

Green Bond Investor Report 2023

1 January – 31 December 2023



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About this report

This report comprises brief information about NCC's sustainability work, the Green Financing Framework, and the Green Bonds that NCC has issued, as well as a description on how environmental sustainability work is performed in our property development and in the industrial production at asphalt plants and quarries. It also contains results and outcomes linked to the Green Bonds.

Property development

NCC has a portfolio of commercial properties that comply with the Green Financing Framework. These projects are designed and constructed to meet at least the BREEAM Excellent or DGNB Gold certificate standards. In this report, we present three representative projects, all of which fulfil the criteria of NCC's Green Financing Framework, and we describe their climate impact, environmental impact, and smart technical solutions.

Asphalt plants and quarries

Significant investments have been made in fuel conversion from fossil to renewable energy, energy efficiency measures and recycling at our asphalt plants. These investments comprise all historic conversions, including the past year, and investments in these types of measures in all the Nordic countries. Energy efficiency measures and recycling started in 2009. Conversion from fossil to renewable fuels started in the asphalt business in Sweden in 2012 but has only recently started in the other Nordic countries. The initiatives taken at the plants include investments to increase energy efficiency and raise the amount of reclaimed asphalt pavement (RAP) reused in our asphalt products. Since RAP goes into our ordinary asphalt production it reduces the cradle-to-gate climate impact of the asphalt product. Investments which increase the amount of RAP used is also a significant contribution to the circular economy since it decreases the amount of virgin aggregates and bitumen required in the asphalt mixtures.

Reported investments in renewable energy in NCC's quarries consist of two parts: 1) electrification of sites owned by NCC and 2) mobile diesel-electric stone crushers owned by NCC for use in any electrified site. Both investments are required to make the transition from diesel-driven to electric crushing. The switch from diesel-driven to electric crushing is also associated with a significant reduction in energy consumption. Data on electrification and investment in diesel-electric crushers and the associated energy efficiency in the crushers includes all historic and present investments

in Sweden. Conversion started in 2019 and is currently ongoing.

Reported investments contributing to preserve biodiversity and sustainable ecosystems also consist of two parts: 1) initiatives to protect and secure biodiversity in our active quarries and gravel pits in accordance with the NCC Kielo method, and 2) investments in facilities to produce NCC Machine Sand, a product which enables our customers to reduce their consumption of natural sand.

This report covers the period January 1, 2023, to December 31, 2023.

Background

To fund climate investments and other relevant environmental initiatives that support our sustainability targets, and our customers demand, NCC published a Green Bond Framework and issued its first Green Bond in September 2019. The Green Bond Framework was updated in 2022 and renamed to the Green Financing Framework, to open for more types of financing. Working with sustainability matters is integrated in the businesses and operations of NCC and our priority areas are described in NCC's sustainability framework. For more information about NCC's sustainability framework, please visit ncc.com.

About NCC

NCC is one of the leading construction companies in the Nordics. Based on its expertise in managing complex construction processes, NCC contributes to a positive impact of construction for its customers and society. Operations include building and infrastructure project contracting, asphalt and stone materials production and commercial property development. In 2023 NCC had a turnover of SEK 57 billion and approximately 12,200 employees.

Sustainability framework

NCC's sustainability framework provides the foundation for the Group's sustainability work. The current sustainability framework was adopted in 2021. It shows which areas and topics are most important for NCC to focus on, as well as the topics that have the greatest impact. The framework is divided into eight impact areas: Data and expertise, Natural resources and biodiversity, Materials and circularity, Climate and energy, Health and safety, People and team, Ethics and compliance and Economic performance.

The foundation for NCC's sustainability work consists of the Group's shared values and behaviors, Star behaviors. NCC works to make a positive contribution to and reduce the negative impact on achieving the UN Sustainable Development Goals. This is also clarified through the Group's sustainability framework. For more information about NCC's sustainability framework, please visit ncc.com.

For each area within the framework, NCC has long-term commitments that serve as guidance within the area of sustainability.



