# City of Gothenburg Green Bond Framework

September 2022

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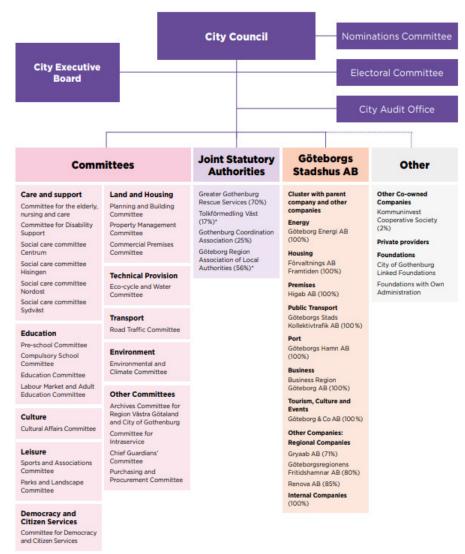


#### **About us**

The City of Gothenburg is a municipality on the west coast of Sweden, strategically located between Oslo and Copenhagen. With a population of almost 600,000, Gothenburg is Sweden's second largest city and home to Scandinavia's largest port and a wide range of industries. The city needs to grow rapidly to make space for almost 700,000 residents by 2035 – 120,000 more than today. Over the next 15 years there are plans to build 80,000 new homes and workplaces. Building a city for the next generation demands safe and sustainable environments, the expansion of public transport, and space for culture, education, service and social care. The city must develop in a way that is sustainable – ecologically, economically and socially.

Swedish municipalities enjoy extensive fiscal autonomy and can issue bonds to fund the delivery of public services. The City of Gothenburg is responsible by law for providing vital services such as healthcare, schooling and social care. Other mandatory responsibilities include libraries, planning and building issues, health and environmental protection, waste, water and wastewater management, energy supply, public transport and emergency services. The City also provide voluntary services that are of value to society, such as cultural and recreational activities, public housing, park maintenance and other technical services.

The City of Gothenburg is the largest employer in Gothenburg and employs more than 50,000 people across a large variety of job roles in the districts, departmental administrations and municipal companies. The City's shared mission is to create a good quality of life for all the city's residents and to develop Gothenburg for the future.



\*Excluded from combined accounts

Figure 1: The Municipal Group of the City of Gothenburg: consisting of committees in the municipal sector that constitutes a legal entity; joint statutory authorities comprising rescue services, coordination associations and interpreting services; and a company sector under the parent company Göteborgs Stadshus AB.

# City of Gothenburg

### Sustainable city - open to the world



The City of Gothenburg has been committed to sustainable development for a long time with a clear aim to create an inclusive, green and dynamic city that is open to the world. The City is determined to be one of the world's most progressive cities when it comes to tackling environmental issues and climate change. The City's environmental efforts have been recognized several times over the years. The City was awarded by environmental company Ragn-Sells as the "Circular Forerunner of 2022" thanks to its purchasing and procurement policy that contributes to lower emissions through requirements on recycled materials and/or circular solutions. In April 2022 the City was selected by the EU Commission as one of the 100 EU cities that will participate in the EU Mission for 100 climate-neutral and smart cities by 2030, the so-called Cities Mission. Other credits include a number one ranking in the Global Destination Sustainability Index 2016, 2017, 2018, 2019 and 2021. The award goes to the top performer amongst participating destinations in order to highlight the destination's exemplary commitment and efforts to becoming as sustainable as possible. In 2019, the City also won an award from the Swedish Environmental Protection Agency for its perseverance and long-term perspective related to waste prevention across different sectors of the City.

The City of Gothenburg was the first city in the world to issue a green bond back in 2013 and the instrument has become an important tool to mobilise capital to reach the City's climate and environmental goals. In April 2022, the City also became the first municipality in Sweden to link a revolving credit facility (RCF) with sustainability goals. The RCF is linked to four ambitious goals:

- (i) reduced energy consumption in the City's own premises
- (ii) district heating production solely from renewable sources by 2025
- (iii) fossil free vehicle fleet by 2023, and
- (iv) implementing the strategic measures planned related to achieving the City's ambition of having zero areas classified as "particularly vulnerable" in accordance with the Swedish police definition.

The goals will be monitored on a yearly basis and depending on the City's success of reaching them, the interest rate will either increase or decrease.



For the past 15 years, the City budget has focused on three dimensions of sustainability – economic, ecological and social sustainability. Collaboration for achieving the sustainability objectives for these dimensions spans the entire organisation and include both the municipal and the municipality owned companies.

#### **Social dimension**

"Equal Gothenburg - Making the entire city socially sustainable" is the City of Gothenburg's long-term commitment aimed at reducing the differences in living conditions in Gothenburg. Differences in living conditions and health between different groups and in different areas have increased significantly in the city in recent years and the gap is widening. Progress towards the goal is guided by two documents: a programme and a plan, covering four focus areas and with key actions to be achieved. The target areas include (i) Create a good start in life and good conditions throughout the school years, (ii) Create preconditions for employment, (iii) Create health-promoting and sustainable environments and communities, and (iv) Create preconditions for participation, influence and trust. For each area one of two directors have been appointed with responsibility to take the work forward across the City.

#### **Economic dimension**

Anti-corruption is a key priority for the City when it comes to economic sustainability and governance. The City works actively to combat corruption and irregularities by continuously strengthening governance, control and transparency across all operations. Governing documents that regulate this area include the City's Policy and guidelines against bribery, Policy and guidelines on representation and gifts, and Guidelines on purchase and procurement. A whistleblower function has been in place since long, enabling anonymous reporting of elected representatives, managers in leading positions or individuals in other key positions within the organisation. The City also has a business strategic programme which guides how the City should work with business related issues in a concrete, long-term and targeted manner, including among others a target to decouple  ${\rm CO}_2$  emissions from growth in the region.

#### Social

Working conditions,
Health, Safety,
Human rights
Racism, Discrimination,
Equality, Integrity,
Warfare and security,
etc

#### Environmental

Climate change, Access to water, Waste management, Hazardous chemicals, Air pollution, Biodiversity, etc.

#### Economic

Poverty, Trade barriers, Bribery, Corruption, Pay, Intellectual property rights, Tax evasion, etc.

Figure 2: The City of Gothenburg is governed based on three sustainability dimensions: social, environmental and economic sustainability – all of which are mutually dependent on one another.



#### **Environmental dimension**

The environmental dimension of the sustainable development of Gothenburg is presented in the Environment and Climate Programme. The objective of the programme is to transition Gothenburg to an environmentally sustainable city by 2030 and provides guidance and a shared platform for the City's strategic long-term climate and environmental work. The starting point of the Programme is the UN's Sustainable Development Goals Agenda 2030, Sweden's national environmental goals system, the Paris Agreement and its 1.5 °C target, and the challenges that Gothenburg as a community and the City of Gothenburg as an organization face in order to make the transition to an environmentally sustainable society.

The programme is outlined in Figure 3 and contains three environmental goals that addresses nature, climate and people. Each environmental goal has subgoals, with indicators that will be measured against target values specifying what needs to be achieved for a given year. Follow-up and performance against the goals are monitored by the Environmental Administration through the City's environmental management system and will be reported to the City Council every two years. The overarching challenge to reach the goals of the programme is to implement measures that require cross-cutting cooperation. Therefore, the Programme also incorporates seven cross-cutting strategies covering all the environmental goals and that will drive and coordinate the work on the Programme.

