



Lejonfastigheter

Green Bond Second Opinion

September 9th, 2019

Linköpingsgruppen was established by the Municipality of Linköping, Linköpings Stadshus, Tekniska verken i Linköping, Stångåstaden and Lejonfastigheter in 2017 to increase cooperation and create new financial solutions by e.g. establishing a common green bond framework. All these subsidiaries of Linköpingsgruppen will issue under one green bond framework. Lejonfastigheter AB is the subsidiary in the groups responsible for the development and management of properties for public entities in Linköping Municipality, such as buildings and arenas for sport and cultural activities, nursing homes and schools.

Linköpingsgruppen's green bond framework as applied by Lejonfastigheter, provides a progressive, clear and sound framework for investments into projects that well align with the Green Bond Principles. The green bond framework, as developed by Linköpingsgruppen contains nine eligible project types. Only a subset is, however, of relevance for Lejonfastigheter. The main category is green buildings, but Lejonfastigheter may also to a smaller extent use the categories renewable energy, energy efficiency, clean transportation and climate adaptation measures. Use of proceeds specifically excludes direct and indirect investments in fossil fuels.

Lejonfastigheter has in place strong environmental goals and targets, good mitigation plans, a sound selection process and comprehensive and transparent reporting. The issuer has in place clear methods and parameters for estimating CO₂ emission reductions from eligible projects. We note that Lejonfastigheter does not seem to carry out climate scenario analysis or risk assessments in alignment with the methodology recommended by TCFD. However, the Climate Adaptation program of Linköping municipality is comprehensive and covers a wide set of potential future risks under climate change.

Based on the overall assessment of the project types utilized by Lejonfastigheter, governance and transparency considerations, Lejonfastigheter's green bond framework receives an overall **Medium Green** shading. While most of the eligible project categories are shaded Dark green, the main category – Green buildings – is shaded Medium green. In order to achieve a dark green shading, the Green Bond framework would need a clearer requirement that best environmental technology is used in eligible green bond building projects. The framework would benefit from improved energy performance of buildings, with passive house technology and the energy performance of existing buildings greatly improved through refurbishments.

SHADES OF GREEN

Based on our review, we rate the Lejonfastigheter's **green bond framework Medium Green.**

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in Lejonfastigheter's framework to be Excellent.



GREEN BOND PRINCIPLES

Based on this review, this Framework is found in





Contents

1	Terms and methodology _____	Error! Bookmark not defined.
	Expressing concerns with 'shades of green'	Error! Bookmark not defined.
2	Brief description of Lejonfastigheter's green bond framework and related policies _____	4
	Environmental Strategies and Policies.....	4
	Use of proceeds.....	4
	Selection.....	5
	Management of proceeds	5
	Reporting.....	5
3	Assessment of Lejonfastigheter's green bond framework and policies _____	6
	Overall shading.....	6
	Eligible projects under the Lejonfastigheter's green bond framework.....	6
	Governance Assessment.....	8
	Strengths	8
	<i>Governance</i>	Error! Bookmark not defined.
	<i>Project Categories</i>	Error! Bookmark not defined.
	Pitfalls.....	9
	<i>Governance</i>	Error! Bookmark not defined.
	<i>Project Categories</i>	Error! Bookmark not defined.
	Appendix 1: _____	10
	Referenced Documents List _____	10
	Appendix 2: About CICERO Shades of Green _____	12

1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated August 2019. 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 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.

Expressing concerns with 'shades of green'

CICERO 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:

CICERO Shades of Green	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. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.</p>	 <p>Wind energy projects with a strong governance structure that integrates environmental concerns</p>
 <p>Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.</p>	 <p>Bridging technologies such as plug-in hybrid buses</p>
 <p>Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.</p>	 <p>Efficiency investments for fossil fuel technologies where clean alternatives are not available</p>
 <p>Brown is allocated to projects and solutions that are in opposition to the long-term vision of a low carbon and climate resilient future.</p>	 <p>New infrastructure for coal</p>

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, the governance aspects are carefully considered and reflected in the overall shading of the green bond framework. CICERO 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.



2 Brief description of Lejonfastigheter's green bond framework and related policies

Lejonfastigheter AB develops and manages properties for public entities in Linköping Municipality such as buildings and arenas for sport and cultural activities, nursing homes and schools. The company's real estate portfolio contains 280 properties with a book value of 3,800 million SEK. In 2017, Lejonfastigheter has received 2 400 million SEK in investments.

