



Vacse AB (publ) Green Bond Second Opinion

September 21, 2021

Vacse AB (publ) ('Vacse') is a Swedish property owner of public properties with headquarter in Stockholm. Vacse was founded in 2009 and is owned by seven Swedish pension funds linked to Apoteket, Atlas Copco, Ericsson, Sandvik, Skanska, Stora Enso, and Volvo. Vacse's property portfolio consists of 188,000m² with most of the properties comprising of larger single-tenant buildings from southern to central Sweden. Vacse has 99% governmental tenants, and its main tenants are The Swedish Prisons and Probation Service, The Swedish Police, Swedish Courts, Swedish Civil Contingencies Agency, and the Swedish Prosecution Authority.

The majority of the proceeds from the green bond will be allocated to Green buildings in Sweden, but included in the framework are also the categories Renewable Energy, Clean Transportation, Energy Efficiency, and Environmentally Sustainable Management of Living Natural Resources and Land Use. Vacse informs us that most of the proceeds will go to existing buildings under the Green building category. Eligible new buildings under the framework must have an environmental certification and an energy use at least 20% lower than current regulations. Existing buildings or major renovations must have a certification of at least Miljöbyggnad "Silver" or BREEAM In-Use "Very Good" and achieve either a 30% improvement in energy use through renovation or a specific energy use not exceeding 100 kWh/m² if built before 2011 or 90 kWh/m² if built between 2011 and 2020. In addition, buildings constructed before 2021 must have an energy use at least 25% lower than the relevant national building code (BBR) depending on the construction year.

The long term targets of Vacse is to be 50% more energy efficient in 2030 than in 2005, to lower greenhouse gas emissions from construction activities by 75% by 2030 compared with 1990 levels and to lower the climate footprint to 2.5 kgCO₂/m² by the end of 2022 (2020: 3.1 kgCO₂/m²). In addition Vacse reports on a set of climate relevant key performance indicators and seek to improve these in the near term. The allocation and impact reporting under the framework is good. They do not, however, follow the TCFD recommendations on use of climate scenario analysis.

Based on the overall assessment of the eligibility criteria in the green finance framework, governance and transparency considerations, and the "around the clock" use of many of Vacse's buildings, the framework receives an overall **CICERO Medium Green** shading. In order to achieve a darker green shading, the green finance framework would need stronger eligibility criteria in the Green buildings category.

SHADES OF GREEN

Based on our review, we rate the Vacse's green bond framework **CICERO 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 Vacse's framework to be **Good**.



GREEN BOND PRINCIPLES

Based on this review, this Framework is found in alignment with the principles.





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1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated September 2021. 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



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.



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.



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.

Examples



Wind energy projects with a strong governance structure that integrates environmental concerns



Bridging technologies such as plug-in hybrid buses



Efficiency investments for fossil fuel technologies where clean alternatives are not available

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 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.



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

Vacse AB (publ) ('Vacse') is a Swedish property owner of public properties with headquarter in Stockholm. Vacse was founded in 2009 and is owned by seven Swedish pension funds linked to Apoteket, Atlas Copco, Ericsson, Sandvik, Skanska, Stora Enso, and Volvo. Vacse creates value through long-term relationships with its tenants and construction companies, and as a financial partner in projects during development. Vacse's property portfolio consists of 188 thousand square meters with most of the properties comprising of larger single-tenant buildings from southern to central Sweden. The greatest part of the property portfolio consists of newly constructed and modern buildings. Vacse focuses on ownership of public properties with governmental tenants. Vacse has 99% governmental tenants, and main tenants are The Swedish Prisons and Probation Service, The Swedish Police, Swedish Courts, Swedish Civil Contingencies Agency, and the Swedish Prosecution Authority. These tenants are active within special operations that demand high standards, not least in terms of security.

Environmental Strategies and Policies

Vacse's Board of Directors has overall responsibility for adopting a sustainable strategy and objectives for the company. In 2021 the Board of Directors adopted an ESG policy that lays out the foundation for Vacse's operations as a long-term property owner. The CEO and Executive Management set strategic goals and plans together with the company's employees. At Vacse there is no head of sustainability, instead all employees are equally responsible for implementing and enforcing sustainability within their respective unit.