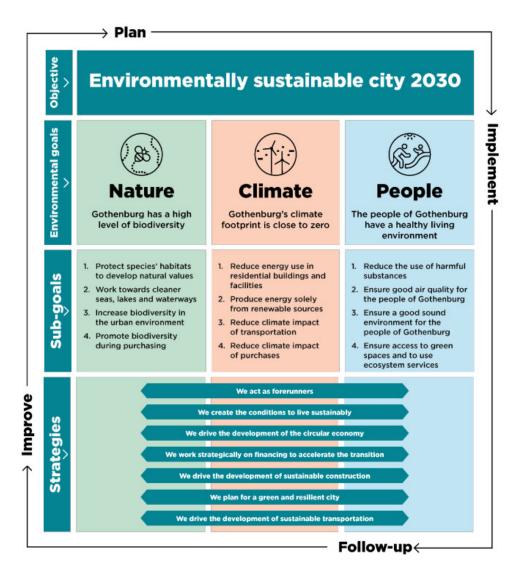


Figure 3: A summary image of the objective, the environmental goals, sub-goals and strategies of the Environment and Climate Programme. The picture is framed by the environmental management system's classification, which is an important part in the implementation of the programme. The goals in the image are shortened.



### 2030 Agenda and the Sustainable Development Goals

In 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development aiming to protect the planet, eradicate poverty and generate good welfare for everyone by 2030. The Agenda is made up of 17 global goals for sustainable development that are sub-divided into 169 targets. Each year, the City of Gothenburg conducts an annual survey on how municipal governance, in the form of budget goals, programmes and plans, relates to the global goals. An illustrative example of this process is displayed in Figure 3, linking the SDGs with the budget goals for 2021. More information on how the City of Gothenburg work contributes to the SDGs can be found <a href="here">here</a>.

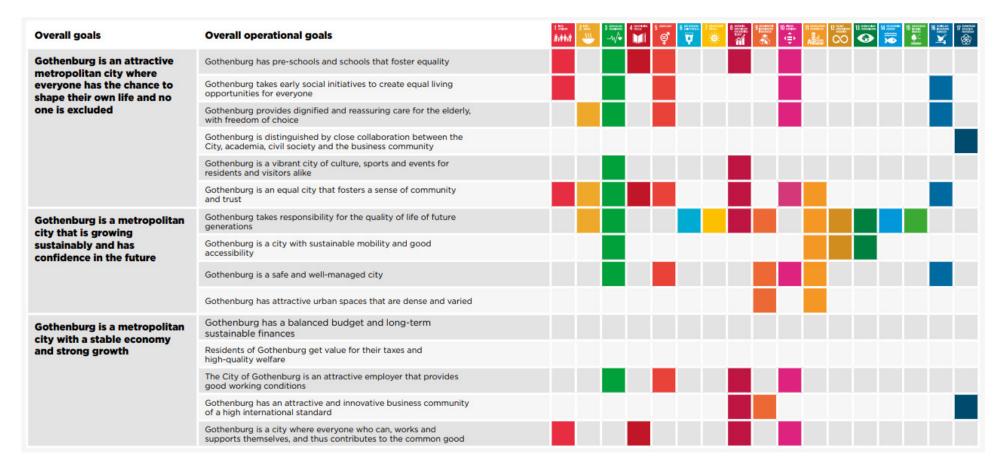


Figure 4: The City of Gothenburg maps annual budget goals against the global goals on sustainable development.

# The City of Gothenburg's Green Bond Framework

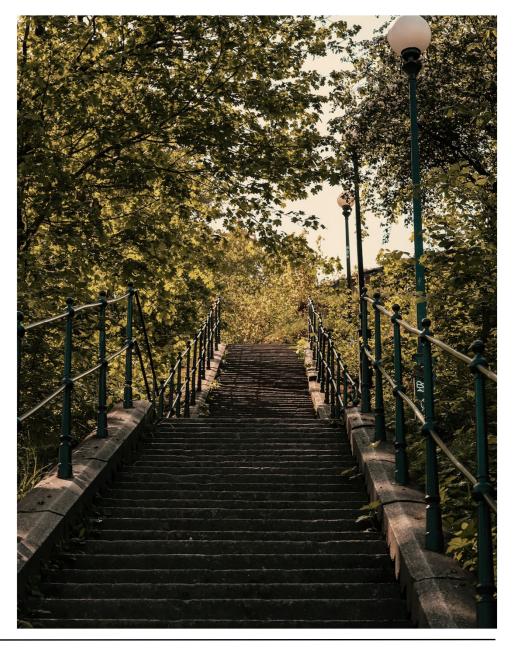


By setting up this document (the Green Bond Framework or "Framework"), the City of Gothenburg aims to mobilise debt capital to support the transition to an environmentally sustainable city by 2030. The City has been committed to sustainable finance for a long time and was the first city in the world to issue a green bond in 2013. In April 2022, Gothenburg became the first city to link sustainability targets with a loan facility. The City was also one of the founders of the Nordic Public Sector Issuers' Position Paper on Green Bond Impact Reporting, first published in 2017 with the aim of providing guidance on impact reporting for Nordic public sector issuers.

The sustainable finance market continues to evolve with new standards and regulations such as updated versions of the Green Bond Principles, published by the International Capital Market Association (ICMA), and the EU Taxonomy Regulation. The City of Gothenburg strives to follow best market practice and projects financed under this Framework will strive to contribute to at least one of the six environmental goals of the EU Taxonomy. The Framework is developed to align with ICMA's Green Bond Principles published in 2021. The four core components of the Principles along with the recommendation of External Review form the basis of this Framework:

- 1) Use of Proceeds
- 2) Process for Project Evaluation and Selection
- 3) Management of Proceeds
- 4) Reporting
- 5) External verification

The Framework allows the City of Gothenburg to raise capital through green bonds and green commercial paper. The terms and conditions of the underlying documentation for each Green Bond issued by the City shall provide a reference to this Framework. The City has worked with Danske Bank to develop the Framework and CICERO Shades of Green has provided a second party opinion, which is publicly available at the City's website. The City of Gothenburg will assign an independent external party to annually review the management of proceeds.



### 1. Use of Proceeds: Definitions



### Allocation of net proceeds

An amount equal to the net proceeds of the Green Bond will finance or refinance, in whole or in part, investments undertaken by the City of Gothenburg that are in accordance with the Green Project categories defined in the next pages (Green Projects), in each case as determined by the City of Gothenburg. The Green Projects will form a portfolio of assets eligible for financing and refinancing by Green Bonds. The overarching goal of the Eligible Projects is to contribute to the transition to an environmentally sustainable city by 2030.

### Financing and refinancing

An amount equal to the net proceeds can finance both existing and new Green Projects financed by the City of Gothenburg. New financing is defined as allocated amounts to Green Projects financed within the reporting year, and refinancing is defined as allocated amounts to Green Projects financed prior to the reporting year. The distribution between new financing and refinancing will be reported in the City of Gothenburg's annual Green Bond Impact Reporting.

### **Exclusions**

The proceeds from the City of Gothenburg's Green Bonds will not be directly allocated to projects for which the purpose is fossil energy production, nuclear energy generation, weapons and defence, potentially environmentally harmful resource extraction (such as rare-earth elements or fossil fuels), gambling or tobacco.

