



# Svenska Handelsbanken AB Green Bond Second Opinion

08/08/2022

## Executive Summary

**Svenska Handelsbanken AB ('Handelsbanken')** is a Swedish bank with a focus on the Nordic market. 82% of its portfolio is financing of the property sector, and it has a negligible exposure to the fossil fuel sector.

**Eight categories are eligible for use of proceeds, with shadings ranging from light to dark green.** The categories which will receive the largest share of proceeds - green buildings, sustainable forestry and clean transportation - reflect this range in shadings. Around a quarter of bond proceeds are likely to be for refinancing, including the repayment of outstanding green bonds. This implies that the lookback period could potentially be quite long.

**The green bond framework is an update of the bank's 2018 green bond framework, which received a CICERO Dark Green shading, to reflect broader lending practices and market developments.** The current framework is broader and includes some categories with less ambitious criteria than the previous one. The issuer has done this to reflect overall lending operations more accurately and accommodate clients who are less advanced in their transition, and to align with the requirements and criteria of the EU Taxonomy. The largest shares of proceeds of the two green bonds issued so far have been allocated to green buildings, followed by sustainable forestry and clean transportation.

**We rate the framework CICERO Medium Green and give it a governance score of Excellent.** Handelsbanken's corporate sustainability profile is in line with other ambitious Nordic banks and includes a restrictive fossil fuel lending policy and targets for green and social lending. It is in the process of mapping its Scope 3 emissions from lending and is using third party guidance (Partnership for Carbon Accounting Financials (PCAF)).

## Key strengths

**Some of the eligibility criteria are particularly strong.** Zero tailpipe emissions and electrified rail in the transport category and the inclusion of both energy efficiency and building certification in the green building category are among those.

**Handelsbanken has a robust governance framework,** including a detailed process for project selection, screening of assets against broader sustainability criteria such as life cycle impacts, and the use of an environmental veto.

## SHADES OF GREEN

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

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



## GREEN BOND PRINCIPLES

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



**The bank has a framework in place for assessing climate risk**, which is being updated and adjusted based on recent scenario modelling. Impacts of flooding on the real estate sector has been a particular focus.

### **Key pitfalls**

**The category likely to absorb the largest share of proceeds is Green Buildings. Sector standards for this category – which Handelsbanken’s framework reflects- are currently not at the level of ambition required for Paris-alignment.** The issuer’s criteria are aligned with e.g. the EU Taxonomy’s mitigation criteria but investors should be aware that this could open up for financing buildings which are no better than regulation. For example, the strictness of national regulations on buildings' energy performance varies from country to country, and an EPC A rating does not necessarily represent an improvement over the status quo. In a long-term perspective, Passive or Plus house technologies should become mainstream and the energy performance of existing buildings greatly improved.

**Some of the categories could be made more prescriptive in their criteria to ensure ambitious outcomes.** For example, to be meaningful, energy efficiency projects should require a minimum improvement (for example 20-30%). The issuer has chosen not to include a threshold for energy efficiency, although it argues improvements are expected to be ‘material’.

**Although thorough in many respects, reporting could be more detailed.** Reporting will be at the portfolio level and hence not provide investors with asset-level information. Another reporting challenge is the issuer’s use of CO<sub>2</sub> impact reporting in accordance with Nordic Public Sector Issuance guidance: Although the use of third-party guidance is a strength, this particular methodology tends to overstate emissions savings in a Nordic context due to measurement against an EU-wide baseline. Finally, we encourage Handelsbanken to provide more detail on their CO<sub>2</sub> impact calculations in future reports compared to what is provided at present.



# Contents

---

	Executive Summary.....	1
<b>1</b>	<b>Handelsbanken's environmental management and green bond framework.....</b>	<b>4</b>
	Company description.....	4
	Governance Assessment.....	4
	Sector risk exposure.....	5
	Environmental strategies and policies.....	5
	Green bond framework.....	6
<b>2</b>	<b>Assessment of Handelsbanken's green bond framework.....</b>	<b>9</b>
	Shading of eligible projects under the Handelsbanken's green bond framework.....	9
<b>3</b>	<b>Terms and methodology.....</b>	<b>19</b>
	'Shades of Green' methodology.....	19
	<b>Appendix 1: Referenced Documents List.....</b>	<b>21</b>

---



# 1 Handelsbanken's environmental management and green bond framework

## Company description

Svenska Handelsbanken AB ('Handelsbanken') is a publicly traded Swedish bank providing personal and corporate banking, financing, mortgage loans, investment banking, and private banking. Headquartered in Stockholm, the Bank's home markets are Sweden, Norway, the Netherlands and the UK, with some operations in Luxembourg and the USA. Of the Bank's total lending at 31 December 2021, 82 % is financing of the property sector. The bank has a negligible exposure to the fossil fuel sector.

