



# Nacka Municipality Green Financing Second Opinion

21 February 2023

## Executive Summary

**Nacka Municipality (“Nacka” or “the issuer”) is a municipality in south-east Sweden with over 109,000 inhabitants.** The municipality is situated just east of Stockholm and parts of it are considered to belong to the Stockholm metropolitan area. The municipality is in a growth phase, driven by a growing population and its proximity to the capital. The goal is to build 20 000 new homes and create 15 000 new jobs between 2014-2030.

**The municipality is expecting that main investments will be sustainable transportation (financing the metro expansion to Stockholm), and energy efficient buildings (e.g. the construction of schools and sport halls).** The ambition is to mainly finance new projects. In the framework, which is an update from the 2018 version, the categories are largely the same, where the changes are that replacement of fossil raw material has been integrated into the energy efficiency category. According to the latest investor letter, 49.8% of green bond proceeds have gone to energy efficient buildings, 45.7% to sustainable transportation, 4.2% to energy efficiency measures and 0.3% to water and wastewater management. Going forward, Nacka expects a small decline in the proportion of green buildings and sustainable transportation in favor of energy efficiency measures and water and wastewater projects.

We rate the framework **CICERO Medium Green** and give it a governance score of **Good**. The shading reflects the middle ground between the Shade of Green assigned to the project categories that will receive most proceeds: sustainable transportation projects and new energy efficient buildings. The metro project represents a Dark Green solution, while criteria for constructing energy efficient buildings are limited to energy use, not including important environmental considerations such as embodied emissions. The green building category is therefore assigned a Light Green shade. Nacka has developed strong climate and environmental policies, with targets that are monitored.

## Strengths

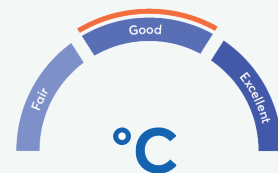
**It is positive that the framework activities address Nacka’s biggest sources of emissions, such as transportation.** The ongoing metro project owned by Region Stockholm will strengthen Nacka’s public transportation by allowing Nacka’s habitants an efficient way to get to Stockholm. It is expected that the metro expansion will reduce air pollution and greenhouse gas emissions as more travelers can use the metro instead of using private fossil fuel powered vehicles. Based on an assessment carried out in the preliminary study, the metro

## SHADES OF GREEN



°CICERO  
Medium Green

## GOVERNANCE ASSESSMENT



## GREEN BOND PRINCIPLES

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



expansion will reduce Nacka's transportation emissions by 1 500 -2 400 tons CO<sub>2</sub> per year<sup>1</sup>. The project has environmental targets, where Region Stockholm is certifying the project with CEEQUAL<sup>2</sup> and is systematically looking at how to improve the climate impact of the project. Some examples of solutions that have been identified are local reuse of rock masses, climate requirements in procurement, and using a wooden frame instead of steel /concrete.

### *Pitfalls*

**There are no specific considerations given to embodied emissions for construction projects.** For new construction, the construction phase of buildings heavily influences total emissions and environmental impact. It is therefore a pitfall that Nacka 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. Nacka informs us that it uses the criteria for the environmental certification Miljöbyggnad Silver as guidelines in its projects, where some considerations on material choices are made. The version of the certification Nacka currently uses have limited criteria that reduce embodied emissions, while the updated version of the certification covers such considerations to a greater extent. While it is encouraging that Nacka uses the criteria set out in the Miljöbyggnad certification, when the certification is not obtained there is no third-party assurance that properties meet all criteria.

**Nacka could benefit from incorporating additional considerations to navigate through the selection process besides the framework criteria.** While environmental experts are included in the selection process, Nacka may benefit from formal procedures considering additional environmental aspects ensure that the complexity of sustainability is considered (e.g. life-cycle assessments, biodiversity, rebound effects, and proximity to public transport.) This is particularly important since Nacka's framework is broad and comprises many categories.

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<sup>1</sup> Underlagsrapport förstudie tunnelbana till Nacka – Miljökonsekvensbeskrivning, Strategisk utveckling/ Trafik- och infrastrukturutveckling, Trafikförvaltningen 2014

<sup>2</sup> CEEQUAL is a sustainability rating scheme for infrastructure, engineering, landscaping and public realm projects.