### **EU Taxonomy alignment**

The EU Taxonomy is a classification system, establishing a list of environmentally sustainable economic activities, with the aim of scaling up sustainable investments. The Taxonomy Regulation states that an activity must make a substantial contribution to at least one of the six environmental objectives set out by the EU, while it does not cause significant harm towards the other five objectives and meets minimum social safeguards. The first Delegated Act of the Taxonomy – the Climate Delegated Act - started to apply in January 2022 and defines the technical screening criteria for making a Substantial Contribution to Climate Change Mitigation and Climate Change Adaptation as well as criteria for Do No Significant Harm (DNSH) to the other objectives. In March 2022, the Platform on Sustainable Finance (PSF) published its final recommendations to the European Commission on technical screening criteria for the remaining four environmental objectives, which are subject to review by the Commission.

The City of Gothenburg acknowledges the importance of uniform requirements for activities to qualify as sustainable and strives to align the Green Use of Proceeds of the Framework with the Taxonomy to the extent possible. This implies that the eligibility criteria of the Green Project categories are based on, where relevant and applicable, the Substantial Contribution criteria for Climate Change Mitigation and the PSF's recommendations for the remaining objectives.









Green Project Category	Eligibility criteria	EU Objective	SDGs
	New buildings		
	<ul> <li>New residential buildings (completed after 1 January 2021 and onwards) that have, or are designed to achieve, a primary energy demand of 60 kWh/m<sub>2</sub> per year, corresponding to an energy demand that is at least 20% better than the level required by the national building regulation (BBR 29). All new buildings are subject to testing for airtightness and thermal integrity as well as for calculating the life-cycle Global Warming Potential for each stage in the life cycle of the building.</li> <li>New premises (completed after 1 January 2021 and onwards) that have, or are designed to achieve, a primary energy</li> </ul>		7 AFFORDABLE AND OLLAN ENERGY
	demand of 50 kWh/m <sub>2</sub> per year, corresponding to an energy demand that is at least 30% better than the level required by the national building regulation (BBR 29). All new buildings are subject to testing for airtightness and thermal integrity as well as for calculating the life-cycle Global Warming Potential for each stage in the life cycle of the building.		
	Existing buildings	Climate	11 SUSTAINABLE CITIES AND COMMUNITIES
Green and energy	<ul> <li>Residential buildings and premises (completed before 1st of January 2021) qualifying within the top 15% most energy efficient buildings of the national building stock in terms of Primary Energy Demand, determined through a specialist study.<sup>1</sup></li> </ul>	change mitigation	A⊞
efficient buildings	Major renovations		12 RESPONSIBLE CONSUMPTION AND PRODUCTION
ounumgs	<ul> <li>Renovation of existing buildings that lead to an overall reduction in primary energy demand per square meter and year (kWh/m<sub>2</sub>/year) by at least 30% compared to the pre-investment situation.</li> </ul>		13 CLIMATE ACTION
	Installation, maintenance and repair of:		
	Energy efficiency equipment (energy efficient windows, doors and light sources, HVAC), instruments and devices for measuring, regulating and controlling the energy performance of buildings, charging stations for electric vehicles in buildings (and in parking spaces attached to buildings), and/or renewable energy technologies (such as solar, heat pumps, wind turbines, storage units and heat exchanger/recovery systems).		Ť
	Buildings implementing circular economy models for reduced climate impact		
	Construction or renovation of buildings that lead to a 50% <sup>2</sup> reduction of the climate impact from the materials and construction process compared to projects constructed by the City prior to 2020. The threshold will be met by implementing a combination of innovative, circular and biobased solutions, such as using low-carbon and/or reused/recycled materials.	Circular economy	

¹ The City of Gothenburg's method for assessing this criterion is based on a <u>study</u> published by Fastighetsägarna (via consultancy CIT energy management) which has interpreted what the EU Taxonomy's 15% most energy efficient buildings-criterion means in the Swedish context in terms of thresholds on energy use for different building categories. According to the study, multi-family apartments with a primary energy demand below 75 kWh/m²/year and schools below 98 kWh/m²/year qualify within the top 15% and these thresholds will be applied as criteria by the City of Gothenburg.

<sup>&</sup>lt;sup>2</sup> As an example, for new residential buildings, this translates into the project not having emissions exceeding 200 kg CO<sub>2</sub>e/m<sup>2</sup> per gross area from the material and construction process of the building, which equals half the CO<sub>2</sub> impact compared to average projects constructed prior to 2020.



#### The City of Gothenburg targets a healthy and climate-adapted built environment with reduced impact on climate and biodiversity

If the world is to be successful in limiting global warming to 1.5 degrees, global emissions will have to be reduced by 7.6 percent between the years 2020 and 2030 and reach net zero emissions by 2050. Success will require fast and far-reaching changes in society. Gothenburg aims to reach a carbon footprint close to zero by 2030 and efforts should not only reduce emissions locally but also nationally, in Europe and the world. A key sub-goal to deliver on this will be to reduce the energy use of the City's residential buildings and facilities. By 2030, the primary energy consumption per inhabitant should have been reduced by at least 30% compared to 2010. The goal covers the energy consumption in residential buildings, facilities, public services and businesses and will require improved energy efficiency in existing residential buildings and facilities and constructing new buildings with a high energy performance. Another key sub-goal that will contribute to the City reaching a climate footprint close to zero is to reduce the GHG emissions from the City's purchases from a life-cycle perspective by at least 90% by 2030. The City is one of Sweden's largest buyers with purchases of about 25 billion annually of which construction accounts for almost half of the volume. The target covers all purchases, including purchases related to building materials and construction of new buildings and reach the 2030 target, emissions from new and renovated buildings will be reduced by 50% already by 2025. Framtiden Byggutveckling, responsible for the development of new residential buildings in the city, and Lokalförvaltningen, that develops new premises, has established carbon budgets that will form the basis for all purchases related to new development projects in order for them to be constructed with 50% less CO<sub>2</sub>e emissions compared to conventional development projects executed prior to 2020. Halving the CO<sub>2</sub>e emissions compared to 2020 means for example not exceeding 200kg per gross floor area going forward for residential

The physical living environment has an important impact on people's health and well-being. A key environmental goal of the City is therefore to strengthen the environmental health factors that affect people positively and reduce the effect of factors that have a negative impact. The City's goals on this include, for example, increasing residents' access to green spaces and by 2030, stop using phase-out harmful substances in products and goods. To reduce the exposure to harmful substances in buildings, the City uses the Swedish product assessment system "Byggvarubedömningen" for assessing and selecting construction materials and products in the development and renovations of buildings. The City also take into account people's exposure to noise during urban planning and in residential buildings and pre-school playgrounds.

All new development projects are subject to adhering to the City's overall plan for the development of land and water areas in Gothenburg. In addition to providing an overall picture of how the city will be developed in the future, it lays out goals and strategies on how to adapt new buildings, roads and infrastructure to climate risks expected in the medium and long term. The plan maps out areas exposed to rising sea levels, higher flows in larger watercourses and heavy rain, which forms the basis for the City's goals and strategies on climate change adaptation. Moreover, urban development is impacting on biodiversity and construction and civil engineering contractors are required to meet the City's criteria on promoting a meaningful impact on biodiversity. This could for example include creating meadows or sandy areas for wild bees and other pollinators when developing new areas.