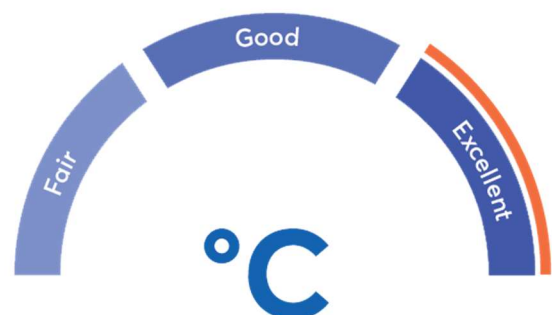
The green bond framework is an update of the bank's 2018 green bond framework, which received a CICERO Dark Green shading. The bank has issued two green bonds under the 2018 framework: one in 2018 (EUR 500 M) and one in 2020 (EUR 500 M). Impact reports have been published in 2019, 2020, 2021 and 2022. The largest shares of proceeds have so far been allocated to green buildings (45%), followed by sustainable forestry (22%) and clean transportation (14%). As at year-end 2021, 88% of the proceeds were distributed to assets in Sweden, with the remaining in Finland and Norway.

## Governance Assessment

Handelsbanken has been working on sustainability for many years and its practices are in line with other ambitious Nordic banks on this issue. Noteworthy actions include a restrictive fossil fuel lending policy, Paris-aligned emission reduction targets which will be complemented by validation from the Science Based Targets Initiative (SBTi) and intermediary milestones, and a target of 20% lending for green, social or transition lending purposes by 2025. The bank's largest exposure to physical climate risk is through its lending portfolio in the real estate sector. It has undertaken scenario analysis for this lending segment and has activities in place to encourage awareness and precautionary practices by its client base.

The bank has in place a robust selection procedure for the green bonds. For example, eligible assets are approved by a majority vote in the Green Finance Committee and the bank's Chief Sustainability and Climate Officer holds a veto. The selection procedure includes an assessment of broader sustainability considerations such as life cycle impacts and rebound effects, although it is unclear how systematic or influential such assessments are. Based on the plans for this framework as well as evidenced by previous green bond reports, we view Handelsbanken's reporting as comprehensive and informative – although curtailed by the usual confidentiality aspects associated with banks. We always encourage issuers to be transparent on their GHG impact calculations and Handelsbanken does provide some information on the methodology in its impact report - although it is not very detailed.

The overall assessment of Handelsbanken's governance structure and processes gives it a rating of Excellent.





### Sector risk exposure

By building climate-aligned lending and investment practices, financial institutions will be vital for achieving the Paris Agreement target. Banks' overall emissions are dominated by Scope 3 emissions (indirect emissions from its customers) and a number of initiatives are being developed to streamline and assist financial institutions in reporting on their climate risk exposures. For example, G7 countries have agreed to mandate climate-related financial reporting in alignment with the TCFD recommendations and the EU Sustainable Finance Disclosure Regulation (SFDR) has been applicable for asset managers since March 2021.

Best practices for the financial sector include:

- Having climate goals, including portfolio-level science-based targets, reporting on scope 1,2 and 3 emissions (and encouraging improved scope 3 reporting from the companies they lend to), implementing TCFD recommendations (including conducting portfolio-level climate risk assessments), and disclosing robust sector and issue-specific policies.
- Integrating considerations of climate resilience, supply chain and life cycle impacts, and rebound and lock-in effects into policies and processes for assessing and managing climate and other E&S risks.
- Referencing science-based and internationally accepted standards and criteria in policies, and investee compliance with such policies, or the development of ambitious and timebound action plans for achieving compliance.

**Physical climate risks.** Banks will be exposed to the physical climate risks of their customers. For many (including Handelsbanken), the real estate sector – through mortgage lending books - is the most salient sector risk exposure and subject to flooding, heat stress and extreme events (hurricane/typhoon) risk.

