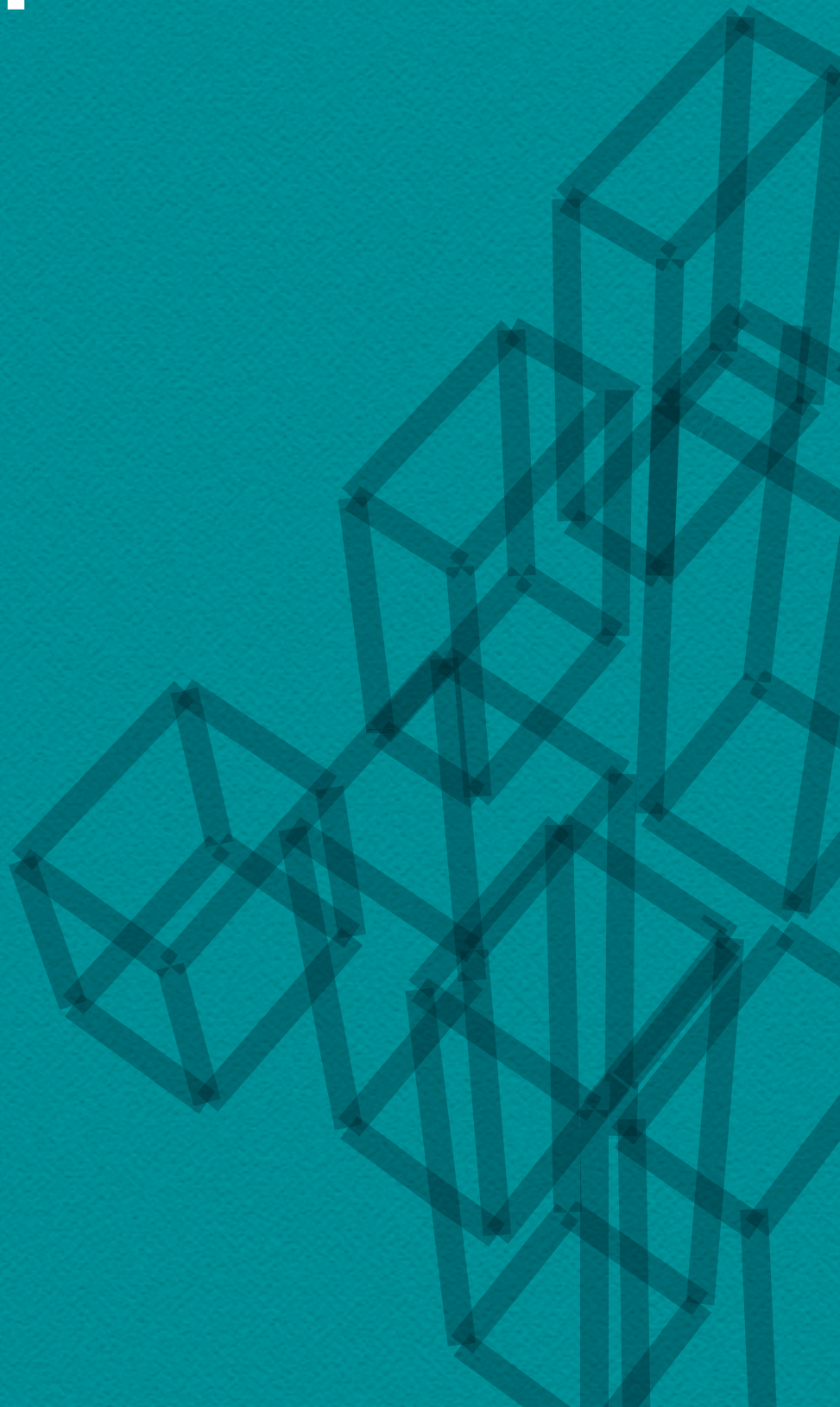


GOOD PRACTICE GUIDE

Climate Positive Development

**C4O
CITIES**
CLIMATE LEADERSHIP GROUP



C40 Cities Climate Leadership Group

The C40 Cities Climate Leadership Group, now in its 10th year, connects more than 80 of the world's greatest cities, representing 600+ million people and one quarter of the global economy. Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, well-being and economic opportunities of urban citizens. www.c40.org

The C40 Cities Climate Leadership Group has developed a series of Good Practice Guides in areas critical for reducing greenhouse gas emissions and climate risk. The Guides provide an overview of the key benefits of a particular climate action and outline successful approaches and strategies cities can employ to implement or effectively scale up these actions. These Guides are based on the experience and lessons learned from C40 cities and on the findings and recommendations of leading organisations and research institutions engaged in these areas. The good practice approaches are relevant for cities engaged in C40 Networks as well as for other cities around the world.