Reduce GHG emissions linked to production within the geographic area of Gothenburg by 10.3% annually until 2030, corresponding to an 80% reduction between 1990 and 2030

Reduce GHG emissions linked to goods and services consumed by the residents in Gothenburg by 7.6% annually until 2030, corresponding to a 64% reduction between 2017 and 2030

Reduce the primary energy consumption by at least 30% per inhabitant by 2030 compared to 2010

Reduce GHG emissions from the construction of new buildings and from renovations of existing buildings by 50% by 2025 and by 90% by 2030, using projects developed prior to 2020 as baseline



Green Project Category	Eligibility criteria	EU Objective	SDGs
Water and	<ul> <li>Water collection, treatment and supply systems</li> <li>Construction and extension of water collection, treatment and supply systems that have a net average energy consumption below 0.5 kWh per cubic meter produced water supply.</li> <li>Renewal of water collection, treatment and supply systems that lead to (i) a reduction in the net average energy consumption per year by at least 20% per m³ water produced compared to the pre-investment energy use level³ in the area where the renewal works are carried out, or (ii) a reduction in the leakage level by at least 20% compared to the pre-investment leakage level of the area where the renewal works are carried out.</li> <li>Wastewater collection and treatment</li> <li>Renewal of sewer networks or treatment plants that lead to a reduction in the net average energy consumption per year⁴ by at least 20% compared to the pre-investment energy use level³ in the area where the renewal works are carried out.</li> <li>Construction, renewal or installation projects that lead to a reduction in CO₂e emissions by at least 20% compared to the pre-investment emission level of the area where the construction/renewal works are carried out or that are subject to installation of new technology.</li> </ul>	Climate change mitigation	G CLEAN WATER AND CANITATION  7 ATTOROGALE AND CLEAN CHERY
wastewater management	<ul> <li>Pollution prevention and control in the water and wastewater system</li> <li>Technologies and solutions leading to a reduced amount of pollutants, such as micropollutants, in the water supply system. These solutions could include for example ultrafiltration systems, which often have co-benefits in terms of improving the system's resilience against expected future climate changes such as deteriorated water quality in lakes and watercourses that will require additional efforts to maintain adequate drinking water quality.</li> <li>Technologies and solutions leading to reduced discharges of pollutants to the recipients of the wastewater, protecting watercourses, lakes and sea from pollutants such as nitrogen, phosphorus and microplastics. These solutions could include measures that target reduced infiltration of additional water in the wastewater system and improved management of excessive stormwater resulting in overflows in the system.</li> <li>Sustainable urban drainage systems (SUDS) leading to a retention of rain water and/or improvement in its quality in urban areas by, for example, reducing rainfall-runoff and corresponding combined sewer overflows, increasing rainwater infiltration and thus improving the water balance, or providing valuable habitats and thus supporting biodiversity. Measures may include green roofs, urban tree planting, green alleys and streets, infiltration ditches etc.</li> </ul>	Sustainable use and protection of water and marine resources	14 USE SECON  13 CLIMATE  ACTION

<sup>&</sup>lt;sup>3</sup> Averaged over three years.

<sup>&</sup>lt;sup>4</sup> Calculated in kWh per population equivalent of the waste water collected or effluent treated.

<sup>5</sup> The construction of SUDS is integrated in the urban drainage and wastewater treatment system, where relevant, and will strive to estimate the percentage of retained rainwater, removed urban runoff pollutants and/or percentage of runoff reduction peak flow.



### The City of Gothenburg works to promote cleaner seas, lakes and waterways



Good water status in seas, lakes and waterways is an environmental quality standard that Sweden's water management aims to achieve by 2027. Good water status consists of several quality factors, such as the state of the riverbed, if there are migration barriers, and the extent to which nutrient discharges affect aquatic life through over-fertilization. Only a few water bodies in Gothenburg have good status today but a comprehensive and detailed plan on actions to reach clean water and healthy aquatic environments, in line with the national target for 2027, have been developed. Reaching the target is also essential for welfare, ecosystem services and public health in the city.

The growing population and urban development of Gothenburg affects the water environments and creates both challenges and opportunities for the City to reach its water-related environmental goals. The water quality must be managed and protected from negative impacts while also allowing for the development of new homes, workplaces, infrastructure and recreation. Another major challenge in the growing city is the management of society's wastewater and stormwater. Gothenburg's sewage system is heavily loaded with additional water in the form of stormwater, drainage water, infiltrating groundwater, surface water and drinking water, resulting in large flow variations and challenges for drainage and treatment of wastewater. The consequence of this is comparatively high emissions of organic materials and nutrients to the system's recipients which need to be reduced. Securing drinking water and water supply in a changing climate and managing heavy rain and floods are also challenges the City is facing. Addressing the above challenges in the coming years will require substantial investments in the water and wastewater infrastructure. These investments will include the implementation of climate-smart solutions for the water and wastewater treatment processes as well as investments for a sustainable management of wastewater and stormwater. The City will also integrate more blue and green spaces to reduce the amount of stormwater entering the water system as well as to offset the effects of climate change and provide the people of Gothenburg with healthier environments.

#### Proportion of surface water bodies with good ecological status

By 2030, reduce the average amount (over a five-year period) of wastewater overflows and discharges of nitrogen and phosphorus to recipients other than Göta Älv by 25%

By 2030, reduce the average value (over a five-year period) of discharge of nitrogen and phosphorus from the sewage system (Ryaverket and overflow of wastewater) to Göta Älv



Green Project Category	Eligibility criteria	EU Objective	SDGs
Clean transportation	Clean transport and mobility  The purchase, financing, renting and leasing of the following transport modes:  Urban or suburban passenger transport with either zero tailpipe CO <sub>2</sub> emissions, such as electric or hydrogen buses and trams, or that are fossil-free (fuelled by biogas).  Passenger cars operated on electricity or biogas.  Electric 2- and 3-wheel vehicles and quadricycles, such as bicycles, motorcycles, mopeds and minicars.  Light- and heavy-duty vehicles and machines that are zero tailpipe CO <sub>2</sub> emissions (electric or hydrogen) or fossil-free (fuelled by biogas or Swedish Hydrogenated Vegetable Oil (HVO) 100).  Vessels for passenger or freight transport on sea or coastal waters with zero tailpipe CO <sub>2</sub> emissions, such as ferries.  Retrofit and upgrade of vessels to electric drive for the transport of freight or passengers on sea or coastal waters, and of vessels required for port operations and auxiliary activities. The retrofit/upgrade should lead to a reduction in the fuel consumption by at least 10%.  Infrastructure supporting clean transportation  The construction, modernisation and maintenance of transport infrastructure, including:  Infrastructure required for zero-emissions road transport and for operating urban transport: such as electric charging points, electric grid connection upgrades, hydrogen fuelling stations, electric road systems, terminal infrastructure for loading, unloading and transhipment of goods, and signalling systems for trams and rail systems.  Infrastructure required for zero tailpipe CO <sub>2</sub> operation of vessels or the port's own operations as well as infrastructure dedicated to transhipment between modes: such as electricity charging, biofuels or hydrogen-based refuelling stations, and shore-side electrical power and/or district heating for vessels at berth.	Climate change mitigation	9 MONSTRY INMEDIATION AND REPARABILITIES 11 MINIMARIA COTES AND COMMUNITIES 13 CHIRATE ADTORNAL TORNAL TORN