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# 1 Nacka Municipality's environmental management and green bond framework

## Company description

Nacka Municipality (“Nacka” or “the issuer”) is a municipality in south-east Sweden with over 109,000 inhabitants. The municipality is situated just east of Stockholm and parts of it are considered to belong to the Stockholm metropolitan area. The municipality is in a growth phase, driven by a growing population and its proximity to the capital. The goal is to build 20 000 new homes and create 15 000 new jobs between 2014-2030.

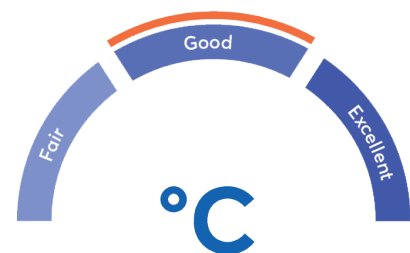
Nacka Municipality is responsible by law for providing vital services such as pre-schools and schools and social care and elderly care. Other mandatory responsibilities include libraries, planning and building issues, environmental and health protection, waste, water and wastewater management and emergency services. The municipality also provide voluntary services that are of value to society, such as cultural and recreational activities, energy supply, park maintenance and other technical services.

In 2018, Nacka issued its inaugural green bond. According to Nacka's 2022 investor letter the value of the green bond amounted to SEK 500 million. Since 2018, proceeds have been allocated to sustainable transportation, energy efficient buildings, energy efficiency measures and water management. Changes in the framework are that replacement of fossil raw material has been integrated into the energy efficiency category.

## Governance assessment

Nacka has developed strong climate and environmental policies, where performance against targets is tracked making it easy to follow its progress. It is positive that the municipality is assessing physical climate risks. Together with external researchers, the municipality has developed guidelines for adaptation to climate change. Nacka's subsidiaries still need to integrate the adaptation plan into their long-term strategy work. It is encouraging that Nacka has started to include environmental considerations in purchasing and procurement.

The selection process is clear and involves environmental expertise. 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. While it is positive that Nacka has employees with environmental competence present in the selection process so they can raise potential concerns, we encourage Nacka to implement systematic environmental considerations that go beyond screening projects by the framework criteria.



Reporting is to be done on a portfolio basis. When reporting on avoided emissions, mainly emissions associated with energy use will be reported on. Investors should be aware, that especially for the construction of new buildings, embodied emissions account for a substantial part of the total impact of the project. For some project categories, there are no quantitative impact indicators, whereas in previous reporting this has been handled by including qualitative descriptions of projects.

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. 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 Nacka'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 greenhouse gas (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, and transportation. Consequently, the municipality is at risk of polluting the local environment for example during the erection of the properties, from poor waste handling and so on.

### Environmental strategies and policies

Nacka currently has six explicitly stated environmental goals in its environmental program for 2016-2030: 1) limit climate change, 2) clean air, 3) toxic-free environment, 4) clean water, 5) a good built environment and 6) biodiversity. Progress on each goal is tracked against a set of 50 indicators and highlighted in Nacka's Annual Report. By 2030, Nacka targets to reduce greenhouse gas emissions to 1,5 ton CO<sub>2</sub>e per person compared to 1990 levels (4,0 ton CO<sub>2</sub>e/ person), corresponding to a 63% reduction. In 2019, the status on the target was 1,97 ton CO<sub>2</sub>e/ person. The target includes territorial emissions.<sup>3</sup> By 2025, it has a goal to reduce the energy intensity of its properties to approximately 100kWh/m<sup>2</sup>/year. In 2021, it reported an energy intensity 119 kWh/m<sup>2</sup>/year, which represents a 22% decrease compared to a 2014 baseline (153 kWh/m<sup>2</sup>/year). The decrease was the result of replacing old oil boilers with district heating and heat pumps, upgrade ventilation systems and to optimize the management of properties.

Nacka has established a carbon budget in cooperation with Uppsala University and Klimatsekretariatet to map emissions within the geographical area of Nacka and to contribute to the goals of the Paris Agreement<sup>4</sup>. In 2022, total estimated territorial emissions from Nacka were 184,259 tons CO<sub>2</sub>e. The two biggest shares came from sea transport (45%) and domestic transport (41%).

<sup>3</sup> Territorial emissions include the entirety of emissions that occur within the city boundaries.

<sup>4</sup> [Nuläge - Nackas koldioxidbudget \(climatevisualizer.com\)](#)



Nacka has launched a climate change adaptation program<sup>5</sup> to evaluate climate related risks and propose an action plan to future-proof the municipality. The IPCC climate scenarios RCP4.5 and RCP8.5 were used to evaluate how the future climate in the region would look. The main identified risks were flooding, increased sea levels, heat waves and biodiversity risks. The climate adaptation program is to be adopted and implemented by Nacka's subsidiaries in the coming years.

