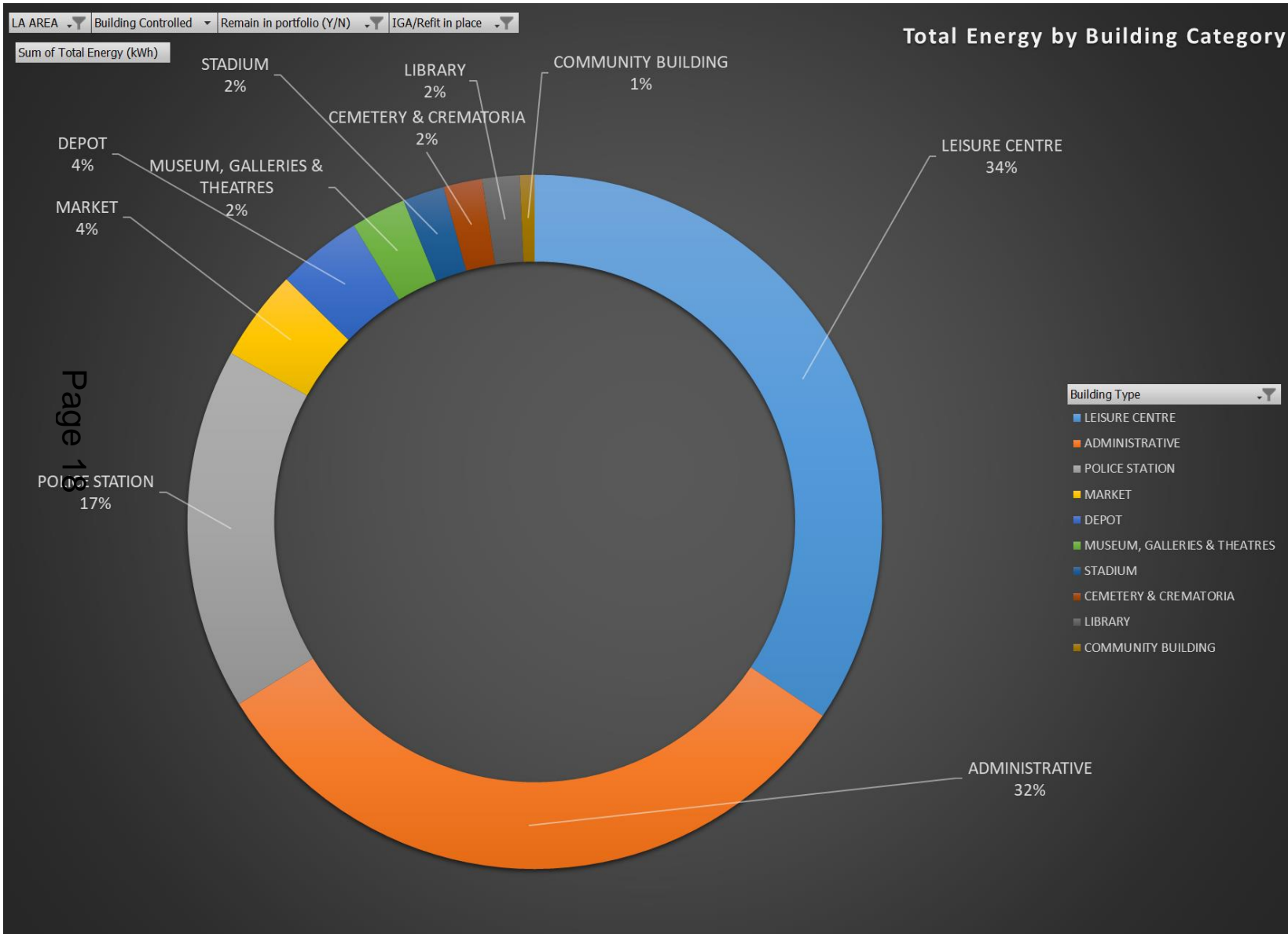
BUILDING CHOICES AND ENERGY PIE

SOFT MARKET TEST BUILDING CRITERIA

- Owned Asset
- Remaining in portfolio over at least next 5 years
- Not under any planned large-scale refurbishment
- No recent investment grade audit carried out or planned
- Be responsive to District feedback.

TOTAL ENERGY PIE

- 234,000 MWh (GMCA total 788,000 MWh – ~30%) – Top 100 Assets
- 12 Mandatory Building and Optional Buildings
- 8% of GMCA energy total
- ~66,000 MWh - 36,000 MWh Gas / ~30,000 MWh Electricity



% TOTAL ENERGY PER ARCHITYPE

OVER THE TOP 100 ASSETS

(SCHOOLS ARE OMITTED)

SOFT MARKET TESTING PROGRAMME

Complete – On Target – Organised – Behind – Critical – Yet to commence



SOFT MARKET TESTING

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Review and agree
Top 100 GM
Assets



Agree list of SM Test
Companies and
Communicate Intentions



Harvest HH Gas
and Electricity Data
from Districts



Complete and Send
out Brief and Data
Packs



Soft Market Test
Data Analysis
Review
Kick Off meeting
1.6.2020



Surveying
Development of
Intervention and
Decarbonisation
approaches



Final Reports
Internal GMCA
Review



Share SMT results with
Districts through DoPE
Group



Seek consensus on
Priority Buildings
and Delivery Route.

March
2020

April 2020

April 2020

May 2020

June 2020

July 2020

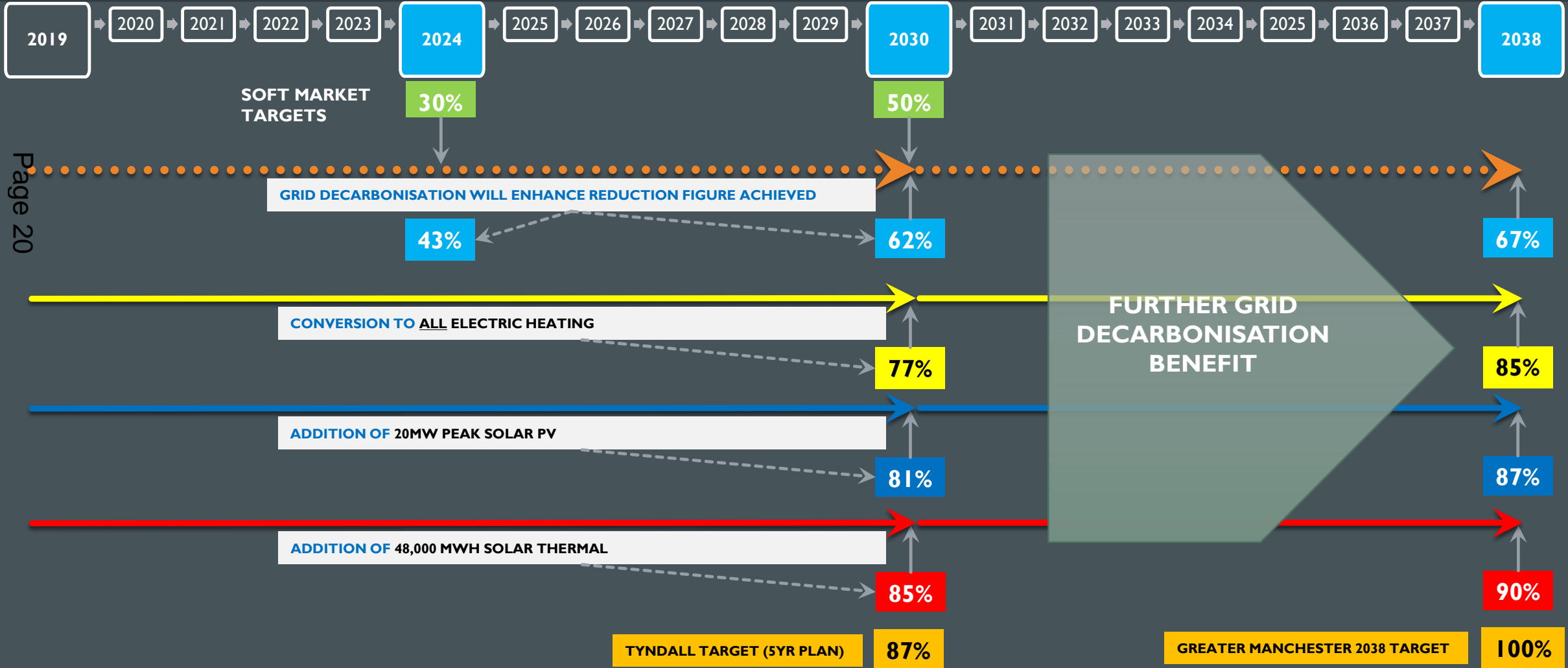
Aug 2020

Sept 2020

Oct 2020



SOFT MARKET TESTING CARBON PATHWAYS – REALITY CHECK



NEXT STEPS

- Complete surveying and data analysis
- Preparation and presentation of outcomes
- Summary report and recommendations

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parity
projects

24th July 2020

Accelerating retrofit for a carbon neutral future:

Modelling the need and opportunities for housing
retrofit in Greater Manchester

Background

- In September 2019, GMCA won £49,980 grant funding from the Local Government Association's Housing Advisers Programme 2019/20
- The GM Low Carbon Team contributed an additional £35k to extend the the project, to enable future scenarios for energy and CO₂ modelling
- GMCA procured and Parity Projects Ltd (with Bays Consulting, ADE Research and Energy Systems Catapult) were appointed in January 2020

Overview

Project timescale Feb – Oct 2020, four main streams:

‘Where are we now?’

- An energy model of every home in Manchester
- Probability of HHSRS hazards at individual home level

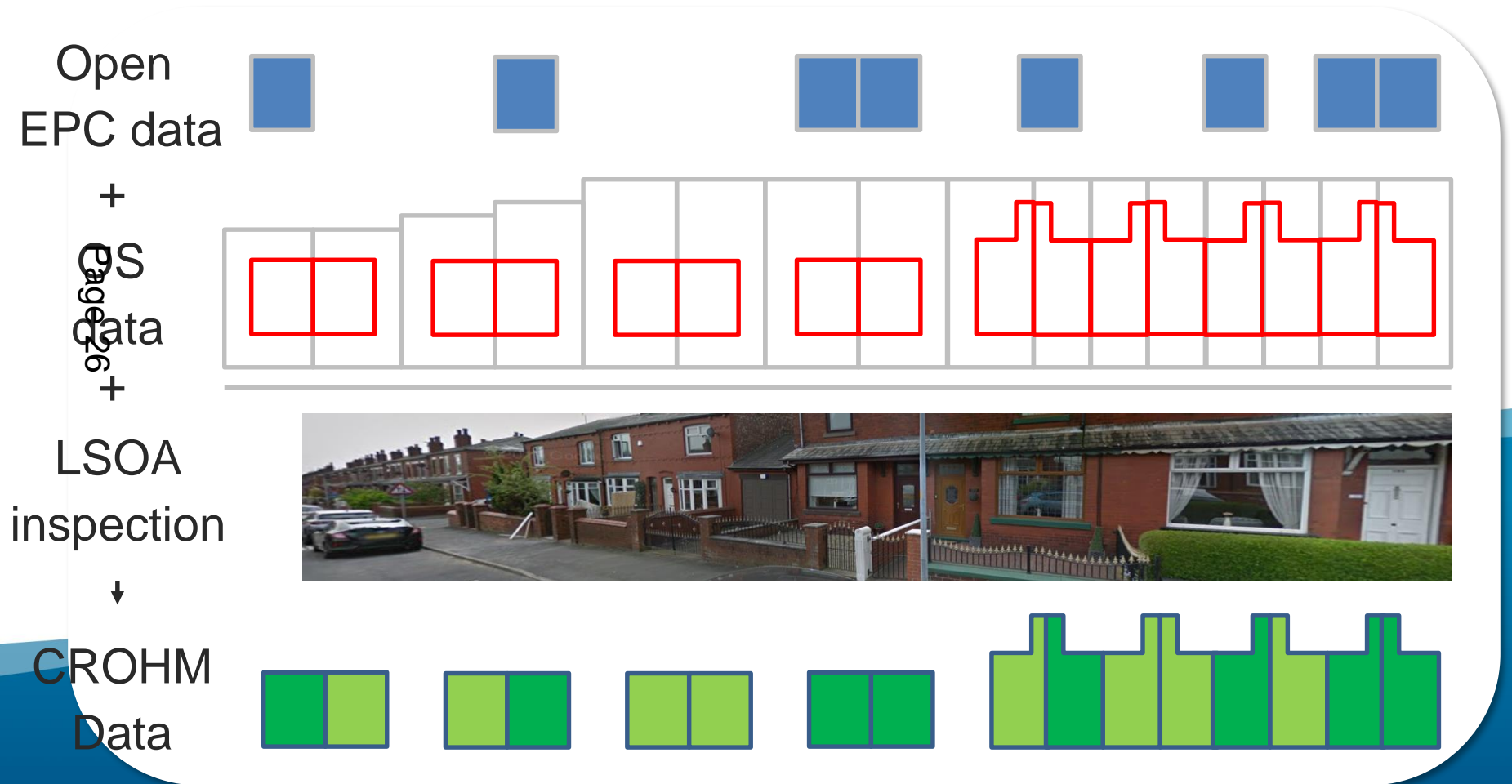
‘Where do we want to get to?’

- the most likely and realistic net zero CO₂ end-result

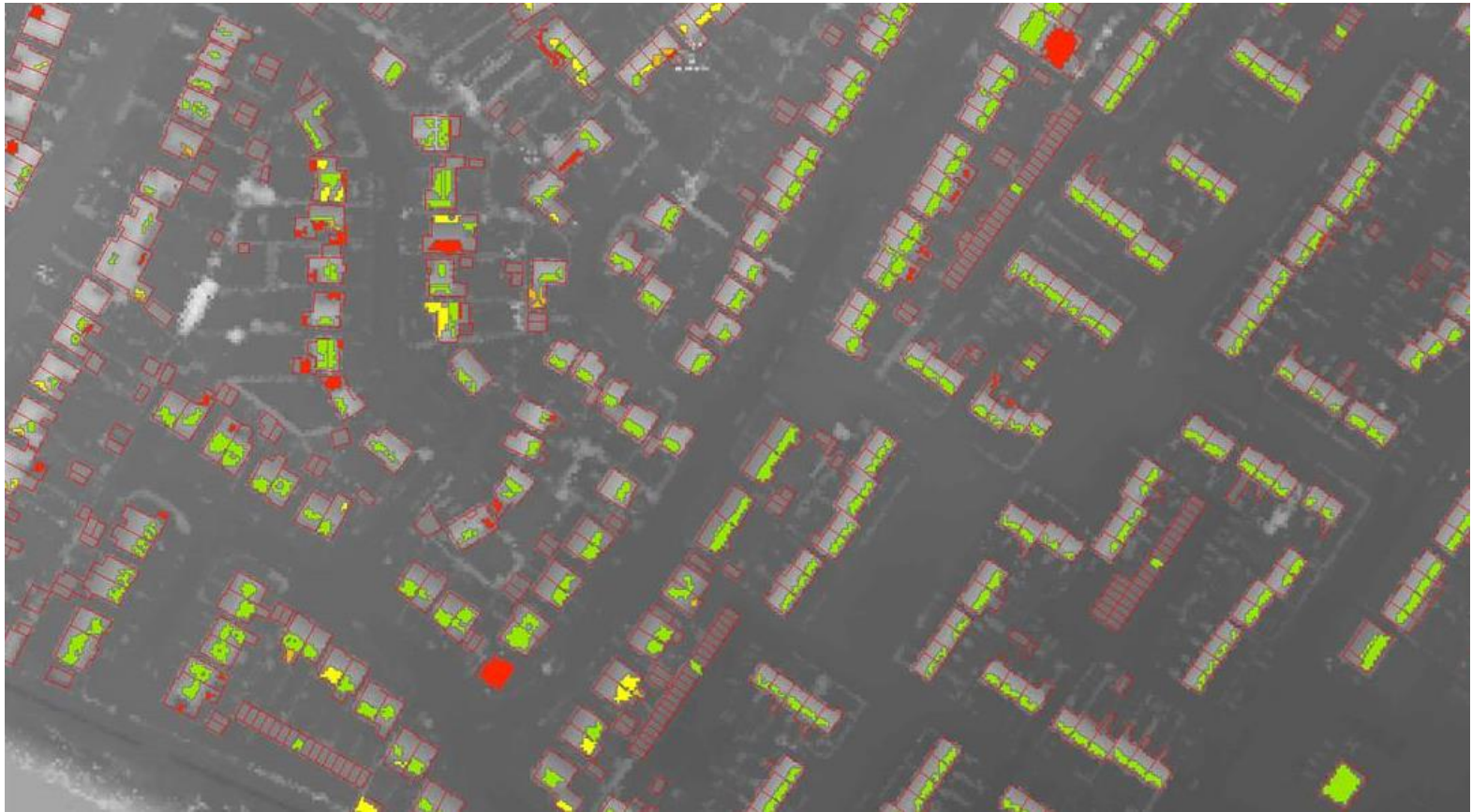
‘How do we get there?’