#### The City of Gothenburg works to reduce the climate impact of transport

Road traffic is the second largest source of geographical greenhouse gas emissions in Gothenburg, after the refineries. As a large city, Gothenburg has greater possibilities to increase walking, cycling and public transport, as well as transitioning to more efficient freight transport, compared to Sweden as a whole. The sub-goal related to transport emissions is therefore set higher than the corresponding national goal. The sub-goal means that the climate impact from transportation will be reduced by at least 90 percent by 2030, and that the volume of motorized traffic will be reduced by 25 percent. Moreover, road traffic in Gothenburg is the single largest contributor to high levels of air pollution and high noise levels where people live. Road traffic therefore needs to be reduced and walking, cycling and public transportation need to be prioritized in the planning and management of the city to create a healthy living environment for the people of Gothenburg. Reaching the sub-targets will require a shift from car travel to walking, cycling and public transportation, and freight transport from road to rail and waterborne transport. Furthermore, the use of fossil fuels needs to stop and be replaced by different renewable fuels and electric or hydrogen vehicles. Renewable fuels will not be sufficient for the same volume of road traffic as today, nor will they be sufficient for shipping, aviation, work machinery and other sectors. That is why the volume of traffic needs to be reduced as well.

The City of Gothenburg also targets a fossil-free fleet by 2023. The City's administrations and companies have different strategies for different types of vehicles to achieve the target. The purchasing policy of Göteborg's Stad Leasing AB, responsible for purchasing passenger and light-duty vehicles used within the City, requires all new passenger cars to be powered by electricity or biogas only - hybrid cars are excluded. For light-duty vehicles, the supply of electric or biogas fuelled vehicles are still limited compared to passenger vehicles and the goal of a fossil-free fleet thus allows for HVO100 for heavier vehicles (i.e. other than passenger cars). This is in line with the definition of "Fossil Free Sweden" – the Swedish government initiative aiming to make Sweden one of the world's first fossil-free welfare nations. The municipality's administrations and companies are responsible for ensuring that the HVO vehicles only use HVO100 as fuel.

The City's fleet of heavy-vehicles includes heavy-duty vehicles and machines of which about 70% comprise garbage trucks operated by Renova AB, the City's waste and recycling company. Renova's target is for all garbage trucks used in the urban area of Gothenburg to be operated on electricity or hydrogen. The remaining part of the fleet consists mainly of buses and heavy work machines such as wheel loaders, excavators and special vehicles for tram maintenance. Reaching the fossil-free target for these vehicles includes electric/hydrogen drive when feasible, otherwise HVO100.

Reduce GHG emissions linked to production within the geographic area of Gothenburg by 10.3% annually until 2030, corresponding to an 80% reduction between 1990 and 2030

Reduce GHG emissions linked to goods and services consumed by the residents in Gothenburg by 7.6% annually until 2030, corresponding to a 64% reduction between 2017 and 2030

By 2030, reduce GHG emissions from transportation in Gothenburg by 90% compared to 2010

By 2030, reduce the volume of traffic in terms of km driven by all types of motorized road vehicles per weekday in the city by 25% compared to 2020

By 2023, 100% of the City of Gothenburg's vehicles are fossil-free



Green Project Category	Eligibility criteria	EU Objective	SDGs
	Wind power		
	The construction of facilities generating electricity from onshore or offshore wind power.		
	Solar power		
	<ul> <li>The construction of facilities generating electricity using solar photovoltaic technology, concentrated solar power technology or solar thermal technology.</li> </ul>		
	Bioenergy		
	The construction of facilities producing or co-generating heat/cool and power from bioenergy and facilities generating electricity from bioenergy. The facilities may include bioenergy carbon capture and storage (BECCS) facilities and will use waste-based biomass, biogas or bioliquids exclusively from sustainable sources. <sup>6</sup>		
	<ul> <li>Manufacture of biogas, biochar or biofuels for use in transport and of bioliquids, based on sustainably sourced agricultural and forest biomass<sup>6</sup>.</li> </ul>		7 AFFORDABLE AND GLEAN ENERGY
Renewable	Waste heat	Climate	- <b>Ö</b> -
energy	The construction of facilities producing heat/cool using waste heat.	change mitigation	13 CLIMATE ACTION
	Geothermal heating/cooling systems		
	<ul> <li>The construction of geothermal technologies producing or cogenerating heat/cool and power or electricity generation facilities based on geothermal energy. Life-cycle GHG emissions from the production will be lower than 100gCO<sub>2</sub>e/kWh.</li> </ul>		
	Transmission and distribution infrastructure for hydrogen and biofuels		
	<ul> <li>Construction of new transmission and distribution networks dedicated to hydrogen or biofuels.</li> </ul>		
	<ul> <li>Retrofit of gas transmission and distribution networks that enables the integration of hydrogen and biofuels in the network.</li> </ul>		
	Storage of renewable energy		
	Storage facilities for electricity, thermal energy and hydrogen, for the purpose of managing the intermittency of renewable energy.		

<sup>&</sup>lt;sup>6</sup> In the evaluation of all bioenergy projects, the environmental and social impact of supply chain elements are taken into account. Biomass/fuel deriving from sources of high biodiversity that competes with food sources is excluded (where applicable, compliant with the EU Renewable Energy Directive). Sustainability of the supply chain is preferably proven by a certification (PEFC).



Green Project Category	Eligibility criteria	EU Objective	SDGs
Energy efficiency	<ul> <li>Clean, efficient and reliable networks</li> <li>Construction of transmission and distribution infrastructure or equipment. Infrastructure dedicated to creating a direct connection or expanding an existing direct connection to a power plant that is more greenhouse gas intensive than 100 gCO<sub>2</sub>e/kWh measured on a life cycle basis is not eligible.</li> <li>Energy efficient district heating distribution, including pipelines and associated infrastructure, that complies with the EU Energy Efficiency Directive<sup>7</sup>. System modifications to lower temperature regimes or advanced pilot systems (such as control and energy management systems and Internet of Things) are eligible without a specific threshold.</li> <li>Electric heat pumps that (i) meet energy-efficiency requirements in the EU Eco-design Framework Directive and is (ii) below the refrigerant threshold (GWP) of 675.</li> <li>Information and communications technology enabling the effective management and distribution of energy, such as smart grid technology.</li> <li>Energy efficient municipal activities</li> <li>Energy efficiency measures in various municipal activities, such as exchanging traffic lights to LED. Investments should improve energy efficiency in the respective area by at least 30 per cent.</li> </ul>	Climate change mitigation	7 AFFORDABLE AND OLDAY DICKEY  11 SUCTAINABLE CITES AND COMMUNITIES  9 MOUSTRY, INVIDATION  9 ACOUSTRY, INVIDATION  13 CLIMATE  ADDITION  13 CLIMATE

<sup>&</sup>lt;sup>7</sup> Compliance means that the system uses at least 50% renewable energy or 50% waste heat or 75% cogenerated heat or 50% of a combination of such energy and heat.



#### The City of Gothenburg promotes the transition to an efficient and renewable energy production



Gothenburg is in a good position to develop an energy system with minimal climate impact. With a well-developed district heating network and the City of Gothenburg as a producer of district heat, district cooling and electricity, the City has considerable control of the necessary transition of the energy system from fossil fuels to renewables. The City of Gothenburg, through Göteborg Energi AB, owns several heating and power plants that produce both heat and electricity by partly using fossil fuels. The fossil fuel-fired generation plants must be decommissioned or converted to use renewable fuels by 2025 in order to reach the goal. A challenge with such a transition is the investments necessary and that it needs to be done in a relatively short time.

