



City of Borås

Green Bond Second Opinion

5th September 2023

Executive Summary

Borås is a municipality in Västra Götaland County in southeast Sweden with a population of approximately 114,000. Sweden's municipalities are responsible by law for several areas that are vital to the public good, including environmental protection and provision of basic services such as healthcare and education. In December 2022, Borås signed a Climate Contract 2030 that establishes the municipality's climate goals, as well as the strategies and organization to achieve the goals.

Most proceeds will initially finance green buildings, including both new construction, existing buildings, and renovations. Overall, the framework covers a broad range of categories, including renewable energy, energy efficiency, pollution prevention, and clean transportation. This is the municipality's first green bond framework.

We rate the framework Light Green and give it a governance score of Good. The framework contains activities of all Shades of Green, and the overall shading reflects that some 85% of proceeds are initially expected to be allocated to green buildings, where additional efforts are needed to manage energy use in existing buildings and reduce embodied emissions in new construction. Other planned investments include charging infrastructure for electric vehicles and water management. The municipality has implemented a sustainability strategy that supports the green projects identified under this framework.

Strengths

The municipality's framework is aligned with the city's broader environmental strategies. Borås' expanded commitments in recent years toward achieving carbon neutrality and sustainable operations are reflected in its first green bond framework that will direct capital to achieving its goals. The city plans to achieve climate neutrality via a reduction of 85% of total emissions by 2030 from a 1990 baseline.

The wide range of project categories in the framework demonstrates Borås' efforts to address climate and environment throughout its municipal activities. The city has chosen a range of project categories that address the most material sustainability challenges it faces, including across district heating, buildings, and transport, which constitute a significant share of total emissions. We believe the city's sustainability commitments will contribute to a low-carbon future.

SHADES OF GREEN



CICERO
Light Green

GOVERNANCE ASSESSMENT



GREEN BOND PRINCIPLES

Based on this review, this framework is found aligned with the principles.



Pitfalls

Beyond what is required by Swedish law, the municipality's policies for reducing embodied emissions within green building construction and retrofitting are at an early stage. In the Nordic context, building material embodied emissions typically account for around half of buildings' lifecycle emissions. The issuer has informed us that the status of the work on embodied emissions varies between its different subsidiaries. Of its five real estate subsidiaries, two of them, Fristadbostäder and Viskafors hem, are actively using wood as a building material, which is positive as research indicates that wooden buildings tend to have a lower carbon footprint over their lifetime. We welcome the ongoing work to establish guidelines for reducing embodied emissions from building materials.

For some project categories, the municipality could benefit from incorporating additional quantitative thresholds. This is the case for example for water management, where the achieved reduction in leakage is not quantified, and for energy efficiency. Given the challenges of undertaking a long-term sustainability strategy at the city level, such quantification could be beneficial.



Contents

Executive Summary	1
<i>Strengths</i>	1
<i>Pitfalls</i>	2
1 City of Borås' Green Bond Framework	4
Company description	4
Governance assessment	4
Sector risk exposure	5
Environmental strategies and policies	5
Green bond framework	6
2 Assessment of City of Borås' green bond framework	8
Shading of eligible projects under Borås' green bond framework	8
3 Terms and methodology	16
'Shades of Green' methodology	16
Appendix 1: Referenced Documents List	18
Appendix 2: About Shades of Green	19

1 City of Borås' Green Bond Framework

Company description

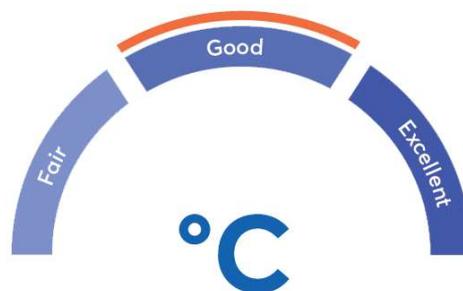
The City of Borås (the “the Municipality” or “the issuer”), located in Västra Götaland county, is the second-largest municipality in western Sweden and has a population of approximately 114,000 people and annual turnover of about SEK 6 billion. As a Swedish municipality, Borås is responsible by law for several key functions including care for the elderly, disabled, and families, basic education, libraries, planning and building issues, rescue services, emergency preparedness, environmental and health protection, energy and housing provision, and water and sewage management. This is the City’s first green bond framework.