At the beginning of 2017, Vacse received its ISO 14001-certification which serves as a foundation for the sustainability strategy. Vacse has signed up to the UN's Global Compact and adheres to the UN's Declaration of Human Rights, ILO's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration, and the UN's Convention Against Corruption. Furthermore, Vacse works towards the UN Sustainable Development Goals (SDGs) focusing on the goals most relevant to their business and operations.

In 2020 Vacse adopted an energy policy that governs their work and ambition to continuously lowered energy use, improved energy efficiency and regular monitoring of progress. The long term energy target is to strive towards compliance with the national 2030 energy strategy¹. Vacse has also committed to the Swedish fossil free roadmap for the construction sector, whereby they target to lower greenhouse gas emissions from construction activities by 75% by 2030 compared with 1990 levels and to lower the climate footprint to 2.5 kgCO₂/m² by the end of 2022 (2020: 3.1 kgCO₂/m²). In their new construction they also work proactively to ensure climate resilient buildings, thereby reducing the risks of ongoing climate change on the built-environment.

Vacse also has longer term climate related targets quantified on property portfolio level such as levels of environmental certifications, "Green appendix" in lease agreements, share of "green electricity", own produced energy from solar panels, etc. In 2017 Vacse established a target of reaching 100% green financing, a target that was achieved in April 2021.

¹ By 2030, Sweden's energy use is to be 50 percent more efficient than in 2005. The target is expressed in terms of primary energy use in relation to gross domestic product (GDP). See: https://ec.europa.eu/energy/sites/default/files/documents/sweden_draftnecp.pdf



To assure sustainable property ownership and a decreased climate impact, the aim is to certify the yet uncertified part of the portfolio according to BREEAM In-Use. By the end of 2020, 85% of the property portfolio (measured by area) was certified through the certification schemes BREEAM In-Use, BREEAM SE, Miljöbyggnad, or LEED. All new buildings shall be certified in accordance with at least BREEAM Excellent. BREEAM has resilience matters as an integral part in their evaluation method and level Excellent demands high standards in resilience issues. Vacse do calculations/investigations in areas where they see a potential climate risk. They follow recommendations from local authorities regarding e.g., risk for flooding. Examples of activities in existing buildings, as well as new, are use of “Grass roof” (Sv. Sedumtak) to mitigate flooding on roofs during heavy rainfall.

Vacse primarily work with Skanska in projects involving new constructions and Skanska carry out life cycle analysis of these projects. Vacse is currently evaluating if they shall make “Climate declarations” for existing buildings. From 2022 it will be mandatory to make “Climate declarations” for new buildings in Sweden, including LCA of greenhouse gas emissions. The increased sustainability reporting will basically contain the same information as recommended by TCFD and it will most likely raise an increased demand from different stakeholders over the coming years to report TCFD-based information.

Vacse’s requirements on sub-contractors regarding greenhouse gas emissions and waste handling are stated in general terms in their “Environmental policy” and “Supplier code of conduct”. In addition, these issues add points in the BREEAM Excellent calculation. Requirements to sub-contractors are rather general and includes e.g., to have a system for proper disposal of waste so that reuse are promoted, and to work to reduce emissions to air, land and water and streamline their energy and resource use. The construction products that are prescribed and intended to be used in a project must be environmentally inspected with the help of Byggvarubedömningen (BVB) or SundaHus². All construction products made of the material wood must be traceable and hold FSC® or PEFC™ certified.

Vacse uses one hundred percent renewable electricity from solar, wind and hydro throughout the property portfolio and continuously work to streamline energy consumption in existing properties. In addition, they continue to increase the share of self-produced electricity by investments in solar panels at their properties. During 2020 the share of self-produced electricity was increased by 30% to a 2.64% share of total energy use.