- Iteratively model a range of possible policy interventions

Energy model of every home



Energy model of every home



HHSRS hazards at individual home level

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Ministry of Housing,
Communities &
Local Government



English Housing Survey



Census 2011 Table Links

Key Statistics (27 tables)

The Key Statistics series provides summary figures covering the full range
Sort on a column by clicking its heading. The list is currently sorted by Ref

Reference	Name
KS101EW	Usual resident population
KS102EW	Age structure
KS103EW	Marital and civil partnership status
KS104EW	Living arrangements
KS105EW	Household composition



Ministry of Housing,
Communities &
Local Government

The English Indices of Deprivation
2019 (IoD2019)



Small Area Health Statistics Unit

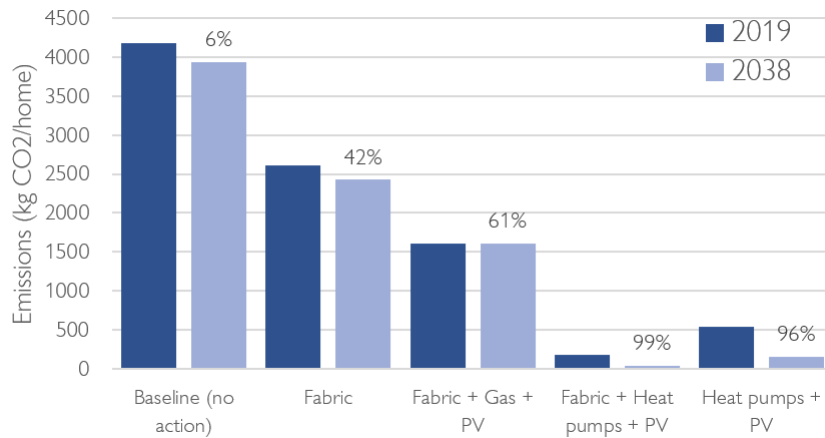
Where do we want to get to?

More difficult than expected; cannot be determined in isolation from national policy on:

- Decarbonisation, capacity and resilience of future electricity grid
- Building infrastructure for new technology (e.g. Hydrogen)

Our analysis and literature review supports key conclusions in the next few slides

Future housing key conclusions: Gas vs Electricity



1 – There is no place for mineral gas in net-zero housing by 2038

2 – The electricity grid will decarbonize, but will not generate enough for conventional electrical heating

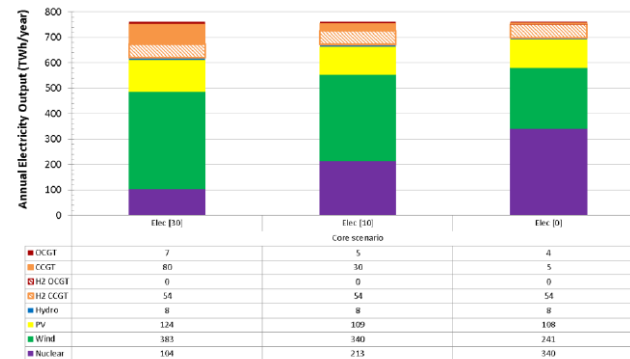


Figure 2-16 Optimised electricity production in Electric pathways

Future housing key conclusions: Heat Pumps and Insulation

3 – Heat Pumps look likely to be key and their roll out needs to dramatically increase, noting that they may not reduce bills much



4 – we don't need every home to be super-insulated, but high and medium cost-effect measures will be important (and will reduce bills)



Future housing key conclusions: Heat Networks & Home Renewables



5 – Heat Networks can be better than individual heat pumps where the business case is viable (perhaps 15% of homes). GMCA key

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6 – some other offsetting mechanism – e.g. domestic renewables – is needed for net zero



Future housing key conclusions: Heat Pumps and Insulation

7 – Energy Storage will become important in the longer term as heating from the electricity grid scales up. Distributed?



8 – Hydrogen requires much development, and may be a priority for other sectors before domestic. Fabric and heat pumps are compatible with future hydrogen roll-out.

How do we get there?

- Key focus of the project July to September
- We are currently modelling the likely effect of different frameworks of policies
- Initial work indicates that decarbonisation will need a radically increased ambition compared to programs to date.

David Shewan Parity Projects

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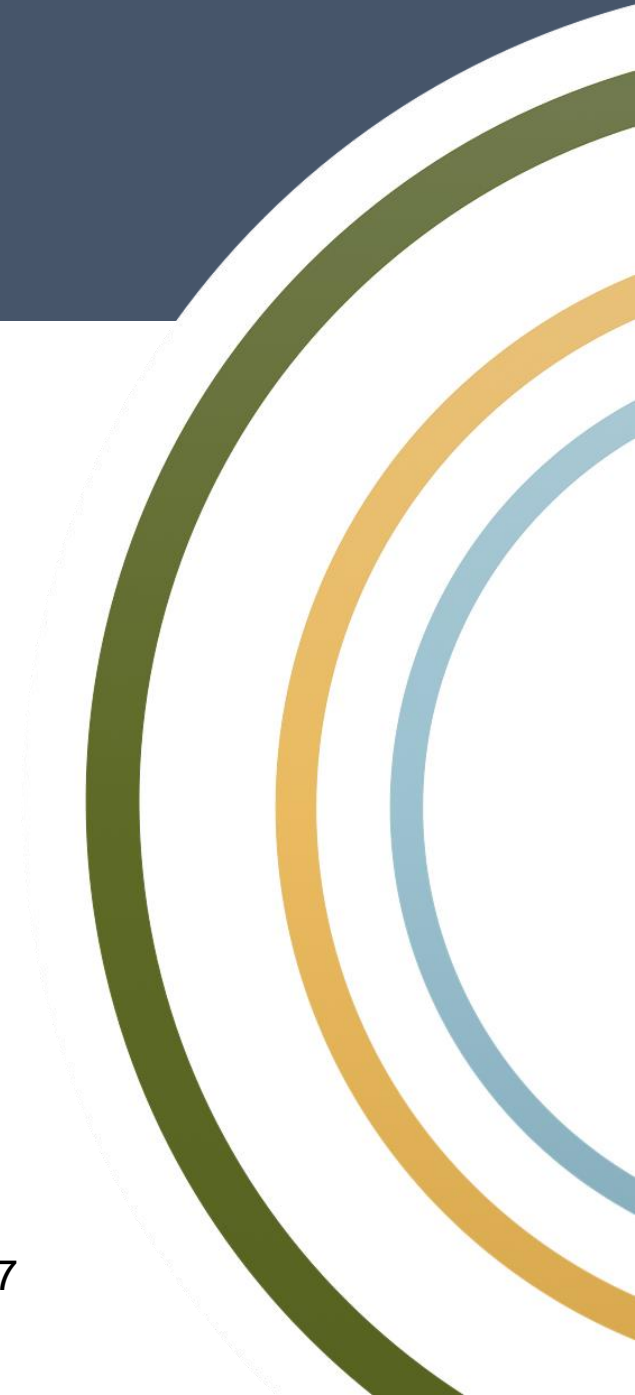


Review of the impact of the Urban Pioneer

Environment Agency

May 2020

Final Report



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Executive Summary

The Urban Pioneer

In 2016, Defra created the Urban Pioneer project in Greater Manchester to work in a local context to support and inform the development and implementation of the Government's 25 Year Environment Plan (25YEP). This was one of four three-year initiatives established across the country, to bring together research, policy development and interventions in order to deliver change that can be replicated in other localities.

Initially, the Urban Pioneer project was entirely unfunded and had no explicit objectives beyond informing the 25YEP. Early in the project's operations the Environment Agency provided funding for a small core team to ensure consistency of delivery to the end of the project (March 2020). Beyond the core team, the Urban Pioneer relied on a Delivery Group comprising officers and representatives from a range of organisations to deliver the project.

An evaluation of the performance of the Urban Pioneer against its specific objectives has been undertaken separately by ICF¹

This review has been undertaken to understand the wider, indirect impacts that the Urban Pioneer had over the course of the project beyond the specific objectives. Specifically, this review has looked to understand how the structure and activities of the Urban Pioneer project can be used as a replicable model for policy testing and transformational change in the future.

This is just the end of the beginning...

(Lee Rawlinson, Environment Agency)

The headlines

Overwhelmingly the participants in this review considered that the Urban Pioneer:

- ✓ created a safe space to think, discuss, test and implement ideas.
- ✓ demonstrated a replicable model for undertaking transformational programmes in the future.
- ✓ provided a platform linking research, policy development and delivery on the ground to accelerate policy changes across the Greater Manchester City Region and beyond.
- ✓ integrated natural capital language into the local and national political arena, helping to influence policies and political priorities across the UK.
- ✓ raised the profile of co-benefits delivered by natural capital (e.g. health and wellbeing) at a national level, facilitating enhanced collaboration and leveraging opportunities for innovative funding routes.

¹ http://randd.defra.gov.uk/Document.aspx?Document=14438_BE0144_FinalReport.pdf

Key drivers of success

The success of the Urban Pioneer was driven by 4 key elements which can be replicated across programmes to support success in the future.

1. **Robust project governance**
2. **Development of a common, thematic language**
3. **Multi-stakeholder ownership and collaboration**
4. **A strong project team**

The Urban Pioneer was embedded into the Greater Manchester Combined Authority governance, enhancing its relevance in the local political arena. Its 'de-branded' approach ensured that there was a strong sense of ownership from each stakeholder involved in delivery of the project, and the work to develop a common language drove engagement and collaboration. This was all underpinned by a strong core team that used an entrepreneurial approach and a range of skillsets to maintain momentum over the course of the project.

The indirect impacts

The indirect impact of the Urban Pioneer has been analysed against the 4 Asks:

Ask 1: Applying a natural capital approach to decision-making

- The Urban Pioneer developed a natural capital framework and created a leverage effect that has influenced decisions at both the national and local levels.

Ask 2: Developing innovative funding opportunities

- The Urban Pioneer was able to develop and support the case for investment into natural capital which has been taken forward locally in the form of the Greater Manchester Environment Fund.

Ask 3: Demonstrating integrated approaches to planning and delivery

- The Urban Pioneer focused heavily on engagement to crowd-source solutions and ideas when planning and delivering projects.

Ask 4: Building our understanding of 'what works' in practice

- The Urban Pioneer demonstrated effective ways to achieve tangible benefits by building on existing approaches and demonstrating how to embed them across a range of organisations.

Lessons learned

The Urban Pioneer learned a number of valuable lessons that can be applied to similar projects in the future:

- 'Working with the grain' allows projects to piggyback off existing initiatives which can harness resources efficiently and promote faster, longer lasting change;
- Flexibility to respond to local drivers and issues as they arise can help maintain local support and safeguard the project's relevant and license to operate;
- The collaborative approach allowed individual organisations to free up capacity by providing access to expertise through the Delivery Group platform;
- Ensuring the core team has secure funding through the lifetime of the project helps to maintain momentum and continuity; and
- Innovative projects like the Urban Pioneer need planning time – up to a year of time is required to help shape and focus the objectives.

The Urban Pioneer legacy

The Urban Pioneer acted as a **catalyst** to the natural capital sector, **collaborating** with, and building on, existing initiatives to **unify the language**, direction and effort in the Greater Manchester City Region. This helped to **accelerate the transition**, supporting Greater Manchester in developing its understanding of the **value of environmental services** in delivering on key policy objectives. Initiatives such as the 5 Year Environment Plan, the Environment Fund and the Natural Capital Investment Plan have been informed and supported by the work of the Urban Pioneer.

The learnings taken from the Urban Pioneer experience have been **adopted at the national level**, influencing internal processes and external communication for the Environment Agency and Defra, as well as informing UK government policy and language and the structure and objectives of the new Environmental Land Management Scheme payments.

The Delivery Group for the Urban Pioneer are now working on a range of other projects nationally, helping to share and promote the learnings from the Urban Pioneer across a range of other initiatives.

Finally, the participants in this review were asked for three concluding words to describe the Urban Pioneer which are shown below. The words and themes arising from the interviews highlight that, despite challenges such as the lack of funding and clear objectives, the Urban Pioneer project has created a **lasting legacy** through its ambitious and innovative approach.

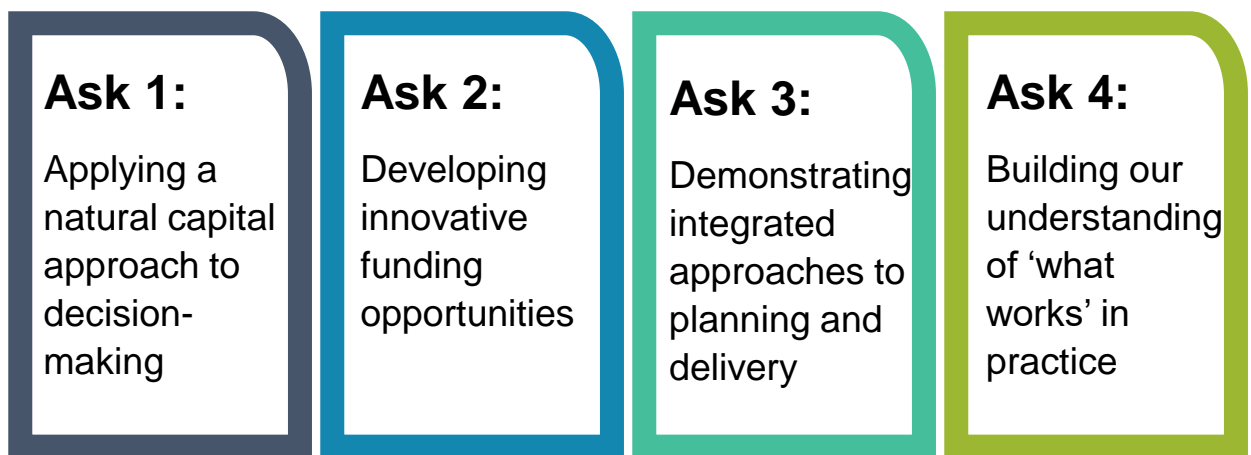


1. Introduction

Background to the Urban Pioneer

The Urban Pioneer project commenced in 2017, aimed at working in the local context of the Greater Manchester City Region to improve the natural environment and inform the development and implementation of the UK Government's 25 Year Environment Plan (25YEP).