Governance assessment

Borås has developed a relevant sustainability strategy that addresses key climate and environmental issues including transition, physical climate, energy, water, and land use. The city has several targets for greenhouse gas emissions, for different time horizons and with different scopes, which creates some operational challenges in terms of measuring progress and in ascertaining how the different targets interact.

The project selection process is good, with the decision-maker green bond committee identified, screening of fossil fuel and non-compliant projects, and criteria for each project. We welcome that, in addition to the framework criteria, alignment with City of Borås’ established long-term plans for environmental and social sustainability, will be considered. For some projects, the issuer will also consider lifecycle and environmental assessments of projects, which could include consideration of physical climate change risk.

The municipality will provide annual reporting of proceeds allocated to each project including the outstanding amount, distribution to each asset, and the year when each asset became operational. Impact reporting will include qualitative and quantitative data, where feasible. Allocation and impact data will be verified and assured by a third party. Borås commits to report methodologies of the identified metrics and baselines, which is positive.



The overall assessment of the municipality’s governance structure and processes gives it a rating of **Good**.



Sector risk exposure

Physical climate risks. For the Nordics, the most severe physical climate impacts will likely include increased flooding, snow loads, and urban overflow, as well as increased frequency of storms and extreme weather. Consequently, the Municipality's climate risk adaptation plans are focused on key risk areas including stormwater collection and management, water level protection and erosion mitigation, and urban heat protection.

Transition risks. The Swedish government is targeting climate neutrality by 2045, a goal that directly affects Borås through the city's GHG-emitting activities including industry, energy generation, buildings, transport, and wastewater management. Transition risk can be mitigated through various efficiency and energy initiatives including renewable energy procurement, building retrofit, and clean transportation.

Environmental risks. The City's activities are associated with environmental pollution including other air emissions, waste generation, and water effluent. These externalities, if improperly managed, can result in environmental degradation and associated remediation costs and penalties.

Environmental strategies and policies

Borås' sustainability strategy is to be a driving force and leader in the environmental field, and it intends for its activities to contribute to reducing the city's negative environmental externalities and increase its positive environmental impacts. Specifically, the city aims to create a healthy living environment, maintain rich plant and animal life, increase biodiversity, and ensure high quality of life for its citizens. The municipality's strategy consists of an energy and climate strategy, a carbon budget, a climate neutrality goal, and an environmental program. Borås further seeks to anchor its sustainability strategy to the UN Sustainability Goals of Agenda 2030 and align its activities with the EU taxonomy, including do no significant harm provisions.

The municipality's energy and climate strategy is designed to reduce Borås' greenhouse gas emissions in accordance with limiting global warming to 1.5-2 degrees per the 2015 Paris Climate Agreement. The strategy's implementation is founded upon a carbon budget (adopted in 2019) that specifies emissions thresholds that the city must remain within, and addresses climate adaptation measures, including flood protection, upstream wetlands, and downpour trails. The budget is broken down into three categories; total emissions of the city's activities and residents, which must remain below 62 tons of cumulative emissions of CO₂ per inhabitant by 2040 from the 2019 baseline; a subset of these emissions are associated with services consumed by residents; and Borås' territorial emissions (from district heating and transportation). The climate neutral goal targets a reduction of 85% of total emissions by 2030 from a 1990 baseline. The city believes residual emissions will primarily reside within transportation. Borås aims to monitor emissions over time and targets a reduction of 16% CO₂ per year which it expects will result in net zero emissions by approximately 2040.

The City of Borås calculates its carbon dioxide emissions using conversion factors from the Swedish Energy Agency, while energy use in the city's geographical area is monitored annually by SCB (Statistics Sweden). Within the municipality, emissions of CO₂ per inhabitant decreased by 64% between 1990 and 2021. This drop is due



largely to a fall in oil and coal consumption for building heating by 94% between 1990 and 2018. In the same period, CO₂ emissions from vehicles did not change substantially, while a sharper decrease occurred more recently due to increased blending of renewable fuels in auto fuel and a decrease in car volumes by 5 to 10%. The reduction in oil use is attribute to an increase in the district heating network and the addition of a 37,000 m³ accumulator tank, a new 120 MW biofuel-fired combined heating and power plant completed in 2019, lower oil use in municipal buildings in favor of district heating or biofuels, and energy and climate education for households in the municipality.