Environmental Strategies and Policies

Lejonfastigheter is owned by the Municipality of Linköping and therefore abides by the municipality's sustainability and environmental policies as well as the Climate Adaptation Program and the Chemical Program. In this context, the issuer refers to the UN Sustainable Development Goals (Agenda 2030) and the Paris Agreement. The Environmental Policy of Linköping focuses on pollution prevention and reduction of natural resource use, energy consumption reduction and increasing use of renewable energy, biodiversity preservation, continuous education and engagement of employees and elected representatives for continuous development of environmental activities and information of the local community and stakeholders.

A clear target for the Municipality of Linköping is to become carbon-neutral by 2025. The business strategy of Lejonfastigheter is in line with the municipality's goals and outlines ambitious sustainability targets. Lejonfastigheter further aims to reduce energy use with 20 percent by 2025 compared to 2015. The issuer aims to develop a sustainable supply chain by engaging with employees and suppliers. Ten suppliers per year are to be evaluated on the suppliers' responsibility code and action plan.

Use of proceeds

Lejonfastigheter's Green Bonds will finance and re-finance eligible projects in accordance to the Green Bond Framework. According to the issuer, the split between new projects and refinanced green projects is expected to be 50/50 and will be included in Linköpingsgruppen's annual Green Bond Investor Report. No proceeds will be allocated to operating expenditure.

The net proceeds will fund eligible projects and assets that meet one of the following purposes: reduce greenhouse gas emissions (1), adapt operations to climate change (2) or promote other environmental issues apart from climate change (3). According to the issuer, analysis shall be conducted to ensure that the projects do not contravene other prioritized areas.

Linköpingsgruppen's green bond framework specifies nine project categories: renewable energy (1), energy efficiency (2), clean transportation (3), replacement of fossil raw materials (4), green buildings (5), waste management (6), water and waste management (7), climate adaptation measures (8) and environmental measures (9). Lejonfastigheter will mainly focus on green buildings but will also include projects relevant for renewable energy, energy efficiency, clean transportation and climate adaptation measures, to a smaller extent. The issuer has informed CICERO Green that they plan to start construction of five to eight new buildings every year for the next few years. Green bond proceeds will not be allocated to nuclear power or fossil energy generation projects.



Selection

The selection process is a key governance factor in the Green bond Principles. CICERO Green considers how climate and environmental considerations are accounted for when evaluating whether projects can qualify for green bond funding. The Lejonfastigheter's green bond framework outlines a detailed and transparent selection procedure that is in line with the Green Bonds Principles. Potentially controversial projects are well managed, with the municipality taking into account different opinions and having a system of appeal in place.

Lejonfastigheter has established a decision-making unit, responsible for the evaluation of potential green projects which includes environmental and financial representatives who are responsible for evaluating and approving projects that meet the green criteria under the green bond framework. Life cycle considerations are taken into account for all projects. The decision-making unit must reach a consensus for a project to be approved and systematically document the decisions made. Lejonfastigheter has confirmed that the decision-making unit has the appropriate competence to cover all the project categories that are relevant to the issuer under the green bond framework.

Management of proceeds

CICERO Green finds the management of proceeds to be in accordance with the Green Bond Principles. Lejonfastigheter will credit the net proceeds of any issuance under the Green Bond Framework to a separate account. Financing or refinancing of eligible projects and/or assets that have qualified according to the project evaluation and selection process, will be deducted at the end of each quarter in an amount equal to disbursements for the financing of green projects. If an eligible green project or asset no longer meets the eligibility criteria, it will be removed from the pool of projects.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green bond programs. Procedures for reporting and disclosure of green bond investments are also vital to build confidence that green bonds are contributing towards a sustainable and climate-friendly future, both among investors and in society.

Lejonfastigheter has committed to annual reporting through the green bond investor report which shall include a list of all approved green projects with description of the projects and their main environmental benefits and the total amount allocated and disbursed and information about the split between new projects and refinancing. According to the issuer, allocated funds will be reported per project and the annual report aims to include installed renewable energy capacity, energy produced, energy efficiency gains (expected vs. achieved) certifications and expected vs. actual energy use per green building and estimated and avoided greenhouse gas emissions when relevant and possible. The CFO and the sustainability manager will take the responsibility for green bond reporting.