Details on the evolution and governance of the Urban Pioneer can be found in section 3. After a lengthy planning and evolution process the project Delivery Group worked towards four key "Asks":



Background to this review

As the project comes to a close, Green Arch Consulting has been commissioned to gather and report on the learnings and outcomes of the Urban Pioneer. This will record the impact that the project had, not only directly but also indirectly by providing insight, assistance and support to other projects, organisations and policy development both locally and nationally¹.

The findings and lessons learned set out in this report are intended to inform future project design, for example those related to continued policy development and environmental intervention projects².

The analysis is informed by feedback provided by a range of participants including those directly responsible for delivery of the Urban Pioneer (the Urban Pioneer Delivery Group) and others who have benefitted from specific deliverables or activities undertaken by the Urban Pioneer. The full list of participating organisations is found in Attachment 2.

1. This assessment does not assess the outcomes for the environment directly as this has been evaluated as part of the broader report by ICF Consulting Services (November 2018) titled 'Evaluation of the 25 Year Plan Pioneers'.
2. Details of the method used to collate the feedback and the contributors are provided in Attachment 2.

2. Key drivers of success

There were four key concepts that ensured the success of the Urban Pioneer:

1. Robust project governance
2. Development of a common, thematic language
3. Multi-stakeholder ownership and collaboration
4. A strong project team



1. Robust project governance

The Delivery Group quickly identified three core requirements in order to ensure that the Urban Pioneer was successful: **core funding; development of objectives** and **strong governance**.

The approach taken in designing the Urban Pioneer was to **embed the project into the local political arena** using tried and tested, locally accepted mechanisms. This ensured that it was relevant to local issues, reporting into the Combined Authority, and helped to minimise the risk of duplication of work already being undertaken locally in relation to natural capital.

2. Development of a common, thematic language

The Urban Pioneer analysed environmental services and communicated them thematically. Rather than focusing on drivers and targets for specific organisations, the **thematic approach** allowed the communication of natural capital to be applicable to a far broader audience. Additionally, the outputs themselves (for example the natural capital valuation for Greater Manchester) were **not branded by any one organisation**, creating more focus and clearer communication of a city-wide message.

The thematic approach also resulted in **convergence and harmonisation of communications** across the participating organisations – **driving a common language** and helping to direct city-wide activities in relation to natural capital.



The Dream Team

The close collaboration between the Urban Pioneer and Greater Manchester City Region through the Natural Course project has been referred to as the 'dream team' – with the project managers working closely together to promote natural capital in Greater Manchester.

3. Multi-stakeholder ownership and collaboration

The Urban Pioneer provided an organisationally agnostic umbrella to work under. This **multi-stakeholder ownership of the Urban Pioneer** brand allowed work to be undertaken in a coherent way. In effect, it '**de-branded**' the natural capital efforts in the Greater Manchester City Region, allowing all interested organisations to get involved without any competition over ownership or credit or for funds.

Fundamental to the success of the Urban Pioneer was the collaboration between organisations which produced outcomes that amounted **to more than the sum of its parts**. In isolation the participating organisations would have been unlikely to have achieved the same level of impact.

A further benefit of engaging multiple stakeholders is the increased likelihood that the outcomes and solutions facilitated by the project will be taken forward and will ultimately drive the impact in the long-term. Each organisation involved has taken forward an aspect of the Urban Pioneer agenda or output and in addition, is now part of **strengthened network of stakeholders** that can provide support and share learnings.

The Urban Pioneer broke boundaries of subject, roles, remit and tiers of teams and created tools that work across political, organisational and budgetary boundaries. This approach **increased collaboration** and **forged relationships** between different organisations, existing projects and initiatives.

By providing a **unified platform for discussion and delivery**, the Urban Pioneer was invaluable in helping participating organisations identify challenges and solutions in their own activities and initiatives.

4. A strong project team

The success of the Urban Pioneer relied heavily on the energy and drive of the core team, the project manager and the champions. **Strong leadership, advocacy and motivation provided by key individuals** was identified by the majority of participants as being a key driver for delivery of the Urban Pioneer.

Choosing project personnel with a broad range of skills including effective communication with government departments is vital for delivering a project with this level of ambition. The team's ability to navigate difficult conversations between organisations with their own agendas maintained the momentum and increased collaboration and engagement. The **“entrepreneurial spirit”** of the individuals in the core team provided the Urban Pioneer with access to both technical expertise and **wide-ranging ‘softer’ skillsets** which drove the success of the project.

The core team worked hard to ensure that the Urban Pioneer **smoothed the natural capital journey** rather than aiming to ‘disrupt the system’. This ensured that they were able to drive positive engagement and collaboration at the local and even national level.

It is notable how many participants identified the project manager, Adam Booth, as being vital to the success of the project. Specifically, his flexibility in the approach he took and the way that he engaged with the Delivery Group and external stakeholders. This leadership at the project level was key for maintaining the energy levels and enthusiasm that participants have articulated clearly during the course of this review.

When you've got someone who is fronting a project and is passionate and believes in it, it builds confidence.

(David Barlow, Manchester City Council)

3. How the Urban Pioneer evolved

The Urban Pioneer Delivery Group worked hard over the course of the project to design a replicable, successful model for project implementation. The key lessons learned by the group, which can be applied in any situation, are as follows:

Ensure the core team is funded

The Urban Pioneer initially had no set budget which led to a risk of inconsistency in delivering the project. Over the course of the first year the Environment Agency guaranteed funding for the core team, including the Project Manager, for the full 3 years to ensure that delivery remained consistent throughout the life of the project.

Set the objectives

The Pioneer projects originally had no specific objectives beyond providing feedback to the 25 Year Environment Plan. The Delivery Group realised quickly that this was a barrier to progress and as a result the 4 Asks were agreed with Defra.

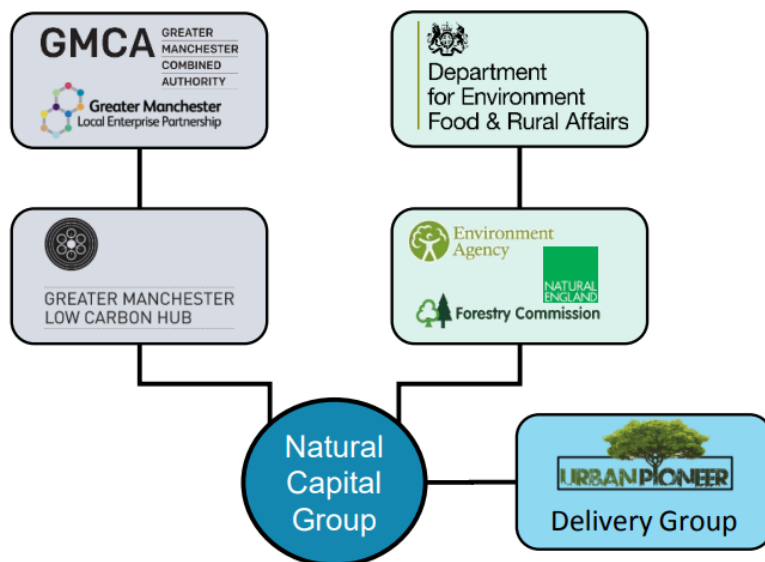
Agree the governance structure

Governance of the project was vital to ensuring success. The Delivery Group identified a core need for the Urban Pioneer to fit in with the existing arrangements within Greater Manchester. The reason for this was a) to avoid duplication of existing initiatives and b) to ensure that the outputs had a route to inform and feed back to local leadership. The governance structure grew organically with time and through close liaison and discussion with the Combined Authority Environment Team.

The Urban Pioneer was governed by an interdisciplinary, collaborative Delivery Group comprising officers and representatives from a range of organisations. This group was co-ordinated by the Project Manager.

The Delivery Group's primary function was to shape and take accountability for the feasibility, development, monitoring and achievement of the outcomes of the Urban Pioneer.

The Urban Pioneer reported to the Greater Manchester Combined Authority's Natural Capital Group, as shown in the image here. Further information on the governance structure is set out in Attachment 1.



Once the Delivery Group had identified the solutions to the three key challenges above, the Urban Pioneer could evolve and establish itself further. The Urban Pioneer's work evolved and was driven as follows:

Localism drove the agenda...

- The experience of the Urban Pioneer has **highlighted the value of testing policy options locally**, supporting politicians in understanding how urban environmental management could work under different policies and in future scenarios (e.g. post-Brexit management).
- Particularly, it **demonstrated the value of flexibility** in the methods used to deliver policy commitments.
- Collaboration between the Urban Pioneer and the Greater Manchester Combined Authority, coupled with collaborative working within the Combined Authority and Mayoral office, delivered **lasting positive outcomes for the local community**.
- Led to **strong local political leadership** and put the local community ahead of national policies.
- Significant local benefits resulted from the regular updates between policy leads and **local teams giving live feedback** (e.g. highlighted where the challenges are).

[The combination of] political will, ambition and energy provided a significant dynamic for enabling change

(Drew Musselbrook, Environment Agency)

... and speaking with one voice drove results.

Through **creation of a common language and terminology**, the Urban Pioneer:

- Helped to identify **key terminology and language drivers** that stakeholders responded positively to - specifically health and wellbeing and flood management – the 'common language';
- **Articulated the business case** for natural capital in a way that promoted acceptance by a wide range of partners and stakeholders;
- Brought together organisations that otherwise may not have engaged with natural capital, facilitating **broader opportunities for collaboration** to deliver common aims; and
- Provided a tool, in the form of the natural capital accounts, for communication and decision-making, creating a way of **embedding co-benefit language into discussions** (e.g. air quality, health linkages and recreation).

Participants in this review identified that **discussions were more efficient and productive** within organisations and also with third-parties as stakeholders were able to articulate the value of the natural environment.

One voice, not an eco-cacophany

(Workshop comment)

The language provided opportunities for upskilling...

This common language resulted in non-specialist advocates choosing to articulate environmental goals because they could do so in a non-technical, engaging way. It **created a toolkit for the non-environment sector** to apply when developing the business case for action.

Through the development of a common language, the Urban Pioneer created a **groundswell of skills** – focusing on upskilling a large number of people with limited natural capital knowledge across a wide range of organisations and roles. It demonstrated that, in a short space of time, those with limited experience of natural capital can see the value through the application of a common language and will actively apply that language in their own roles and activities.

This provided a **safe space to turn theory into reality** through a forum of **experiential learning**.

Building Capacity



The Urban Pioneer funded a project to understand the natural capital benefits associated with the Warrington Flood Risk Management Scheme. The scheme's delivery team are using the outcomes of that work to influence their peers and stakeholders including speaking about the work at conferences.

...and resulted in high levels of engagement with the project

A key success of the Urban Pioneer was the **effective engagement** delivered during the project. The common language helped to:

- **Raise the profile of natural capital** and wider sustainability issues by providing a clear narrative of the benefits to society such as the health benefits from the access to green space;
- Integrate environmental science with economic, social and PR discussions, painting a wider picture for politicians, business and local communities;
- Engage developers with the concept of 'net gain' in a way that clearly communicated the benefits to the developer and the end user;
- Reach out to communities using the tools developed by the project in order to **demonstrate 'real world' applications**;
- Facilitate dialogue and foster interest and engagement through a range of campaigns, not just those delivered by the Urban Pioneer;
- Coordinate efforts across different organisations and **harmonise timeframes to deliver maximum impact** in the minimum amount of time;
- Assist Delivery Group organisations with their own engagement efforts, creating a feedback loop of engagement with the Urban Pioneer as benefits were seen both internally and externally with stakeholders and participating organisations; and
- Access cutting edge thinking which sparked interest, enabled experimentation and facilitated discussion.

4. Review of the Urban Pioneer against the 4 Asks

Ask 1:

Applying a natural capital approach to decision-making

The Urban Pioneer developed a natural capital framework and created a leverage effect that has influenced decisions at both the national and local levels.

The Challenge

At the start of the Urban Pioneer the local and national decision-making landscape was characterised by a lack of understanding of the co-benefits delivered by natural capital and a lack of evidence to prove those co-benefits. This resulted in an inability to articulate the value of natural capital in supporting other policy priorities and natural capital therefore not being considered in core decisions (e.g. local authority planning and investment decisions).



[The Urban Pioneer] demonstrated a methodology to understand natural capital at the political level and across political boundaries

(Jim Airton, United Utilities)

The Objective

One of the key objectives for the Delivery Group was, therefore, to find a replicable way to **demonstrate the value of the environment** in facilitating local and national policy and investment priorities (for example growth, health, economic benefit and returns on investment). Essentially, the challenge was for the environmental sector to 'prove its worth'.



Accelerating decision-making



Having the Biodiversity Net Gain Task Group as part of the Urban Pioneer gave Salford City Council confidence to adopt a strong position in their Local Plan¹ ahead of the national 10% net gain target coming into effect. The Plan was subject to a public consultation which closed on 20th March. Formal Examination in Public is scheduled to be held in the autumn of 2020.

The Outputs

The Urban Pioneer led to **better informed decision-making** by:

- ✓ Creating a strong evidence base, using nationally available datasets, for natural capital co-benefits, putting tangible numbers against what the environment provides, resulting in a baseline which stakeholders can understand, apply and work from.
- ✓ Demonstrating replicable methods based on nationally available datasets, and providing tools and templates, for accounting for natural capital. This included tools such as those created to support the Greater Manchester vision, as well as development of the natural capital accounts infographic as a communication tool.
- ✓ Evidencing the range of beneficiaries of ecosystem services, demonstrating linkages between organisations and departments and promoting collaboration and effective communication.
- ✓ Demonstrating the value of considering the environment as a whole, rather than focusing on one specific aspect (e.g. carbon).
- ✓ Allowing non-specialist advocates to articulate the benefits delivered by the environment.
- ✓ Providing a valuable forum with license to collaborate, experiment and even fail.

1. <https://www.salford.gov.uk/planning-building-and-regeneration/planning-policies/local-planning-policy/salfords-development-plan/salford-local-plan/publication-local-plan-chapters/23-biodiversity-and-geodiversity/>

The Impact

Local and Regional

Informed:

- ✓ Greater Manchester City Region plans: the 5 Year Environment Plan, Local Industrial Strategy, Spatial Framework and Tree and Woodland Strategy
- ✓ Greater Manchester City Region commitment to Biodiversity Net Gain before national legislation was brought in
- ✓ Correspondence from the Mayor of Greater Manchester to the Secretary of State for Environment, Food and Rural Affairs in 2020 promoting environmental priorities, green finance and collaboration in delivering on policy objectives
- ✓ The natural capital accounts provided new and greater insight into the value of investing in environmental services to local authorities. This is reflected in, for example, the 2020/21 Rochdale Borough Council budget report
- ✓ The 2019 NP11 and Convention for the North event resulted in the Manifesto for the North, calling on the UK government to support the North in delivering long term social value, clean growth and decarbonization (the 5 Game Changers)
- ✓ Analysis of the business case for prioritising green infrastructure at development sites, undertaken by Manchester Business School and commissioned by Ministry of Housing, Communities & Local Government and Defra. This is now being used to inform green infrastructure priorities at Mayfield and for the Northern Gateway

National

Inputted to:

- ✓ Defra's 25 Year Environment Plan including proving the case for legislating for Biodiversity Net Gain
- ✓ The Environment Agency's 2025 plan
- ✓ The Defra and Natural England Peatland Pilot projects
- ✓ The Treasury Public Value Framework
- ✓ The evidence base for the Environment Agency's six capitals model which is being used to help integrate natural capital thinking into wider organizational decision-making
- ✓ The Natural England biodiversity metric, influencing its design
- ✓ The evidence base for the Forestry Commission's National Forest Inventory and the services provided by Great Britain's forests
- ✓ Political communication and discussion, including a speech made in parliament by the Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs

Ask 2:

Developing innovative funding opportunities

The Urban Pioneer was able to develop and support the case for investment into natural capital which has been taken forward locally in the form of the Greater Manchester Environment Fund.