Additionally, Borås joined the Viable Cities' initiative Climate Neutral Cities 2030, a program supported by Vinnova, the Swedish Energy Agency and Formas. As part of the program, Borås signed a Climate Contract 2030 in December 2022 that describes the municipality's climate goals, strategies, and the principal collaborators which includes the municipally owned companies BoråsEnergi och Miljö AB and Fristadbostäder AB, the regional science center Navet, and Science Park Borås.

Green bond framework

Based on this review, this framework is found to be aligned with the Green Bond Principles. For details on the issuer's framework, please refer to the green bond framework dated July 2023.

Use of proceeds

For a description of the framework's use of proceeds criteria, and an assessment of the categories' environmental impacts and risks, please refer to section 2.

Selection

The City of Borås established a Green Bond Committee (GBC) consisting of members from the treasury and sustainability department as well as internal and external experts who can participate in decision-making related to the Projects or Assets considered. The committee is responsible for evaluating proposed eligible projects and assets with the issuer's eligibility criteria, assure project compliance with applicable laws and regulations as well as the City of Borås' established long-term plans for environmental and social sustainability, replace projects that no longer meet the criteria, and approve investor reporting of project performance. Where relevant, the city will utilize lifecycle and environmental assessments to mitigate potential externalities and risks such as those related to physical climate risk. We note that the committee has a sustainability representative with veto rights for projects selected by the committee.

Management of proceeds

According to the frameworks, an amount equal to the proceeds of any Green Bond will be separately identified within the City of Borås' treasury department and will form an earmarked portfolio within the City of Borås' internal treasury systems. While an issuance is outstanding and the earmarked portfolio has a positive balance, funds may be deducted from the earmarked portfolio and added to the City of Borås' lending pool in an amount up to all disbursements from that pool made in respect of Eligible Projects and Assets. The earmarked portfolio will ensure prudent monitoring and tracking of the Eligible Projects and Assets. The City's Group Treasury team is responsible for tracking funds and allocation of proceeds. If, for any reason, an Eligible Project or Asset ceases to comply with the eligibility criteria of the framework, the project will be removed from the portfolio of Eligible Projects and Assets. Unallocated proceeds will be placed in the liquidity reserves and managed as such. We note these temporary investments will not be related to any fossil-fuel activities.

Reporting

The Municipality will provide an annual green bond investor report to investors that will be made publicly available on the issuer's website www.Borås.se. The report will include the allocation of proceeds and on the non-financial



impact where feasible and relevant data is available. Allocation reporting will include the proceeds allocated to each project or asset, the outstanding amount of green bonds, the distribution of new financing and refinancing of approved eligible projects and assets, and the year when the project or asset became operational. The issuer will follow ICMA's recommendations on harmonized impact reporting as well as ICMA's "Position Paper on Green Bonds Impact Reporting" by the Nordic Public Sector Issuer.

The impact reporting will include qualitative and where feasible quantitative information as well as publicly available data. Examples of potential impact reporting metrics are listed in the table below:

Eligible Green Project and Asset Categories	Example indicators
Renewable energy	<ul style="list-style-type: none">• Annual renewable energy production in MWh• Capacity of energy generation of plant in MW
Energy efficiency	<ul style="list-style-type: none">• Annual energy savings in MWh
Green buildings	<ul style="list-style-type: none">• Annual energy savings in MWh• Annual GHG emissions reduced/avoided (tons of CO₂e emissions)
Clean transportation	<ul style="list-style-type: none">• Number of charging points of electricity or biofuel installed or upgraded• Annual GHG emissions reduced/avoided (tons of CO₂e emissions)
Climate Change Adaptation	<ul style="list-style-type: none">• Increase in area under wetland management in km²• Improved measures to reduce risk from adverse flooding impact
Sustainable water and wastewater management	<ul style="list-style-type: none">• Annual water savings: Annual absolute (gross) water use before and after project in m³, in % water use reduction• Annual energy savings from new technique (kWh/m³)
Terrestrial and aquatic biodiversity	<ul style="list-style-type: none">• Maintenance/safeguarding/increase of protected area/OECM/habitat in km² and in % for increase
Pollution prevention and control	<ul style="list-style-type: none">• Reduction in contaminant levels in mg contaminant/kg soil