**Transition risks.** Due to the profound changes needed to limit global warming to 2°C, transition risk affects all sectors. Handelsbanken is exposed to transition risks from stricter policies and changes in consumer behaviour – including a decrease in demand for fossil fuels and animal protein (diet change). However, due to Handelsbanken's overwhelming exposure to the real estate sector the main transition channel is likely to be via regulation on properties (e.g. related to energy efficiency, building materials).

**Environmental risks.** Financial institutions are exposed to environmental risks through their customers. These can cover industries which have a potentially serious impact on local water quality and biodiversity, including manufacturing (sourcing of mined materials) and clothes retailing (sourcing of fibre) as well as those directly involved in sourcing raw materials (timber, fossil fuels). Handelsbanken's markets are governed by EU or similar legislation on these issues, which provides some mitigation of these risks.

### Environmental strategies and policies

The Bank has committed to climate goals with an overarching climate target to achieve net-zero emissions of greenhouse gases as soon as possible and by 2040 at the latest. This goal covers the entire Group and includes



lending, leasing, and investments as well as the Bank's own operations. Handelsbanken will seek validation from the Science Based Targets Initiative (SBTi) for this goal.

Separate initiatives have been created to reduce emissions from its investments and asset management operations, in credits and lending operations and from the bank's direct footprint. The vast majority of Handelsbanken's emissions are Scope 3 emissions from its customers. Handelsbanken has committed to calculating these, and to ensure this is done correctly it has joined the Partnership for Carbon Accounting Financials (PCAF), which provides models for such calculations. Work on calculating emissions from the loan portfolio began in 2021, focusing on emissions from the bank's real-estate lending in Sweden.

The bank's direct emissions derive mainly from energy consumption, business travel and transport as well as use of resources such as paper. Handelsbanken has reduced its direct emissions by 70 % since 2013 and compensates for the emissions it cannot avoid.

The bank has reduced its lending to carbon-intensive sectors in recent years. Its policy is to refrain from directly financing any new mining of coal for combustion or new coal power plants, or energy companies that are dependent on coal and are not working actively to ensure a transition to renewable energy sources. As of Q3 2021, Handelsbanken does not provide any financing to the coal sector. The bank also has restrictive policies in place for oil & gas, such as no direct financing of expansion plans and not to enter into relationship with companies in the sector who do not have credible transition plans. Lending to the oil & gas sector is currently only SEK 1.6 billion – corresponding to 0.1 per cent of total loans to the public.

Handelsbanken has set a goal that by 2025, 20 per cent of the Bank's financing volume shall consist of green financing, social financing or financing that contributes to the borrower's measurable, sustainable transition. The bank's products include green loans and sustainability-linked loans, through which it seeks to contribute to its clients' sustainability transition.

The bank has signed several international agreements relevant to its proposed Green Bond Framework, such as the UN Global Compact, the UN Principles for Responsible Investment (PRI) and the UN Environment Programme Finance Initiative. According to the bank, Agenda 2030 and the Sustainable Development Goals are integrated into the Bank's operations. The Bank issues an annual sustainability report in accordance with the Global Reporting Initiative's (GRI) guidelines and for the first time in 2021 it published a climate report covering its lending operations in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The Bank has performed its first forward-looking scenario analysis, where they explored the potential future impact on the Bank's real estate lending in Gothenburg by 2050.

As part of the credit-granting process, Handelsbanken assesses the environmental and climate profile of potential borrowers. The assessment has been updated in recent years, in line with the bank's evolution in this area. Because of the bank's exposure to real estate customers, it is aware of the risks of flooding and other physical climate hazards on this sector and is incorporating some measures to protect its portfolio against these. For example, it is developing a tool with an external partner to help company's and tenant-owner association's map the climate and energy related risks of their properties.

### **Green bond framework**

Based on this review, this framework is found to be in alignment with the Green Bond Principles. For details on the issuer's framework, please refer to the issuer's green bond framework dated 2022.

### *Use of proceeds*



For a description of the framework's use of proceeds criteria, and an assessment of the categories' environmental benefits, please refer to section 2.

### *Selection*

To ensure all possible eligible assets are in line with the green bond framework and follow national laws and internal rules, all customers of Handelsbanken are managed and approved in a standard credit process. The credit process includes a Know-Your-Customer procedure, a sustainability risk assessment, a credit risk analysis and a credit approval.