The Challenge

Stakeholders are grappling with the need to fund environmental interventions with decreased access to public funds. This not only requires more efficient use of existing funding sources but also results in a need to leverage in private sector contributions.



Successful funding bids



The Urban Pioneer supported a collaborative project between Environment Agency and Manchester City Council to commission a team of Manchester Business School MBA students to identify different financial mechanisms and management approaches to maintaining newly created green spaces within developments, using the Northern Gateway development as the case study. The results helped secure approx. £45,000 worth of technical consultancy to continue exploring this as part of the £5M Ignition programme in 2020.

The Objective

The Urban Pioneer therefore needed to **build the business case** for taking a natural capital approach to developing innovative funding opportunities. This would support wider efforts to evidence return on investment, address challenges in procuring high quality green infrastructure, identify new funding sources and develop innovative financing opportunities.

The Outputs

The Urban Pioneer helped to build the business case for taking a natural capital approach by:

- ✓ Demonstrating lower financial risk and increased investment opportunity if Natural Capital is included in the early stages of project design.
- ✓ Providing a blueprint for communication of the value of environmental services to business.
- ✓ Informing resourcing decisions and providing evidence for initiatives and funds.
- ✓ Illustrating the co-benefits delivered by natural capital in an urban environment, contributing to achieving targets and reducing long-term costs.

Identification of co-benefits [delivered by natural capital] unlocked doors to different funding mechanisms

(Lee Rawlinson, Environment Agency)

The Impact

The outputs from the Urban Pioneer informed a range of innovative financing projects including:

- The funding and resourcing of the Oxford-Cambridge Arc, focusing on sustainable growth and social returns for the development of the corridor;
- The successful City of Trees led funding bid, obtaining £1.5million from the government's Urban Tree Challenge Fund to invest in tree planting in Greater Manchester;
- The development of the Greater Manchester Natural Capital Investment Plan, which was funded by Natural Course;
- The programme of work to deliver the Greater Manchester Environment Fund and associated Investment Readiness Fund; and
- Development of the funding application for the €5m IGNITION project in Greater Manchester.

It also helped to highlight the benefits of green flood defences in urban areas to Ministers and developers by promoting the outcomes of the Salford Flood Basin project, which created a flood storage area to protect developable land and reduce financial risk to developers.

Ask 3:

Demonstrating integrated approaches to planning and delivery

The Urban Pioneer focused heavily on engagement to crowd-source solutions and ideas when planning and delivering projects



The Challenge

Early engagement with stakeholders identified that their objectives were often not environmental. Instead, they were focused on issues such as health, adult social care and tourism. Occasionally the focus would include flood risk, or water and air quality.

The Objective

The Urban Pioneer Delivery Group identified a need to **engage with a broad spectrum of stakeholders** in order to inform planning and delivery of projects. Part of that included finding a way to build trust and confidence in the products and tools being used to articulate the natural capital story.

The Outputs

The Urban Pioneer employed innovative methods for encouraging a two-way conversation with a broad range of stakeholders, including:

- ✓ Hosting joint departmental visits and meetings.
- ✓ Employing a digital engagement strategy and using data in real time to crowd source information.
- ✓ Developing engaging toolkits such as video and animation to communicate messages.
- ✓ Engaging young people through creative writing and other activities.
- ✓ Facilitating townhall talks and art projects.

The Impact

The outputs from the Urban Pioneer encouraged significant levels of engagement with the natural environment sector and facilitated integrated approaches to planning and delivery through:

- Using artificial intelligence (AI) learning to analyse over 4,000 responses to the Manchester Green Summits, including real-time analysis during the event;
- Hosting a joint visit by Defra and the Ministry of Housing, Communities and Local Government to consider natural capital in development planning;
- Influencing the rebranding of the Manchester Low Carbon Hub to the Green City Region Partnership;
- Influencing the alteration of the Greater Manchester 5 year plan to cover general environmental planning instead of just carbon reduction; and
- Connecting Natural England and Ordnance Survey to support delivery of the ANGST project.

[The Urban Pioneer] drew different projects together into a co-ordinated programme, streamlining working to help keep key issues and priorities on track

(Krista Patrick, GMCA)

The significant level of input from stakeholders identified natural capital as a mainstream engagement issue and led to increased political interest, resulting in a snowball effect of different departments within the Greater Manchester Combined Authority taking the co-benefit message on board. There was seamless integration with local, regional and national agendas which lead to multiple benefits rather than a single outcome

This helped to increase visibility of natural capital in the Greater Manchester City Region and further afield by creating a wider awareness and interest of what natural capital can do to support local policy drivers.

Aligning plans



The Urban pioneer's work on ecosystem service mapping has helped to lay the foundation for a new approach to River Valleys being developed by Manchester City Council. It uses an evidence-based ecosystems approach to prioritizing opportunities for investment to regenerate the landscapes of the Irk, Medlock and Mersey Valleys.

Ask 4:

Building our understanding of ‘what works’ in practice

The Urban Pioneer demonstrated effective ways to achieve tangible benefits by building on existing approaches and demonstrating how to embed them across a range of organisations.

The Challenge

The key challenge for the Urban Pioneer was to find out what ‘good’ looks like while avoiding reinventing the wheel.



Learning lessons



The Urban Pioneer acted as a live action learning project with a direct relationship with policy writers as part of the 25 Year Environment Plan. This enabled the rapid testing of hypotheses in a real-world environment and the ability to give valuable guidance and feedback on suggested ways of working. A key example of this was the inclusion of Biodiversity Net Gain in the 25YEP and supporting the bidding process for the IGNITION project.

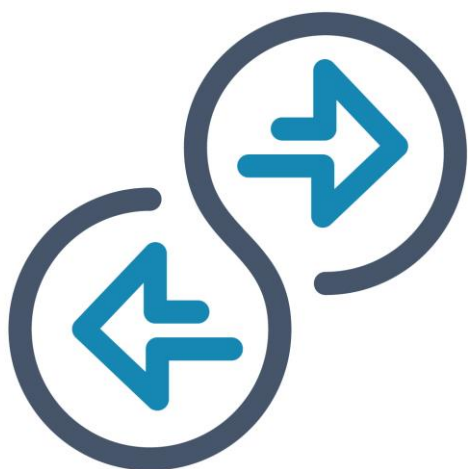
The Objective

Using the outputs from Asks 1, 2 and 3, the Urban Pioneer Delivery Group aimed to **develop a replicable model** for undertaking other transformational projects.

The Outputs

The Urban Pioneer project ensured that:

- ✓ Principles were developed covering how such projects could be governed.
- ✓ Time was taken to design the project management approach and developing the management style of a long-term task and finish group.
- ✓ The project management structure and approach was designed to provide consistency and give confidence to decision-makers.
- ✓ Collaborative approaches were achieved between organisations that might usually compete for resources.
- ✓ A unified, independent decision-making platform was developed, providing a safe space for collaboration.
- ✓ Multi-stakeholder ownership of the platform means that key outputs are not lost at the end of the project.



The Impact

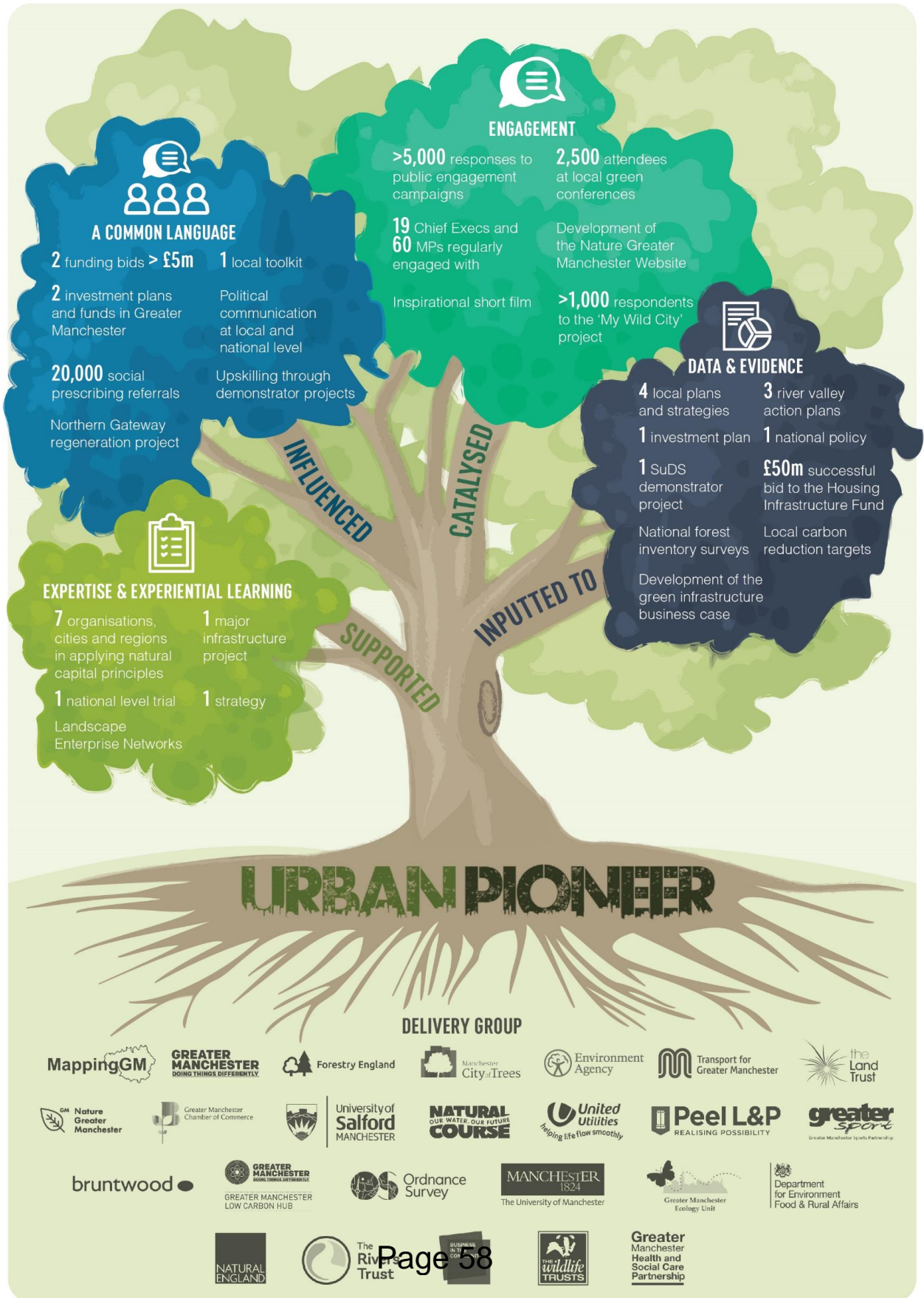
The outputs from the Urban Pioneer have resulted in:

- A replicable project governance and management model that is being rolled out throughout the Environment Agency as part of the 2025 plan, including development of the Environment Agency Future Funding team.

[The Urban Pioneer] created a safe space for people to come together from different sectors & backgrounds to talk in non-prescriptive way – delivering a fresh way of working.

(Clive Memmot, Greater Manchester Chamber of Commerce)

5. The impact of the Urban Pioneer



The participants in this review have identified that the Urban Pioneer has had significant beneficial impact on the natural capital landscape by providing a stable platform (a “safe space”) for discussion and delivery. It helped to mainstream the use of natural capital language in the Greater Manchester City Region and wider, for example within the Environment Agency’s strategic approach to environmental management. The legacy and impacts supported by the Urban Pioneer are set out in the infographic above and further detail is provided below.

Expertise and experiential learning

Supported:

- ✓ The development of the **United Utilities** natural capital baseline
- ✓ Ecosystem Services Opportunity Mapping across **Greater Manchester City Region**, as well as the development of the GM Tree and Woodland Strategy and Housing Infrastructure Fund bids
- ✓ **Natural Course** catchment-level decision-making
- ✓ Catchment scale natural capital accounts at **Bristol and Avon**
- ✓ Application of the principles in the **Birmingham and Liverpool city regions**
- ✓ Production of natural capital accounts for **Carlisle Garden City**
- ✓ The development of the **Greater Manchester, Merseyside and Cheshire region** natural capital baseline
- ✓ The Environmental Land Management trial project being undertaken by the **Lancashire Wildlife Trust**
- ✓ The work of the **Landscape Enterprise Networks**
- ✓ The **Environment Agency’s** management of the **OxCam** project

Engagement

Catalysed:

- ✓ The Green Summits in Greater Manchester, with **2,400 attendees** over the 2 events
- ✓ Significant feedback and engagement from those attendees, with over **4,000 responses** to a questionnaire that was analysed by the Urban Pioneer core team using AI analysis capability and insights
- ✓ Delivery of the **natural capital group conferences**, leading to livestreaming in 2019 and **170 attendees** at the 2020 event
- ✓ Engagement across the political spectrum, with regular updates provided to **19 Chief Execs** and **60 MPs** in the Greater Manchester, Merseyside and Cheshire Region
- ✓ Over **1,000 respondents** to the Lancashire Wildlife Trust ‘My Wild City’ project
- ✓ The Greater Manchester **natural environment toolkit** - outputs include an inspirational short film showing how to bring actions in 5 year plan to life
- ✓ Development of the **Nature Greater Manchester** Website, connecting businesses and residents with nature

Driving a common language

Influenced:

- ✓ **Political communication and discussion** including by the Mayor of Greater Manchester and the Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs
- ✓ The Greater Manchester **natural environment toolkit**
- ✓ The Greater Manchester **Natural Capital Investment Plan**
- ✓ The establishment of a **Greater Manchester Environment Fund**, announced as part of the first Greater Manchester Mayor's Green Summit
- ✓ **Social prescribing** in Greater Manchester, with **20,000 referrals** by the end of 2019
- ✓ The **Northern Gateway** regeneration project
- ✓ The **IGNITION** project bid, which achieved **€5m** of funding
- ✓ The **City of Trees** funding application to the Urban Tree Challenge Fund
- ✓ **Oldham council** has displayed their natural capital accounts in the office, helping to spread the message internally
- ✓ Natural capital assessment of the **Warrington Flood Risk Management Scheme** and a broad engagement programme with colleagues as a result

Data and evidence

Inputted to:

- ✓ The Greater Manchester **carbon reduction targets** and commitments
- ✓ The Greater Manchester **5 Year Environment Plan, Local Industrial Strategy, Spatial Framework** and **Tree and Woodland Strategy**
- ✓ The Greater Manchester City Region **Investment Readiness Fund**
- ✓ The Moorlands primary school **SuDS raingarden demonstrator** project in Sale
- ✓ The Irk, Medlock and Mersey **river valley action plans**
- ✓ The The Defra and Natural England **Peatland Pilot** projects
- ✓ The UK's **25 Year Environment Plan**
- ✓ Developing the green infrastructure case for the **National forest inventory**
- ✓ Analysis of the **business case for prioritising green infrastructure** at development sites, undertaken by Manchester Business School
- ✓ Development of the Environment Agency's **six capitals model**, integrating natural capital thinking into organisational planning.
- ✓ The successful Manchester **Housing Infrastructure Fund Bid**, raising **>£50m** to unlock land for new homes

6. Lessons learned

The experience of the Urban Pioneer has provided clear insight into what works well and what could be done better for programme design, policy development and environmental intervention projects

Innovation is born from adversity...