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EXECUTIVE SUMMARY

More than 50% of the world's population currently lives in urban areas, with the percentage expected to grow to more than 70% by 2050. Planning and development of low-carbon, compact and connected cities is critical to sustainably manage this significant urbanisation trend. Fortunately, C40 cities have significant power and authority over land-use planning (through zoning, other planning frameworks and requirements, and building codes), waste management and water supply, as well as transportation and energy to varying degrees.

In partnership with the Clinton Climate Initiative and the US Green Building Council, C40 Cities launched the Climate Positive Development Program in 2009. Climate Positive helps create a new paradigm for cities with replicable and scalable models for low-carbon development, targeting the operational carbon emissions associated with energy, waste and transportation. C40's Climate Positive Frameworkⁱ is not rigidly prescriptive as there is not one single path for a development to achieve a Climate Positive outcome; in fact, developments in any city in the world can reach the Climate Positive target.

This Good Practice Guide focuses on the main elements to successfully deliver Climate Positive development in cities, with a survey of best practices leading to better economic, social, and environmental outcomes for cities. These include:

- **Set ambitious goals and utilise holistic planning**
- **Create policy and regulatory frameworks to stimulate Climate Positive development in regeneration projects**
- **Utilise procurement powers to promote Climate Positive transformation of industrial areas**
- **Create sector plans to guide Climate Positive development of mixed-use areas**
- **Maximise the potential of Climate Positive private-public partnerships**

The C40 Climate Positive Development Program was established to address the dual challenges of rapid urbanisation and climate change. It uses a performance-based framework that creates replicable, innovative models for environmentally sustainable and economically viable growth, through the 'urban laboratories' of large-scale Climate Positive Developments. The Program is currently comprised of 18 projects, including 13 in C40 cities.

The purpose of this Good Practice Guide is to summarise the key elements of Climate Positive development for global dissemination, highlighting successes in planning and delivering low-carbon district-scale developments.

1 BACKGROUND

1.1. Purpose

The C40 Cities Climate Leadership Group has developed a series of Good Practice Guides in areas critical for reducing GHG emissions and climate risk. The C40 Good Practice Guides provide an overview of the key benefits of a particular climate action and outline successful approaches and strategies cities can employ to effectively scale up these actions. These Guides are based on the experience and lessons learned from C40 cities and on the findings and recommendations of leading organisations and research institutions engaged in these areas.

The following Good Practice Guide focuses on the key elements to successfully deliver Climate Positive development, with a survey of best practices leading to better economic, social, and environmental outcomes for cities. These approaches are relevant for cities engaged in C40's Climate Positive Network as well as for other cities around the world.

1.2. Introduction

Urban planning plays a crucial role in defining how cities function, significantly affecting the quality of people's lives as well as all facets of a city's operation. Recognising the unsustainability of prevailing urban development approaches, the Climate Positive Development Program seeks to shift the development paradigm by focusing on three of the main sources of greenhouse gas (GHG) emissions in cities: energy, waste and transportation. The Program capitalises on the significant power and authority that C40 cities have over land-use planning, waste management and water supply, as well as transportation and energy to varying degrees. Through the utilisation of a recognition-based framework -- beginning with ambitious goal setting and then considering the phases of planning, implementing and ultimately reporting on performance -- cities have the ability to deliver truly sustainable and net-carbon negative neighbourhoods at scale.

2 CLIMATE POSITIVE AND CLIMATE CHANGE

2.1 What is Climate Positive Development?

C40's Climate Positive Development Program serves to meet the dual challenge of rapid urbanisation and climate change, by creating locally relevant models for large-scale urban development guided by the Climate Positive Framework.ⁱⁱ The C40 Climate Positive Network supports the development and recognition of projects that seek to meet a "Climate Positive" emissions target of net-negative operational GHG emissions.