Local branches of Handelsbanken nominate new and existing loans within the eligible green use of proceeds categories to the Green Finance Committee ("GFC"). Alternatively, a financing department nominates green criteria related to a certain green loan product to have these approved at the product level. The GFC is a subcommittee consisting of the Chief Sustainability and Climate Officer, a representative from Stadshypotek (a wholly owned subsidiary of Handelsbanken which issues covered bonds), a representative from Group Credits, sustainability officers from other internal departments, etc.

The GFC reviews information about the assets or criteria and assesses their alignment with the Green Bond Framework. The GFC also evaluates their overall ESG benefits using criteria such as life cycle considerations, potential rebound effects, resilience, scientific targets and possible significant harm to other sustainability objectives. If there is doubt about the ESG benefits or compliance with the bank's green bond framework, such assets will not be included. Eligible green assets are approved by a majority vote by the GFC, where the bank's Chief Sustainability and Climate Officer holds a veto.

The decisions made by the GFC will be documented, and the information gathered in the approval process will be recorded in a Green Registry. The green registry allows the green assets to be monitored by the bank and will be used as a tool to determine if there is a current or expected headroom to issue a green bond. If a loan ceases to meet the Green Terms, the green status of the loan will be removed from the bank's green registry.

### *Management of proceeds*

An amount equal to the net proceeds of any issue under the Green Bond Framework will be credited to an earmarked portfolio (the "Green Portfolio") in Handelsbanken's internal information system managed by the Treasury Department. Deductions will be made from the Green Portfolio by an amount corresponding to the financing or refinancing of eligible green assets that have qualified according to the selection process or to repay a green bond. If an eligible green asset no longer qualifies or if the underlying eligible loan is repaid or divested, an amount equal to the funds will be re-credited to the Green Portfolio pending reallocation to other eligible green assets. Net proceeds may be reallocated to other eligible green assets by the Treasury at any time during the term of a green bond. The bank's treasury department will keep a record of the purpose of any change in the green portfolio.

Pending the allocation of an amount equal to the net proceeds and while the green portfolio has a positive balance, the proceeds may be invested or utilised by Treasury in accordance with the Bank's internal sustainability policy and the requirements of the liquidity reserve. The policy of the liquidity reserve is to invest in low risk profile assets and consists mainly of balances with central banks, government bonds and covered bonds. The same exclusions are applicable for the temporary allocations as for the use of proceeds. According to Handelsbanken, there are no undisbursed proceeds from the previous green bond issuances.

### *Reporting*



Handelsbanken will publish an annual report on its website that will include details on the allocation of proceeds and adherence to the green terms as well as the environmental impacts of the green portfolio. The Reporting will contain information on the green assets and a summary of Handelsbanken's green bond activities in the preceding year.

Due to confidentiality agreements, single loans, projects and customers will – generally speaking - not be disclosed. Instead, the issuer will gather and analyse the required environmental data and disclose data on an aggregate basis to investors.

Handelsbanken will provide both an allocation report and an impact report. For the latter, Handelsbanken will disclose the impact based on Handelsbanken's financing share of the total investment or market value. Proposed impact metrics have been disclosed for each category in the green bond framework.

The allocation of net proceeds will be verified by the Bank's external auditor on an annual basis, but there will be no external verification of impacts.

Handelsbanken's two previous green bonds have been subject to annual reporting, available on the bank's website. The reports are based on the guidelines for impact reporting provided by ICMA and the Nordic Public Sector Issuers Position Paper on Green Bonds Impact Reporting. Energy production and energy savings are converted into greenhouse gas emissions savings using an emission factor for electricity production in mainland EU and Norway of 315 g CO<sub>2</sub> /kWh. For green buildings, national building standards are used as baseline for calculating impact and energy savings. Impact is calculated as the net value of a specific building's energy consumption per m<sup>2</sup> and year, and the relevant national building regulation. The reports include information on the impact estimation methodology.






