

# Impact Report, Green Bonds

Vasakronan issued the world's first green bond in November 2013, and remains the largest issuer of green bonds in Sweden. In 2017, Vasakronan launched a new framework that tightens requirements for new construction and major renovation projects financed with green bonds and opens up opportunities for investments in existing properties. The framework has been reviewed by the Center for International Climate Research (CICERO) and has received the highest rating, Dark Green.

Vasakronan's total investments approved for financing with green bonds totaled SEK 14.2 billion (6.2) at the end of 2017. Of these, SEK 13.8 billion (–) comprised investments in existing properties, of which SEK 5.1 billion (4.0) consisted of properties that had previously undergone new construction or redevelopment. Investment in ongoing projects totaled SEK 0.4 billion (1.2).

In 2017, Vasakronan increased the volume of green bonds outstanding by SEK 2.8 billion, and the total amount outstanding at year end was SEK 8.0 billion (5.2), equivalent to 14% (9) of the total liabilities.

Properties account for nearly 40% of energy consumption in Sweden. Continuing the work on reducing energy consumption in our properties is therefore self-evident to us. Through investments and close collaboration with our tenants, we have man-

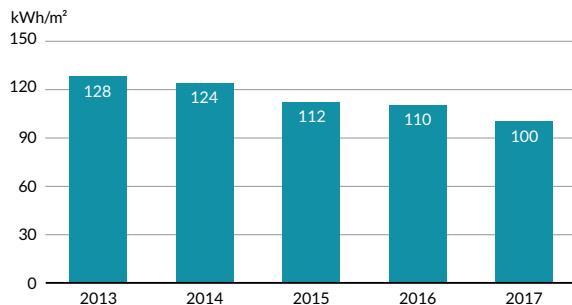
aged to halve our energy consumption since 2009, and by supplying our properties with renewable or climate-neutral energy we have reduced our carbon dioxide emissions in Scope 1 and 2 by 97% since 2006.

Large amounts of waste arise in new construction and major renovation projects, and a large portion of that waste currently goes to incineration or landfill. We also take care of large amounts of waste from our tenants' operations, and often we are the ones who determine how well the waste is sorted since we are responsible for the space and equipment used for sorting waste at the property. The EU waste hierarchy governs our work with both types of waste, and the goal is to minimise landfill and incineration and to increase the proportion that is recycled or reused.

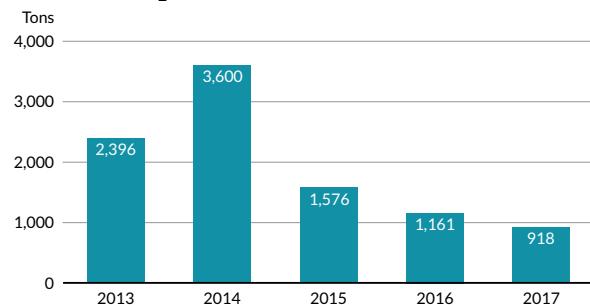
Water consumption is an important issue from a global and a local perspective. Vasakronan uses water from municipal systems, and even though no shortages have yet arisen in the locations where we operate, we are working continually on monitoring and on cost-efficient measures to reduce consumption. Low water use is also a precondition for environmentally certifying buildings with high ratings.

Every year, business planning is carried out around the company that focuses on areas for development and improvement in our operations. Financial, environmental, and societal goals are set based on these business plans. For more information on our environmental goals for 2017 and how well we achieved them, refer to page 12.

## Improved energy intensity

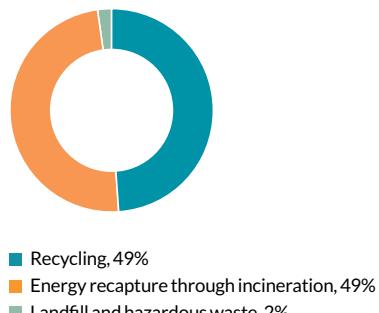


## Reduced CO<sub>2</sub>-emissions

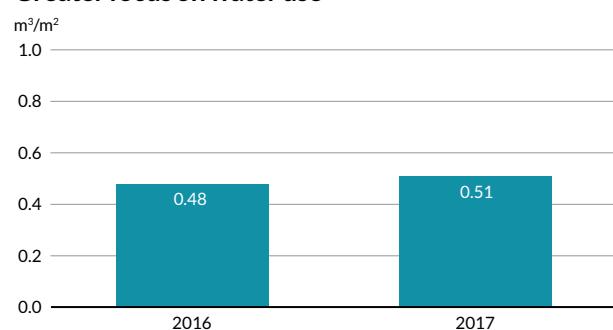


Pertains to Scope 1 and 2

## Larger share of waste recycling



## Greater focus on water use



Water intensity

**Criteria under the framework**

As a basis for the selection of assets that can be financed with green bonds, there is a framework that has been reviewed by the Center for International Climate Research (CICERO), a Norwegian climate research fund. In 2017, Vasakronan launched a new framework that also facilitates investments in existing properties. The criteria to be met for financing an existing property is that the building must be certified according to LEED for existing buildings on a Gold level or higher and have an energy intensity below 100 kWh/m<sup>2</sup> per year.