In accordance with the Swedish national goal that greenhouse gas emissions from road transport must be reduced by at least 70 percent by 2030, Nacka has produced an action plan for fossil fuel-free transportation. The action plan describes measures to convert the municipality vehicle fleet to not be dependent on fossil fuels.

External contractors are required to follow the municipal environmental policy. The requirements can vary from case to case, for example, if the project is in a sensitive environment the demands can be higher. Environmental audits are routinely performed by internal auditors.

### **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 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*

According to the issuer, the evaluation and selection of projects will be preceded by an analysis to ensure that the project does not contravene any other prioritized area according to the categorization of green projects. For example, the energy efficiency gains may not be counteracted when it implements an adaptation measure. Projects will be subject to Nacka's procurement policy, which includes guidelines on ethical, environmental and social aspects.

Nacka has a council for green bonds. The members come from the relevant entities of Nacka and will have expertise in environmental issues, finance, strategy and project management and construction. Decisions are made in consensus. A list of projects will be kept by the city management office who is responsible for keeping it up to date. The list of projects is monitored on a regular basis to ensure that the proceeds are sufficiently allocated to green projects. This is the responsibility of the council. If, for any reason, a green project ceases to comply with the requirements set out in the municipality's green bond framework such projects will be removed from the green project portfolio.

Nacka will follow the development of the green financing market and manage any future updates of the framework to reflect current and future market practices and potential updates to the GBP.

#### *Management of proceeds*

Proceeds will be credited to a separate account with the purpose to finance Nacka's green projects. As long as green bonds are outstanding and proceeds from issuances are available on the separate account, Nacka shall, after decision of the green bond council, deduct funds from the separate account in an amount equal to disbursements for the financing / refinancing of green projects. Until disbursement, the separate account balance will be placed as a part of the liquidity reserve. Nacka will strive to allocate unallocated proceeds within one year.

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<sup>5</sup> [Klimatanpassning \(nacka.se\)](https://www.nacka.se/klimatanpassning)



All green bonds issued will be managed on a portfolio level, the equivalent to the net proceeds from Nacka are followed-up. The green bond council is responsible for the follow-up and allocation of the net proceeds.

### *Reporting*

Nacka will provide an annual investor letter on its website. The investor letter will cover the following areas:

#### Allocating reporting

There is an internal control process that is carried out annually, that controls that allocation reporting. The control is done by someone other than the person who delivered the figures. There is no external verification.

- Total amount of green bonds issued
- A list of financed green projects within the municipality
- Share of proceeds used for financing / refinancing and share of proceeds used for green project categories
- Share of unallocated proceeds (if any)

#### Impact report

Nacka will report on a portfolio basis and intends to report on quantitative impact indicators where reasonable and where relevant data is available. It will be transparent on methodologies and disclose chosen grid factors. Nacka has confirmed it will be consistent with using the same grid factor when reporting on its own emissions and when calculating avoided emissions. Impact reporting will not be verified by a third party. Some of the reporting indicators include:

- Estimation of avoided CO<sub>2</sub>e emissions. Nacka expects it will be foremost avoided emissions from reduced energy use it will report on, for example from its planned construction projects.
- Expected or actual energy use for each building
- For renewable energy projects, the amount of installed and produced renewable energy in kilowatt hours.

In past reporting, the issuer disclosed that proceeds have been allocated to four out of nine project categories. Previously, proceeds have been split between sustainable transport and energy efficient buildings. Minor shares have also been allocated to energy efficiency measures and water management. The reporting has been project by project and has focused on allocated proceeds and avoided emissions where possible.





## 2 Assessment of Nacka Municipality’s green bond framework

The eligible projects under Nacka Municipality’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 Nacka Municipality’s green bond framework

- The majority of investments are expected to be new financing
- 40% of allocated proceeds are expected to go to sustainable transportation, 35% is expected to go to energy efficient buildings, 10% to energy efficiency measures and 8% to water and wastewater management.
- Previously, proceeds have been split between sustainable transport and energy efficient buildings. Minor shares have also been allocated to energy efficiency measures and water management. Proceeds will not be used to finance either fossil fuel energy generation, nuclear energy generation, weapons, and defence industries nor potentially environmentally negative resource extraction, gambling or tobacco.