## 2 Assessment of Handelsbanken’s green bond framework

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

### Shading of eligible projects under the Handelsbanken’s green bond framework

- The net proceeds will be used to finance or refinance assets primarily in the Bank’s home markets<sup>1</sup> in accordance with this Framework. New financing is defined as loan disbursements that have been made up to one year before the allocation of net proceeds from a Green Bond. The proportion between new financing and refinancing will be disclosed in the Annual Reporting. Around 75% of green bond proceeds under the former framework have financed new projects. Handelsbanken expects a similar split under the present framework.
- The split across the categories in Table 1 is expected to be similar to the current split of green bond proceeds, that is, a majority for green buildings, followed by forestry and clean transport.
- The framework is an update. Compared to the 2018 framework, the issuer has added adaptation, energy efficiency and biodiversity as categories.
- Green financing will not be allocated to assets linked to the exploration, production or transportation of fossil fuels, nuclear energy generation, research and/or development within armament and defence, potentially environmentally negative resource extraction (such as rare- earth elements or fossil fuels), gambling, alcohol, adult entertainment or tobacco. Furthermore, any assets that are deemed not to be eligible in reference to Handelsbanken’s Climate Risk Policy will not be selected for financing or refinancing by the net proceeds of any green bond issued under the framework.

Category	Eligible project types	Green Shading and considerations
 <b>Clean Transportation</b>	The financing or refinancing of zero emission transport solutions for passenger, public and freight purposes, low carbon public transport as well as related infrastructure including, but not limited to: <ul style="list-style-type: none"> <li>• Transport by road: zero direct (tailpipe) CO<sub>2</sub> emissions vehicles such as buses, cars and</li> </ul>	<b>Dark Green</b> <ul style="list-style-type: none"> <li>✓ Assessing sustainability in the transport sector is not straightforward. The largest amount of carbon savings come from switching from inefficient modes of transport (e.g., private cars) to mass transit. However, where projects are</li> </ul>

<sup>1</sup> Handelsbanken’s home markets are Sweden, Norway, the Netherlands and the UK



trucks as well as public transport vehicles that run on biofuels

- Transport by rail: trains, wagons, coaches, underground trains and trams with zero direct (tailpipe) CO<sub>2</sub> emissions ✓
- Relevant supporting infrastructure related to electric transportation such as charging stations for electric vehicles ✓

aimed at like-for-like replacement of transport infrastructure, the improvements in environmental performance depend on the fuel type and efficiency.

- ✓ The issuer's criteria of zero tailpipe emissions is in line with best practice and is ambitious
- ✓ Biofuels emit carbon at combustion but have been considered 'carbon neutral' as the biomass was sequestering carbon during the growth cycle. The sustainability and emissions savings potential of biofuels depend both on the biomass used and on the alternative fuel (in some sectors where electrification is not yet possible, biofuels may be the next best alternative). Handelsbanken has clarified that for biofuels to be eligible in this category, the greenhouse gas emission savings should be at least 65% compared to standard fuels and that they will continuously evaluate which biofuels are relevant. In a Swedish context it is expected that biogas, HVO100 (from hydrogenated vegetable oil) and RME (from rapeseed oil) will be included.
- ✓ The issuer has clarified that only electrified rail services are eligible

**Climate Change  
Adaptation**



The financing or refinancing of adaptation measures contributing to the reduction of negative impacts of climate change related to e.g. temperature, wind, water or solid mass such as drought, storms and flooding. Including adaptations measures to increase the climate resilience in buildings.

**Dark Green**

- ✓ The issuer has informed us that they currently don't have many eligible assets in this category, but that they expect it to be a growth category - for example for measures related to real estate, infrastructure or forestry assets. Assets which support the use of fossil fuels (e.g. roads) are not intended to be included.
- ✓ Any construction activity can cause local pollution, and 'grey' infrastructure often cause GHG emissions through the



use of cement and virgin materials. We encourage the use of ‘green’ – or natural infrastructure solutions whenever possible.

## Energy Efficiency



The financing or refinancing of energy efficient solutions, infrastructure, technologies and related R&D contributing to a low carbon and energy efficient society. Eligible assets includes but are not limited to:

- Energy efficient products, technologies and processes in buildings including installation, replacement, maintenance and repair of energy efficient equipment such as light sources, HVAC (heat, ventilation and air conditioning), windows, doors and insulation as well as instruments for measuring and controlling the energy performance of buildings
- Production and development of energy efficient products, technologies and processes such as energy efficient electric heat pumps, ventilation systems and household appliances
- Storage of energy including electricity, batteries, pumped hydropower, hydrogen, thermal energy
- District heating/cooling distribution
- Smart grid technology