Vacse works with the following additional key performance indicators:

<i>KPI</i>	<i>Unit</i>	<i>Target 2021</i>	<i>2020</i>	<i>2019</i>	<i>2018</i>
<i>Energy</i>	kWh/m ² Atemp	110.0	116.8	127.9	136.9
<i>CO₂</i>	kg/m ²	2.8	3.1	4.0	4.2
<i>Self-produced energy</i>	MWh/year	200	154	118	45
<i>Water consumption</i>	l/m ²	320	324	325	379
<i>Environmental certifications</i>	Number of properties	17	15	11	6
<i>Environmental certifications</i>	m ²	173,073	146,306	108,287	69,760
<i>Share of travels by train</i>	%	64	59	47	50

Vacse will report CO₂-emissions on Scope 1, 2 & 3 levels in the annual report for 2021. A project to produce a sustainability report plan with defined reporting standards, defined information and calculation methods are in a

² Byggvarubedömningen (The Building Products Assessment) (BVB) and SundaHus are web tools with environmentally assessed products. www.byggvarubedomningen.se, www.sundahus.se.



startup phase and will be finalized during the autumn of 2021. Vacse is also obliged to produce a Sustainability report according to the Swedish Annual Accounts Act as from 2021.

Use of proceeds

An amount equivalent to the net proceeds from green bonds will exclusively be used by Vacse to fully or partly finance or refinance investments and expenditures that promote the transition to low-carbon, climate resilient and sustainable economies. Such assets (“Eligible Green Assets” or “Green Assets” or “Green Projects”) must comply with the categories and criteria described in table 1, as well as the exclusion criteria set out below. The eligible categories are Green Buildings, Renewable Energy, Clean Transportation, Energy Efficiency, and Environmentally Sustainable Management of Living Natural Resources and Land Use. According to the issuer, the vast majority of net proceeds from the green bonds goes to Green Buildings and only very small amounts go to the other categories (approximately less than 0.5 % each).

Both financing and refinancing of tangible assets (without age restriction) and operational expenditure (up to 3 years backwards looking before the starting year of any newly issued green bond) such as maintenance costs related to green assets that either increase the lifetime or the value of the assets can qualify. The majority of the net proceeds are expected to be allocated to existing projects and assets (defined as projects and assets older than 12 months). The proportion of net proceeds allocated to new projects and assets will be disclosed in the annual reporting. The combined allocated amount to a specific Green Asset, by one or several sources of financing with specified use of proceeds, may not exceed its value. Vacse operates in the Nordic market. However, all properties are located in Sweden so far, and initially all proceeds will be used in Sweden.

The net proceeds will not be allocated or linked to fossil-based energy generation, nuclear energy generation, research and/or development within weapons and defence, potentially environmentally negative resource extraction (such as rare-earth elements or fossil fuels), gambling, adult entertainment or tobacco.

Selection

The selection process is a key governance factor to consider in CICERO Green’s assessment. CICERO 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 Green places on the governance process.

The business units, administrative departments and environmental department within Vacse will nominate projects and assets within the eligible categories to a Sustainable Finance Committee (“SFC”) consisting of members from the management team including the CEO, the CFO and the Head of Properties³. This information will be used by the SFC to determine which projects and investments are compliant with the Green Terms and therefore qualifies for green bonds financing. All approvals will require consensus by the SFC. Furthermore, the SFC is also responsible for signing off on the forthcoming reporting under the framework. Vacse does in-house assessments that an investment is within the criteria set out in the Green Bond Framework. The yearly Investors report is audited by Vacse’s auditors and they check the relevance and accuracy in allocations of net proceeds.

The environmental competence in SFC is based on the fact that the management of Vacse has gained knowledge in sustainable issues over the years by working actively to certify all Vacse’s properties according to BREEAM or LEED standards, implement energy measuring system for the whole property portfolio, issue green bonds since 2018, actively work in real estate industry organizations with sustainability focus and by preparing sustainability reports.

³ The SFC was established in 2018 in connection with Vacse’s first Green Bond Framework.



The projects and assets must also be compliant with the Green Terms, applicable national laws and regulations, and policies and guidelines within Vacse. No controversial projects will be allocated to the net proceeds. This is one of the topics SCF considers in the evaluation process. All decisions will be documented by the committee and a record will be kept. An updated list of all Green Assets will be kept by Vacses treasury department. The list will also be used as a tool to determine if there is a current or expected capacity for additional green bonds.