The success [of the Urban Pioneer] came from “working with the grain” [and] piggybacking off existing initiatives / drivers.

(Keith Jones, Forestry Commission)

The Pioneer projects were not directly funded and initially had no clear objectives. This resulted in challenges from the start around delivery of the projects but also resulted in innovative approaches being developed as the Urban Pioneer core team was forced to be creative:

1. A lack of funding beyond that required for the core team forced the Delivery Group to identify innovative solutions including locating existing resources and initiatives to ‘piggyback’ off
2. The Delivery Group collaborated in order to create new workstreams and harness additional resource. This included holding a number of brainstorming sessions in order to identify key priorities and workstreams.
3. Driven by a lack of clear objectives, the Delivery Group and core team had the flexibility to be more responsive to local issues and drivers as they arose
4. Participants identified that the collaborative approach allowed individual organisations to free up capacity by providing access to expertise through the Delivery Group platform
5. In order to underpin the activities above, the Delivery Group worked closely with the Greater Manchester Combined Authority to embed the Urban Pioneer into the local political governance structure – thereby integrating the objectives and outcomes with other existing initiatives throughout the city.

... but there are some key solutions identified by the Urban Pioneer team...

Challenge	Solution
<p>Innovative projects are challenging to socialise with local authorities who are highly focused on delivering business-as-usual</p>	<p>The Urban Pioneer worked to ensure that it maintained good relationships with central government and local government. Maintaining the support of senior government officials, both national and local, was vital for maintaining momentum and overcoming barriers</p>
<p>Lack of clarity over funding resulted in uncertainty over deliverability over the whole term of the project</p>	<p>The Environment Agency ensured that the core team was funded for the duration of the project, providing stability and consistency of approach in delivering on the wider objectives</p>
<p>The lack of clarity in objectives resulted in challenges when engaging with stakeholders initially...</p>	<p>The Urban Pioneer Delivery Group chose to engage with stakeholders to understand the challenges that they were facing in their own roles, for example challenges in delivering positive health outcomes locally.</p>
<p>...and resulted in a need to engage with more stakeholders than originally anticipated</p>	<p>Having a clear online presence would have helped with this initial engagement piece.</p>
<p>The lack of objectives made it difficult to identify priorities, a focus and a purpose</p>	<p>Broad stakeholder engagement provided a 'critical mass' of concerns that, when grouped into themes, allowed priorities to be identified.</p>
<p>"Design by committee" meant that the outcomes were less detailed than they could have been and the outputs were less 'productive' than if the project had had fewer stakeholders and clearer objectives</p>	<p>The Delivery Group needed to decide whether they were aiming for broader, shallower coverage or narrower, deeper outcomes. The Urban Pioneer chose the former.</p>
<p>Maintaining energy and enthusiasm for delivery with no allocated budget and a small team</p>	<p>The skillsets and personality types for the core team is vital to get right. If the project or programme manager can think laterally and bring a broad range of wider skillsets to bear, then the project has a higher chance of success.</p>

.....and some important lessons learned for future projects

Extending the project over 5 instead of 3 years with the 1st year dedicated to setting up and developing the project would have helped in delivering a clear beginning, middle and end.

(Adam Booth, Environment Agency)

Challenge	Lesson
There is a risk of 'confirmation bias' in designing objectives and developing outputs, where contributors fail to understand wider challenges in associated sectors	Engaging more comprehensively with 'unrelated' sectors such as the financial sector would provide a critical eye when designing solutions
The amount of education and engagement required to actually deliver some of the findings on the ground is still unknown	Ensuring engagement with operations teams, or other projects working with operations teams, would help to identify challenges and barriers to implementation
A lack of available or harmonised data at the local and national level can delay results	The Delivery group deliberately chose to work with nationally available open data sets in order to design a method that was nationally replicable. This can result in older data being used, but was considered to be appropriate for the objectives of the project.
Natural capital accounting is still seen as 'complicated' to operations teams.	Identification of what operations teams can realistically be held accountable for in their day to day roles then helps to understand what needs to be managed at a regional or national level. Importantly, it also identifies what does not need to be held centrally
Educating stakeholders on how to use the outputs is an on-going process	Identification of how to educate stakeholders, and how to maintain momentum, would be a valuable way of ensuring the outputs from the project are taken forward
When looking at place-based design, integration with local teams is vital	Embedding the core team into local authority offices could have helped in maximizing exposure to operations teams in the local area
How can the team be certain that outcomes will continue to influence policy and activities after the project ends?	It is essential to build in an exit plan to ensure that key work is continued after the end of the project

7. Next steps

As the Urban Pioneer comes to a close, stakeholders are thinking about what's next for the legacy that's been created.

Testing at different scales

- The approach is being scaled up and applied to the entire Greater Manchester, Merseyside and Cheshire region within the Environment Agency
- Scaling up the approach to a region outside of an individual organisation would help to test the concept further
- It would be worth scaling it down also, by applying the approach to smaller urban area with less political autonomy

Delivery Group organisations are maintaining momentum by:

- Embedding the ways of working and the outcomes/outputs achieved by the Urban Pioneer project into the:
 - Environment Agency's operating system
 - Defra's policies and systems;
 - Defra and Natural England's Peatland Pilot projects; and
 - Environmental Land Management Scheme payments structure and objectives.
- Working on different projects, thereby promoting and sharing the learnings from the project with other teams working on Natural Capital
- Greater Manchester will continue to promote natural capital through its 5 Year Environment Plan and through the Natural Capital Investment Plan and associated Environment Fund
- Additionally, Greater Manchester City Region is committed to continuing as a 'pioneer' in this field and continuing to be a trusted partner and test-bed for local applications of national policy discussions
- Water company planning & baselining is driving a consistent approach & collaboration in the natural capital space which is being replicated at, nationally, at catchment scale. This is further developing the principles informed by the Urban Pioneer
- A wider roll out of health outcomes through continued and expanded social prescribing.

The Urban Pioneer has shown the benefit of developing 'commercial awareness' using a language that works across sectors in order to demonstrate value. Delivery Group organisations are continuing to consider how to deliver the 25YEP and the Environment Bill through the use of Natural Capital plans, Nature Recovery Networks and Nature Recovery Strategies

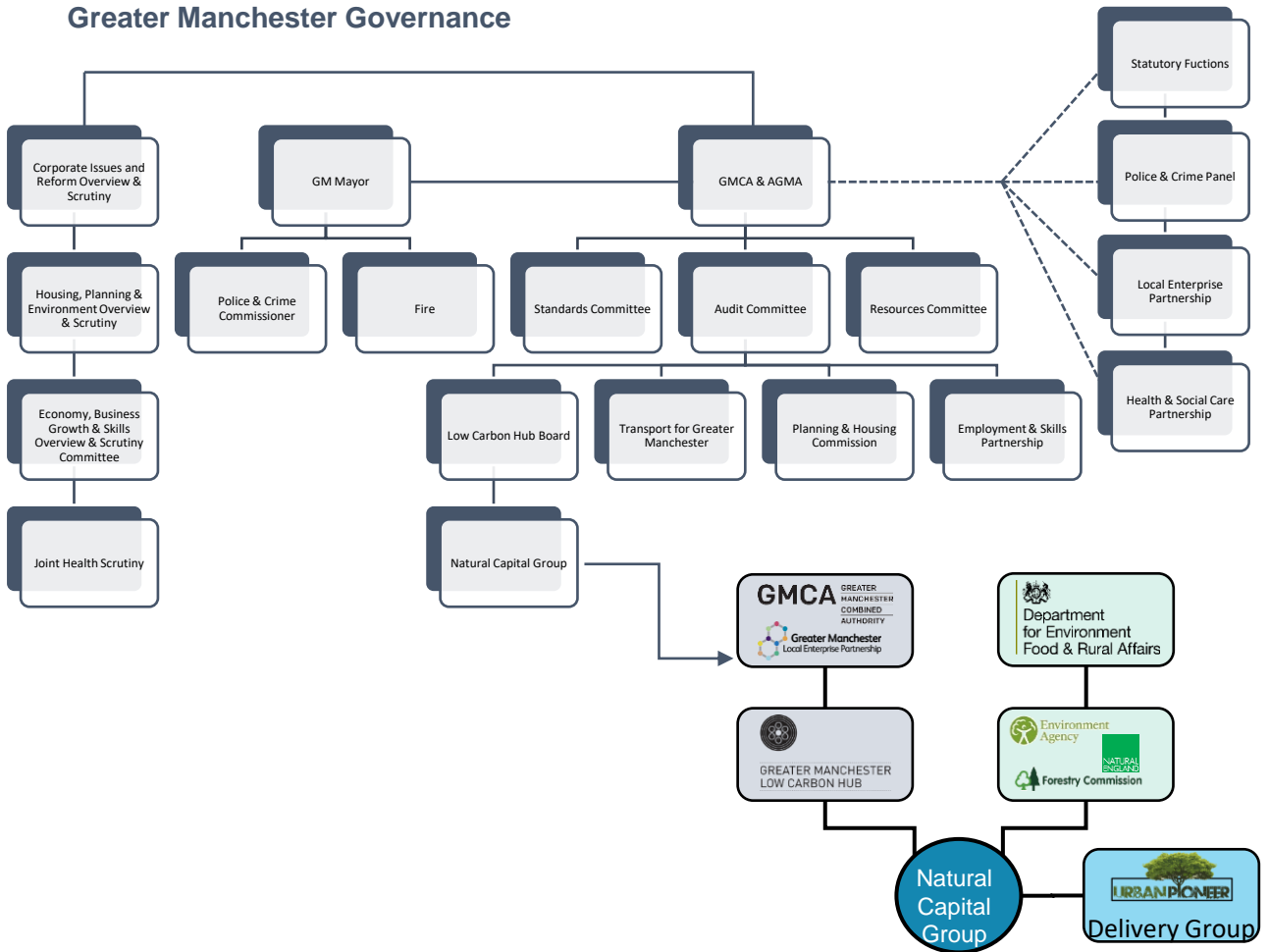
The fact that there is no sudden funding gap means that elements of the Urban Pioneer are more likely to be taken forward

(Max Heaver, DEFRA)

Attachment 1: Urban Pioneer Governance Structure

National Governance 'DEFRA led'	Local Governance Urban Pioneer Delivery Group
<ul style="list-style-type: none"> ➤ Interfaced at national level ➤ Fed into the 25 Year Environment Plan ➤ Created consistency between the Pioneers and linked with other initiatives ➤ Provided a steer on tools and approaches ➤ Interfaced with the Natural Capital Committee and Environmental Analysis Unit 	<ul style="list-style-type: none"> ➤ Local leadership and steer for the Pioneer ➤ Established project priorities ➤ Provided strategic input ➤ Monitored progress and held partners to account ➤ Reported up to DEFRA group and local leadership on progress

Greater Manchester Governance



Attachment 2. Method and contributors

The analysis is based on feedback provided by a range of participants including those directly responsible for delivery of the Urban Pioneer (the Urban Pioneer Delivery Group) and others who have benefitted from specific deliverables or activities undertaken by the Urban Pioneer. Feedback was collected via three methods: a workshop, telephone interviews and through collation of existing lessons learned documents from a range of participants.

Workshop

A 2 hour workshop was undertaken on 26th February 2020 at Greater Manchester Chamber of Commerce, Elliot House. The workshop consisted of a number of interactive sessions which used visual tools to gather feedback from attendees on the project. Participants of the workshop were:

- Adam Booth, Urban Pioneer
- Colin Binnie, Forestry Commission
- Mark Turner, Greater Manchester Combined Authority (GMCA)
- Ruth Jones, Environment Agency (EA)
- Sarah Davies, EA

Telephone Interviews and written contributions

Fifteen 45 minute telephone interviews were undertaken with selected stakeholders. The questionnaire is provided in Attachment 3. Additionally, those members of the Delivery Group that were unable to provide a telephone interview supported the review through written contributions to the report. The following individuals contributed either by telephone, by written review or a combination of the two:

- Andrew Holden, Department for Environment, Food and Rural Affairs (DEFRA)
- Anne Selby, Lancashire Wildlife Trust
- Chris Saville, EA
- Clive Memmot, Greater Manchester Chamber of Commerce (GMCC)
- Daryl Quantz, National Health Service (NHS)
- Dave Barlow, Manchester City Council
- David Hodcroft, GMCA
- Drew Musselbrook, EA
- Jessica Thompson, City of Trees
- Jim Airton, United Utilities
- Keith Jones, Forestry Commission
- Krista Patrick, GMCA
- Lee Rawlinson, EA
- Max Heaver, DEFRA
- Natasha Lombino, EA
- Will Horsfall, Salford City Council
- Dave Bell, Natural England

Lessons learned documents

Lessons learned documents were provided from City of Trees, Greater Manchester Combined Authority and the University of Salford.

Attachment 3. Questions answered by participants

Workshop questions

Workshop Questions: ASK 4 – Lessons Learned

1. From your perspective what helped Urban Pioneer make the most difference/impact?
2. What would you say is your biggest take away from the project?
3. Is there anything you would have done differently with hindsight?
4. If you had a magic wand and could change one thing about the project, what would it be?

Looking forward & Pledges:

1. Looking forward to the long term, what would you like to see happen with the work started by this project?
2. What will you miss most about Urban Pioneer after 31st March 2020?
3. Are you or anyone in your organisation taking forward any of the work from UP? (Specific projects currently in the works or anything planned)

Telephone interview questions

1. Please describe your organisation and role, and your involvement with the Urban Pioneer project?
2. When you first heard of, or started working on the Urban Pioneer, what 3 words would you have used to describe it?
3. How do you think that the Urban Pioneer project has contributed to integrating natural capital considerations into local and national political decision-making approaches?
4. How do you think that the project helped to facilitate access to additional financial and other resources for other natural capital projects in the local area?
5. What additional deliverables/impact has Urban Pioneer had beyond the key objectives?
6. How has the work of Urban Pioneer impacted wider decision making:
 - a. in your organisation?
 - b. in Greater Manchester?
7. From your perspective what helped Urban Pioneer make the most difference/impact?
8. What would you say is your biggest take away from the project?
9. Are you aware of others that have been influenced by or have used any of the Urban Pioneer's products or outputs and if so in what way?
10. Is there anything you would have done differently with hindsight?
11. How has the project contributed to upskilling and knowledge sharing in relation to natural capital?
12. If you had a magic wand and could change one thing about the project, what would it be? And why?
13. Looking forward to the long term, what would you like to see happen with the work started by this project and is your organisation taking any of the activities from Urban Pioneer forwards
14. What will you miss most about Urban Pioneer after 31st March 2020?
15. Finally, what 3 words now come to mind when you think of the Urban Pioneer Project?