Category	Eligible project types	Green Shading and considerations
 Renewable energy	Wind power, solar power, and geothermal energy	<b>Dark Green</b> <ul style="list-style-type: none"> <li>✓ Renewable energy is key to the low carbon transition and represents a Dark Green solution.</li> </ul>
 Energy efficiency	Energy storage, smart grids and electricity networks (including transmission, infrastructure or equipment), heat pumps, replacement and new installation of LED lighting, and replcement of oil boiler for heating.	<b>Medium to Dark Green</b> <ul style="list-style-type: none"> <li>✓ Potential investments could be Nacka energy expanding the electricity network. A well-functioning power grid is a prerequisite for electrification, which is a key component of decarbonizing the energy sector.</li> <li>✓ Another priority is to install LED lighting in all municipal properties. Nacka has 40% of traditional lighting left to replace with</li> </ul>





LED lighting. Other investments under this project category would be projects with energy storage, changing to FTX ventilation, presence controls and heat pumps.

- ✓ The issuer informs us that energy storage is by use of batteries. The production of batteries has potentially significant negative environmental impacts, that should be managed.

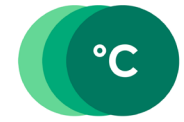
Sustainable transportation



Fossil free public transportation, pedestrian and bicycle paths, biogas and **Dark Green** electrical vehicles and logistics solution

- ✓ Electrified public transport is crucial from a 2050 perspective. Nacka expects that 95% of proceeds allocated to sustainable transportation will support the metro expansion connecting Stockholm and Nacka.
- ✓ It is the Stockholm region that is responsible for the project, while Nacka is covering parts of the financing. Region Stockholm has CEEQUAL-certified<sup>6</sup> the project and climate considerations have been included in the design phase.
- ✓ In Region Stockholm's policies, new transportation projects have goals for GHG reductions for the entire project phase (from planning to completion) and must set targets for emissions in scope 1-3. Actual emissions are monitored and reported yearly in the budget process. New metro projects have a goal of 25 percent reduction of GHG, other projects currently have the goal of 15 percent reduction. The baseline for the reductions are a "business-as-usual" scenario developed by the public transportation company Trafikverket

<sup>6</sup> CEEQUAL is a sustainability rating scheme for infrastructure, engineering, landscaping and public realm projects.



Energy efficient commercial and residential buildings



- New buildings (buildings built after 31 Dec 2020)<sup>7</sup>
- i. Buildings with a Primary Energy Demand (PED) at least 20 percent lower than the threshold set for nearly zero-energy building (NZEB) requirements in national measures, or
  - ii. Buildings that meet the energy requirements for Miljöbyggnad Silver, or Nordic Swan Ecolabel (Sw. Svanen) or equivalent level
  - iii. For buildings larger than 5000 m<sup>2</sup>:
    - upon completion, the building resulting from the construction undergoes testing for airtightness and thermal integrity, and
    - the life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for selected stages in the Life Cycle
- Existing buildings (buildings built before 31 Dec 2020)<sup>8</sup>
- i. EPC A or
  - ii. Buildings that meet the energy requirements for Miljöbyggnad Silver, Nordic Swan Ecolabel (Sw. Svanen) or equivalent level
- Major renovations
- Major renovations and re-construction leading to primary energy savings of at least 30 percent

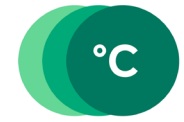
- ✓ Other projects would most likely be pedestrian and bicycle paths.
- ✓ Note that biogas could include climate risks from sourcing and transportation. Be aware of life cycle emissions and broader impacts on biodiversity and the environment.

**Light Green**

- ✓ This category receives a Light Green shading due to the solid energy criteria that ensure that energy-efficient buildings are financed while capturing that there is a lack of systematic considerations of life cycle emissions for building materials, which are particularly important for new construction.
- ✓ Nacka is expecting that the main investments will be the construction of schools, pre-schools, and sports halls.
- ✓ The municipality has confirmed that environmental certifications are not a criterion, however, it uses criteria set out in Miljöbyggnad Silver as guidelines for construction projects. There has not been a culture in the municipality to certify its buildings.
- ✓ While it is encouraging that Nacka uses the criteria set out in the Miljöbyggnad certification, when the certification is not obtained there is no third-party assurance that properties meet all criteria.
- ✓ Nacka informed us that for its current projects, it is Miljöbyggnad version 3.2 that is used as guidelines, however, moving forward it will train in the new updated certification Miljöbyggnad 4.0. The

<sup>7</sup> New buildings are defined as buildings built after 31 Dec 2020, in line with the current definition in the EU Taxonomy.