Management of proceeds

CICERO Green finds the management of proceeds of Vacse to be in accordance with the Green Bond Principles.

The net proceeds of any green bonds will be credited to a dedicated account (the “Green Account”) or otherwise tracked by Vacse (the “Green Portfolio”). Deductions will be made from the Green Portfolio by an equivalent amount corresponding to the financing, refinancing, investment or expenditure of Eligible Green Assets or at repayment of any green bonds. Proceeds will be allocated to a portfolio of disbursements.

If an Eligible Green Asset no longer qualifies or if the underlying project or asset is divested or lost, an amount equal to the funds allocated towards it will be re-credited to the Green Portfolio. Funds may also be reallocated to other Green Assets during the term of any Green Bond, unless otherwise agreed in the loan documentation.

The treasury department will keep a record of the purpose of any change in the Green Portfolio and ensure that the combined funds directed towards a specific Green Asset, by one or several sources of green financing (such as green bonds) or other financing with specific use of proceeds, does not exceed its value.

While the Green Portfolio has a positive balance, the net proceeds may be invested or utilised by the treasury in accordance with Vacse’s sustainability policy and investment criteria. Such unallocated funds may for instance be invested in short-term interest-bearing securities, such as Swedish treasury bills (and related entities) or Swedish municipal notes (including related entities). Any unallocated funds invested in short-term interest-bearing securities will follow/accommodate within the criteria set out in the green bond framework.

Verification will be sought from Vacse’s external auditor.

Reporting

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

In order to be fully transparent towards the green bond investors and other market stakeholders, Vacse will publish an annual report on its website (<https://www.vacse.se>) that will detail the allocation of net proceeds and adherence to the Green Terms for all eligible assets and projects (the “Reporting”). The first such Reporting under the Framework is expected to take place in April 2022, in proximity to the release of the company’s Annual Report and will be available in Swedish. Until such time that no green bonds are outstanding, Vacse will yearly publish the allocation and impact reporting. The Reporting will be prepared by the treasury department. It will contain information on the Green Assets that have been financed with green bonds, a summary of Vacse activities in the past year as pertains to green bonds as well as information, including examples, of the financed Green Asset’s adherence to the relevant criteria.



Allocation Disclosure:

- For Green Buildings that have met the relevant Green Terms and to which net proceeds have been allocated the Reporting will disclose the aggregate market value (or investment cost, as applicable).
- For the categories Energy Efficiency Investments, Renewable Energy Investments, Environmentally Sustainable Management of Living Natural Recourses Investments and Clean Transportation Investments the total allocation of green net proceeds to each category will be disclosed.
- The sum of outstanding green bonds and the sum of the Green Portfolio balance, including any short-term investments or net proceeds managed within the liquidity portfolio. The data shall be from the last of December in the previous year.

Impact Reporting & Metrics:

The Reporting will contain a disclosure of asset level performance indicators on a project-by-project basis. The assets/projects will not be linked to individual bonds. The Reporting will strive to disclose the impact based on the green financings share of the total investment. For financed green assets that are not yet operational, Vacse will strive to provide estimates of future performance levels. Vacse will emphasise energy savings and greenhouse gas reductions as the most relevant performance metrics for most projects. Vacse's Green Bond Framework contains a list of examples of indicators that are likely to be used by Vacse in the forthcoming Reporting.

To calculate GHG emission reductions, Vacse uses the Green House Gas Protocol and reports on Scope 1 and Scope 2 emissions. All values are location-based emissions equivalents and includes Scope 2 emissions per energy source. For (2020) the numbers were 90.0 grams CO₂e per kWh for electricity, 40.2 grams CO₂e per kWh for heat and 7.2 gram CO₂e per kWh for cooling, with a combined CO₂e for delivered energy of 22.8 grams CO₂e per kWh (all values are location-based emissions equivalents and includes Scope 2 emissions per energy source). This is the same methodology used in the company's sustainability reporting, although the sustainability reporting uses market-based emission factors⁴.

