



Norrköping Municipality Green Bond Second Opinion

11 October 2022

Executive Summary

Norrköping is a municipality in Östergötland County in southeast Sweden. Sweden's municipalities are responsible by law for several areas that are vital to the public good. The municipality's corporate group consist of the parent company Norrköping Rådhus AB together with nine active subsidiaries. The municipality expects increases to its current population of around 140,000, necessitating continued real estate growth.

The municipality is expecting the biggest share of financing to be allocated to real estate projects (e.g. residential properties, elderly homes or schools). It wants to keep a varied portfolio and aims to have projects in all categories. It will be a mix of refinancing and new financing, however, the ambition is to mainly finance new projects. Other investments could be e.g. financing a recycling facility, renovations at the water treatment plants and climate adaptation measures. The main change since the previous framework is that the eligibility criteria for green buildings have been set to align with the EU taxonomy mitigation criteria.

We rate the framework **CICERO Light Green** and give it a governance score of **Good**. The shading reflects that most proceeds will be allocated to new green buildings, where associated framework criteria demonstrate an improvement compared to the norm but environmental considerations are limited to energy use. The municipality has developed strong climate and environmental policies and targets, such as a goal for 30% reduction in energy consumption in its properties and for its subsidiaries to only use renewable energy types and fuels.

Strengths

The municipality works actively with climate adaptation. Together with external researchers, the municipality has developed guidelines for adaptation to climate change and has performed a vulnerability mapping that primarily focuses on three climate-related events, which cover i) the combination of a hundred-year flood and high water levels, ii) extreme rain, and iii) high temperatures. Climate adaptation measures are necessary from a 2050 perspective, therefore we welcome investments such as the investment in Ljura Bäck, done in 2021 by the municipality, to develop a stream area so that it could handle a 100-year flow from both natural land and extreme rain.

The municipality's subsidiaries' sustainability work covers a broad set of sustainable activities. Its subsidiaries are transitioning to fossil-free operations and have already performed energy efficiency and

SHADES OF GREEN



°CICERO
Light Green

GOVERNANCE ASSESSMENT



GREEN BOND PRINCIPLES

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



electrification measures, screened and mitigated for physical climate risks, and multiple subsidiaries are transitioning from diesel to the waste-based biofuel HVO100.¹

Pitfalls

The energy criterion for new buildings is modest, and there are no specific considerations given to embodied emissions. For new construction, the construction phase of buildings heavily influences total emissions and environmental impact. It is therefore a pitfall that the municipality does not have clear policies towards contractors and other partners, nor targets tied to the construction phase and embodied emissions beyond what is required by Swedish regulations. The municipality informed us that it is looking to strengthen its environmental considerations in purchasing and procurement, which could cover material choices, and that the current political leadership has requested a proposal for a climate strategy for buildings and properties, however, this work is still under development.

The municipality could benefit from incorporating additional considerations to navigate through the selection process besides the framework criteria. Based on its previous experience with selecting projects for green financing, the issuer expects its framework to provide the guidance needed for selecting projects and has clarified that it does not expect a need for additional formal rules. While this may have worked well for the municipality so far, formal procedures considering additional environmental aspects ensure that the complexity of sustainability is considered (e.g. life-cycle assessments, rebound effects, and proximity to public transport). This is particularly important since Norrköpings' framework is broad and comprises many categories which may be open to interpretation.

We encourage issuers to use harmonized methodologies in their reporting, among other to facilitate comparisons between issuers. The municipality follows the recommendation based on the Nordic Position Paper on Green Bonds Impact Reporting. Investors should, however, be aware that the used grid factor set by the Nordic Position Paper, set at 315g CO_{2e}/kWh, is higher than the European average grid factor and much higher than the Nordic average.

¹ HVO100 is a fuel produced from waste, residue oils and fats, such as used cooking oil. Compared to fossil diesel, the use of HVO100 can reduce greenhouse gas emissions significantly.



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1 Norrköping's environmental management and green bond framework

Company description

Norrköping (the “the municipality” or “the issuer”) is a municipality in Östergötland County in southeast Sweden with a population of approximately 140,000 people. The population is likely to grow to 175,000 by 2035, an increase that will necessitate continued real estate growth. Sweden’s municipalities are responsible by law for several areas that are vital to the public good. Responsibilities include healthcare, schooling, social care, public transport, waste and water, energy supply, environmental protection and so on. The municipality’s corporate group consist of the parent company Norrköping Rådhus AB together with nine active subsidiaries.