The city has appointed an external independent auditor to assure annually the selection process for financing eligible projects and the allocation of proceeds are conducted in accordance with Borås' Green Bond Framework.

2 Assessment of City of Borås’ green bond framework

The eligible projects under Borås’ green bond framework are shaded based on their environmental impacts and risks, based on the “Shades of Green” methodology.

Shading of eligible projects under Borås’ green bond framework

- Proceeds can be used to finance new projects and for refinancing. The issuer expects that proceeds will be skewed towards refinancing in the first transaction, with more going to new financing in the following issuances. The largest project category is expected to be green buildings initially, including both existing buildings, new buildings, and renovations of existing buildings.
- Fossil energy production projects or those with potential environmentally harmful resource extraction cannot be financed, nor can purchases of fossil fuels or related equipment.
- No eligible costs will directly on behalf of Borås be allocated to any fossil fuel purchases or equipment.

Category	Eligible project types	Green Shading and considerations
 Renewable energy	Financing of renewable energy production facilities and supporting infrastructure such as smart grids from the following renewable sources:	Medium Green ✓ Renewable energy is key to the low carbon transition and represents a Dark Green solution, while higher transition risks are associated with district heating, where waste is a substantial part of the input.
	<u>Solar energy</u> The construction of facilities generating electricity using solar photovoltaic (SPV) technology, and production of heat/cool from solar thermal heating.	
	<u>District heating</u> Investments where the system is using at least 50% renewable energy, 50% waste heat, 75% cogenerated heat or 50% of a combination of such energy and heat.	✓ District heating investments may relate to expansion of existing district heating networks. Depending on their inputs and mitigation of other climate risks, district heating networks can be beneficial sources
	<u>Energy storage</u> Energy storage including, but not limited to, battery and hydrogen.	

of heat. The eligibility criterion in the framework maintains that systems must use at least 50% renewable energy or 50% waste heat or 75% cogenerated heat or 50% of a combination of such energy and heat. In Borås, cogeneration will be powered by burning waste and local forestry residues, while we note this fuel does generate GHGs and other air emissions. The issuer has informed us that the bio-inputs used stem from forestry waste and are certified with “Bra Miljöval”, which has a requirement that inputs must come from certified forestry. Swedish district heating has high compliance with the European definition of energy efficient district heating, but the issuer has not indicated if investments will include modification to lower temperature regimes or advanced pilot systems.

- ✓ Energy storage is crucial for facilitating greater integration of renewables. However, emissions and environmental risks in the value chain of such technologies need to be managed carefully. Certain technologies, such as the storage of hydrogen, may entail climate risks that are not yet fully understood. Be aware of risks associated with leakage of stored hydrogen, which is difficult to avoid.

 - ✓ The issuer informed us that its hydrogen would be produced from renewable sources. Green hydrogen is part of a low emission future due to low emissions and potential applications in sectors that are hard to abate, for example transportation.
-

Energy Efficiency



Financing of installation, maintenance and repair of energy efficiency equipment leading to energy use¹ including:

Medium Green

- ✓ From a 2050 perspective, lowering building energy use through efficiency investments is a key element to a low-carbon future. The replacement and installation of energy-efficient windows, light sources, and control systems, and installing more efficient heating, cooling, and ventilation equipment and related management systems is beneficial from an environmental perspective as it can reduce the overall energy consumption and carbon footprint of the real estate sector.
- ✓ Borås has chosen to not set a fixed per cent reduction to account for reduced energy use over time. We note that energy efficiency measures could be tied to mandatory improvements of technical systems that would take place regardless of the linked energy savings.