It should be noted that this grid emission factor(s) Vacse uses is considerably lower than what has been outlined in the "Nordic Public Sector Issuers: Position Paper on Green Bonds Impact Reporting" (2020), which currently states 315 grams CO₂e per kWh.

The external auditor of Vacse, or a similar party appointed by Vacse with the relevant expertise and experience, will investigate and report whether an amount equal to the net proceeds have been allocated to the Eligible Green Assets that Vacse has communicated in the Reporting. Their conclusions will be provided in a signed statement, which will be published on Vacse's website (www.vacse.se).

⁴ A location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice).



3 Assessment of Vacse’s green bond framework and policies

The framework and procedures for Vacse’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 Vacse 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 Vacse’s green bond framework, we rate the framework **CICERO Medium Green**.

Eligible projects under the Vacse’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
Green building	<p>New buildings:</p> <ul style="list-style-type: none">• Ongoing development or recently completed buildings that have or will receive (i) a design stage certification or (ii) a post-construction certification of at least Miljöbyggnad “Silver”, BREEAM-SE “Excellent”, BREEAM “Excellent” or LEED “Gold”.• The buildings must also achieve at least 20% lower energy use than required by the applicable national building code (e.g., BBR). <p>Existing buildings:</p> <ul style="list-style-type: none">• Existing buildings or major renovations that have or will receive (i) a design stage certification, (ii) a post construction certification or (iii) an in-use certification of at least Miljöbyggnad “Silver” or BREEAM In-Use “Very Good” and	<p>Medium Green</p> <ul style="list-style-type: none">✓ Note that the highest shading level, Dark Green, is reserved for the highest building standards such as Zero-Energy buildings and passive houses. The building criteria are good, but do not represent the highest standard levels.✓ BREEAM and LEED covers a broad set of issues that are important to sustainable development. However, these certifications alone does not ensure passive or plus housing. Miljöbyggnad Silver require an energy use less than 80% of current regulations. Certification standards differ considerable in their requirement for energy efficiency and reduction, biodiversity and stakeholder engagement.✓ Note that proceeds can be used for properties in both Sweden, Denmark, and Norway, where building codes, and hence



achieve an energy target as specified below:

- Major renovation requires an overall reduction in energy use of at least 30% over a period not exceeding 3 years or achieving an energy use in line with the applicable national building code (BBR) for newly built properties.
- Existing buildings must achieve an energy use per square meter not exceeding the targets set out below and for buildings constructed before 2021 at least 25% lower than the national building code (BBR) applicable for the specific building:

<u>Construction year</u>	<u>Energy use per m²</u>
Before 2011	100 kWh/m ²
2011-2020	90 kWh/m ²
After 2020	20% lower PED kWh/m ² than applicable national building code (BBR).

the eligibility criteria will vary. The issuer informs us that initially all proceeds will be used in Sweden.

According to the company, properties heated with fossil fuels will not be eligible for funding using green proceeds. The issuer informs us that all Vacse's properties with district heating have suppliers that use only a small amount of fossil fuel.

- ✓ Refurbishment of existing buildings are often better than new constructions from a climate point of view but should ideally come with greater improvements in energy efficiency. IPCC recommends 50% energy efficiency improvements, and according to IEA, efficiency of building envelopes needs to improve by 30% by 2025 to be aligned with the Paris target.
- ✓ Vacse's building portfolio has an average energy use of 116 kWh/m² in 2020 including newly constructed buildings. Many of Vacse's older buildings have much higher energy use than the average and will demand extensive work to come below 100 kWh/m². Also, many of Vacse's buildings have "around the clock"-activities like police houses, custodies and prisons which generates a considerable higher energy use than traditional office buildings. Still, the criteria for existing buildings do guarantee an energy performance better than applicable regulation for the specific building.
- ✓ It is a strength that Vacse will use actual energy consumption that they measure using a system called Mestro that is feeded with actual consumption data directly from each energy supplier. Design value will only be used initially before they have actual consumption data.
- ✓ The issuer should consider construction phase waste and emissions as well as emissions related to transportation to and from the properties.