## Light to Medium Green

- ✓ The issuer offers clients (tenants) ‘green loans’ to finance energy efficiency improvements and these products will fall under this category.
- ✓ In order to be meaningful, energy efficiency projects should require a minimum threshold of efficiency improvements (usually 20-30%)<sup>2</sup>. The issuer has not included a threshold although it argues improvements are expected to be ‘material’
- ✓ Handelsbanken has confirmed that efficiency upgrades of fossil-based heating systems are excluded from this category
- ✓ District heating/cooling is included in this category. Eligible assets are mainly located in Sweden where the fuel is a mix of renewable and fossil elements.
- ✓ Efficiency upgrades to the transmission and distribution of electricity represent positive measures in themselves, but if the grid is largely fossil-fuel based such investments may contribute to prolonging the lifetime of fossil-based systems (lock-in). The issuer has clarified that projects will mainly be in the Nordics (where renewables dominate the grid). In countries with high grid CO<sub>2</sub> emissions, only infrastructure which connects renewable assets will be permitted.

<sup>2</sup> The IEA’s latest update states that energy efficiency has to improve by at least 4% per annum between 2020 and 2030 to be compatible with the Net Zero Emissions by 2050 Scenario (<https://iea.blob.core.windows.net/assets/9c30109f-38a7-4a0b-b159-47f00d65e5be/EnergyEfficiency2021.pdf>)



- Infrastructure for the transmission and distribution of electricity
- Green iron and steel produced with green hydrogen
- Data-driven solutions for GHG emissions reductions

- ✓ Handelsbanken has informed us that smart grid projects are unlikely to benefit fossil fuel-intensive customers due to the bank's ambition to only engage with clients who pursue their operations in line with the Paris Agreement (e.g., by transitioning to renewable energy production). Assets linked to the exploration, production or transportation of fossil fuel have been explicitly excluded.

**Environmentally sustainable management of living natural resources and land use**



**Sustainable forestry:**

The financing or refinancing of investments in sustainable forest management and sustainable forestry assets:

- Forest holdings exceeding 1500 hectares are required to have a sustainable forestry certification from either the Forest Stewardship Council (FSC) and/or the Programme for the Endorsement of Forest Certification (PEFC)
- Forest holdings between 50 and 1500 hectares, located in Sweden with an up to date Forest Management Plan, including conservation action plans for at least five per cent of the productive area (nature protection and habitat management) and a minimum of five per cent deciduous trees

**Biodiversity**

The financing or refinancing of investments in activities that promote, restore and/or preserve

**Medium to Dark Green**

- ✓ FSC and PEFC are internationally recognised certification schemes for sustainable forestry management, although the stringency of the certification depends on the local version of the standard. The issuer has clarified that the assets will be in their home markets, primarily Sweden
- ✓ Small forest holders may choose not to have their operations certified due to costs and time constraints. By including eligibility criteria which are similar to those included in certification schemes, Handelsbanken seeks to extend the eligibility criteria to a larger group of forest owners. It should be noted that Handelsbanken's criteria for small forest owners do not include an obligation to establish a GHG baseline or monitor carbon stock.
- ✓ Best practice forestry management requires criteria for increases in carbon sinks and the measurement of GHG baselines.



biological diversity including but not limited to:

- Protection and restoration of natural resources and ecosystems
- Conservation and restoration of forest, woodlands and wetlands

- ✓ Forestry, even when ‘sustainable’ as indicated by a certification standard, will have impacts on nature, e.g. through the construction of roads and the use of fossil-fuel based maintenance machinery. Biodiversity is often limited in planted forests.

## Green Buildings



The financing or refinancing of buildings which meets the following criteria:

### Commercial buildings

New buildings (built after 31 December 2020):

- Primary energy demand is, or will be, at least 10% lower than the threshold set for nearly zero-energy building (NZEB) requirements in national measures
- The building must also have, or intend to receive, a design stage certification or a post-construction certification in any of the following building certification schemes at the defined threshold level or better:
  - o BREEAM “Very Good”
  - o LEED “Gold”
  - o Miljöbyggnad “Silver”
  - o Svanen
  - o DGNB “Gold”
- Or the building is determined to be Taxonomy aligned (including DNSH criteria)

## Light to Medium Green

- ✓ The issuer is imposing energy thresholds and is thus targeting one of the most important climate change impacts of buildings. However, the ambition level of the target for new buildings is uncertain because few countries have defined ‘nearly zero’ at this stage. In some countries it may represent no more than current regulations. If so, a 10% improvement over that cannot be said to be at the level of ambition required by the Paris Agreement. In a long-term perspective, Passive or Plus house technologies should become mainstream and the energy performance of existing buildings greatly improved. Also, in a Nordic context, the share of embodied emissions in total emissions is rising, so reducing emissions from building materials in all new buildings is important.
- ✓ The majority of Handelsbanken’s property lending linked to previous green bonds has been to Swedish properties (88% according to the issuer) and the distribution is likely to be similar going forward.
- ✓ According to recent analysis carried out by the issuer, 22 % of its current lending to the sector was to buildings within the top 15 per cent most energy efficient for their