At the same time, the City needs to work with energy efficiency and the sub-goal to reduce the energy use in residential buildings and facilities in order to facilitate the transition to a more sustainable energy system. The transition to renewable production and an increased supply of electricity requires substantial investments in renewable energy solutions and in the electricity network capacity.

Reduce GHG emissions linked to production within the geographic area of Gothenburg by 10.3% annually until 2030, corresponding to an 80% reduction between 1990 and 2030 Reduce GHG emissions linked to goods and services consumed by the residents in Gothenburg by 7.6% annually until 2030, corresponding to a 64% reduction between 2017 and 2030

By 2025, the electricity and district heating produced in the production facilities of Göteborg Energi AB should be 100% based on renewable fuels

By 2030, reduce the primary energy consumption by at least 30% per inhabitant compared to 2010



Green Project Category	Eligibility criteria	EU Objective	SDGs
Climate change adaptation	<ul> <li>Adaptation solutions in buildings, infrastructure and the city as a whole</li> <li>Adaptation solutions (physical and non-physical) in buildings and infrastructure that substantially reduce the most important physical climate risks<sup>8</sup> that the infrastructure is exposed to.</li> <li>Adaptation solutions (physical and non-physical) that substantially reduce the most important physical climate risks<sup>8</sup> that the city is exposed to, such as flood defences, management of rising water levels and extreme weather research and monitoring systems.</li> </ul>	Climate change adaptation	3 GOOD HEALTH AND WELL DEING  11 SUSTAINABLE CITES 13 ACTION 13 CLIMATE 13 ACTION

#### The City of Gothenburg promotes climate change adaptation in the city and its infrastructure

To build a resilient city means that urban planning ensures that society is prepared for the effects of climate change. The City prioritize the development of green infrastructure for its climate change adaptation efforts to address the undesirable effects of climate change. New development projects are subject to the City's overall plan for the development of land and water areas. The plan maps out areas exposed to rising sea levels, higher flows in larger watercourses and heavy rain, and forms the basis for the City's goals and strategies on climate change adaptation. For example, in a couple of decades, protection against higher water levels need to be in place in the City.

The City also works with a planning tool that connects land surface, pipes below ground, sea level, and streams in watercourses to a large system. The model enables simulations of elevated levels in the sea, lakes and watercourses, and as a consequence of heavy rain, and can be used to simulate various measures to minimize damage.

<sup>&</sup>lt;sup>8</sup> Process to identify the most important climate risks that the asset/city is exposed to is based on robust assessment of risks related to temperature (e.g. changing temperature, heat stress and wildfires), wind (e.g. changing wind patterns and storms), water (e.g. changing precipitation patterns, sea level rises and water stress) and solid mass (e.g. coastal erosion, soil degradation and landslides). The risk assessment is based on climate projections (based on best practice) across the existing range of future scenarios consistent with the expected lifetime of the activity. The adaptation solutions will not adversely affect the adaptation efforts of other people, nature, cultural heritage, assets or activities. The solutions will favour nature-based solutions such as blue or green infrastructure to the extent possible and, when feasible, be monitored against pre-defined indicators.



Green Project Category	Eligibility criteria	EU Objective	SDGs
Waste management and Circular economy	<ul> <li>Waste collection and material recovery</li> <li>Waste collection: separately collected and transported non-hazardous waste that is segregated at source and intended for preparation for reuse or recycling operations.</li> <li>Material recovery: facilities dedicated for the sorting and processing of separately collected non-hazardous waste streams into secondary raw materials involving mechanical reprocessing. At least 50%, in terms of weight, of the processed waste should be converted into secondary raw materials suitable for substituting virgin materials in production processes.</li> <li>Technologies for carbon capture and storage</li> <li>Bioenergy carbon capture and storage (BECCS) facilities.</li> <li>Transport and permanent underground storage of captured CO<sub>2</sub>, with CO<sub>2</sub> leakages not exceeding 0.5% of the mass of CO<sub>2</sub> transported and with appropriate leakage detection and monitoring plan in place.</li> <li>Waste-to-energy</li> <li>Waste-to-biogas<sup>9</sup>: facilities dedicated for the treatment, through anaerobic digestion or composting, of sewage sludge or separately collected bio-waste with the resulting production and utilisation of biogas.</li> <li>Waste-to-energy: facilities dedicated to waste incineration to produce heat/cool and electricity that follows a waste hierarchy to ensure that as much of the waste as possible is reused and recycled before being converted to energy.</li> </ul>	Climate change mitigation	11 SUSTAINABLE CITES AND COMMUNITIES  12 RESPONSIBILITY CONSIDER INC. AND PRODUCTION  CONSIDER INC.
	Circular economy adapted products, production technologies and processes  Construction of facilities for the recovery of resources for productive reuse in other processes, such as the recovery of zinq from ashes generated in waste-to-energy plants or the recovery of phosphorus from sewage sludge.	Circular economy	

<sup>&</sup>lt;sup>9</sup> A monitoring and contingency plan should always be in place in order to minimise potential methane leakage at the facility.



#### The City of Gothenburg promotes waste management and the transition to a circular economy



The City's Environment and Climate programme does not contain goals for areas that are already covered by other governing documents in the city, such as waste prevention, reuse and recycling as addressed by the <u>regional waste plan</u>. The regional waste plan covers the period 2021-2030 and provides guidance for the entire waste chain, with the concept of waste hierarchy as an overall principle. The waste hierarchy is about working preventively to avoid waste generation, reducing hazardous waste, detoxifying cycles, using waste as the resource it actually is and taking care of the waste that cannot be reused or recycled in a safe way. The waste plan includes goals and sub-goals related to six areas: Prevention, Reuse, Collection and Recycling, Physical planning, User focus and Littering.

The City also have a strategy for a "Circular Gothenburg", including initiatives aiming to promote the transition to a circular city by facilitating the reuse, repair and sharing of products. Examples of such initiatives include do-it-yourself workshops where products can be repaired, borrowed and/or exchanged, partnerships promoting businesses to design and produce smart products and services, and circular initiatives within the City's own operations that promote the reuse of products and materials.