<p>Renewable energy</p> 	<p>Investments in solar power or wind power, either on an existing building or as a stand-alone investment.</p>	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ To be aligned with the proposed EU Taxonomy, CO₂ emissions should be lower than 100 gCO₂/kWh. ✓ Vacse will actively screen for any controversial projects and avoid those.
<p>Clean transportation</p> 	<p>Investments in supportive infrastructure for clean transportation, for example charging stations for electric vehicles, bicycling garages and other investments that support and emphasize the use of clean transportation solutions.</p>	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Note that charging stations can be used by hybrid vehicles and hybrid cars will involve a fossil fuel element.
<p>Energy efficiency</p> 	<p>Investments in the existing portfolio of buildings that target a lower overall energy use and an improved environmental footprint. This could include, for instance, the installation of geothermal heating/cooling, district heating/cooling, energy-efficient lighting, IT-technology (monitoring, efficiency management and remote operation), energy efficient windows or an upgraded ventilation system. Vacse will ascertain the following:</p> <ol style="list-style-type: none"> a) High estimated energy savings in the targeted area for physical installations (minimum 20%). b) Minimize long term negative climate impact and potential rebound effects. c) Minimal negative climate impact from the technology used. 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Only directly associated expenditure (e.g., material, installation and labour) is eligible for financing. ✓ Efficiency measures in existing buildings is a good way to lower the climate footprint of buildings, unless it involves fossil fuel elements which then can be locked in. The issuer informs us that no fossil-based systems will be involved, and no upgrading of fossil fuel technologies will be allowed. District heating system may contain some fossil elements through the use of waste for energy. ✓ Be aware of potential rebound effects following energy efficiency improvements.
<p>Environmentally sustainable management of living natural resources and land use</p> 	<p>Investments in green environments that promote, restore and preserve biological diversity and facilitate green urban environments. These include, e.g., green roofs, green walls, urban biotopes, flowerbeds and trees, which all have various positive effects on e.g., strengthening ecological values, reducing noise levels, mitigating physical climate risks or binding air-borne particles.</p>	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ These activities contribute positively to mitigating a number of local problems, as well as lowering the physical risks from climate change.

Table 1. Eligible project categories



Background

The construction and real estate sector have a major impact on our common environment. According to the National Board of Housing, Building and Planning's environmental indicators, it accounts for 32% of Sweden's energy use, 31% of waste and 19% of domestic greenhouse gas emissions. Calculations from Sveriges Byggindustrier indicate that the climate impact of new production of a house is as great as the operation of the house for 50 years.

As members of the EU, Sweden, Denmark and Finland are subject to the EU's climate targets of reducing collective EU greenhouse gas emissions by 40% by 2030 compared to 1990 levels, increasing the share of renewable energy to 32% and improving energy efficiency by at least 32.5%.⁵ The European Green Deal aims for carbon neutrality in 2050.⁶ Sweden has developed a National Energy and Climate Plan (NECP) in which it outlines the targets and strategies in all sectors.⁷ These strategies include measures such as increasing renewable energy capacity, improving energy efficiency, facilitating the large scale implementation of clean transportation alternatives, and implementing carbon sinks through reforestation and the LULUCF sector. Non-ETS emissions, of which public buildings and households are a part, must decrease by 63% by 2030. In February 2020, Norway released updated targets for 2030 to cut GHG emissions by 50-55% from 1990 levels⁸.

The building sector accounts for a large share of primary energy consumption in most countries, and the IEA reports that the efficiency of building envelopes needs to improve by 30% by 2025 to keep pace with increased building size and energy demand – in addition to improvements in lighting and appliances and increased renewable heat sources.⁹ The energy efficiency of buildings is dependent on multiple factors including increasing affluence and expectations of larger living areas, growth in population and unpredictability of weather, and greater appliance ownership and use. Additionally, approximately half of life-cycle emissions from buildings stem from materials/construction. The other half stems from energy use, which becomes less important over time with the increasing adoption of off-grid solutions such as geothermal and solar. All of these factors should therefore be considered in the project selection process. In addition, voluntary environmental certifications such as BREEAM or equivalents measure or estimate the environmental footprint of buildings and raise awareness of environmental issues. These points-based certifications, however, fall short of guaranteeing a low-climate impact building, as they may not ensure compliance with all relevant factors e.g., energy efficiency, access to public transport, climate resilience, sustainable building materials. Many of these factors are covered under the World Green Building Council's recommendations for best practices for developing green buildings.¹⁰ CICERO Shades of Green assesses all of these factors when evaluating the climate impact of buildings.