As a result of the new framework, the level for financing new construction and major renovation projects was also raised. These must be certified according to LEED for new construction on a Platinum level, or BREEAM-SE on an Outstanding level, and have an energy performance 25% below the National Board of Housing, Building and Planning's guidelines (BBR requirements). The framework and CICERO's report can be found at [www.vasakronan.se](http://www.vasakronan.se).

Vasakronan has a special account for transactions attributable to the issue of green bonds. If the approved investment amount is less than the outstanding amount of green bonds, Vasakronan has undertaken to place a corresponding amount in this special account. At year end, the approved investment amount exceeded the outstanding amount of green bonds, and the account balance was therefore zero.

**Ongoing new construction and major renovation forming basis for investment**

Property	Location	Certification	Energy performance (F), kWh/m <sup>2</sup>	Energy intensity BBR <sup>2)</sup> , kWh/m <sup>2</sup>	Waste, kg/m <sup>2</sup>	Materials, kg/m <sup>2</sup>
Kronåsen 1:1 (Hubben) <sup>1)</sup>	Uppsala	LEED Platinum (F)	30	115	38	1,018
Hilton 7 <sup>1)</sup>	Stockholm	LEED Platinum (F)	50	80	–	–
Kronåsen 1:1 (Celsius)	Uppsala	LEED Platinum (F)	51	96	–	–

1) The project is financed in part by green bank loans via the NIB. See page 33 for more information.

2) Maximum permitted energy intensity under National Board of Housing, Building and Planning guidelines.

(F) = Forecast

Waste and materials are not reported for the Hilton 7 and Kronåsen 1:1 projects, as these were not complete as of 31 December 2017.

**Existing properties forming basis for investment**

Property	Location	Certification	Energy performance, kWh/m <sup>2</sup>	Water intensity, m <sup>3</sup> /m <sup>2</sup>	Emissions, kg/m <sup>2</sup>
Heden 22:19	Gothenburg	LEED Gold	64	0.2	0.0
Heden 42:4	Gothenburg	LEED Gold	69	0.8	0.0
In Vallgraven 11:6	Gothenburg	LEED Gold	67	0.6	0.0
Gullbergsvass 1:16	Gothenburg	LEED Gold	60	0.3	0.0
Magnus Stenbock 4	Malmö	LEED Gold	86	0.2	0.7
Nereus 1	Malmö	LEED Platinum	72	0.2	0.6
Riga 2	Stockholm	LEED Gold	46	0.3	0.0
Hekla 1	Stockholm	LEED Gold	53	0.3	0.0
Albydal 3	Stockholm	LEED Gold	65	0.2	0.0
Tre Vapen	Stockholm	LEED Gold	85	0.3	0.0
Dragarbrunn 24:5	Uppsala	LEED Gold	86	0.5	0.0
Modemet 1, Hus 8 <sup>1)</sup>	Stockholm	LEED Platinum	29	0.4	0.0
Rosenborg 3 <sup>1)</sup>	Stockholm	LEED Platinum	48	0.3	0.0
Uggelborg 12 <sup>1)</sup>	Stockholm	LEED Platinum	63	0.4	0.0

1) Properties that underwent new construction or redevelopment, and were financed over the course of the project in accordance with the criteria for new build and redevelopment projects. After the project was finished, the property was reclassified to the existing properties category. As of 31 December 2017, these properties comprised SEK 5.1 billion out of a total SEK 13.8 billion. For further information, see Other information.

**Other information**

The Impact Report has been prepared in accordance with the guidelines in the framework for green bonds. The framework was produced in accordance with the Green Bond Principles, and has been reviewed by CICERO, the independent climate and environmental research institute. The framework is available at [www.vasakronan.se](http://www.vasakronan.se). The environmental data reported was produced in accordance with the same principles and methods as the Sustainability Report and is shown on page 114.

Investments in new construction and major renovation projects corresponded to the amount that as of the balance-sheet date had been invested in the property. Existing properties are recognised at market value. The market value is updated mid-year and at the end of the year in connection with external evaluations being performed. Reporting of market value and amount invested follows the accounting policies indicated in Note 13 on page 97.