The municipality issued its first green bond in 2016 and its most recent green bond issuance was in 2021. The first bond transaction amounted to 600 million SEK. In 2020, the municipality financed a portfolio of green projects worth SEK 600 million and in 2021 a third portfolio of green projects. This 2022 framework is broadly unchanged from the 2019 framework, with the main change being the inclusion, in the green building category, of the top 15% of the building stock in terms of energy performance for existing buildings.

Governance assessment

The municipality and its subsidiary companies have developed strong climate and environmental policies, where policies appear to be well implemented and tracked. It is positive that the municipality is actively looking at where it needs to strengthen its work, for example by focusing on environmental considerations in purchasing and procurement. The municipality informed us that environmental specialists will be involved in this process.

The municipality is advanced when it comes to adaptation. Together with external researchers the municipality has developed guidelines for adaptation to climate change and has already invested in climate adaptation measures.

The selection process is clear and involves environmental expertise that has veto power. However, the selection process does not incorporate any systematic environmental evaluations and considerations, such as e.g. life cycle assessments, to assess projects besides the framework criteria. Such additional considerations are especially important given that the framework criteria are quite vague and are therefore somewhat open to interpretation.

Reporting is done on a project-by-project basis. We welcome the introduction of impact indicators for each project category; in previous reporting, the municipality has primarily focused on energy savings associated with real estate projects and street lighting.

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 be increased flooding, snow loads, and urban overflow, as well as increased storms and extreme weather. Developing projects with climate resilience in mind is critical for the municipality's planned real estate growth. For any municipality, mitigation and adaptation measures should be mapped for its current building stock and activities, to limit damages and consequently potential financial impacts from damage costs.

Transition risks. The Swedish government is targeting climate neutrality by 2045, a strategy that includes coping with environmental issues that concerns multiple of Norrköping's responsibilities, such as minimizing the carbon footprint of the real estate sector and transitioning towards zero-emission transport. Therefore, the municipality is exposed to transition risks from stricter climate policies e.g., reducing its GHG emissions, upgrading the energy efficiency of its industries, buildings, transport, etc.

Environmental risks. A city is responsible for several vital areas; therefore, the municipality is associated with heavily emitting sectors such as industrial processes, the real estate sector, shipping, and transportation. Consequently, the municipality is at risk of polluting the local environment for example with noise from ship engines from the municipality's port or during the erection of the properties, e.g., from poor waste handling and so on.

Environmental strategies and policies

The municipality aims at becoming one of Sweden's leading environmental municipalities by 2035. The overarching sustainability strategy of the municipality is to economize its natural resources, transition to renewable fuels and energy sources and take advantage of technological innovation. Other focus areas are green agriculture, climate-smart transport in the form of public transport, walking and bike paths and to actively work towards climate resilience of the municipality's own companies' and activities.

In 2009, the municipality decided on a 2030 goal of 30% reduction in energy consumption in its properties compared to 2005, as well as only using renewable energy types and fuels. Since the last framework was published the municipality has carried out a new materiality analysis, where several stakeholders' perspectives were included to better understand their expectations of the municipality's sustainability work as well as defining focus areas going forward. A total of nine areas were identified as essential topics, some topics being environmental considerations in purchasing and procurement, energy use and waste management.

The municipality reports on emissions linked to its fuel-consumption and operational energy for its buildings. It is the port of Norrköping that is responsible for most emissions linked to fuel consumption, with approximately 380 tonnes from the use of HVO100 out of a total of 687 tonnes CO₂e. District heating, district cooling and electricity use for its two real estate companies Norrevo and Hyrbostäder, was reported on for the first time in 2021 and showed that district heating accounted for the majority of emissions, with Norrevo emitting 10,655 tons CO₂e from district heating and Hyrbostäder 11,955 tons CO₂e.

The municipality's sustainability work is reflected through its companies' activities, for example:

- Hyresbostäder is the municipality's largest housing company, with approx. 9,800 apartments and just over 300 premises. The company adopted a new environmental strategy in 2021 and plans to reduce its



climate impact and carbon footprint. Specific measures the company plans to undertake are replacing lighting with LED, installing motion sensors in properties, and setting up solar panels where possible. It also targets to have all its vehicles be fossil-free by 2025. In 2021, the company implemented an analysis to investigate climate adaptation measures in connection with the rebuilding of Ljuraparken.