If sustainable development is the creation of cities and neighbourhoods that are environmentally friendly places to live, work and play, Climate Positive development provides the means of ensuring that these vibrant, sustainable neighbourhoods are also verified net-

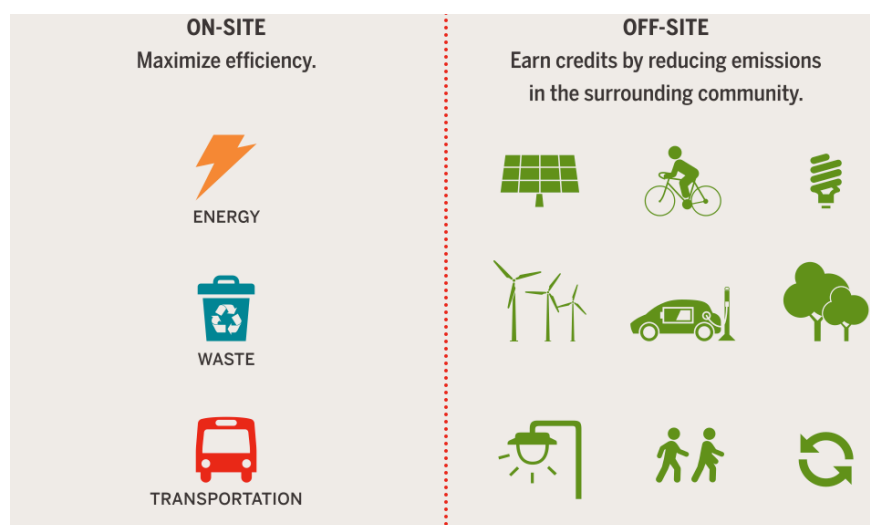
carbon negative. The Climate Positive Development Program addresses the three main sources of operational (versus embodied) carbon emissions: energy, waste and transportation. Using a non-prescriptive approach to ensure that local conditions are taken into account, developers of Climate Positive projects commit to maximising efficiency on-site and then further reducing emissions in the surrounding community, so that the impact of a Climate Positive development is a net reduction in carbon emissions.

With the focus on operational emissions associated with energy, waste and transportation, Climate Positive developments feature highly efficient buildings, renewable energy, and utilisation of waste as a resource, and are built to enhance residents' access to low-carbon mass transit solutions.

2.2 Climate Positive Credits

As detailed below, Climate Positive Development Partners report on the emissions associated with a development's energy, waste and transportation operations. Although Development Partners should strive to reduce on-site emissions as much as they can, they will also have to earn Climate Positive credits in order to achieve the required net-carbon negative Climate Positive outcomes. Just as emissions are measured in tCO_2e , so too are Climate Positive credits. As Development Partners either reduce or abate emissions in the local community or capture carbon on-site, they earn a Climate Positive credit for each tCO_2e abated. In order to achieve a Climate Positive outcome, a development's Climate Positive credits must exceed its annual emissions. Rather than offsetting carbon emissions at distant locations or purchasing credits on the open carbon trading market, the Climate Positive Framework guides Development Partners to make a positive impact in the surrounding community.

One way to earn credits is to create or preserve on-site parks and green spaces as carbon sinks. Most credits, however, will be earned off-site. All the avoided emissions must be quantifiable.



As mayors and cities have strong powers for setting urban planning and land-use policies, they have a clear opportunity to reduce these first-order carbon emissions from large-scale developments. Climate Positive projects serve as an important urban laboratory showing what is possible, identifying critical collaborations between developers and their city government counterparts, and creating a case for holistic planning and development that improves the local environment, creates jobs, and enhances residents' quality of life. C40 currently supports 18 projects, including 13 in C40 cities.

2.3 Climate Positive Development as a journey

The Climate Positive Development Program is a journey. In recognition of the many years it takes to develop district-scale projects, the journey to Climate Positive is marked by four stages of recognition:



The journey to achieving Climate Positive outcome is marked with detailed measurement and verification of carbon emissions reduction plans that quantify the on-site emissions as well as the carbon abated through Climate Positive credits. As each development project faces different local conditions, the Climate Positive outcome is guided by a flexible performance-based framework. By utilising this non-prescriptive approach, cities can implement variety of approaches to achieve Climate Positive growth.