Green buildings



Financing of new and existing buildings as well as major renovations, including:

Light Green

- ✓ New buildings
Buildings (built after 31 December 2020) that have or will receive a Primary Energy Demand (PED) at least 20% more energy efficient than the level required by the national building regulation (BBR 29 or later) at the investment decision. The energy performance is certified using an Energy Performance Certificate (EPC). Life-cycle Global Warming Potential for each stage in the life cycle of the building will also be a requirement for buildings built after 31 December 2022.
- ✓ The shading reflects the project category's ambition to finance energy efficient buildings, while taking into consideration that policies to reduce emissions associated with building materials are still under development, as well as the absence of strong energy performance management and identification of physical climate risks for existing buildings.
- ✓ The issuer expects to mostly finance residential buildings, schools, and pre-schools. Five different subsidiaries manage the city of Borås' real estate assets.

Existing buildings

¹ To account for reduced energy use over time, the City of Borås will evaluate the level of reduced energy use at the time of the investment decision rather than fixing the required level of energy use reduction. This will allow taking the investment impact into consideration rather than level of reduction and will be reported on in the yearly investor report.

Buildings (built before 31 December 2020) that have an Energy Performance Certification (EPC) class A or being within the top 15%² most energy efficient of the national or regional building stock expressed as operational Primary Energy Demand (PED).

✓ The municipality has a goal to reduce emissions from building materials, and guidelines for reducing embodied emissions from building materials from new construction and retrofitting are currently under development. The criteria for new construction ensure an improvement in energy performance compared to regulation.

Major renovations

Major renovations that achieve a reduced PED of at least 30% per square meter A-temp and year compared to the building's pre-investment level.

✓ To determine what constitutes the top 15% in Sweden, the City of Borås will initially use the 2022 report from the Swedish Building Owners (Fastighetsägarna) and CIT Energy Management, until an official definition is in place. The report recalculates buildings' energy performance so that it is expressed in line with the currently applicable building regulation.

✓ Buildings meeting the top 15% thresholds are not necessarily better than current regulations, while buildings with EPC A are at least 50% better than regulations. How ambitious the top 15% are will vary between building types, and the weighting means that all else equal, it is easier for a building with district heating to meet the threshold. Nevertheless, from a transition risk perspective, the buildings identified on the basis of this report are the most energy efficient in the building stock, and hence the least exposed to potential future tightening of building energy regulations.

✓ While we consider the data and methodology underlying the identification of the top 15% robust, investors should be aware that buildings are assessed using modelled values, which means that actual energy performance, and therefore total environmental impact, will vary depending on occupants' behavior and building management. Therefore, it is important with strong energy performance

² The City of Borås will utilize the Swedish Property Federation's (Sw: Fastighetsägarna) study, or guidance from an appropriate external benchmark to determine the top 15%, such report shall be issued by a national government or by an industry specialist.

-
- management to minimize the actual energy use and minimize potential rebound effects.
- ✓ With regards to efforts to reduce buildings' energy use, additional efforts are needed. According to the issuer, for existing buildings, measures are in place to reduce energy consumption including improved ventilation, energy efficient windows and doors as well as efficient heating systems. Borås monitors energy consumption throughout the municipal group annually, including in the real estate subsidiaries, which shows decreasing energy consumption in the largest municipal operations. Real estate subsidiary Fristadbostäder had an average energy consumption was 106 kWh/m² in 2022, with a target to lower it to 88 kWh by 2030. Nevertheless, there is no common quantified target for the energy performance of the real estate assets managed by the five real estate subsidiaries. We welcome the municipality's intention to make a new strategy for further reducing energy use in the buildings but note that the timeline is uncertain.
 - ✓ According to the issuer's assessment of physical climate risks, one of the most material risks for the city is flooding from heavy rainfall, and areas that are particularly exposed have been identified. This is considered in the city's planning and screening process, focusing on modelling of water flows. Adaptive measures are under way in the city. For buildings that are not part of the city's own planning, consideration of physical climate risk is part of the building's permitting process. However, for the portfolio of existing buildings, an identification of exposure to physical climate risks, and implementation of relevant measures, has not yet been undertaken.
-

- ✓ In the transition to a low-carbon society, it is vital to renovate and improve existing properties. With that perspective in mind, refurbishments with a 30% reduction in energy consumption are welcome.