Existing buildings (built before 31 December 2020):

- The building has an Energy Performance Certificate (EPC) demonstrating class A, or the building is within the top 15% of the national or regional building stock expressed as Primary Energy Demand (PED)

**Residential buildings**

New buildings (built after 31 December 2020)

- Primary energy demand is, or is designed to be, at least 10% lower than the threshold set for nearly zero-energy building (NZEB) requirements in national measures
- Or certified as described under new commercial buildings

Existing buildings (built before 31 December 2020):

- The building has an Energy Performance Certificate (EPC) demonstrating class A, or the building is within the top 15% of the national or regional building stock expressed as Primary Energy Demand (PED)
- Or certified as described under new commercial buildings

**Renovation of existing buildings**

Renovation of an existing building that either leads to a reduction of Primary Energy Demand (PED) of at least 30%, or where the

respective building type (of those with an EPC rating) – so a slight positive skew towards energy efficient buildings compared to the average of the market.

- ✓ For existing buildings, the issuer will calculate ‘top 15%’ based on an external benchmark – either guidance from national governments or a specialist study, or until such studies are ready – national statistics (in Sweden: e.g., Boverket). Based on this methodology, there is a risk that residential buildings simply complying with regulation are financed, while non-residential might include buildings with energy performance below regulation.
- ✓ It is positive that in addition to the energy criteria, Handelsbanken requires new buildings to be certified on broader sustainability parameters (related to building materials, access to public transport and other environmental impacts) or to be aligned with EU’s DNSH criteria.
- ✓ The definition of ‘major renovation’ will be in accordance with Directive 2010/31/EU.



building meets the applicable requirements for  
'major renovations'

### Pollution Prevention and Control



#### Waste to Energy

The financing or refinancing of environmentally responsible and fossil-free waste-to-energy investments

- Waste to energy plants with an emission intensity of  $\leq 100\text{gCO}_2\text{e/kWh}$  for electricity generation
- Waste hierarchy and plastic content in waste considered in the assessment
- No peat, coal, oil, gas or other fossil fuels (except as required to start the incineration process)

#### Waste Management

The financing or refinancing of waste management or waste treatment in a responsible and environmentally friendly way. Waste management activities includes electric collection trucks, waste prevention measures, waste reduction or waste recycling. Projects are assessed both on their direct and indirect environmental credentials, including the collection and transport of waste and the greater societal impact of circular material use.

#### Medium Green

- ✓ The issuer clarifies that for waste-to-energy to qualify, the recycling facility must convert at least 50% of waste to secondary raw materials (in terms of weight). Resource efficiency plays an important role in limiting GHG emissions. Recycling with a minimum secondary raw material conversion rate of 50% is in line with the EU Taxonomy requirements for material recovery from non-hazardous waste
- ✓ The emission intensity threshold of  $\leq 100\text{gCO}_2\text{e/kWh}$  is the threshold used to qualify as 'green' electricity generation in the EU Taxonomy and is on a lifecycle basis.
- ✓ Co-generation facilities (with fossil fuels) are excluded
- ✓ Waste-to-energy facilities can be an effective way of disposing of waste but releases pollutants and emissions and can lead to excessive waste production at the expense of recycling.
- ✓ This screening of projects using a waste hierarchy approach is positive, although without more specific thresholds it leaves the possibility of outcomes which may or may not be ambitious.
- ✓ The issuer is not expected 'large amounts' of waste to be shipped to other countries but is allowing for some export.



- ✓ The waste management category is quite broad and could include projects/assets with limited aspirations.

## Renewable Energy



### Wind Energy

The financing or refinancing of wind power installations (offshore and onshore) and related infrastructure investments such as grid connections and electric sub-stations.

### Solar Energy

The financing or refinancing of on-site solar power installations or stand-alone solar farms, as well as related infrastructure investments such as grid connections and foundations.