While the Climate Positive Framework is non-prescriptive, developers and cities are tasked with thinking in holistic terms to address operational carbon emissions associated with energy, waste, and transportation. Developers need to set a baseline to understand where carbon emissions are coming from, and then create a strategy for maximising efficiency on site. In accordance with accepted good practice, the key basic elements of a Climate Positive Development should include an integrated systemic approach, including quantifiable measures around:

- Energy - addressing both supply and demand, with an emphasis on: renewable power sources; distributed and district-scale solutions, where appropriate; highly efficient utilisation strategies; and passive design measures, which can reduce the energy consumption of buildings.
- Waste - which should be reduced and/or recycled, and utilised as a resource.
- Transportation - emphasizing access to mass and non-motorised transit options, alongside mixed-use zoning, to allow people to live close to work and leisure activities.
- Off-site - expanding the impact of carbon emissions reductions beyond the project boundary for the generation of Climate Positive credits.

2.4 Characteristics of a successful Climate Positive Development

A Climate Positive Development is a district scale, mixed-use project that typically includes:

- Walk- and bike-ability;
- Highly efficient buildings;
- Low-carbon energy sources;
- Recycling, landfill diversion programmes and, ideally, utilising waste as a resource;
- Close proximity to high quality mass-transit;
- Compact, mixed-use development; and
- Expansion of the positive impact into the surrounding community.

Cities have ample opportunities to encourage and better enable Climate Positive Development. As the case studies below show, if the government controls the land through land ownership, the city can be in a position where they can either develop their own Climate Positive project (like the City of Stockholm), create a joint venture (like the Mahindra World City Jaipur), develop the project through a public-private partnership (like San Francisco's Treasure Island), or require a development to deliver a Climate Positive outcome as part of the procurement process (like Sydney's Barangaroo South).

In addition, there are different types of policies that cities can utilise to better enable Climate Positive development, such as London's requirements that buildings connect to district heating networks should they become available. Cities can also create the appropriate incentives for developers to pursue investments that might deliver carbon savings but for which the business case would otherwise be challenging.

Even if strict adherence to the Climate Positive Framework is not carried out, the more of Climate Positive elements are included within a master plan, the more it will increase the potential of a project to deliver the wide assortment of sustainable community benefits listed below. Additionally, there are great opportunities for cities to champion the development of particularly innovative and ambitious developments to demonstrate their success as well as that of any new technologies they use.

Even though the Climate Positive Framework primarily focuses on carbon emissions, it serves as a useful proxy for many of the other elements of sustainable development design. There are numerous guides, publications and methodologies available that outline complementary approaches, such as *ITDP's 8 Principles for better streets and better cities*,ⁱⁱⁱ *Star Communities*,^{iv} and the *Ecodistricts protocol*.^v In addition, many of the Climate Positive projects are also using local community-scale rating tools to support their path towards Climate Positive, such as BREEAM for Communities, LEED for Neighbourhood Development, and Green Star Communities. By emphasising and measuring operational performance, the Climate Positive designation complements existing rating systems that are predominantly based on planning and projected performance.

2.5 Benefits of Climate Positive

The best practices below provide an overview of some of the approaches being used successfully by cities to integrate the elements of the Climate Positive Framework and reap the multiple benefits of low-carbon development. The benefits of the holistic, Climate Positive Development approach include:

Maximum CO₂ reduction through integrated design and operation: Achieving net-negative carbon emissions in a large-scale project is a journey that requires extensive planning. Approaching the planning and delivery of the development in an integrated fashion, while taking into account all operational emissions associated with energy, waste and transportation, helps to emphasize carbon emissions avoidance at the outset and identify opportunities to make further reductions to progress to a net-carbon negative outcome. In recognition of the importance of comprehensive planning, the Climate Positive Development Program's second stage of recognition is the Climate Positive Roadmap for development, which details the strategies and tactics to be pursued to deliver a net-carbon negative Climate Positive outcome.

Industrial area transformation: The Climate Positive model can effectively support the transformation of former industrial port-lands and the revitalization of underutilized parcels of centrally located land. As population growth accelerates and economic activity shifts, many cities and developers have identified great opportunities for new mixed-use communities that can serve as pilots and catalysts for a transition to a new model of sustainability.

Investment in renewable energy and transportation infrastructure: The Climate Positive model emphasizes a model of holistic planning and implementation that expands the positive impact of development into the surrounding community, quantified through Climate Positive credits. Through investments in renewable energy and low-carbon, mass-transit infrastructure, for example, cities can help make the business case and deliver a win-win by locking in actions that will ensure substantial carbon emissions reduction well into the future.

2.6 Challenges to delivering Climate Positive Development

There are a few barriers that local governments might face when considering Climate Positive Development projects. These include:

Regulatory and political barriers: Because Climate Positive Development represents a new development model, it may raise regulatory and political considerations that have not been previously encountered. Similarly, given the cost and size of these developments, they are likely to represent an investment opportunity of unprecedented scale for the city.