Linköpingsgruppen has informed CICERO Green that allocation of funds under the green bond framework and the green bond investor report will be reviewed annually by an external auditor. Reporting will be conducted on a project basis where impact metrics, such as sustainability targets, total emissions and emission reductions will be screened for. The green bond investor report and the opinion of the external auditor will be publicly available on the webpage of every member of Linköpingsgruppen.



3 Assessment of Lejonfastigheter’s green bond framework and policies

The framework and procedures for Lejonfastigheter’s green bond investments are assessed and their strengths and weaknesses are discussed in this section. 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 in this section to note areas where Lejonfastigheter's should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in Lejonfastigheter’s green bond framework, we rate the framework **CICERO Medium Green**.

Eligible projects under the Lejonfastigheter's green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed and that the selection process should be “well defined”.

Category	Eligible project types	Green Shading and some concerns
Renewable energy 	<ul style="list-style-type: none"> Solar power 	Dark Green <ul style="list-style-type: none"> ✓ Solar power is key to a low-carbon transition. ✓ Potential concerns regarding supply-chain emissions and land-use.
Energy efficiency 	<ul style="list-style-type: none"> District heating/cooling Smart grids Other measures to introduce and promote energy efficient solutions 	Medium Green <ul style="list-style-type: none"> ✓ Energy efficiency investments are key to reducing emissions.



- ✓ Consider the potential for rebound effects on energy consumption.

Clean transportation



- Fossil free public transportation
- Pedestrian and bicycle paths
- Hydrogen, biogas and EVs
- Logistics solutions which reduce climate footprints from transportation of people and goods

Dark Green

- ✓ Note that biofuels are not strictly CO₂ neutral.
- ✓ The representativeness of the national grid factors for electricity should be considered when assessing the impact of electric vehicles.
- ✓ Hydrogen is an environmentally friendly alternative for clean power systems, such as fuel cells. However, hydrogen production has a high energy demand. Consider renewable sources in hydrogen production.
- ✓ Biogas vehicles have the potential of running on natural gas and will still be a source for local pollutants.

Green buildings



- Commercial and residential buildings that, at the time of approval, at least meet the requirements for *Miljöbyggnad silver*, *Svanen*, *BREEAM very good* or *LEED gold*, or have an energy use that at least meets the requirements for the level silver for energy use (indicator 3) in *Miljöbyggnad*.
- Major renovations leading at least to compliance with requirements for *Miljöbyggnad silver* or that lead to a reduction in energy use per year on a m² Atemp basis of at least 30%.

Medium Green

- ✓ A dark green shading would require passive or plus house technologies.
- ✓ *Miljöbyggnad Silver* requires energy use at least 25% lower than the requirements in national regulations (Boverkets byggregler, BBR)
- ✓ Lejonfastigheter expects to start building 5-8 new buildings per year the coming years.
- ✓ Construction projects can have potential negative local environmental impacts.



Climate adaptation measures



Adaptation measures considered for:

- Buildings
- Infrastructure
- Sensitive habitats

Dark Green

- ✓ Consider the implications of climate change on developments along lakefronts, waterfronts and other locations at risk of climate impacts and natural hazards.

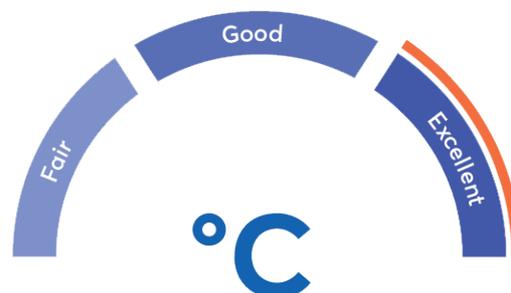
Table 1. Eligible project categories

Governance Assessment

Four aspects are studied when assessing the Lejonfastigheter's governance procedures: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent.

The overall assessment of the governance structure of Lejonfastigheter gives it a rating of Excellent.

Lejonfastigheter has in place strong environmental goals and targets, good mitigation plans, a sound selection process and comprehensive and transparent reporting. Nevertheless, we note that Lejonfastigheter does not seem to carry out climate scenario analysis or risk assessments in alignment with the methodology recommended by TCFD¹. On the other hand, the Climate Adaptation program of Linköping municipality is comprehensive and cover a broad set of potential future risks under climate change.