- Norrevo, another municipality-owned real estate company, works to increase knowledge and collaboration around buildings' life cycle and climate impact. The company has adopted several measures to reduce the climate impact both in the construction and the operational phase. It frequently carries out energy surveys of its properties, where the result is summarized in energy efficiency action plans, which forms the basis of measures to implement. In collaboration with Linköping University, Norrevo has carried out a mapping of physical climate risk for all its existing properties, looking at high temperature and flood risks. The mapping resulted in several proposals for climate adaptation measures.
- Norrköping Science Park works with various energy efficiency improvement projects. It is collaborating with Logistikia on the electrification of truck transport. It is also working on the project HOPE – Home of Organic and Printed Electronics – which aims to replace traditional electronics with sustainable technology.
- The port of Norrköping is transitioning to fossil-free operations and in 2021, it increased its investments in the electrification of its cranes, trucks, and other vehicles. It also changed diesel with HVO100 fuel, a diesel with reduced CO₂ emissions compared to traditional diesel. It participates in research studies on shore power and the electrification of ports. Regarding climate adaptation, the company is working on adapting new operations to risks associated with rising seawater levels, as well as implementing measures to handle stormwater. The company will also participate in a risk management project for floods together with the municipality.
- Nodra works with water, sewage, and waste management. All of Nodra's vehicles for waste collection are powered with biogas or HVO100. All waste transport to treatment facilities is carried out with fossil-free fuels. The company also requires the use of renewable fuel in procurement by other waste contractors. In the fall of 2021, Nodra hired an environmental manager who will structure the work to reduce the company's environmental impact going forward. The company works actively with climate adaptation measures. In 2021, the company investigated how Norrköping's water supply is to be secured in the long term, mainly by focusing on meeting future requirements for security regarding reserve water and climate changes.



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 5 October 2022.

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

Assets and projects that are selected as eligible when evaluated against the framework criteria will be put in a pool of eligible green projects as a part of Norrköping's budget-setting process. The outlined process is: i) all investment projects included in the budget proposals will be assessed annually by the respective management of the departments and companies owned by the municipality, with projects assessed to be aligned with the framework criteria included in a list of potential projects, ii) the list of potential projects is evaluated by the finance and corporate unit together with an environmental controller, and iii) for projects that make it through the second level of screening, a dialogue is initiated by an environmental controller with the respective project leader to assure the greenness of the project and to develop suitable reporting metrics. After this final assessment, the eligible investments are included in the green assets and project pool.

Management of proceeds

An amount equal to the net proceeds will be credited to a special account that will support the municipality's lending for eligible projects. Until disbursement to eligible projects, the special account balance will be placed as part of the liquidity reserve and managed accordingly.

If, for any reason, a financed eligible project ceases to meet the eligibility criteria, it will be removed from the pool of green bond financed projects.

Reporting

The municipality will provide an annual green bond impact report to investors that will be made publicly available on the issuer's website. The report will include: 1) a list of projects financed and the impact from these projects (actual or estimated), 2) a selection of project examples, and 3) a summary of Norrköping's green bond development.

The issuer will follow recommendations from the Nordic Public Sector Position Paper on green bond impact reporting. An independent external party will confirm that an amount equal to the green bond net proceeds has been allocated to green projects. Examples of potential impact reporting metrics are listed in the table below:

Green Bond Principles Category	Selected Impact Indicators
Renewable energy	<ul style="list-style-type: none">• Installed renewable energy production capacity (megawatt hours)
Energy efficiency	<ul style="list-style-type: none">• Energy saved (megawatt hours)
Green buildings	<ul style="list-style-type: none">• Greenhouse gas emissions avoided (tonnes carbon dioxide equivalents)• Amount of energy saved (megawatt hours)



Clean transportation	<ul style="list-style-type: none">• Greenhouse gas emissions avoided (tonnes carbon dioxide equivalents)
Pollution prevention and control	<ul style="list-style-type: none">• Recycling and re-use, rehabilitation of contaminated areas
Sustainable water and wastewater management	<ul style="list-style-type: none">• Water withdrawals or treatment capacity (cubic meters day or tonnes per day)
Climate change adaptation	<ul style="list-style-type: none">• Projects financed (number)
Environmentally sustainable management of living natural resources and land use <i>(max. 20 per cent)</i>	<ul style="list-style-type: none">• Land area protected (meters squared)

Table 1. Impact indicators for impact reporting

In previous reporting, proceeds have been allocated to six out of seven project categories. The biggest share of proceeds has previously gone to the green building category and sustainable water and wastewater management. Projects have included funding student and residential apartments, a new home for the elderly, two schools, street lights, a new recycling facility, a new sludge handling treatment plant, renewal of pipeline network, renovations at the water treatment center and climate adaption measures. The reporting includes a description of each project, and estimated impact for some projects.