Market barriers: Climate Positive Development represents a new opportunity, which requires a willingness to pursue (and perhaps create) a new business model (e.g. Capex vs. Opex trade-offs, first costs vs. lifecycle costs, etc).

Limited awareness and public support: The need to implement sustainable, low-carbon development is increasingly urgent and important. While progressive cities are taking many actions, limited public awareness can slow pursuit of particularly ambitious goals.

Future-proofing concerns: Because large-scale projects are developed over such a long timeframe, and installed infrastructure has long lifespan, ensuring adoption of the best technology is vital. However given the significant costs involved, developers might be less willing to take the risk involved with new, cutting-edge technology solutions that have not yet been proven at scale or in that locality.

3 GOOD PRACTICE APPROACHES FOR A SUCCESSFUL CLIMATE POSITIVE PROJECT

3.1 Categories of best practice

In order to overcome the challenges outlined above, reap the benefits and successfully pursue Climate Positive Development, a few key best practice approaches have been identified:

- **Set ambitious goals and utilise holistic planning**
- **Create policy and regulatory frameworks to stimulate Climate Positive development in regeneration projects**
- **Utilise procurement powers to promote Climate Positive transformation of industrial areas**
- **Maximise the potential of Climate Positive public-private partnerships**

We have identified case studies within each of these categories that demonstrate good practice for the cities and projects involved in Climate Positive Development Program.

3.2 Set ambitious goals and utilise holistic planning

When cities plan for growth that minimizes carbon emissions, holistic planning and ambitious goal setting are important, to ensure that:

- the development is well designed from the outset, with integrated planning to make it a sustainable, people-oriented place; and
- the project reflects strong stakeholder engagement throughout the design, planning and implementation phases.

Stakeholder and citizen engagement is key to successful Climate Positive Developments. By securing input and buy-in from citizens, and creating a platform for the public's views to be heard during the initial goal-setting stage, a sense of public ownership and support for the project can be fostered from the beginning. Implementing a strategy that engages citizens and key stakeholders in conjunction with existing successful projects enables cities to build support for even more ambitious policies and future projects.

Case study: Stockholm - Royal Seaport^{vi}

Summary: The Stockholm Royal Seaport^{vii} (SRS) project is transforming the old industrial port area into a modern city environment for both residents and businesses. The City of Stockholm owns the site and controls the approvals, thus being in a position to drive the sustainability agenda. Accordingly, the city is using SRS as a living laboratory and model for the long-term aim of creating a zero fossil fuel Stockholm and adapting Sweden to the growing impacts of climate change. The project has a target for energy use of 55 kWh per square meter (about 10.8 square feet) per year, a target of 1.5 tCO₂e per person by 2020, target to adopt measures to adapt to climate change, and a target to be fossil-fuel free by 2030. The project will provide 12,000 apartments and 35,000 work places combined with space for recreation, thereby creating a dynamic and vibrant living and working space.

Results: The project started in 2010 and is expected to be completed in 2030. However, the SRS is already an important part of city life, with high citizen participation and engagement. This project is an example of Stockholm's commitment to sustainability, which saw Stockholm being selected as the first European Green Capital in 2010.

Reasons for success: Cooperation and dialogue with developers has been a key strategy for the city. To help deliver the aims of the project, the city has pursued various strategies, including stringent requirements; a comprehensive follow-up process from early planning through to occupancy; close dialogue with developers; and capacity development programs.

When/why might a city adopt an approach like this: The pro-active, highly engaged approach taken by Stockholm in the SRS project is particularly effective when the city owns the land outright or has very strong authority over land-use planning. Additionally, setting particularly

aggressive targets and being actively involved in the holistic planning is further enabled if a city has a high degree of citizen engagement or participation.

3.3 Create policy and regulatory frameworks to stimulate Climate Positive development in regeneration projects

Cities have strong power to create an enabling policy and regulatory framework that supports low-carbon development and integrated planning. The setting of a strategic vision for the city through a policy and regulatory framework can support the right development partner to deliver a Climate Positive Project.

Case study: London - Elephant & Castle^{viii}

Summary: The Elephant & Castle site sees the regeneration of the Heygate Estate, a post-war social housing area in central London.^{ix} In 2002, the Greater London Authority published the London Plan, setting out a vision for the development of the capital. In addition to establishing a spatial and regulatory framework for the development of more jobs and homes, the 2002 plan identified key areas for growth across London, including Elephant & Castle in the London Borough of Southwark.