Green Financing Framework

NCC will exclusively apply the net proceeds from the issuance of Green Bonds to finance a portfolio of “Eligible Projects,” promoting the transition to a low-carbon and climate resilient society.

Second opinion

The NCC Green Financing Framework has been reviewed by CICERO, an independent climate and environmental research institute, and has been awarded the highest grade EXCELLENT regarding governance procedures and MEDIUM GREEN as the overall rating.

Green Financing Committee

NCC has established a Green Financing Committee to ensure that NCC utilizes the net proceeds from the issuance of Green Bonds to finance a portfolio of eligible projects, in accordance with NCC’s Green Financing Framework. In this report, NCC gives examples of property development projects that accurately represent the larger portfolio and for asphalt plants, the total climate and environmental impact made during the investments. This has been reviewed by the Green Financing Committee. For more information, please visit our web: [Green Financing Framework](#).



Property development

To take a holistic approach to sustainable property development, NCC aims to certify all office projects at least at the BREEAM level excellent or the DGNB level Gold. This ensures that the focus is kept on the relevant sustainability issues and that improvements are made continuously in multiple areas. Certification is part of the entire project process and done in two phases, design, and finalised building. Certificate is obtained when the project is completed, and an independent person monitors and assesses the fulfilment of certification requirements during production period. Certification includes an independent third-party review, which ensures that measures are implemented, and that a robust follow-up is carried out.

Real estate accounts for nearly 40 percent of energy use in Sweden regarding to authority Boverket. It is therefore important to minimize energy use in properties being developed. All buildings are required to use at least 25 percent less energy compared with local codes.

We are also working to provide buildings with renewable energy and to primarily focus on using energy with a low climate impact, this is for example solar energy and district heating from biofuels.

Reducing climate impact from used materials and the construction process is a major focus area. We focus on resource-efficient construction and materials with low climate impact. NCC's ambition is to reduce climate impact from materials with 50 percent by 2030. Large amounts of waste are generated in construction projects, and we focus on minimizing waste and reduce the amount of waste sent to incineration or landfill. The EU waste hierarchy controls our way of working and the goal is to reduce waste to less than 25 kg/BTA and sort the waste generated into reusable clean fractions.

Impact from the three example projects:

141 ton expected annual CO₂e reduction, and
1,232 MWh expected annual energy saving



Asphalt plants and quarries

Asphalt plants

NCC produces asphalt in a variety of qualities and properties. NCC also offers paving services. Manufacturing of asphalt consumes large amounts of base materials. It is also an energy intensive operation that requires equipment and vehicles running on fossil and renewable energy. The sustainability work conducted in this area concerns NCC's production of asphalt, rather than the paving operations. It comprises the following, interlinked aspects:

- Energy conversions: Replace fossil fuel oils and gases at the plants with wood pellets or bio-oil
- Increasing recycling of input materials: Aggregates, reclaimed asphalt pavement (RAP)
- Energy efficiency: Reducing production temperature by covering, insulating and ventilating to reduce moisture in components and production units etc.

Although not immediately affecting energy type or consumption, increasing aggregate and asphalt recycling contributes to achieving a circular economy and indirectly affects the carbon footprint within Scope 3. For definition and more information please see Appendix.

The main components in asphalt mixtures, besides mineral rock aggregates, are bitumen and smaller amounts of adhesives and cellulose fibers. In addition, RAP is usually added to asphalt mixtures, thereby replacing virgin aggregate and virgin bitumen. Content declarations of individual products provide content ranges depending on recipe and type. Asphalt production requires energy as the material is heated to a temperature of 120-180 °C (hot-mix asphalt). The fuel used for asphalt production has historically constituted fossil energy, typically fuel oil or gas, while during the last decade NCC has emphasized increased use of renewable energy such as wood pellets which are milled to powder, or the bio-oil tall-oil pitch, TOP. The direct energy usage in asphalt production derives from heating the asphalt mixture and removing moisture from aggregates and RAP. Therefore, investments to reduce production temperature and to protect stored raw materials from precipitation are also covered by the green investments and associated bonds.