Clean transportation

Financing of zero direct (tailpipe) CO₂ emission and low carbon transport solutions for public, passenger and freight purposes, including:

Medium to Dark Green

- ✓ Infrastructure to enable non-motorize mobility and electric modes of transportation are key solutions for a net zero future, while public modes of transportation are more resource efficient than private ones.



Supporting infrastructure

Supportive infrastructure dedicated to road transport, including:



- Non-motorized mobility, such as bike lanes, bike storage facilities,
- Electric charging stations
- Infrastructure for electrification of the municipal-owned bus-garage

- ✓ The main investment is expected to be charging infrastructure for electric buses. The issuer has confirmed that only infrastructure dedicated to zero or low carbon transport will be financed.

- ✓ Infrastructure entail emissions and other environmental impacts in the construction phase and from the upstream value chain, these should be sought minimized.

- ✓ The City of Borås leases the vehicles, while the operation of the public transport is not managed by the municipality. The city's own vehicles run on biogas, produced from waste streams.

- ✓ Note that biofuels could include climate risks from sourcing and transportation. Be aware of life cycle emissions and broader impacts on biodiversity and the environment.

Climate change adaptation Financing of climate resilience enhancements with the objective of increasing resilience to physical climate risk including:

Dark Green

- ✓ Climate scientists have been clear that some level of climate change is taking place even in the most optimistic scenarios. For the Nordic

Stormwater collection and management



Multifunctional areas for stormwater collection and management.

Water level protection and erosion measures

Water level protection and erosion measures by means such as raising of land.

- ✓ Planned measures reflect that flooding from heavy rainfall, in particular near the river flowing through the city, have been identified as materials physical risks.

Urban heat protection

Urban heat protection measures such as tree planting.

Sustainable water and wastewater management

Financing of the conservation of water sustainably by means including:

Light to Medium Green

Water collection, treatment, and supply systems

The renewal of water collection, treatment and supply systems including distribution infrastructures for domestic and industrial needs, water purification, water saving, water conservation and the re-use of water.



Water efficiency

Improved water efficiency through reduced leakage.

Water and/or wastewater collection, treatment urban drainage and supply systems

The construction and extension of water and/or wastewater collection, treatment, sustainable urban drainage systems and supply systems.

countries, expected changes include heavier rain, floods, and heat waves. It is therefore crucial to plan and mitigate potential risks to reduce impacts to city infrastructure and services.

- ✓ The Light to Medium shading reflects a lack of a quantitative eligibility criteria for the planned under this project category.

- ✓ The main investment here is expected to be a new drinking water source and facility. Environmental considerations have been part of the site selection.

- ✓ Reducing water leakage are important considerations in the sustainability of these projects given the ties to energy use. Borås will utilize the EU Taxonomy criteria for urban draining systems, and the issuer is aiming for a more efficient and safe water management.

- ✓ Projects should seek to minimize emissions from the construction phase and supply chain (e.g., from cement production). The issuer has informed us that financed facilities or infrastructure run on renewable sources of energy.

Pollution prevention and control	Financing of projects related to pollution prevention and control measures including:	Medium Green
	<p><u>Soil remediation</u> The removal of harmful substances in the soil mainly from past human activity. The conduct of a soil survey will be required to identify the harmful substances and make take necessary measures in substance removal. Emphasis is placed on the reuse of the material.</p>	<ul style="list-style-type: none"> ✓ Environmental cleanup activities, remediation, and restoration of soil contribute positively to the local ecosystem. ✓ According to the issuer, no fossil fuels vehicles can be financed under this category. The issuer has also confirmed that waste-to-energy facilities will not be financed.
	<p><u>Removal of Harmful Substances</u> Investments in the removal and replacement of harmful substances in products, assets or projects, such as asbestos, PCBs, mold, chemicals or metals, that have been linked to negative effects on biodiversity, human health and/or the environment.</p>	<ul style="list-style-type: none"> ✓ The issuer is yet to identify specific investments within waste management but has indicated potential examples like systems for reuse of building material or for sorting and treatment of textile to increase the amount of reuse of clothes.
	<p><u>Waste Management</u> Investments in waste management, such as collection, prevention, reduction or recycling of waste, as well as in enabling infrastructure and facilities.</p>	
	<p>Financing of the conservation, preservation and/or restoration of nature and biodiversity, as well as natural habitats and ecosystems including:</p> <p><u>Watershed environments</u> The protection and restoration of watershed environments, including wetlands.</p> <p><u>Biodiversity and natural ecosystems</u> Protection and preservation of biodiversity and natural ecosystems.</p>	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Investments to conserve ecosystems and increase the number of green spaces in the urban environment are likely to have multiple environmental benefits. ✓ The issuer has indicated wetland restoration as an example of potential investment within this project category.