The City's regional waste management plan sets waste management targets for the entire waste chain, including among others the following overarching goals for 2030:

Waste from households should be reduced by 30% per inhabitant

Waste from the City's operations must be reduced by 40% per full time employee

At least 20% of the bulky waste collected by the City shall be prepared for reuse

At least 90% of the waste collected shall be sorted in the correct fraction

At least 70% of the food waste shall be used for nutrient recovery and biogas production

Waste-related transports should be 10% more energy efficient

Vehicles, machines and facilities within the City's waste management shall be fossil-free



Green Project Category	Eligibility criteria	EU Objective	SDGs
Environmentally sustainable management of living natural resources and land use	<ul> <li>Management and conservation of habitats and ecosystems that promote biodiversity</li> <li>Measures to conserve, manage and develop responsibility biotopes – meaning habitats for plant and animal species that the Environmental Administration have identified that Gothenburg has a particular responsibility to conserve and develop – such as shallow sea bays, natural pastures, deciduous forests and small water bodies. Measures will include nature conservation management and other efforts to increase the area of responsibility biotopes on municipal land.</li> <li>Measures to manage and increase the proportion of green and blue spaces in the urban environment for the purpose of contributing to biodiversity, recreation, equalizing temperatures, cleaning the air and reducing noise.</li> </ul>	Protection and restoration of biodiversity and ecosystems	11 SUSTAINABLE CITES AND COMMUNITIES  14 LIFE BELIEW  15 LIFE ON LAND

#### The City of Gothenburg promotes biodiversity and healthy ecosystems

The loss of biodiversity is one of the greatest global environmental problems today, according to the UN's expert panel of biodiversity scientists IPBES. The use of land and water is changing, resulting in loss of habitats for plants and animals. The main cause is the overexploitation of natural resources. In addition, global warming is causing species that build ecosystems to disappear. A rich biodiversity is a prerequisite for nature to provide the uses and benefits that we humans receive from nature. These are called ecosystem services and examples of these include the pollination of crops by insects, the purification of water and air in nature, the fertilization of the soil by microorganisms and worms, and the improvement of people's health by spending time in nature. The goal is for Gothenburg to have sufficient areas of natural habitats and habitats with proper management to conserve the species present in the municipality and to provide conditions for the development of ecosystem services by 2030 at the latest. The City of Gothenburg will also contribute to biodiversity on a regional, national, and a global level.

The City's efforts to promote biodiversity and healthy ecosystems include measures to conserve and manage threatened habitats for rare plants and animals that are dependent on continuous management, such as grazing lands that have declined by almost half since 1990. Moreover, as much of the biodiversity in Gothenburg is found in urban areas, the City is taking measures to increase the proportion of green and blue spaces in the urban environment to further promote the conservation and promotion of species. These may be proper habitats for plants and animals or providing opportunities for them to spread across the landscape. Urban green and blue spaces also provide other benefits such as managing precipitation, equalizing temperatures, reducing noise and cleaning the air. Access to these spaces also have far-reaching positive effects on public health and quality of life.

By 2030, more than 90% of meadows and pastures should be well-maintained. compared to 55% in 2017

By 2030, 16,200 hectares of protected nature compared to 13.230 hectares in 2019

By 2030, the number of municipal biotope protection areas and natural monuments should reach 10 and 15 respectively, compared to zero in 201<u>9</u>

By 2030, the area of natural grassland should not have

By 2030, area of deciduous forests should not have decreased compared to 2018 decreased compared to 2011

By 2030, 100% of surface water bodies should have a good ecological status

### 2. Green Project evaluation and selection process



The City of Gothenburg's assessment and management of environmental, social, governance and financial risks are core components of the City's decision processes, including in the evaluation and selection of Green Projects.

### **Green evaluation and selection process**

The evaluation and selection process for eligible Green Projects is a key component in ensuring that an amount equivalent to the net proceeds from Green Bonds is allocated to Green Projects eligible under this Framework. Green Projects shall comply with the eligibility criteria defined under the Use of Proceeds section. The process of evaluating and selecting eligible Green Projects as well as the allocation of Green Bond proceeds to eligible Green Projects comprise the following steps:

- The relevant Project Manager evaluates potential Green Projects, their compliance with the Green Project categories, and their environmental benefits.
- ii. A list of the potential Green Projects is presented to the City of Gothenburg's Green Bond Committee (GBC). The GBC is solely responsible for the decision to acknowledge the project as green, in line with the Eligibility Criteria in this Framework. Approved Green Projects will be tracked using a dedicated "Green Register". A decision to allocate net proceeds will require a consensus decision from the GBC. The decisions made by the GBC will be documented and filed.

### **Green Bond Committee (GBC)**

The GBC is chaired by the Head of Treasury and also includes members from the following offices:

- City Planning and Development Office
- Environmental Office

The GBC may call upon other divisions within the City organisation if relevant. The GBC will convene every 6 months or when otherwise considered necessary. The GBC holds the right to exclude any Green Project already funded by Green Bond proceeds if the Green Project no longer meets the eligibility criteria defined in the Framework. In the event a Green Project is sold, or for other reasons loses its eligibility, funds will then follow the procedure under Management of Proceeds until reallocated to other eligible Green Projects. The GBC will also be responsible for preparing and verifying annual reporting on the allocation and impact of the net proceeds raised through Green Bonds.

### 3. Management of Proceeds



### **Tracking of proceeds**

City of Gothenburg will use a Green Register to track that an amount equivalent to the net proceeds from Green Bonds is allocated to Green Projects. The purpose of the Green Register is to ensure that an amount equivalent to the net proceeds only support the financing of Green Projects or is used to repay any Green Bonds outstanding. The Green Register will form the basis for the impact and allocation reporting.

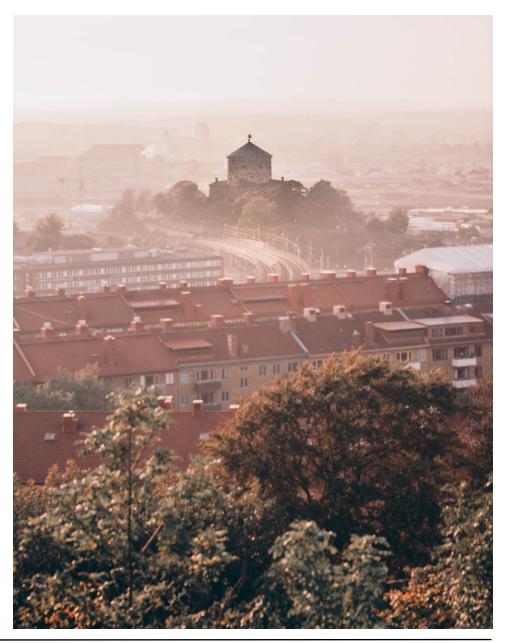
The balance of proceeds should be adjusted on an annual basis, in order to match allocations to eligible Green Projects (re)financed during this period. In the event a project has been sold or is no longer eligible, the City of Gothenburg commits to substitute the project as soon as practical, on a best effort basis.

### **Temporary holdings**

The balance of unallocated Green Bond net proceeds will be held in the liquidity reserve and be managed in line with the City of Gothenburg's treasury management policies. The maximum period that net proceeds may be unallocated is 12 months.

### **Exclusions**

Temporary investments will not be placed in entities with a business plan focused on fossil energy generation, nuclear energy generation, research and/or development within weapons and defence, environmentally negative resource extraction, gambling or tobacco.



### 4. Reporting and transparency



To enable the monitoring of performance and provide insights into prioritised areas, the City of Gothenburg will annually and until maturity of the Green Bonds issued, provide investors with a report ("Green Bond Impact Report") that describes the allocation of proceeds and the environmental impact of the Green Projects. The report will be made available on the City's website together with this Framework.

### **Allocation reporting**

Allocation reporting will include the following information:

- A summary of Green Bond developments
- ii. Nominal amount of outstanding Green Bonds
- iii. Amounts allocated to each project category
- iv. Relative share of new financing versus refinancing
- v. The amount of unallocated proceeds
- vi. Descriptions of selected Green Projects financed

In the event of outstanding Green Commercial Paper, the City of Gothenburg will report quarterly on the value of Green Projects and the total value of outstanding Green Commercial Paper and Bonds.