The timing of a given investment at each asphalt plant depends on current plant status, need of maintenance/replacement and site-specific conditions such as local fuel availability, transport distances and plant configuration. For example, efficient use of biofuels often needs additional preparations and adjustments, such as milling of pellets or preheating of

bio-oils, which normally limits annual consumption below 100 percent. Consequently, the present target for individual converted plants is typically to reach 90 percent non-fossil fuels, a figure that has been increased over the years by successive accumulation of experience.

Reduction of CO₂e in NCC's asphalt plants:

274,880 ton total CO₂e reduction 2015-2023

Quarries

Production of aggregates, gravel and sand in quarries and pits uses large amounts of virgin material and energy. NCC produces aggregates in diverse sizes, from blasted rock to finely crushed stones with different sizes. The products are used in construction and civil engineering projects, including as bulk material in asphalt mixtures and concrete.

Most of the sustainability work is conducted in Sweden, where it has been most favorable, by the mobile aggregate crushing units within the areas of:

- Energy efficiency: Replacing fossil diesel with electricity
- Energy conversion: Replacing fossil diesel with electricity

Energy for the mobile crushing production process has historically been fossil energy, typically 100 percent fossil diesel. During recent years, NCC has advocated for increased use of renewable energy in the form of electricity from renewable sources (hydropower).

The timing of a given investment depends on current crusher or screen status, need of maintenance/replacement and site-specific conditions, such as local electricity and effect (power output) availability, and crusher configuration.

Reduction of CO₂e in NCC's mobile crushers:

9,467 ton total CO₂e reduction 2019-2023

There are two categories of investments for electrification of mobile crushing:

- Electrification of sites (transformers and cables)
- Mobile crushers and screens that are diesel-electric instead of diesel-hydraulic

There are also two categories of investments that contribute to preserving biodiversity and sustainable ecosystems:

- Initiatives to protect and secure biodiversity in our active quarries and gravel pits. NCC has developed a method that promotes biodiversity in quarries, known as NCC Kielo and counters the change of nature that occurs because of the extraction of aggregates.
- Investments in facilities to produce NCC Machine Sand, a product which enables our customers to reduce their consumption of virgin natural sand.

In certain NCC sites we work aligned with our developed method, NCC Kielo, which helps us to implement solutions to maintain and promote biodiversity in our active quarries and pits, during operation and as a part of the rehabilitation. To become a NCC Kielo site there are several criteria that must be met, including an investigation of habitat types to note characteristic species in the area, set targets, and describe planned measures to create desirable conditions for biodiversity at the specific site.

NCC invests in facilities to produce NCC Machine Sand at some quarries. NCC Machine Sand is based on rocks that are crushed, sieved, and refined to meet customers' requirements in various applications. NCC Machine Sand can replace virgin natural sand or gravel in concrete production, asphalt production, sports and recreational infrastructure and civil engineering projects. Reducing the exploitation of virgin natural sand and gravel protects water resources, keeping biodiversity and delivering ecosystem services, since virgin natural sand is the second most exploited natural resource in the world after water and plays a strategic role in delivering ecosystem services and maintaining biodiversity.



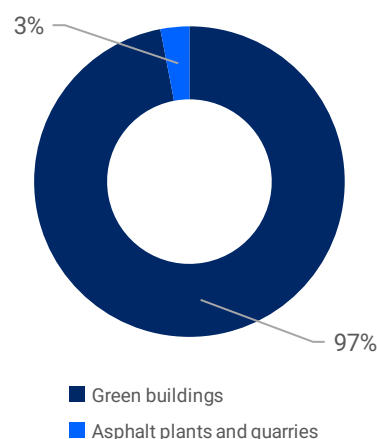
Issuance of Green Bonds

NCC reports in Swedish kronor (SEK) and the reporting period ended on December 31, 2023. NCC has outstanding Green Bonds amounting to SEK 1,750 M of which SEK 750 M matures on September 30, 2024, and SEK 1,000 M matures on September 08, 2025.

NCC also has SEK 500 M in a private placement that matures on June 22, 2026, SEK 100 M in a private placement that matures November 27, 2026, and SEK 500 M in a private placement that matures on June 30, 2027.