Strengths

Lejonfastigheter is owned by the Municipality of Linköping and therefore abides by the municipality's ambitious sustainability and environmental policies as well as the Climate Adaptation Program and the Chemical Program. A clear target for the Municipality of Linköping is to become carbon-neutral by 2025. As an important property developer and manager in Linköping, Lejonfastigheter plays a key role in reaching this target. The criteria for eligible projects under the green buildings category are good, but do not yet deliver the solutions needed in a low carbon 2050 perspective (passiv house technology and similar).

Lejonfastigheter's green bond framework, established governance procedures and organizational performance stand proof that the company takes climate impacts and physical risks of climate change seriously and is working to build climate resilience of own assets and services. The issuer has proven its capacity to meet its sustainability targets. To date, Lejonfastigheter has reduced 13,8 percent of energy use, which is in line with the 20 percent reduction target until 2025. Furthermore, CICERO Green is encouraged to see that Lejonfastigheter consistently

¹ <https://www.fsb-tcf.org/publications/final-recommendations-report/>



screens for rebound effects from energy use, at building level. Meters are installed in all buildings for water, electricity and heating. Both energy and water consumption are registered in Lejonfastigheter's internal system.

Weaknesses

We find no substantial weaknesses in Lejonfastigheter's Green Bond Framework.

Pitfalls

The Green building criteria allow for either a comprehensive certification (through Miljöbyggnad, Svanen, BREEAM or LEED) *or* a pure energy improvement requirement. In the latter case, other environmental concerns like material use, etc., is not binding.

In a low carbon 2050 perspective, the energy performance of buildings is expected to be improved, with passive house technology becoming mainstream and the energy performance of existing buildings greatly improved through refurbishments. The issuer is taking a step in this direction with energy efficiency criteria for both new buildings and in renovation of existing buildings. In order to achieve a dark green shading, the Green Bond framework would need a clearer requirement that best environmental technology is used in eligible green bond building projects.

Due to the complexity of how socio-economic activities impact the climate, a specific project is likely to have interactions with the broader community beyond the project borders. These interactions may or may not be climate-friendly, and thus need to be considered with regards to the net impact of climate-related investments. The issuer should consider access to public transportation, shared bike and car facilities and avoid emission lock-in from connected infrastructure, such as parking spaces and/or roads.

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced there will be incentives to do more of the same activity. An example is green buildings. Lejonfastigheter should be aware of such effects and possibly avoid green bond funding of projects where the risk of rebound effects is particularly high.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	Linköpingsgruppens' Green Bonds Framework, 2019	This document comprises Linköpingsgruppens' Green Bonds Framework and how it intends to use proceeds, how it plans to evaluate and select eligible projects, manages the proceeds and reports to investors.
3	Environmental Policy of the Municipality of Linköping Lejonfastigheter AB	The environmental policy of the Municipality of Linköping describes the principles for ecologically sustainable development that apply to the municipality's activities.
4	Climate Adaptation Programme of the Municipality of Linköping	This document describes the climate adaptation plan of the Municipality of Linköping. The purpose of the document is to create an overall picture of the risks linked to already ongoing climate change that will not be avoided within the municipality and identify long-term directions and strategies with prioritization of special development initiatives to adapt the municipality's activities to manage these risks.
5	Chemical Programme of the Municipality of Linköping	This document elaborates on the Municipality of Linköping chemical programme with the purpose to develop guidelines for how the use of chemicals that are harmful to health and the environment should be reduced in municipal activities, municipal companies and in activities purchased by the municipality.
6	Lejonfastigheter AB Business Plan 2019-2021	This document elaborates on Lejonfastigheter's approach on business planning, vision and focus.
7	Lejonfastigheter Sustainability Policy	Lejonfastigheter sustainability policy describes the basic sustainability values and principles that apply to the organization's activities.



8	Lejonfastigheter Code for Suppliers 2018	This document covers the expectations that Lejonfastigheter has from their suppliers, related to laws, regulations, standards and sustainability and ethics.
---	--	--



Appendix 2: About CICERO Shades of Green

CICERO 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 Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO 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 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 and the International Institute for Sustainable Development (IISD).