**Environmental
Finance**



**Lancashire,
Manchester &
N Merseyside**

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY



Natural Capital Group Webinar

Greater Manchester Environment Fund

13th July 2020



Agenda

Overview

- **Welcome and housekeeping** (AS - 5 mins)
- **Greater Manchester (GM) Environment Fund background** (MA - 5 mins)
- **GM Environment Fund overview** (LWT and EF – 30 mins)
 - Structure and approach
 - Investment model development update
 - Next steps
- **Q&A** (All – 20 mins)
- **Close**

Housekeeping

- Webinar will be recorded
- Please turn microphones/cameras off if not speaking
- Please submit questions via chat or verbally during the Q&A session, and introduce yourself



“A clean, carbon neutral, climate resilient city region with a thriving natural environment and circular, zero-waste economy”

Greater Manchester 5 Year Environment Plan

5 environmental threats and challenges to Greater Manchester

Climate change – mitigation

Carbon neutral city region by 2038

Air Quality

Meet WHO guidelines and support UK govt in meeting and maintaining thresholds

Production and consumption of resources

Put us on a path to a circular economy and reach 65% recycling rate by 2035

Natural Environment

Protect, maintain and enhance, and take steps to achieve environmental net gain

Climate change – resilience and adaptation

Be prepared and adapt to future changes

People

Improve health and quality of life, increase productivity and reduce inequality

Places

Create vibrant and sustainable places and good quality homes

Economy

First mover advantage – increase prosperity and productivity

3 opportunities in tackling them

“The management of natural capital draws upon a relatively limited suite of business models and financing strategies”




Greater Manchester Natural Capital Investment Plan

EXECUTIVE SUMMARY — JANUARY 2019

eftec, Environmental Finance and Countryscape
to
Greater Manchester Combined Authority (GMCA)

eftec economics for
the environment

countryscape 

 Environmental
Finance

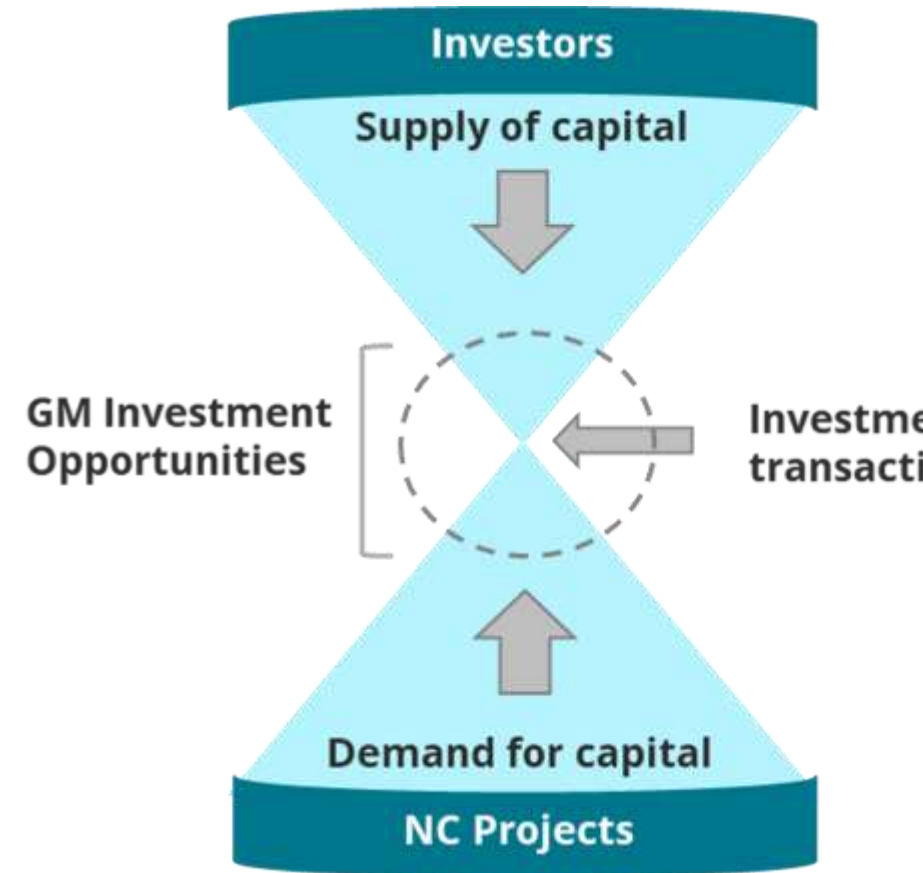
GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY

 NATURAL
FOR PEOPLE AND PLANET
COURSE 

Why?

- Limited suite of business models
- Lack of scale and aggregation
- Lack of business cases
- Lack of arrangements for accountability and governance

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A GM Environment Fund

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“A clear, consistent and transparent mechanism for funders and delivery organisations to set priorities, access funds and deliver accountable results whilst supporting the Mayor’s goal of developing a green city region”



Lancashire,
Manchester &
N Merseyside

Greater Manchester Environment Fund Overview



Greater Manchester Environment Fund Opportunity

The GM Environment Fund could support GM to deliver its ambitions to become a leading European green city and achieve carbon neutrality by 2038.

Status-Quo

GM Environment Fund Opportunity

Investors



- **Growing interest in environmental investment** – investors are seeking new opportunities to invest in environmental impact alongside financial returns
- **Lack of investable projects** – limited robust business models at sufficient scale to attract investment



- **Aggregate and leverage new funding sources** – provide a transparent mechanism to bring together funding and investment
- **Develop investable business models** – funding deployed strategically to develop investable business models that provide triple bottom line investor returns

Project developers



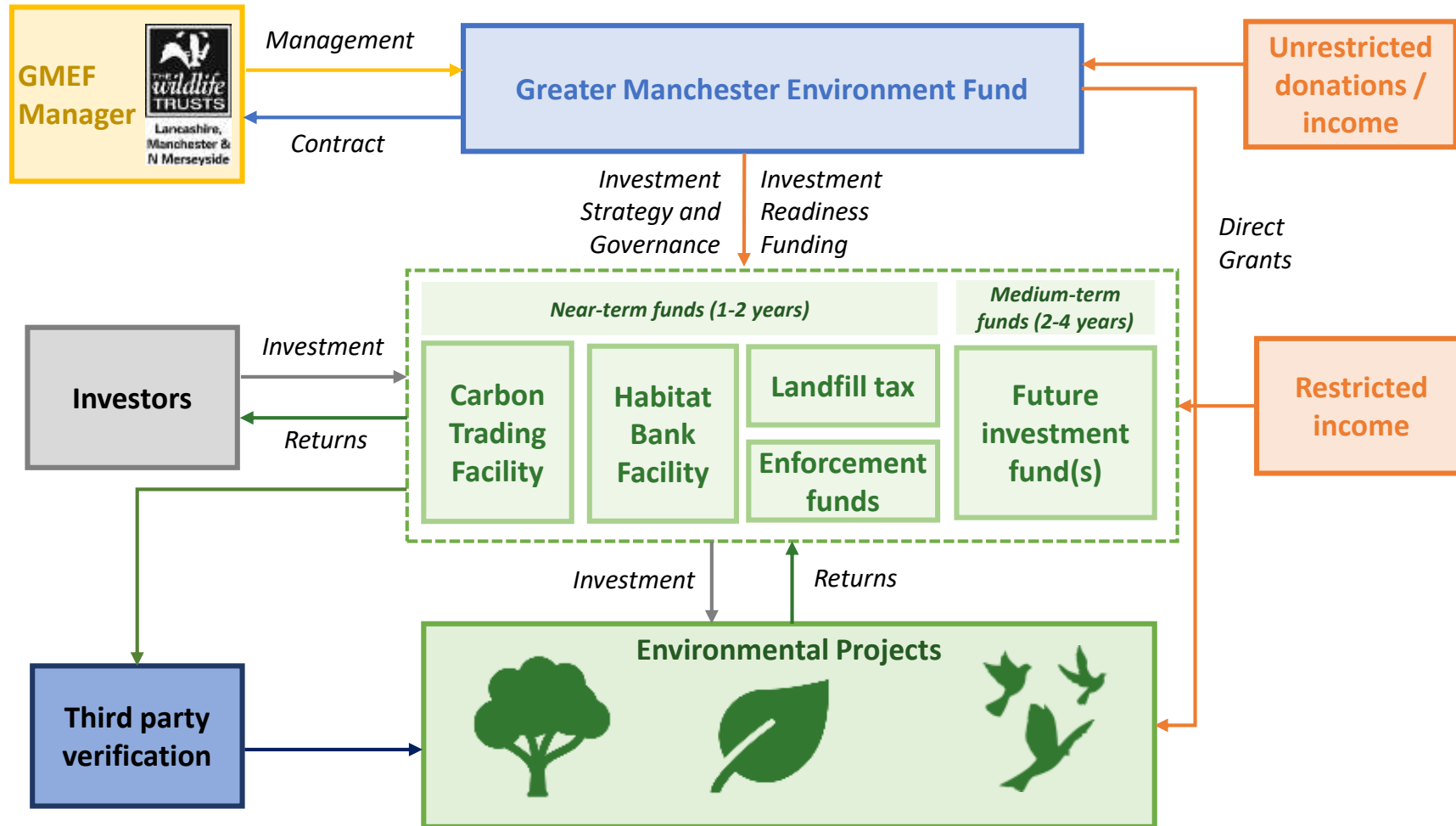
- **Funding pressures** – ad-hoc, piecemeal grants available from disparate sources to enable NGOs to protect, restore and enhance the environment
- **Capacity constraints** – limited capacity to create investable propositions to secure new sources of investment



- **Reduce funding pressures** – provide a coordinated approach and governance framework to source and channel funding
- **Provide increased capacity** – provide funding for technical assistance and capacity building to enable organisations to access blended finance opportunities

GM Environment Fund Overview

The GM Environment Fund will take a strategic approach to leverage a significant increase in investment to deliver a green city region.



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The GMEF Manager: Why Lancashire Wildlife Trust?

Lancashire Wildlife Trust has over 50 years of experience in managing large-scale projects, partnerships and funding programmes to protect and enhance the natural environment, build a strong voice for wildlife, and inspire people to connect and engage with nature.

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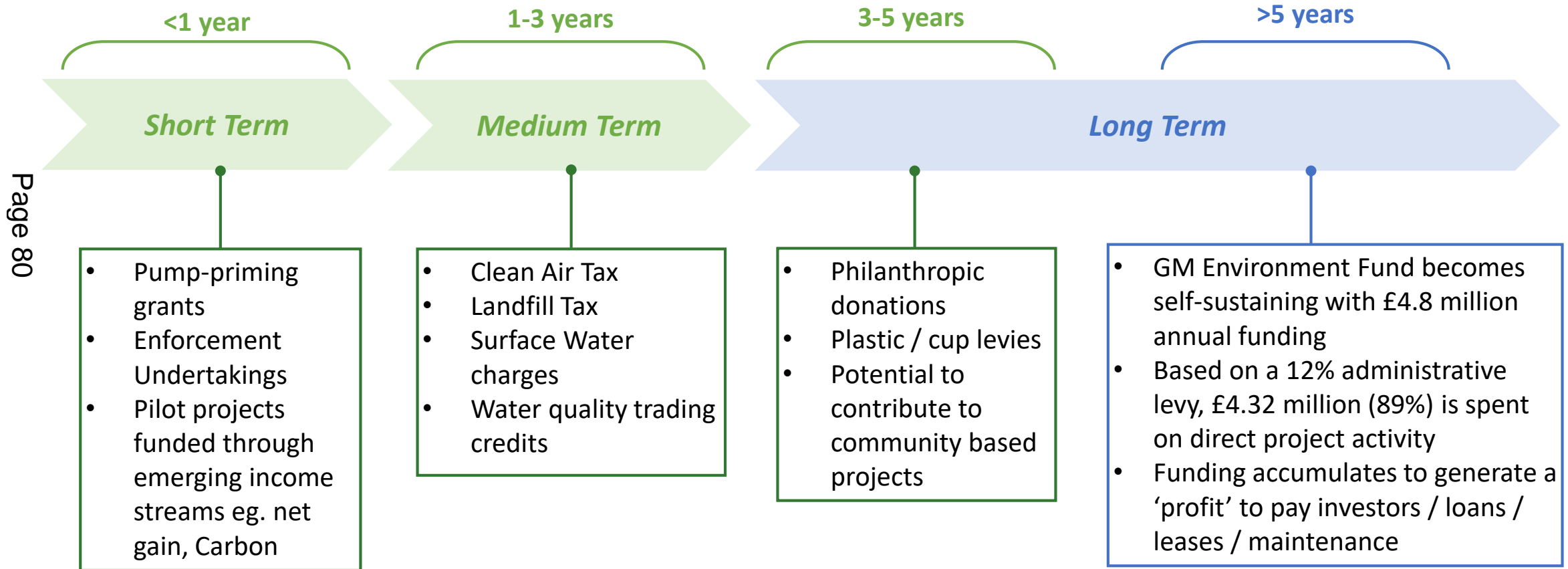


**Lancashire,
Manchester &
N Merseyside**

- Managing large scale projects – annual turnover £5million and £1m trading arm, £1m landfill distribution
- Core values, ambition, commitment, determination, belief, independence, principles
- Expertise in natural environment – prioritisation, evidence, advocacy, campaigning, land management, fundraising, landscape scale, partnerships, knowledge
- Partnership and programme management
- Wider stakeholder engagement, consultation and communication
- Fundraising and experience in new and more diverse income streams
- Fund distribution
- Strategic influence

A Self-Sustaining Funding Opportunity

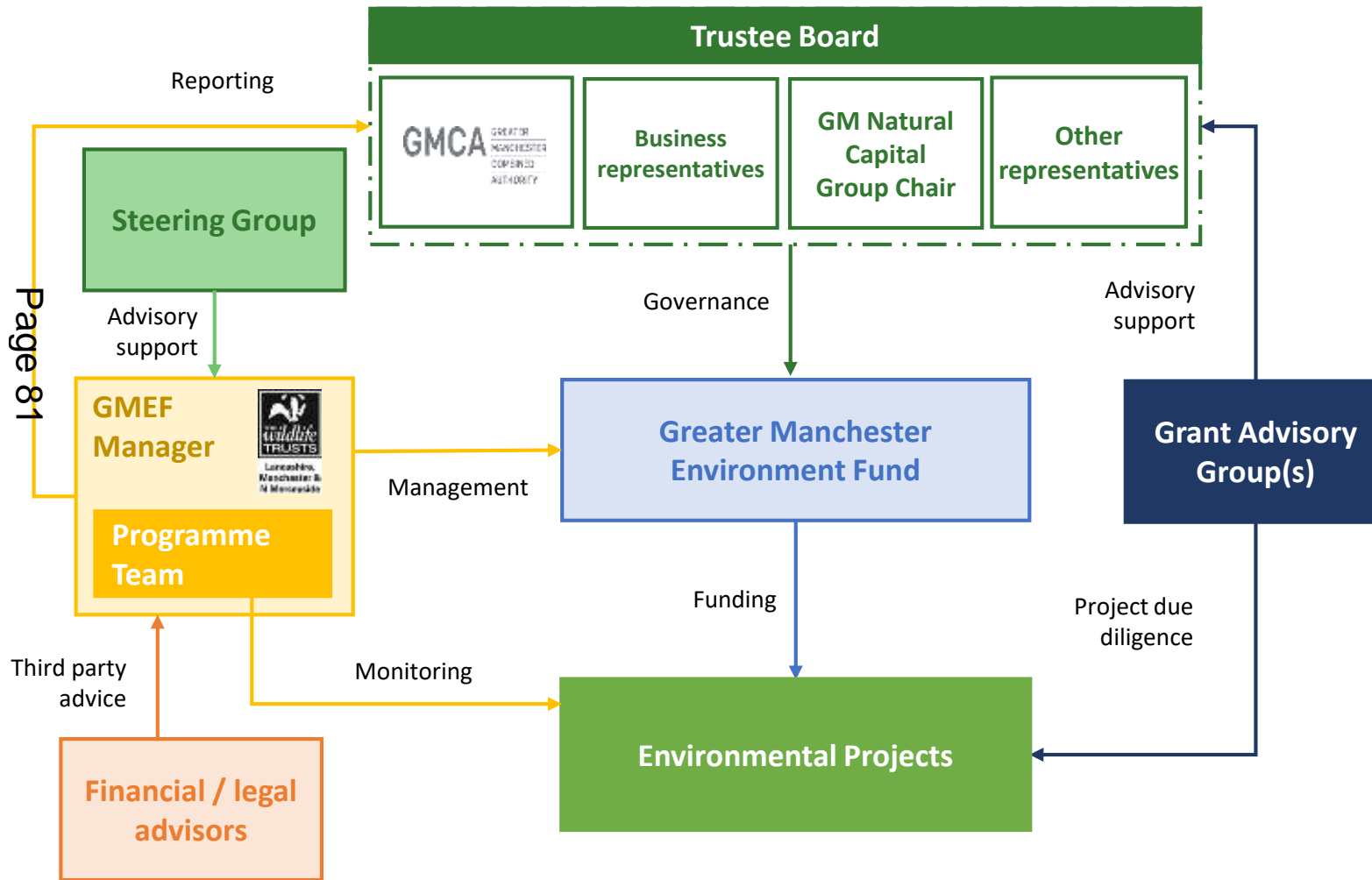
The GM Environment Fund presents significant opportunities to expand sources of funding and investment to deliver a thriving natural environment in GM and become self-sustaining over the long-term.