The proceeds from the Green Bonds have all been used to re-finance investments that are in alignment with the NCC Green Financing Framework. Activated eligible green assets amounted to SEK 2,850 M on December 31, 2023.

Distribution of green assets



Summary of key results

Dispersed and allocated bonds

SEK M	Dispersed Green Bonds	Allocated volume	Carrying amount, portfolio December 2023	Available volume
Green Buildings	2,770	2,770	9,000	6,230
Asphalt plants	80	80	122.7	42.7
Quarries			83.2	83.2
Total	2,850	2,850		

Total investment Estimated available volumes

NCC Treasury had as per December 31, 2023, Green Bonds outstanding amounting to SEK 2,850 M (including SEK 1,100 M in private placement). The internal green lending was at the same time amounting to SEK 2,850 M.

Small differences between the Carrying amount and NCC Group's book value on ongoing property projects may occur. These differences mainly consist of eliminations of internal profits and joint venture projects.

Environmental impact

Green Buildings	Expected reduction of emissions (ton CO ₂ e)	Expected annual energy savings (MWh)	Recycled waste, %
Annual savings	141	1,232	75-95
Asphalt plants	Fossil Scope 1 emissions saving in 2023 compared with 2015 (kg fossil CO ₂ e/ton asphalt and %)	Fossil energy saving in 2023 compared with 2015 (fossil kWh/ton asphalt and %)	Increase in renewable share of Scope 1 energy mix from 2015 to 2023 (%)
Saving 2015-2023	4.4 (35%)	16 (29%)	From 22 to 47%
Mobile crushers in quarries	Fossil Scope 1 & 2 emission saving 2023 compared to 2019 (kg fossil CO ₂ e/ton aggregates and %)	Fossil energy saving in 2023 compared with 2019 (fossil MWh/ton aggregates and %)	Increase in renewable share of energy mix from 2019 to 2023 (%)
Savings 2019-2023	0.22 (27%)	0.87 (27%)	From 1 to 28%

Calculated savings on green buildings are annual savings during building lifetime. Expected reductions are not for the entire project portfolio, but for the three example projects only, see page 11-12.

NCC Industry Asphalt in Finland was divested on Dec 31, 2021, and the environmental impact from asphalt plants in Finland for all the years is therefore not included in the Investor Report from 2022 and ongoing.

Information on Green Bond investments

Property development

Per Dec 31, 2023, NCC had seven ongoing and four completed property development projects.

Portfolio of ongoing green property development projects per Dec 31, 2023

Project	City	Segment	Lettable area (sqm)	Construction start	Sold, expected time for profit recognition	Environmental certification
Albatross	Gothenburg	Logistics	34,000	Q2 2022	Q1 2024	BREEAM – Excellent
MIMO	Gothenburg	Office	31,600	Q2 2021	Q4 2024	BREEAM – Excellent
We Land	Helsinki	Office	21,200	Q3 2020		BREEAM – Outstanding
Park Central	Gothenburg	Office	15,200	Q1 2023	Q2 2027	BREEAM – Excellent
Flow	Malmö	Office	10,300	Q3 2022		BREEAM – Excellent
Nova	Stockholm	Office	9,900	Q3 2021		BREEAM – Excellent
Habitat 7	Gothenburg	Office	7,800	Q2 2022		BREEAM – Excellent

Portfolio of completed green property development projects per Dec 31, 2023

Project	City	Segment	Lettable area (sqm)	Construction start	Sold, expected time for profit recognition	Environmental certification
Bromma Blocks	Stockholm	Office	52,400	Q4 2018		BREEAM – Excellent/Outstanding
Brick Studios	Gothenburg	Office	16,100	Q4 2019		BREEAM – Excellent
Våghuset	Gothenburg	Office	10,900	Q4 2019		BREEAM – Excellent
Kulma21	Helsinki	Office	7,700	Q2 2021		BREEAM – Excellent

To show the environmental impact, three projects have been selected to represent the portfolio and they are described in detail below. These are the Habitat 7 and Flow projects in Sweden and the We Land project in Finland. All three are new construction office projects.