**Approved investment amount green bonds, 31 Dec 2017, SEK m**

Accrued investments in ongoing projects	407
Existing properties	13,824
– of which previously new construction and major renovation	5,102
<b>Total approved investment amount</b>	<b>14,231</b>
Volume outstanding, green bonds	8,035
<b>Remaining approved investment amounts</b>	<b>6,196</b>

The emissions reported for existing properties pertains to emissions attributable to energy consumption in buildings with the type of purchased energy taken into consideration. "Tenant electricity" is not included in energy intensity and the emission calculations. The Existing properties category includes properties that previously underwent new construction or redevelopment, and were financed over the course of the project in accordance with the criteria for new construction and major renovation projects. In connection with the completion of new construction and major renovation, an evaluation was conducted against the criteria set for investment in existing properties. Reclassifying a property from new construction and major renovation projects to the category for existing properties requires that the new construction and major renovation is reported to the Board of Directors, that final certification has been obtained and that energy intensity has been measured over at least a rolling twelve-month period.



**HUBBEN**  
New build

**Hubben**, designed by White Arkitekter, is approximately 13,000 sq. m. and is located in Uppsala Science Park. The building contains a restaurant, offices, laboratories and conference rooms, and the tenants moved in during November 2017.

A few examples of environmental measures taken during the project:

- Major focus on reducing the amount of construction waste. When the project was completed, we could verify that waste per square metre produced amounted to 38 kg, of which none went to landfill.
- Solar photovoltaic cells on the roof
- Energy efficient installations
- All construction material assessed according to Byggvarubedömnningen criteria

**Klara C** is an office building with conference facilities and several restaurants in central Stockholm. The property is approximately 35,000 sq. m. and was built in 1931. From 2014 to 2017, the building underwent a major redevelopment. This included replacing windows and modernising technical installations, which led to a drastic reduction in energy consumption.

To reduce the amount of construction waste, a number of the interior fixtures and fittings were reused in other buildings. When the project was completed, we could verify that waste per square metre redeveloped amounted to 33 kg, of which around 1% went to landfill.

The project attained Platinum-level LEED certification, the highest certification level, in 2017.

**KLARA C**  
Redevelopment



**LÄPPSTIFTET**  
Existing property

**Läppstiftet** is an office building in Gothenburg covering approximately 32,000 sq. m. The building was constructed between 1986 and 1989, and has been owned by Vasakronan since 2001.

Over the years, a number of measures were taken to reduce the building's energy consumption, and at the end of 2017 the property had an energy intensity of 60 kWh/sq. m. per year.

Läppstiftet was one of Vasakronan's first existing properties to be certified under LEED (Existing Buildings: Operations and Maintenance).

# Independent Auditor's Limited Assurance Report on Vasakronan's Green Bond Impact Report

To Vasakronan AB, Corp. ID 556061-4603

## Introduction

We have been engaged by the Board of Directors and CEO of Vasakronan AB ("Vasakronan") to undertake a limited assurance engagement of Vasakronan's Green Bond Impact Report ("the Impact Report") for the year 2017. The Impact Report is comprised of pages 127–129 in the Annual Report.

## Responsibilities of the Board of Directors and the CEO for the Impact Report

The Board of Directors and the CEO are responsible for the preparation of the Impact Report in accordance with the applicable criteria, as explained on page 128 of the Annual Report and consists of the parts of Vasakronan's Green Bond Framework which are applicable to the Impact Report, as well as the accounting and calculation principles that the Company has developed. This responsibility includes the internal control relevant to the preparation of an Impact Report that is free from material misstatements, whether due to fraud or error.

## Responsibilities of the Auditor

Our responsibility is to express a conclusion on the Impact Report based on the limited assurance procedures we have performed.

We have conducted our limited assurance engagement in accordance with ISAE 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Impact Report, and applying analytical and other limited assurance procedures. The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with ISA, and other generally accepted auditing standards in Sweden.

The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control

including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent of Vasakronan in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

The limited assurance procedures performed do not enable us to obtain such a level of assurance that we would become aware of all significant matters that might be identified in an audit. Consequently, the conclusion based on a limited assurance engagement does not provide the same level of assurance as a conclusion based on an audit.

Our procedures are based on the criteria defined by the Board of Directors and the CEO as described above. We consider these criteria suitable for the preparation of the Impact Report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion below.

## Conclusion

Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Impact Report is not prepared, in all material respects, in accordance with the criteria defined by the Board of Directors and the CEO.

Stockholm, 21 March 2018

Öhrlings PricewaterhouseCoopers AB

**Helena Ehrenborg**  
Authorised Public Accountant

**Fredrik Ljungdahl**  
Expert member of FAR