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Indicative GM Environment Fund Governance Structure

The GM Environment Fund will be structured as a charitable company limited by guarantee using a similar model as the Lancashire Environment Fund, which LWT has managed for the last 20 years.



Indicative Structure

- Charitable company with a Trustee Board to provide independence which could include: GMCA, Chair of GMNCG, Business, GMEF Community
- Project 'Steering Group', engaging individuals with influence over the various funding streams. Could include members of the current Advisory Group.
- Financial / legal expert as required for support.
- Grant Advisory Groups could support the Board with recommendations for specific funding streams and agree on verification process and due diligence. These groups will be populated by technical and practical experts specific to each funding stream.
- GMEF Programme Team will monitor delivery and compliance of projects.
- *Structure subject to further review and assessment by the project team*

Communications

Communications will be key to promote opportunities for funders

- ✓ Communications Plan and Branding Guidelines
- ✓ Website – our shop window – landing point for information and enquiries
- ✓ Celebration for first projects funded.
- ✓ Case studies on every project that is funded.
- ✓ Video diaries of projects and how they are progressing with the help of funding.
- ✓ Social media
- ✓ Poster campaign around GM celebrating projects funded by the GM Environment Fund.
- ✓ Interesting stories released to the media about projects and individuals.
- ✓ Reports on how the fund is supporting projects in the local community.
- ✓ Annual celebration event, inviting funders and participants, incorporating an awards ceremony.

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GM Natural Capital Investment Opportunity

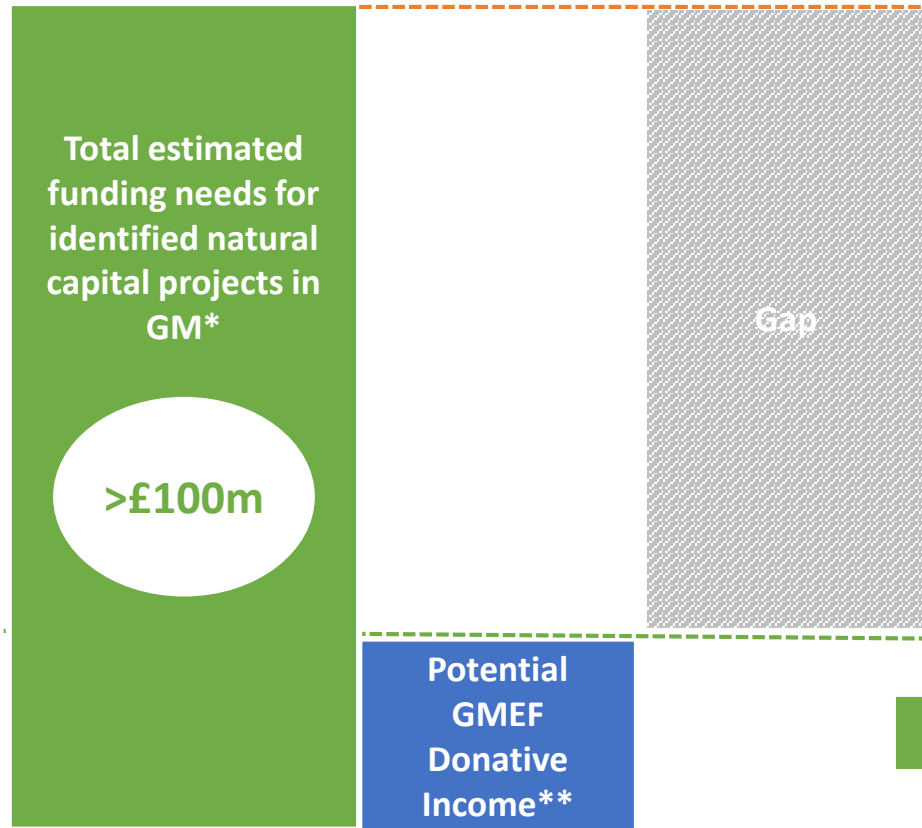


GM Natural Capital Investment Opportunity

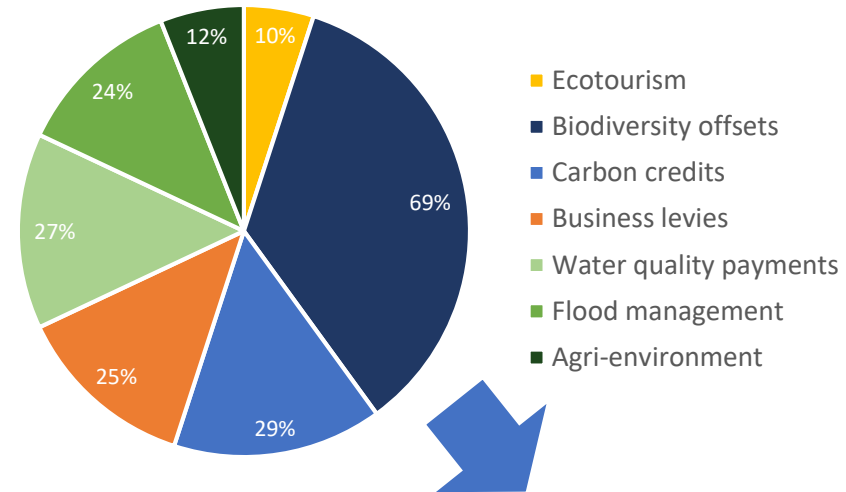
There is considerable need to mobilise additional investment to deliver Greater Manchester's natural capital priorities.

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GM's natural capital (NC) project funding need



Emerging revenue sources for GM's natural capital projects



Need to identify new forms of finance to deliver the city region's natural capital objectives

Significant opportunity to mobilise investment in habitat creation across GM through securing biodiversity net gain and carbon income streams

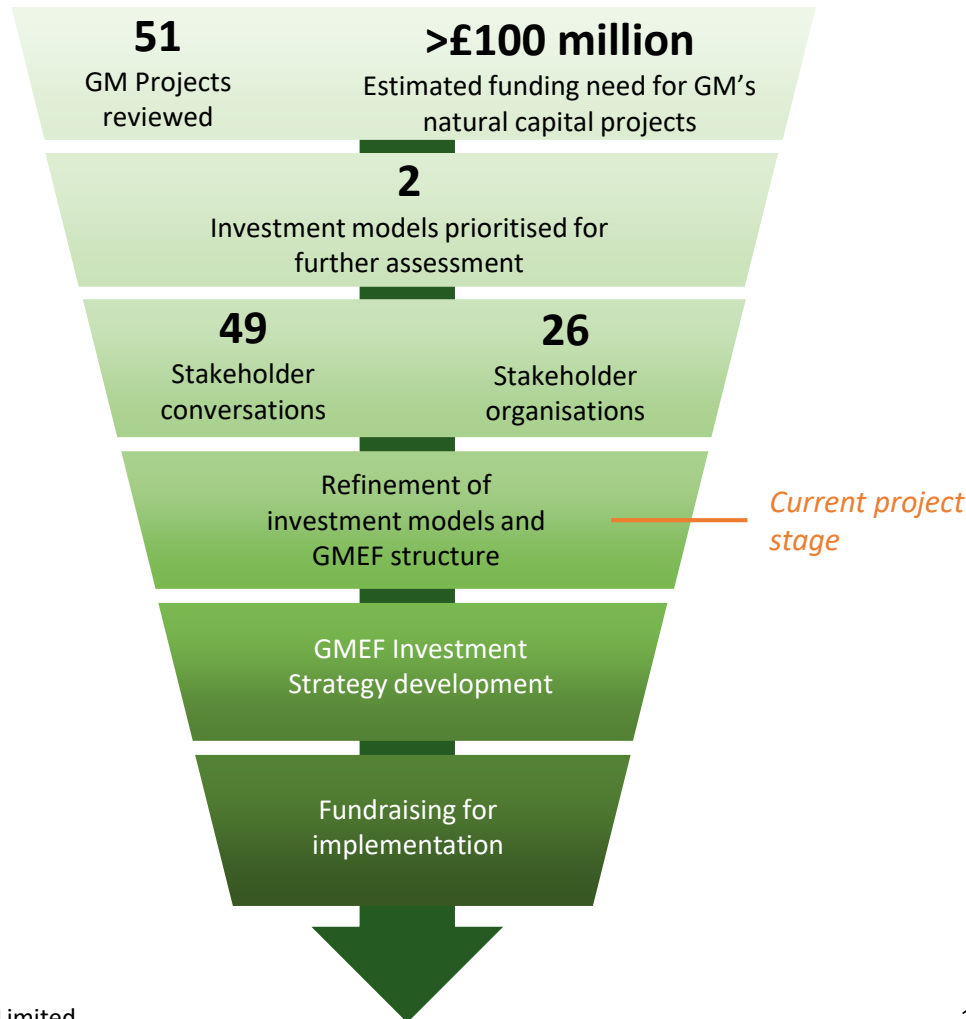
* Based on initial list of 26 projects; a further 25 projects have been identified but not yet costed.

** Will depend upon a separate process to raise charitable donations.

Investment Model Development Process

Between March and May 2020, EF engaged with a wide range of stakeholders in the GM region to support the design of the GM Environment Fund and assess the opportunity for investment in habitat banking and carbon trading as the primary near-term trading opportunities.

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Stakeholder engagement summary



- Natural capital project developer
- Local authority / public body
- Regulatory bodies
- Local business

Habitat Bank Facility



Investment Model Opportunity: Habitat Bank Facility

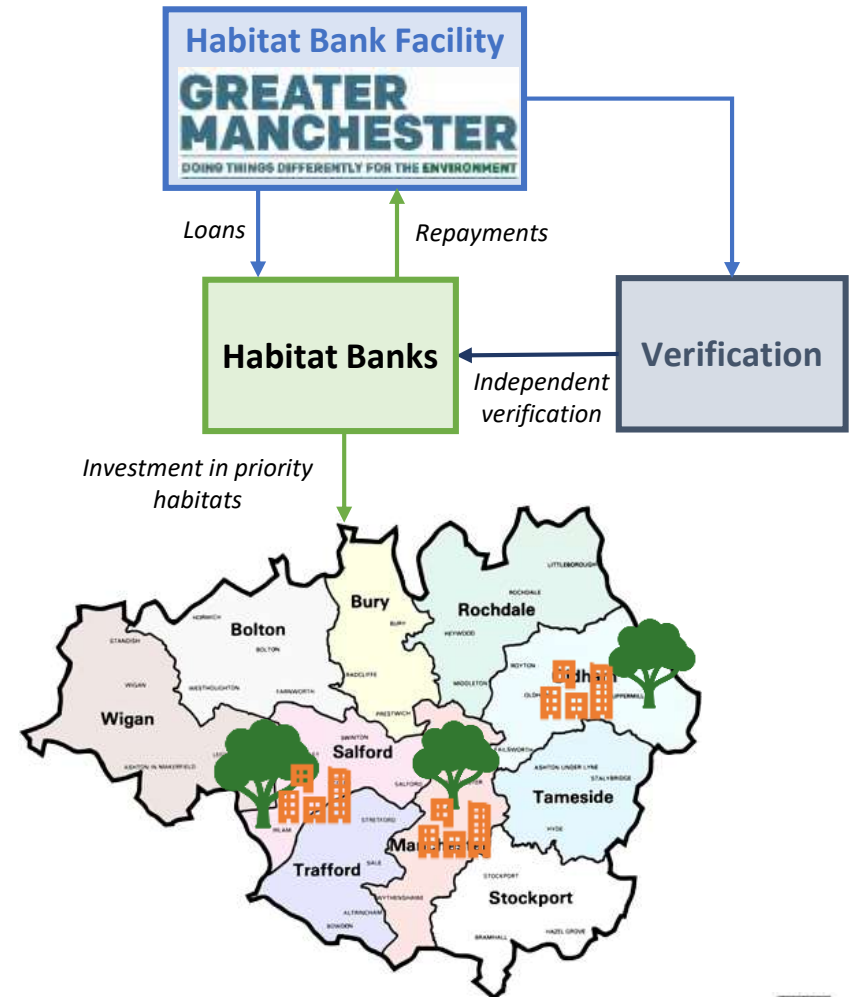
GM could lead the delivery of strategic habitat creation by setting up a dedicated Habitat Bank Facility (HBF) to provide funding to deliver Biodiversity Net Gain (BNG).

New opportunities for habitat creation as a result of BNG policy...

- Requires all developments to provide **habitat gains of 10% or more**.
- Is expected to deliver **£190 million revenues** for habitat creation / restoration per year (Defra 2019).
- Provides a major opportunity to **attract private capital** into the market to create and restore strategic habitats in GM.

A HBF could...

- Enable districts in GM to access upfront financing to **create strategic habitats in advance of the development impact**, and ultimately deliver a **GM-wide Nature Recovery Network**.
- **Streamline** the housing development and habitat delivery process.
- **Reduce development and verification costs** across habitat projects.
- Enable GM to **fulfil the potential of a new market** for BNG and allow the city region to grow sustainably.



Learnings from Stakeholder Engagement: Strategic Opportunities

The habitat bank investment opportunity has been assessed through stakeholder engagement with LPAs, regulatory bodies, developers and conservation NGOs.

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	Status
Policy development	<ul style="list-style-type: none"> Strong political ambition and governance framework in place in GM to support BNG policy development District-level policy is under development at various stages LPA preference to avoid pooling S.106 funding across multiple districts
Funding needs	<ul style="list-style-type: none"> High upfront costs and uncertainty over process, timescales and costs involved in setting up a HB Identification of strategic priority areas for net gain is in progress e.g. Local Plans, Nature Recovery Network No mechanism in place to enable districts to set up habitat banks once policy is in place



A 'proof of concept' pilot in advance of national BNG policy would...