Actual or expected environmental impact from the three example projects

Project	Energy performance ^A (kWh/m ² , year)	Energy-savings, %		CO ₂ e impact ^B (kg CO ₂ e/m ² , year)		Renewable energy, %	Waste ^C %
				Impact	Avoided		
Habitat 7	49	33	3	1	87	92	
Flow	51	43	2	1	72	95	
We Land	77	23	22	5	52	75	

^AAccording to local building code

^BFrom energy usage

^CAs described in NCC's annual report

^DAvoided CO₂ impact from reduced energy use, compared to local code

The energy used in the two Swedish projects are to great extent renewable with low CO₂-emissions. The avoided CO₂ emissions due to reduced energy use are thereby very low compared to the project in Finland since used energy in Finland have larger CO₂ emissions. The CO₂ savings are about 24 percent of total annual climate impact. During a 50-year lifecycle this sums up to about 7,000-ton CO₂e savings.

In addition, large scale savings of CO₂ emissions during construction have been made, see information about each project. This sums up to at least 2000-ton CO₂e.

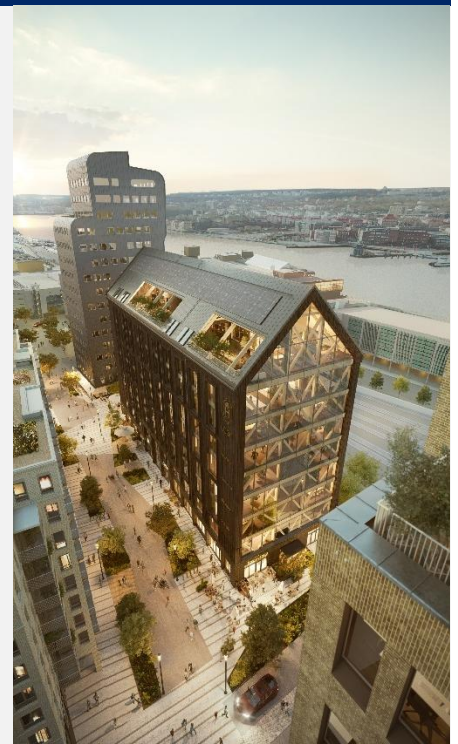
Habitat 7

Project facts

City:	Gothenburg
Type:	Office building
Scheme:	BREEAM-SE 2017 New Construction
Level:	Excellent
Status:	Design stage and production ongoing

Sustainability facts

Energy	<ul style="list-style-type: none"> - Energy-smart installations with presence controlled low air flow and high heat recovery in ventilation. - Presence and daylight control of lighting. Water saving faucets. - Local energy production from roof mounted solar panels.
Other	<ul style="list-style-type: none"> - Solid wooden framework combined with climate improved concrete - Large green terrace for building users - Bicycle rooms and changing rooms - Proximity to public transport and services - Sustainable construction site with for example improved waste handling, material reuse and presence-controlled lighting - Climate-impact from materials and construction are reduced by 35 percent by using materials with low climate impact. Reduced climate impact with about 1200-ton CO₂e. - Used materials with low climate impact are for example Wooden framework, climate improved concrete, recycled glass and transports with HVO - Parts of ventilation ducts without steel - Certifications: In addition to BREEAM, also NollCO₂ and Citylab



Flow

Project facts

City:	Malmö
Type:	Office building
Scheme:	BREEAM-SE 2017 New Construction
Level:	Excellent
Status:	Design stage and production ongoing