<sup>8</sup> Existing buildings are defined as buildings built before 31 Dec 2020, in line with the current definitions in the EU Taxonomy.



updated certification includes stronger criteria relating to embodied emissions and physical climate risks.

- ✓ Life Cycle Cost (LCC) assessments have been used to consider different material options, e.g. by considering wood, different types of concrete, and steel. This has been used to be able to choose between structure materials with different GWP.
- ✓ While Nacka has published a Climate Adaptation Program, it is yet to be implemented in the systematic work with its building stock to ensure that properties are fit for the changing climate.
- ✓ The criteria for existing buildings ensure that financed buildings are better than applicable regulations, but how energy efficient the buildings are will depend on their time of construction.
- ✓ 80% of the building stock that we will have in 2050 is already built today<sup>9</sup>. 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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Recycling and re-use, rehabilitation of contaminated land and leachate management

**Medium to Dark Green**

- ✓ Facilitating material recovery through increased recycling and re-use is essential to reduce climate impacts from production.

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- <sup>9</sup> [Climate change - UKGBC - UK Green Building Council](#)



Waste management



- ✓ A potential investment could be a recycling centre so that more residents have access to leave materials for recycling or reuse. Other investments might be the purchase of new machinery for recycling newspapers and packaging.
- ✓ Leachate management is of landfills may be financed. Generally, leachate has a high biochemical oxygen demand (BOD) and high concentrations of organic carbon, nitrogen, chloride, iron, manganese, and phenols. Many other chemicals may be present, including pesticides, solvents, and heavy metals.
- ✓ Projects should seek to minimize emissions from the construction phase and supply chain

Water and wastewater management

For example water pipes (to reduce inflow/leakage and to replace privately owned wells and treatment plants), pumping stations (with more efficient and energy-efficient pumps) and stormwater dams (renovation of old ones and building new and modern ones)



**Light to Medium Green**

- ✓ The Light to Medium shading reflects a lack of quantitative eligibility criteria for investments under this project category.
- ✓ Energy consumption and limiting leakage are important considerations in the sustainability of such projects. The EU taxonomy has defined thresholds to define ambitious water and wastewater management. Nacka has set no quantitative criteria, however, it informs us that the goal is to measure how efficient the pumping stations become.
- ✓ The issuer has confirmed it measures energy consumption and leakage for its water and wastewater operations.
- ✓ Nacka has confirmed that all facilities run on electricity and that there is no infrastructure running on fossil fuels.






		<ul style="list-style-type: none"> <li>✓ Projects should seek to minimize emissions from the construction phase and supply chain (e.g., from cement production).</li> </ul>
<p>Climate adaptation measures</p> 	<p>Climate adaptation measures in buildings, infrastructure and sensitive habitats</p>	<p><b>Dark Green</b></p> <ul style="list-style-type: none"> <li>✓ 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.</li> <li>✓ For measures that require construction, emission intensity and resilience of materials and equipment should be considered. There should also be considerations on how measures impact the local environment.</li> </ul>
<p>Environmental measures</p>  	<p>Environmental measures in other fields than climate mitigation and climate adaptation (max 20 percent), for example:</p> <ol style="list-style-type: none"> <li>i. Nature conservation</li> <li>ii. Biodiversity</li> <li>ii. Development of non-toxic environments</li> </ol> <p style="padding-left: 40px;">Improved eco-system services</p>	<p><b>Medium to Dark Green</b></p> <ul style="list-style-type: none"> <li>✓ 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.</li> </ul>

Table 1. Eligible project categories









## 3 Terms and methodology

This note provides CICERO Shades of Green’s second opinion of the client’s framework dated February 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. 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
 <b>Dark Green</b> is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate resilient future.	 Solar power plants
 <b>Medium Green</b> is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet.	 Energy efficient buildings
 <b>Light Green</b> 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	Green bond framework 2023	
2	Investor letter 2019	
3	Investor letter 2020	
4	Investor letter 2021	
5	Investor letter 2022	
6	Climate change adaption plan	
7	Nacka municipality's environmental program 2016-2030	
8	Carbon budget	





## Appendix 2: About CICERO Shades of Green

CICERO Shades of Green, now a part of S&P Global, 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.

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 Shades of Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions

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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