Table 1. Eligible project categories

3 Terms and methodology

This note provides Shades of Green’s second opinion of the client’s framework dated July 2023. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. Shades of Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client’s policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

‘Shades of Green’ methodology

Shades of Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

Shading	Examples
 <p>Dark Green is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate resilient future.</p>	 Solar power plants
 <p>Medium Green is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet.</p>	 Energy efficient buildings
 <p>Light Green is allocated to transition activities that do not lock in emissions. These projects reduce emissions or have other environmental benefits in the near term rather than representing low carbon and climate resilient long-term solutions.</p>	 Hybrid road vehicles

The “Shades of Green” methodology considers the strengths, weaknesses and pitfalls of the project categories and their criteria. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised, including potential macro-level impacts of investment projects.

Sound governance and transparency processes facilitate delivery of the client’s climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. Shades of Green considers four factors in its review of the client’s governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



Assessment of alignment with Green Bond Principles

Shades of Green assesses alignment with the International Capital Markets' Association's (ICMA) Green Bond Principles. We review whether the framework is in line with the four core components of the GBP (use of proceeds, selection, management of proceeds and reporting). We assess whether project categories have clear environmental benefits with defined eligibility criteria. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed. The selection process is a key governance factor to consider in Shades of Green's assessment. Shades of Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance Shades of Green places on the selection process. Shades of Green assesses whether net proceeds or an equivalent amount are tracked by the issuer in an appropriate manner and provides transparency on the intended types of temporary placement for unallocated proceeds. Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	City of Borås Green Bond Framework	Borås' Green Bond Framework dated July 2023
2	Emissions Reporting Borås 2021	
3	Energi- och klimatstrategi – strategi	Energy and climate strategy, dated 2020
4	Sammenställning handlingsplan	Summary of action plans for different areas of sustainability
5	Annual and sustainability report 2022 for Fristadsbostäder AB	Reporting of Fristadbostäder AB, one in five real estate subsidiaries



Appendix 2: About Shades of Green

Shades of Green, now a part of S&P Global and formerly part of CICERO, provides independent, research-based second party opinions (SPOs) of green financing frameworks as well as climate risk and impact reporting reviews of companies. At the heart of all our SPOs is the multi-award-winning Shades of Green methodology, which assigns shadings to investments and activities to reflect the extent to which they contribute to the transition to a low carbon and climate resilient future.

Shades of Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. Shades of Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. Shades of Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

- 
- ★ **2021 Largest External Reviewer**, Climate Bonds Initiative Awards
 - ★ **2020 External Assessment Provider Of The Year**, Environmental Finance Green Bond Awards
 - ★ **2020 Largest External Review Provider In Number Of Deals**, Climate Bonds Initiative Awards
 - ★ **2019 External Assessment Provider Of The Year**, Environmental Finance Green Bond Awards
 - ★ **2019 Largest Green Bond SPO Provider**, Climate Bonds Initiative Awards
 - ★ **2018 External Assessment Provider Of The Year**, Environmental Finance Green Bond Awards
 - ★ **2018 Largest External Reviewer**, Climate Bonds Initiative Awards
 - ★ **2017 Best External Assessment Provider**, Environmental Finance Green Bond Awards
 - ★ **2016 Most Second Opinions**, Climate Bonds Initiative Awards