The London Plan provided a clear framework within which Southwark Council could develop its policies and proposals for the Borough, and the Council established its own Southwark Plan. Following this, Southwark Council published a development framework for Elephant & Castle, that described where, how and what regeneration might take place, and included details of the Council's aspirations for jobs, housing, community safety, transport, education, shopping, health and more.^x

Results: In July 2007, as part of a competitive tender process, Southwark Council selected Lendlease as its preferred master development partner for the regeneration of Elephant & Castle; a Regeneration Agreement between the two parties was signed in July 2010. The London Borough of Southwark was heavily involved in the process as both the approving authority and the creator of the development framework. The regeneration then took a major step forward in 2012 when Lendlease submitted planning applications for its three sites and, in January 2013, received outline planning permission for the Elephant Park Masterplan.

The project has since achieved the second phase of recognition in its journey to become Climate Positive. The Climate Positive Roadmap projects a Climate Positive outcome and the reduction of more than 10,000 tCO₂e annually through the development of the project and implementation of its Climate Positive credits.

The Masterplan's Energy Reduction Strategy goes beyond current policy requirements to ensure that the most sustainable solutions are implemented on-site, aiming to maintain

flexibility to accommodate future developments in technology and fuel supply. The strategy also specifies the following goals:

- Doubling density with zero growth in emissions;
- Exceeding local policy requirements for carbon reduction by 30%;
- Ensuring efficient building design and technology to improve insulation and air circulation – leading to significant energy savings for residents;
- Building all homes with 100% controlled, responsibly-sourced FSC timber;
- Implementing an extensive biodiversity strategy, which will seek to restore nature on-site and help improve air quality;
- A masterplan with a strong focus on walking, cycling, and the use of public transport, with charge points for electric vehicles.

The project's energy solution is particularly innovative. Existing policy calls for buildings to connect to heat networks that will be delivered to Elephant Park through the construction of a highly efficient on-site Combined Heat and Power (CHP) system. The energy strategy will also utilise grid-injected biomethane as a carbon offset. Additionally, Climate Positive credits are to be generated through the expansion of a district heating network to connect at least 1,000 neighbouring homes. These homes will be equipped with smart meters to further reduce heat demand.

Reasons for success: The Elephant & Castle Climate Positive project is notable for its strong planning framework and the ability of a visionary developer to leverage that framework to raise ambition and innovation. Elephant & Castle also benefits from its central location with robust transit connectivity and supportive policies that for instance encourage development of and connection to heat networks.

When/why might a city adopt an approach like this: While the city does not control this project, the local borough was the approval agency and selected the developer as part of a competitive bid process. A similarly situated city could include procurement requirements emphasising low-carbon performance and seek a single developer to deliver a holistic, masterplanned solution.

3.4 Utilise procurement powers to promote Climate Positive transformation of industrial areas

When cities or government bodies own the land to be developed, there is a unique opportunity to use their procurement power to select the right partner and ensure their strategic development vision is delivered. When transforming former industrial areas, land ownership and procurement powers represent a great opportunity for cities to work with the private sector to reinvigorate sites and turn these areas into leading sustainable districts.

Case study: Sydney - Barangaroo South^{xi}

Summary: The New South Wales (NSW) government owns the 55-acre site, which is managed by the Barangaroo Delivery Authority. The Barangaroo Delivery Authority selected Lendlease to develop the first of three phases to transform the western edge of Sydney's central business district, a former container terminal, into a new financial services hub. Delivering a Climate Positive result from the development of the site was a requirement of the bidding process, as the NSW Government wanted to highlight Sydney as a gateway to Australia and deliver the first Climate Positive precinct of this size.

Barangaroo South, a 19-acre mixed-use development that will include over 500,000m² of commercial and residential space, is the first phase of this development. Energy efficient design is supported by low-carbon and renewable energy. Precinct-wide infrastructure for power, cooling, water and waste management provides greater efficiencies and economies of scale.

Results: The Barangaroo South project was the first to complete its Climate Positive Roadmap.^{xii} The site is currently under construction and 99% of construction waste is being recycled. To date, all three commercial office towers have been awarded 6-Star Green Star Office Design ratings by the Green Building Council of Australia, scoring an unprecedented 85 points, making them Australia's most sustainable high-rise office buildings. Innovative green leases are being utilised with commercial tenants to encourage and reward more sustainable operation of their buildings and to ensure their part in delivering the Climate Positive outcomes for the development.