The Exponential Roadmap¹¹ lays out a trajectory for reducing emissions by 50% by 2030 and requires that emissions reductions strategies within the buildings sector be rapidly scaled up. The roadmap advocates for standardised strategies that are globally scalable within areas such as new procurement practices for construction and renovation that require dramatically improved energy and carbon emission standards, developing new low-carbon business models for sharing space and smart buildings to achieve economies of scale, and allocating green bond funding for sustainable retrofitting and construction.

⁵ https://ec.europa.eu/clima/policies/strategies/2030_en

⁶ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

⁷ https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en

⁸ <https://www.regjeringen.no/no/aktuelt/norge-forsterker-klimamalet-for-2030-til-minst-50-prosent-og-opp-mot-55-prosent/id2689679/>

⁹ <https://www.iea.org/reports/building-envelopes>

¹⁰ <https://www.worldgbc.org/how-can-we-make-our-buildings-green>

¹¹ https://exponentialroadmap.org/wp-content/uploads/2020/03/ExponentialRoadmap_1.5.1_216x279_08_AW_Download_Singles_Small.pdf



EU Taxonomy

In March 2020, a technical expert group (TEG) proposed an EU taxonomy for sustainable finance that included a number of principles including “do-no-significant-harm (DNSH)-criteria” and safety thresholds for various types of activities¹². In April 2021, EU published its delegated act to outline proposed criteria for climate mitigation and adaptation, which it was tasked to develop after the EU Taxonomy Regulation entered into law in July 2020¹³. The mitigation criteria in the EU taxonomy includes specific thresholds for real estate sector activities relevant for the company¹⁴. Relevant activities for the green finance framework are Construction of new buildings, renovation and ownership and acquisition of buildings.

Do-No-Significant-Harm criteria include measures such as ensuring resistance and resilience to extreme weather events, preventing excessive water consumption from inefficient water appliances, ensuring recycling and reuse of construction and demolition waste and limiting pollution and chemical contamination of the local environment, as well as restriction on the type of land used for construction (no arable or forested land).

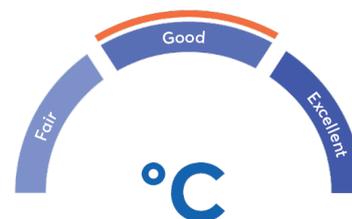
In order to qualify as a sustainable activity under the EU regulation 2020/852 certain minimum social safeguards must be complied with. The safeguards entail alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the International Labour Organisation’s (‘ILO’) declaration on Fundamental Rights and Principles at Work, the eight ILO core conventions and the International Bill of Human Rights.

Governance Assessment

Four aspects are studied when assessing the Vacse’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. 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.

Vacse has some longer-term climate related targets quantified at the property level such as level of environmental certification, green leases, etc. At an annual level, Vacse has quantified targets for a number of relevant KPIs such as specific energy use, CO₂ emissions (Scope 1+2), water use, etc. The selection process is good, but not verified by independent experts. The management of proceeds is in accordance with the Green Bond Principles and reporting is detailed and comprehensive. The overall scope of the annual reporting is good, and the allocation report will be verified by an auditor. We note, however, that the impact reporting is not verified by an independent expert, and that climate risk reporting is not following the recommended guidelines from TCFD. Control of Scope 3 emissions is to a large degree delegated to subcontractors. Vacse does have a focus on type of materials used in construction and encourage for example increased use of wood in new constructions, when possible.