2 Assessment of Norrköping’s green bond framework

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

Shading of eligible projects under Norrköping’s green bond framework

- Proceeds can be used for both financing and refinancing. The ambition is to mainly finance new projects.
- Norrköping is expecting that the biggest allocation will go to green buildings, though wants to keep a varied portfolio and aims to have projects in all categories.
- In 2021, the portfolio receiving green financing consisted of the construction of two schools and climate adaptation measures to a stream area.
- Nuclear or fossil fuel projects cannot be financed.

Category	Eligible project types	Green Shading and considerations
Renewable energy 	Renewable energy generation and supporting infrastructure <ul style="list-style-type: none"> • Wind, solar, small-scale geothermal and biogas from waste 	Dark Green <ul style="list-style-type: none"> ✓ Renewable energy is key to the low carbon transition and represents a Dark Green solution. ✓ If investing in geothermal projects the municipality is planning to respect the life cycle emission threshold set out by the EU Taxonomy, to keep GHG emissions below 100gCO₂e/kWh. ✓ The environmental impact associated with renewable energy projects will be addressed in the permit process and this will not be assessed in the selection process. The issuer informs us that it is most unlikely that it would finance a wind-project. ✓ The municipality has no requirements that forestry waste must come from certified forests, while, in its experience, waste is sourced locally.



Energy
efficiency



Individual installations and improvements in existing buildings, activities, and operations

- Leading to efficiency improvements compared to existing technology (such as new control technology, ventilation systems, lighting, and window replacements)

- ✓ It is not a standard policy that methane leakage will be assessed for future projects. It monitors methane leakage in the biogas production at its Slottshagen project, however it is not a general policy.

Medium Green

- ✓ Focusing on improving energy performance in existing buildings is essential to decrease the climate footprint of the real estate sector. Measures such as window replacements, upgrading ventilation systems and similar generally give high energy savings.
- ✓ One should 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



Residential and non-residential buildings

- New buildings with a primary energy demand (PED) at least 10 per cent lower than the threshold set for nearly zero-energy buildings (NZEB) in national measures (Swedish Building Regulations, BBR) valid at the time of construction. New buildings are encouraged to have a minimum certification of either LEED gold, BREEAM very good, Miljöbyggnad silver. The Nordic Swan Ecolabel or other certification of similar ambitions.
- Existing buildings which represent the top 15% of the national or regional building stock or are classified with an energy performance certificate class A.

Major renovation of buildings

- Leading to a reduced primary energy demand (PED) of at least 30 per cent

Light Green

- ✓ This category receives a Light Green shading due to the lack of systematic considerations of life cycle emissions for building materials, and other environmental considerations besides energy use, which are particularly important for new construction. Though good, performing 10% better than NZEB is considered comparatively modest.
- ✓ The current political leadership has requested a proposal for a climate strategy for buildings and properties. This is currently being developed. The issuer is planning to start demolition projects where its demolition materials can be used in new projects. We encourage the continued development of this strategy.
- ✓ The municipality calculates the Global Warming Potential (GWP) as required by Swedish law.



- ✓ The municipality has confirmed that environmental certifications are encouraged but not a criterion. There has not been a culture in the municipality to certify its buildings.
 - ✓ The type of properties the municipality is expecting to finance is schools, elderly homes and residential properties.
 - ✓ As long as the official levels are not available, the top 15% will be defined either by EPC A and B or the levels defined by Fastighetsägarna. The building authorities will come with an official definition of the top 15%, but it is not clear when this will happen. There are at the moment no planned investments in existing buildings.
 - ✓ Regarding physical climate risks, the municipality's guideline for climate adaptation is in line with the national strategy. Risk and vulnerability analyses have been carried out with Linköping University and Sveriges Meteorologiska och Hydrologiska Institut (SMHI).
 - ✓ Buildings with direct fossil fuel heating cannot be financed.
 - ✓ 80% of the building stock that we will have in 2050 is already built today². Therefore 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 PED is an encouraged activity.
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- ² [Climate change - UKGBC - UK Green Building Council](#)



Clean transportation



Sustainable public and individual transportation

- Non-fossil fuels and related infrastructure

Medium to Dark Green

- ✓ The municipality has informed us that the activity planned under this category is building infrastructure such as charging infrastructure and fossil fuel-free gas stations. It could include projects that contribute to the production of non-fossil fuels such as biogas and projects related to its tramcar. It is not financing vehicles.
- ✓ 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.
- ✓ Biogas vehicles, which can use the infrastructure that may be financed here, have the potential of running on natural gas and will still be a source of local pollutants.
- ✓ For projects that require construction and the use of vessels, emission intensity and resilience of materials and equipment should be considered.