### Hydro Energy

The financing or refinancing of hydro power plants and related infrastructure such as renovation of dams, new or refurbished grid connections and electric substations. To be eligible the asset must comply with either of the following requirements:

- The electricity generation facility is a run-of-river plant and does not have an artificial reservoir
- The power density of the electricity generation facility is above 5 W/m<sup>2</sup>

## Dark Green

- ✓ The issuer is applying widely used screening criteria for geothermal and hydropower which ensure that these will be aligned to the EU Taxonomy criteria (life cycle GHG emissions lower than 100gCO<sub>2</sub>e/kWh). However, emission intensities vary by country and applying the EU threshold in e.g. a Swedish context – where the grid's emission intensity is currently 8.8 gCO<sub>2</sub>e/kWh - would in fact imply a substantial increase in emissions<sup>3</sup>
- ✓ Hydropower projects may imply land use conflicts, resettlement and disturbance of livelihoods, and negative health effects for affected communities. Some hydropower facilities can have significant GHG emissions. However, by limiting the location to Europe and by applying the bank's sustainability policies, these risks are considered to be mitigated.
- ✓ The hydrogen category has been limited to green hydrogen (i.e. based on renewables). This is best practice and ensures more sustainable outcomes and lower risks than when permitting grey or blue hydrogen
- ✓ Increasing the share of renewable energy in national electricity mixes is an essential part of achieving the

<sup>3</sup> Source: <https://www.eea.europa.eu/data-and-maps/indicators/overview-of-the-electricity-production-4/assessment>





- The life-cycle GHG emissions from the generation of electricity from hydropower, are lower than 100gCO<sub>2</sub>e/kWh

#### **Geothermal Energy**

The financing or refinancing of geothermal heating and cooling installations and related infrastructure, such as network, heat pumps and heat exchangers. To be eligible the asset must comply with the following requirement:

- The life-cycle GHG emissions from the generation of electricity from geothermal energy are lower than 100gCO<sub>2</sub>e/kWh

#### **Hydrogen**

The financing or refinancing of investments in production of green hydrogen and the manufacture of equipment for the production and use of green hydrogen.

transition to a low-carbon economy, however as with any new construction they have impacts on biodiversity, landscapes and local communities and care should be taken to minimise these.

- ✓ The production of renewable energy equipment may require environmentally sensitive materials. The supply chains for these materials need to be appropriately managed, to avoid creating new adverse social and environmental impacts. Responsible sourcing and recycling should be part of any renewable project developer's strategy.

---

### **Sustainable Water and Wastewater Management**

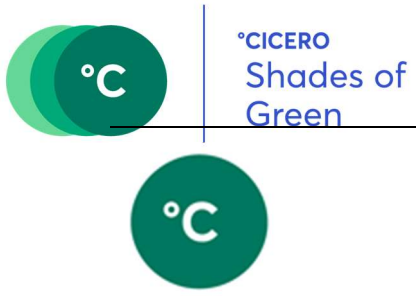


The financing or refinancing of investments in sustainable management of water and/or wastewater such as plants, technologies and related infrastructure for the supply of fresh water or processing of wastewater, such as:

- Ultrafilters
- Energy or other energy efficiency improvements
- Capacity expansions
- Enabling infrastructure

### **Medium to Dark Green**

- ✓ The issuer has informed us that processing of wastewater from fossil fuel plants would not qualify in this category
- ✓ Investors should be aware that in some geographies wastewater treatment and water purification facilities run on fossil fuels and can be a source of GHG emissions. In Handelsbanken's home markets, however, they tend to run on electricity (which at least in the Nordics is a majority renewables-based mix).



- 
- New network infrastructure
  - New-build or investment in the water purification process
- ✓ Projects will be in Northern Europe where the application of EIAs and/or regulatory guidelines will lower the risks related to impacts on biodiversity, excessive overflows etc. which are otherwise associated with this category
- 

Table 1. Eligible project categories









## 3 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated June 2022. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO 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 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 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 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 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 selection process. CICERO 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	Handelsbanken Draft Green Bond Framework 2022 V3	
2	Annual and Sustainability Report 2021	
3	Handelsbanken's climate change progress report 2021	TCFD report
4	Environment and Climate Change	Policy on environment and climate change
5	Handelsbanken Green Bond Impact Report 2021_tcm72-143637	
6	GFC Verksamhetsbeskriving	Description of Green Finance Committee



## 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, the International Institute for Sustainable Development (IISD) and the School for Environment and Sustainability (SEAS) at the University of Michigan.



- ★ **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