### Impact reporting

The impact reporting aims to disclose the environmental impact of the Green Projects financed under this Framework, based on the City of Gothenburg's financing share of each project. As the City of Gothenburg can finance a large number of smaller Green Projects in the same Project Category, impact reporting will, to some extent, be aggregated. The impact assessment is provided with the reservation that not all related data can be recovered and that calculations therefore will be on a best effort basis. The methodologies as well the assumptions and baselines used to determine the impact reporting indicators will be provided as well as a distinction between where actual and estimated impact metrics are reported.

The City of Gothenburg intends to align, on a best effort basis, the reporting with the portfolio approach described in ICMA's "Handbook – Harmonized Framework for Impact Reporting (June 2021). As a founding signatory to the Nordic Public Sector Issuers: Position Paper on Green Bonds Impact Reporting, the City of Gothenburg will also strive to follow the impact reporting principles stated in the report. The impact assessment will, if applicable, be based on the impact reporting metrics presented in the table on the next page. The City applies a conservative approach to its impact reporting, meaning that indirect impacts and impacts achieved outside the scope of the project(s) financed will not be included in the reporting.

# 4. Reporting and transparency



Green Project Category	Key Performance Indicators (KPIs)	SDGs
Green and energy efficient buildings	New buildings  Annual energy use avoided compared to the relevant building code (MWh)  Annual GHG emissions reduced/avoided (tonnes of CO <sub>2</sub> e emissions)  Existing buildings  Annual energy use avoided compared to relevant national building standard (kWh/m² or %)  Annual GHG emissions reduced/avoided compared to relevant national building standard (tonnes of CO <sub>2</sub> e emissions)  Major renovations  Annual energy use reduced compared to the pre-investment situation (MWh or %)  Annual GHG emissions reduced/avoided (tonnes of CO <sub>2</sub> e emissions) compared to the pre-investment situation (Installation, maintenance and repair  Annual energy reduced/avoided (MWh) compared to the pre-investment situation (MWh)  Annual GHG emissions reduced/avoided (tonnes of CO <sub>2</sub> e emissions) compared to the pre-investment situation Buildings implementing circular economy models for reduced climate impact  Annual GHG emissions reduced/avoided (tonnes of CO <sub>2</sub> e emissions) compared to 2020 baseline	7 AFFORDABLE AND OLEAN DICEASE SHEET AND COMMINITIES AND COMMI
Water and wastewater management	<ul> <li>Water and wastewater collection, treatment and supply systems</li> <li>Annual water savings (m3)</li> <li>Annual energy savings (kWh/m³)</li> <li>Annual GHG emissions reduced/avoided (tonnes of CO₂e emissions) compared to the pre-investment situation</li> <li>Capacity of plant or network being constructed or renewed</li> <li>Pollution prevention and control in the water system</li> <li>Annual volume of water or wastewater avoided (cubic meters)</li> <li>Annual reduction of discharges of pollutants to water (tonnes of phosphorus, nitrogen or other pollutants)</li> <li>Estimated improvement in urban water management measured by applicable indicator, such as % of a defined area where rainwater is retained within the area site, % of rainwater that is retained in a defined area, amount or % of removed urban runoff pollutants (e.g. nutrients such as phosphorus and nitrogen), or % of runoff reduction peak flow</li> </ul>	6 CLEAN WATER TO GLEAN DATES!  13 CLIMATE TARGET THE WATER COMPANY  14 WATER COMPANY  WATER COMPANY  14 WATER COMPANY  WATER COMPANY  15 CLIMATE THE BOOK THE WATER COMPANY  THE BOOK THE WATER COMPAN
Clean transportation	Clean transportation and mobility  Annual GHG emissions reduced/avoided (tonnes of CO <sub>2</sub> e emissions)  Number of vehicles or vessels  Infrastructure supporting clean transportation  Number of charging points of electricity, hydrogen or biofuel installed or upgraded  Passenger km in new means of transportation  Type of project, such as km of new train lines, bicycle lanes  Annual GHG emissions reduced/avoided (tonnes of CO <sub>2</sub> e emissions)	9 ROUSTRY, INNOVATION 11 SUSTAINABLE CITES AND DEPARTMENTIES 13 CUMANE 13 ACTION

# 4. Reporting and transparency



Green Project Category	Key Performance Indicators (KPIs)	SDGs
Renewable energy	<ul> <li>Installed renewable energy capacity (kW)</li> <li>Annual renewable energy generation (MWh)</li> <li>Storage capacity installed</li> <li>Number of meters of piping laid, upgraded or replaced for transmission and distribution of hydrogen/biofuels</li> <li>Annual GHG emissions reduced/avoided (tonnes of CO<sub>2</sub>e emissions)</li> </ul>	7 AFFORDABLE AND CHEAN EXERCITE TO CHEAN
Energy efficiency	<ul> <li>Annual energy use reduced/avoided (MWh or GWh or %)</li> <li>Annual GHG emissions reduced/avoided (tonnes of CO<sub>2</sub>e emissions)</li> </ul>	7 AFFORMABLE AND CLEAN ENERGY 9 NONTHE INNOVATION AND PRACTICIAL STATEMENT AND COMMINITIES 13 ACTION  11 SUSTAINABLE CITIES AND COMMINITIES 13 ACTION
Climate change adaptation	<ul> <li>Physical climate risk addressed and expected adaptation related outcome (quantified if possible)</li> <li>Number of individuals/households/m² addressed</li> </ul>	3 GOOD HEALTH 11 SUSTAINABLE CITES AND OWNER BEING AND COMMINITIES  13 GUIMATE  13 ACTION
Waste management and Circular economy	<ul> <li>Waste collection and material recovery</li> <li>Quantity of waste that is prevented, minimised, reused or recycled (tonnes or % of total waste per year)</li> <li>Annual GHG emissions reduced/avoided (tonnes of CO₂e emissions)</li> <li>Technologies for carbon capture and storage</li> <li>Tonnes of CO₂e emissions captured</li> <li>Waste-to-energy</li> <li>Biofuel production/Energy generation from waste</li> <li>Annual GHG emissions reduced/avoided (tonnes of CO₂e emissions)</li> <li>Circular economy adapted products, production technologies and processes</li> <li>Type of circular economy investment and purpose</li> <li>Annual recovery of materials for reuse in new processes</li> </ul>	11 SUSTAINABLE CITES 12 RESPONSELE AND COMMINITIES 12 RESPONSELE AND PRODUCTION AND PRODUCTION
Environmentally sustainable management of living natural resources and land use	<ul> <li>Area of habitat or ecosystem protected/conserved/restored/managed (total and as proportion of municipal land)</li> <li>Area of wetlands in urban areas</li> <li>Area of green spaces in urban areas</li> </ul>	11 SUSTAINABLE CITIES AND COMMUNITIES 14 WATER LINE STATES OF LAND.

### 5. External review



### **Second party opinion**

CICERO Shades of Green has provided a second party opinion to this Framework verifying its credibility, impact and alignment with ICMA's Green Bond Principles, including an assessment against the EU Taxonomy's technical screening criteria for substantial contribution to climate change mitigation.

### **Post-issuance review**

An independent external party, appointed by the City of Gothenburg, will on an annual basis until full allocation of the net proceeds, and in the event of any material changes until the relevant maturity date, provide a review, confirming that an amount equal to the Green Bond net proceeds has been allocated to Green Projects.

### **Publicly available documents**

The Green Bond Framework and the second party opinion will be publicly available on the City of Gothenburg's website, together with the post-issuance review and the annual Green Bond Impact Report once published.