Reasons for success: As Climate Positive was a requirement in the bidding process, the developer embraced sustainability, and is using novel strategies such as hiring an "eco-concierge" to support tenants in better utilising the buildings to deliver sustainable outcomes.

Why/when might a city adopt an approach like this: Cities can adopt this approach when they own a large and highly desirable parcel of land and are in a position to conduct a competitive procurement process. By controlling the land and setting a high bar for sustainability targets, the interested developers will come up with creative ideas in the procurement phase, and will deliver to the stipulations of procurement, thereby delivering a win-win result.

3.6 Maximise the potential of Climate Positive public-private partnerships

Sustainable development projects have the opportunity to positively influence the community and city beyond the project site. This potential can often be successfully unlocked through joint ventures with the private sector as a means of delivering a project.

Case study: *Jaipur - Mahindra World City*^{xiii}

Summary: Mahindra World City, Jaipur is a 3,000 acre integrated business city located in the fast growing Delhi-Mumbai Industrial Corridor. It is a Public-Private Partnership (PPP) between Mahindra Group and Rajasthan State Industrial Development and Investment Corporation (RIICO), and will be a home and workplace to over 300,000 people.

Results: While in the early phases of development, the project has completed its Climate Positive Roadmap^{xiv} that details the strategies and tactics to be pursued to achieve a Climate Positive outcome. Situated 25 km from Jaipur airport, Mahindra World City already houses more than 65 global and domestic multinational clients like Infosys, Wipro, JCB, Perto, Rexam and others, across its Special Economic Zone (SEZ) and Domestic Tariff Area (DTA) facilities.

As detailed in the Roadmap, Mahindra World City, Jaipur will have a net impact of reducing over 60,000 tCO₂e per year, compared to a business as usual baseline of over 800,000 tCO₂e.

Energy currently accounts for over 80% of the site's total emissions. The project is pursuing three strategies to reduce that impact:

- Efficient use of energy in buildings;
- Efficient use of energy for utilities; and
- Use of renewable energy (solar).

Embracing flexibility to accommodate changes in technology, the plans for the Mahindra World City call for a minimum of 30% savings from energy efficiency strategies and at least 50% of rooftops dedicated to solar.

The sustainable transport strategy for Mahindra World City utilises the 'Avoid, Shift and Improve' approach^{xv} for developing a sustainable transport plan. The sustainable transport strategy also incorporates a variety of non-motorised and public modes of transport, thereby reducing the overall CO₂ impact from transport on-site.

Reasons for success: The project adopted a holistic approach to sustainable development right from the master-planning stage and prioritised infrastructure investments that are projected to help deliver carbon savings. With both partners -- State Government and Mahindra World City - having a strong desire to deliver a sustainable new development, they were able to think creatively about how to expand the impact across the community and leverage additional investment opportunities, positioning them to better deliver a lower carbon outcome.

When/why might a city adopt an approach like this: This strategic approach will work well in a greenfield development or in cities that are growing rapidly, where there are opportunities to develop infrastructure at scale.

4 FURTHER READING

A number of external organisations, including C40 partners, have published best practice guidance in a number of sustainable development areas, including:

- C40's Climate Positive Framework; available at:
http://www.c40.org/networks/climate_positive_development
- The Ecodistricts Protocol; available at:
<http://ecodistricts.org/protocol/>
- The 2014 Transit Oriented Development Standard from ITDP; available at:
<https://www.itdp.org/tod-standard/>
- Star Communities Rating System; available at:
<http://www.starcommunities.org/rating-system/>
- 'Transformative Tools' that provides a regularly updated registry of urban sustainability ratings tools; available at:
<http://www.transformativetools.org/>

ⁱ [http://c40-production-](http://c40-production-images.s3.amazonaws.com/other_uploads/images/1_Climate_Positive_Framework_v1.1_Aug_2013.original.pdf?1390706960)

[images.s3.amazonaws.com/other_uploads/images/1_Climate_Positive_Framework_v1.1_Aug_2013.original.pdf?1390706960](http://c40-production-images.s3.amazonaws.com/other_uploads/images/1_Climate_Positive_Framework_v1.1_Aug_2013.original.pdf?1390706960)