Pollution prevention and control



Waste management

- Recycling and re-use
- Rehabilitation of contaminated areas
- Initiatives to prevent the generation of waste

Medium Green

- ✓ The issuer expects the main investment in this project category to be recycling centers or sorting facilities.
- ✓ Facilitating material recovery is essential to reduce climate impacts from production.
- ✓ No fossil fuels vehicles can be financed under this category
- ✓ Projects should seek to minimize emissions from the construction phase and supply chain (e.g., from cement production).



Sustainable water and
wastewater management



Water management

- Projects and investments to ensure societies overall water need and reduce the risk of draft and floods

- ✓ There are no current plans to invest in heat incineration plants.

Light to Medium Green

- ✓ The Light to Medium shading reflects a certain vagueness in the eligibility criteria, including a lack of a quantitative eligibility criteria for investments under this project category.
- ✓ Energy consumption and limiting leakage are important considerations in the sustainability of such projects. There are no criteria in this respect, however the issuer has confirmed it will report on energy consumption and leakage for its water and wastewater operations.
- ✓ Earlier projects such as renovation of the pipeline for water and sewage and renovation of the water treatment plan. Projects are 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).

Climate change adaption Climate change adaption measures in buildings



- Activities contributing to reducing the negative effects of climate change such as costs for adaption of buildings, infrastructure, and sensitive surroundings.

Dark Green

- ✓ Climate scientists are clear when communicating that some level of climate change is unavoidable even in the most optimistic climate scenarios. For the Nordic countries, expected changes are among others heavy rain and floods. It is therefore crucial to plan and mitigate potential risks to reduce the potential financial and environmental impact of such events.
- ✓ The municipality has performed a vulnerability mapping that primarily focuses on three climate-related events, which cover i) the



combination of a hundred-year flood and high water levels, ii) extreme rain, and iii) high temperatures.

- ✓ In 2021, the municipality invested in Ljura Bäck to develop a stream area so that it could handle a 100-year flow from both natural land and extreme rain.
- ✓ Ecosystem-based climate adaptation is the basis for the climate adaptation work in the municipality. Ecosystem-based adaptation makes use of ecosystems and biodiversity to help to adapt to the impacts of climate change. Ecosystem-based solutions are supplemented with technical solutions and routines.
- ✓ For measures that require construction and the use of vessels, emission intensity and resilience of materials and equipment should be considered. There should also be considerations on how measures impact the local environment.

Environmentally sustainable management of living natural resources and land use

Conversational activities

- Nature conservation
- Biodiversity
- Development of non-toxic environments
- Preparation of meals with lower climate impact in preschool, school, elderly care and group housing.



Medium to Dark Green

- ✓ Investments in biodiversity are welcome, even if their overall climatic effects are uncertain. These types of investments can contribute to resilience against flood risk through the provision of natural drainage.
- ✓ Projects relating the development of non-toxic environments are related to the fact that the municipality have some heavily polluted areas such as former industrial plots. Development of non-toxic environments can include decontamination of polluted land to prevent toxic substances from spreading to the surrounding environment.



✓ From a 2050 perspective, we need to shift to a more plant-based diet.

Table 2. Eligible project categories



3 Terms and methodology

This note provides CICERO Shades of Green’s second opinion of the client’s framework dated 5 October 2022. 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. CICERO 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

CICERO 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
 Dark Green is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate resilient future.	 Solar power plants
 Medium Green is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet.	 Energy efficient buildings
 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.	 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. CICERO 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

CICERO 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 CICERO Shads of Green's assessment. CICERO 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 CICERO Shades of Green places on the selection process. CICERO 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	Norrköping framework 5 October 2022	
2	Årsedovisning:Hållbarhetsrapport_Rådhus_AB_2021	Norrköping's Sustainability report for 2021
3	Klimakartläggning 2019 Norrköpings kommun	Norrköping's climate action plan



Appendix 2: About CICERO Shades of Green

CICERO Shades of Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Shades of Green.

CICERO Shades of Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Shades of Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO 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. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Shades of Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University, the International Institute for Sustainable Development (IISD) and the School for Environment and Sustainability (SEAS) at the University of Michigan.

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- ★ **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