- Ensure a robust business case and strong investor appetite by matching volume of income to a strategic habitat creation project
- Demonstrate multi-partner collaboration to deliver BNG and maximise opportunity for growth
- Prepare GM to meet future increased demand for habitat creation by building confidence in the approach
- Provide valuable learnings ahead of national policy to inform best practice and unlock investment to scale up habitat delivery across GM
- Establish GM as a leader in BNG policy and a pioneer in delivering strategic approaches to nature recovery, providing green jobs and sustainable growth

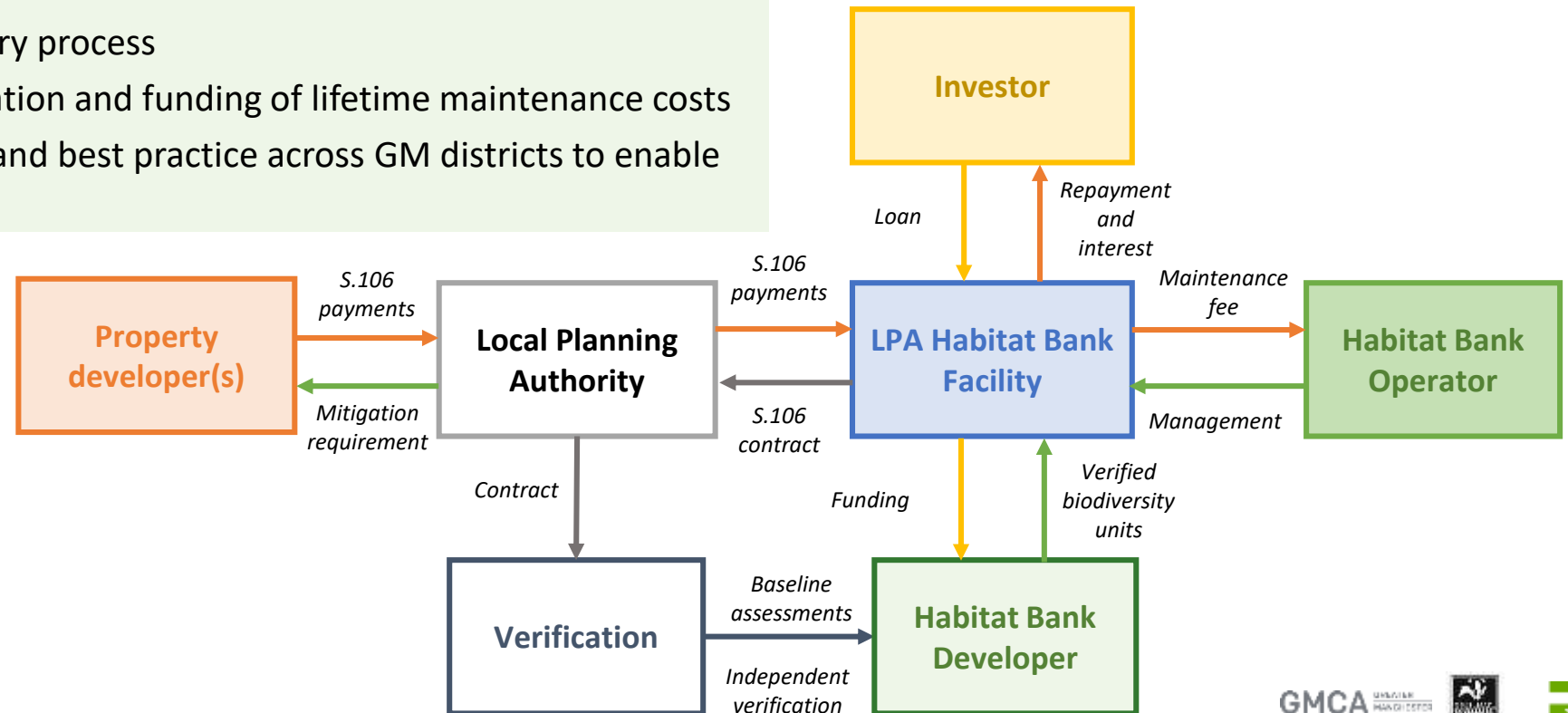
Indicative Habitat Bank Investment Pilot Structure

Delivery of a pilot HBF-funded BNG site would provide valuable learnings to enable the investment model to be scaled up to deliver BNG across the city region as district-level policy is implemented and UK legislation comes into place.

Targeted learnings from pilot

- Use of repayable finance
- Application of Defra metric to verify BNG units
- S.106 contracting mechanism with LPA
- Habitat bank funding delivery process
- Habitat bank set up, verification and funding of lifetime maintenance costs
- Dissemination of learnings and best practice across GM districts to enable scale up

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Carbon Project Facility



Investment Model Structure: Carbon Project Facility

With GM's ambition to become carbon neutral by 2038 and an increasing corporate focus on carbon mitigation, GMCA could lead the creation of a Carbon Project Facility to accredit and monetise carbon credits from natural assets.

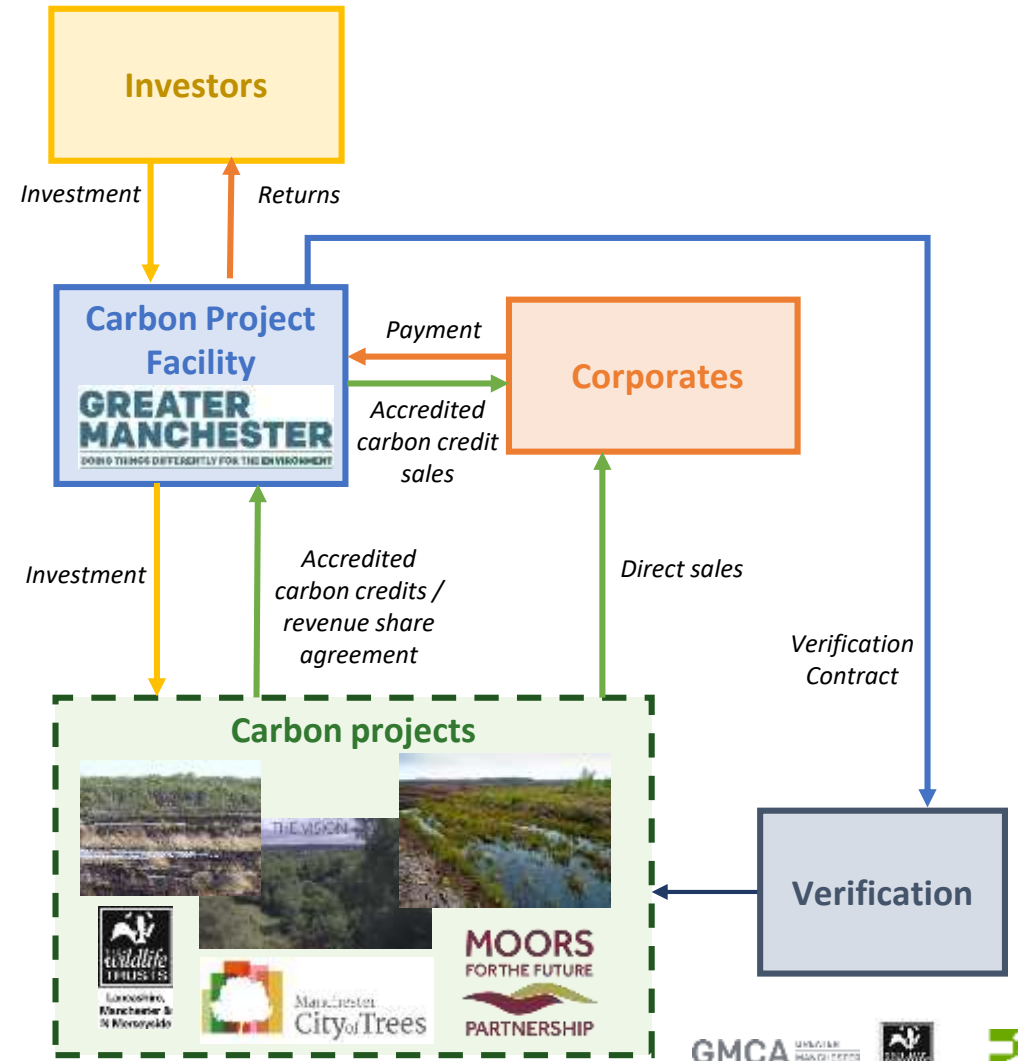
Significant GM carbon opportunity...

- GM's natural assets provide **significant opportunities for carbon sequestration**.
- **Corporate appetite for local carbon impact mitigation is increasing** as a result of policy and consumer pressure.

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A GM Carbon Project Facility could...

- **Secure partnerships with corporates** with carbon targets to enable mitigation of residual emissions in return for accredited carbon credits.
- Attract **private investment** into carbon sink projects with significant upfront funding requirements.
- Provide **higher and more consistent carbon prices**, and **reduced set up and verification costs**.
- Enable GM to **meet its carbon reduction targets** through restoring its natural assets.



Learnings from Stakeholder Engagement

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	Status
Funding needs	<ul style="list-style-type: none"> • Lack of funding to facilitate the development and expansion of projects looking to supply GM verified carbon credits in terms of identifying delivery plan, costings, verification process • Carbon funding insufficient to enable land acquisition and / or project delivery – need to stack benefits and aggregate projects • Flexible service offering required regarding funding, verification, brokerage etc. depending on project developer needs
Credit demand	<ul style="list-style-type: none"> • Corporate appetite for local carbon offsetting and willingness to pay a price premium but limited supply of suitable projects • Lack of certainty over carbon prices
Verification	<ul style="list-style-type: none"> • Ad-hoc verification process across projects; established verification programme only exists in woodlands • Corporate demand likely to determine optimum verification strategy e.g. GM approved scheme, carbon codes, international scheme



A 'proof of concept' carbon pilot would...

- Build investor and corporate confidence in the approach to unlock further investment in carbon projects
- Prove the opportunity for benefit stacking alongside BNG income or other funding sources to improve carbon project viability
- Determine the service offerings required from the funding vehicle
- Provide standardised transaction documents and templates to reduce project transaction costs

Carbon Pilot Options Overview

A range of options are available for the delivery of a carbon investment pilot – we are looking to identify the preferred pilot project based on the opportunity to attract repayable investment.

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Option	Considerations	Key requirements for pilot
Woodland aggregation vehicle	<ul style="list-style-type: none"> • Need for project aggregation to reach sufficient scale • Strategic mapping for woodland creation across GM carried out • WCC established in the market; WCaG provides a floor price and guaranteed market for credits • Difficult to stack alongside BNG pilot as limited opportunity to deliver significant BNG uplift through new woodland creation 	<ul style="list-style-type: none"> • An existing project in development with a need for funding for further development and expansion • Opportunity to test the market for verifiable local carbon credits • Opportunity to use repayable finance in project delivery
Peatland – alignment with BNG pilot	<ul style="list-style-type: none"> • Potential for large-scale peatland carbon sequestration in GM • Peatland Carbon Code difficult to apply to GM lowland habitats – opportunity to use BEIS metric • Carbon funding insufficient to meet costs of peatland habitat restoration • Potential to prove benefit stacking opportunity by alignment with BNG pilot or other funding sources 	
Other / mixed habitat	<ul style="list-style-type: none"> • Verification codes / metrics not yet in place for other landscapes • Limited supply of other carbon habitats in GM 	

Next Steps



Key questions



Are you aware of any suitable funding pilot opportunities?
e.g. habitat creation/restoration project in GM, c.£0.5m-£1m funding gap, close to “shovel-ready”?

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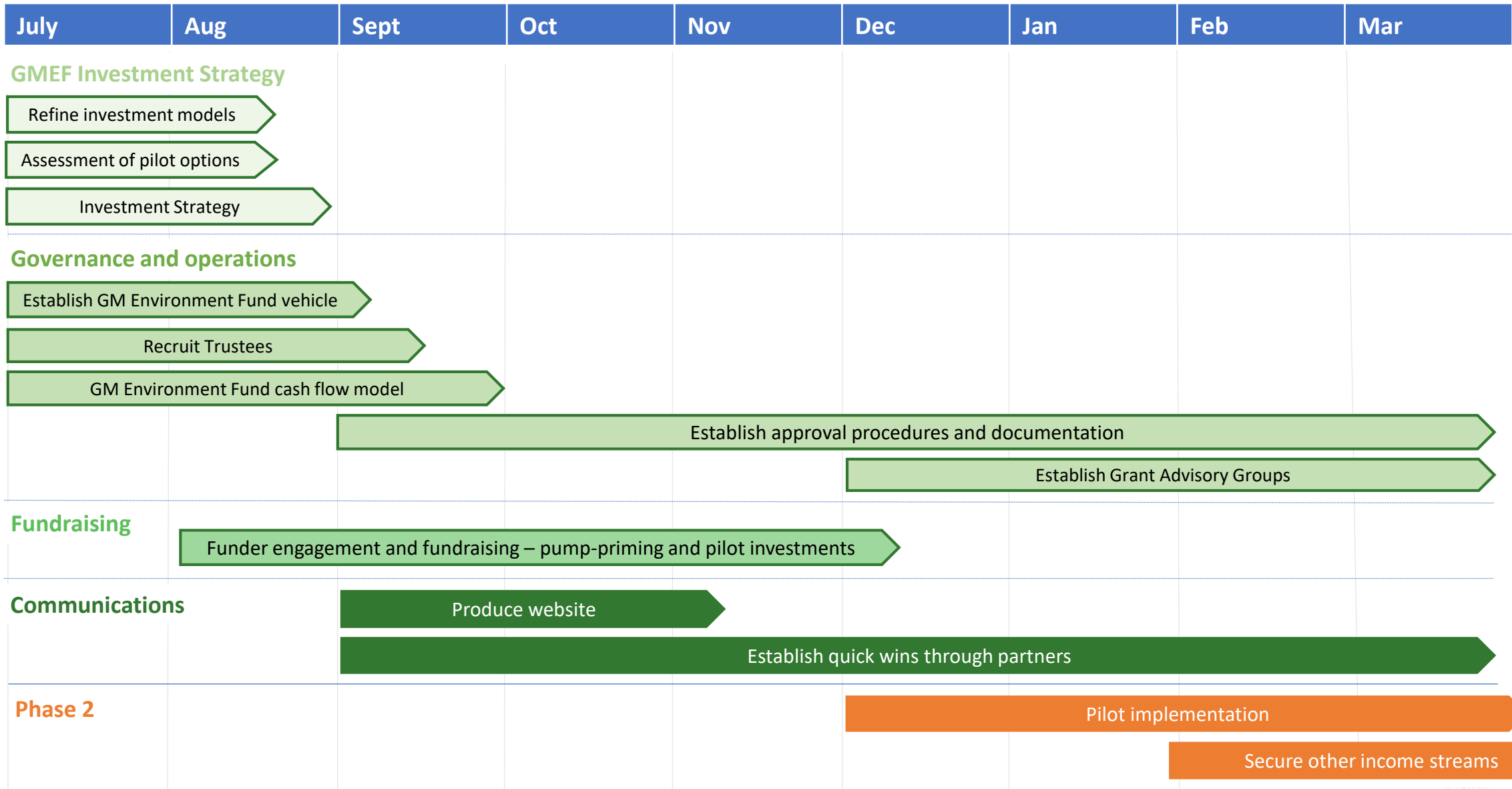


Are there any other key learnings you would like to target for the pilot projects that we haven't mentioned?



Are there any concerns or other suggestions around the approaches described?

GM Environment Fund Development Programme



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