ⁱⁱ The Climate Positive Framework is available at: <http://C40.org/>

ⁱⁱⁱ <https://www.itdp.org/what-we-do/eight-principles/>

^{iv} <http://www.starcommunities.org/rating-system/principles/>

^v <http://ecodistricts.org/protocol/>

^{vi} C40 (2015). *Case Study - Stockholm Royal Seaport*. Available at: http://www.c40.org/case_studies/stockholm-royal-seaport

^{vii} C40 Blog (2015). *Expert Voices: City of Stockholm's Tomas Gustafsson – "Let low carbon development be driver of green growth in cities"*. Available at: http://www.c40.org/blog_posts/expert-voices-city-of-stockholm-s-tomas-gustafsson-let-low-carbon-development-be-driver-of-green-growth-in-cities

^{viii} C40 (2015) *Elephant & Castle Climate Positive Roadmap Summary*. Available at

http://www.c40.org/networks/climate_positive_development

^{ix} C40 (2012). *C40 Blog - London's Evening Standard recognizes coming of Climate Positive Development Project in Elephant & Castle*. Available at: http://www.c40.org/blog_posts/london's-evening-standard-recognizes-coming-of-climate-positive-development-project-in-elephant-castle

^x <http://www.elephantandcastle-lendlease.com/>

^{xi} *Barangaroo South Sustainability Plan*. Available at <http://www.barangaroosouth.com.au/about/sustainability>

^{xii} *Barangaroo South Climate Positive Roadmap Summary*. Available at

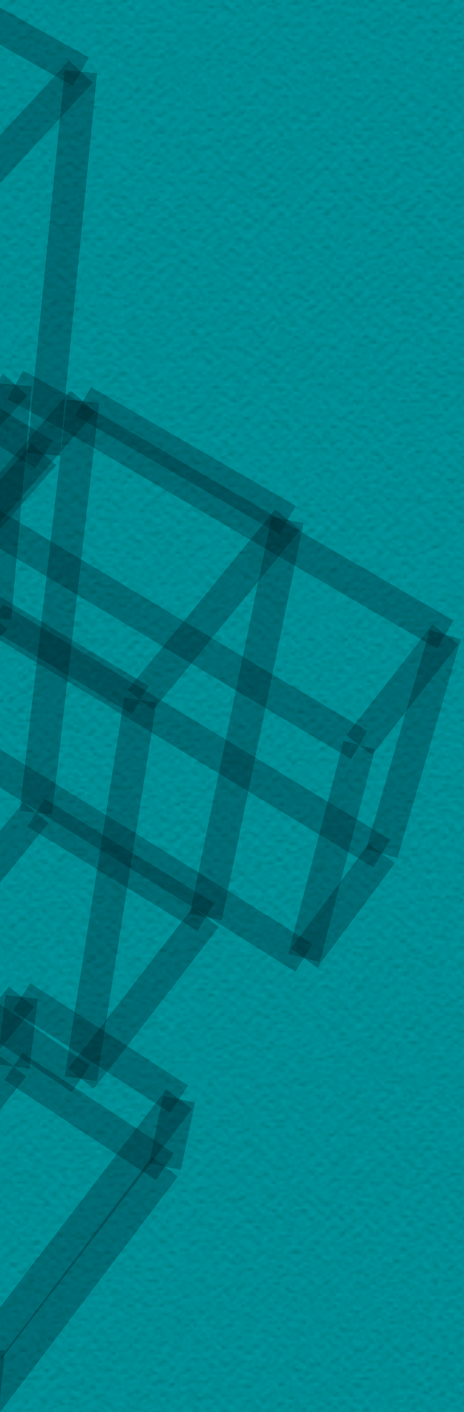
http://www.c40.org/networks/climate_positive_development

^{xiii} Jaipur & C40 (2015). *Mahindra World City, Jaipur: Climate Positive Roadmap Summary*. Available at:

http://www.c40.org/networks/climate_positive_development

^{xiv} Jaipur (2014). *Mahindra World City, Jaipur: Climate Positive Roadmap*. Available at: http://c40-production-images.s3.amazonaws.com/other_uploads/images/271_Mahindra_World_City_Jaipur_Climate_Positive_Roadmap.original.pdf?1433445204

^{xv} http://www.sutp.org/files/contents/documents/resources/E_Fact-Sheets-and-Policy-Briefs/SUTP_GIZ_FS_Avoid-Shift-Improve_EN.pdf

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