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



¹² Taxonomy: Final report of the Technical Expert Group on Sustainable Finance, March 2020. [TEG final report on the EU taxonomy \(europa.eu\)](https://ec.europa.eu/easf/easf-portal/technical-expert-group-on-sustainable-finance)

¹³ [Sustainable finance taxonomy - Regulation \(EU\) 2020/852 | European Commission \(europa.eu\)](https://ec.europa.eu/easf/easf-portal/technical-expert-group-on-sustainable-finance)

¹⁴ [taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf \(europa.eu\)](https://ec.europa.eu/easf/easf-portal/technical-expert-group-on-sustainable-finance)



Strengths

Vacse monitors and reports on a number of relevant key performance indicators. This supports the reporting described in the framework and is a clear strength in that it provides transparency to investors on environmental impacts. Clear exclusion of investments in fossil fuel related technologies or activities is a further strength. Vacse's focus on type of materials used and, when possible, encouragement for increased use of wood in new constructions, is a strength.

Weaknesses

There is a lack of scenario analysis whether or not formally in alignment with the TCFD recommendations. Other than that, we find no material weaknesses in Vacse's Green Bond Framework.

Pitfalls

Pitfalls of a green bond framework are potential environmental risks. Whereas weaknesses are areas that remain unaddressed by the issuer, pitfalls can be mitigated.

CICERO Green factor in if there have been any considerations around transportation solutions and environmental impacts in the construction and demolition phases of the building (building material and waste considerations). The CICERO Dark Green shading is difficult to achieve in particular in the building sector because buildings have a long lifetime. In a low carbon 2050 perspective the energy performance of buildings is expected to be improved, with passive and plus house technologies becoming mainstream and the energy performance of existing buildings greatly improved through refurbishments. Vacse's green bond framework is not quite there yet, but is taking steps towards this long-term vision. More stringent criteria would have been required for a darker shading.

We note that the Green building criteria for existing buildings that require a specific energy use less than 100 kWh/m² and an energy use 25% below regulations in the year of construction, is ambitious when it comes to older buildings. Investors should be aware of the fact that many of Vacse's buildings have "around the clock"-activities like police houses, custodies and prisons, which generates a higher energy use than traditional office buildings.

Life cycle assessment of projects are mainly carried out in connection with some of the environmental certification schemes, although some sub-contractors may carry out such estimates themselves. Currently, there is no emission accounting covering construction and demolition phase activities. The issuer is encouraged to consider construction phase emissions and waste and systematically work on reducing these.

To the extent that the buildings rely on district heating, there is an inherent probability that some fossil fuel fractions (e.g., plastics) will be involved, although Swedish district heat providers generally are good at tracking and reducing fossil fractions. The issuer should consider initiating discussions with local energy companies that do not provide 100% fossil free heating today about their possibilities of doing so in the future.

To assure consistency, the emission factor(s) used in Vacse's Green Bond reporting should equal the emission factor(s) used in the company's sustainability reporting and annual report.

The energy efficiency requirement of 20% energy saving in this framework, does not align with the 30% requirement in the proposed EU Taxonomy. However, there are many individual efficiency measures that qualify automatically under the taxonomy. The issuer should be aware that 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. From the project categories in table 1, an example is energy efficiency investments in buildings which in part may lead to more energy use or a failing to reach the potential reductions.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	Draft Vacse Green Bond Framework 2021-09-21	Vacse's Green Bond Framework, dated September 2021
2	Ars-och-hallbarhetsredovisning-2020	Vacse's Annual and Sustainability report 2020
3	Investerarapport-2020-Grona-obligationer	Vacse's Green bond investor report 2020
4	Uppförandekod för Vacse anställda	Vacse's Code of Conduct for employees
5	Uppförandekod för Vacses driftoperatörer, fastighetsägarnas	Vacse's Code of Conduct for operators and property owners
6	Energipolicy-Vacse-AB-publ	Vacse's Energy policy
7	Jamställdhetspolicy	Vacse's Gender equality policy
8	Miljö-och-kvalitetspolicy	Vacse's Environmental and quality policy
9	Kvalité och hållbarhetsprogram	Vacse's Quality and sustainability program
10	Vacse_Hallbarhetspolicy_2021	Vacse's Sustainability policy



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).