Sustainability facts

Energy	<ul style="list-style-type: none"> - Energy-smart system control function for air handling unit. Use of renewable energy sources, 200 m² solar panel system on roof - Use of renewable energy sources, 200 m² solar panel system on roof - Energy-smart system control function for air handling unit. The function is used where there are several units so that they can be controlled as a group to reduce fan pressure and save energy. The sequence of in- and the output of the air handling units is based on current power and energy demand, which optimizes energy performance.
Other	<ul style="list-style-type: none"> - Analysis of thermal comfort conducted for future climate changes, the effect of higher temperatures, show that the building will be able to maintain the comfort levels required for indoor thermal comfort without any adaptations - The building floor plan and window sizes have been optimized to minimize energy losses through building envelope but at the same time ensure occupiers wellness by providing good view out and daylight - Concrete with reduced climate impact, up to 40 percent reduction - Reduced climate impact with about 18 percent and 820-ton CO₂e. - Green steel with reduced climate impact - Green roof and green areas on the ground for the increase of biodiversity; plants, insects, and birds, and with the function as water-holding during heavy rains to lower risk of flooding - Green roof and green areas on ground to lower the effect of high temperatures, the heat island effect, locally in this urban area - Choice of plants that are local to the region and can adapt to climate change such as longer periods of heat and drought - Bicycle rooms and changing rooms - Proximity to public transport and services - Each floor layout is modifiable from single to multi-tenant use and floor levels can be connected with open staircases



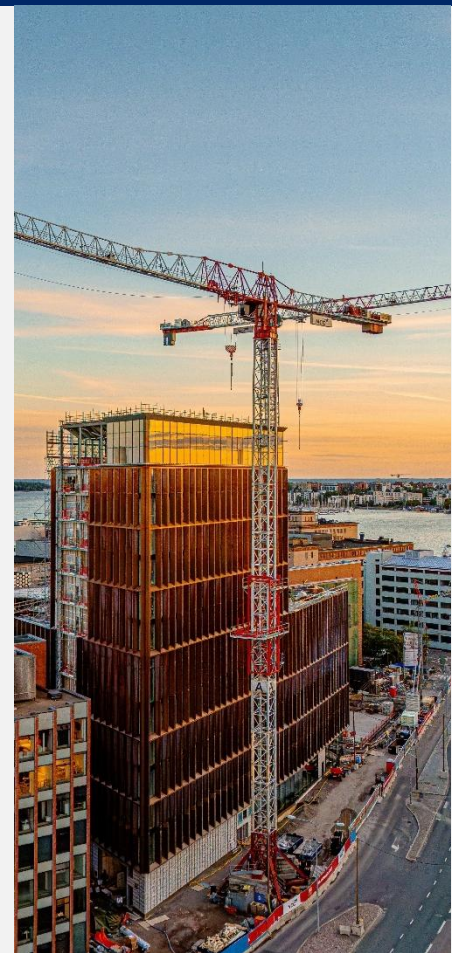
We Land

Project facts

City:	Helsinki
Type:	Office building
Scheme:	BREEAM-International New Construction
Level:	Outstanding
Status:	Design stage and production ongoing

Sustainability facts

Energy	<ul style="list-style-type: none">- Use of renewable energy sources, 26 kWp solar panel system onsite- Presence and daylight control of lighting- District heating and cooling, highest energy efficiency level A2018- During construction period, consumption of electricity and CO₂ emissions from transportation and fuels are monitored. The building site uses renewable energy
Modifiable	<ul style="list-style-type: none">- Adaptability to climate change- Each floor layout is modifiable from single to multi-tenant use and floor levels can be connected with open staircases, underfloor system for installations
Other	<ul style="list-style-type: none">- Reservation of electric car charging points available for 100 percent of parking places- 450 indoor bicycle parking places, electric bicycle charging points available for 30 percent of spaces- During office hours, 15 percent of parking facilities will be used for public parking and after office hours, 100 percent for public parking- Easy access to public transport, 30 meters to bus stop, 80 meters to tram stop, 400 meters to metro station- Western Helsinki's main bicycle route passes by the building and its cycling related facilities are of high quality, including a bicycle washing facility- Green roofs with bird houses, accessible terrace- Facade cobber material is made of 100 percent recycled cobber and can be fully recycled after use- Procurement process takes account reused material and building products



Asphalt plants

Between 2012 and 2023, all the 29 Swedish asphalt plants and 4 of 13 plants in Norway have been converted from fossil fuels to biofuels. Instead of traditional fossil light fuel oil (LFO), renewable wood pellets/powder or bio-oil (tall oil pitch, TOP) is now used. See page 15 for table Investments by year and investment category.

Other measures to reduce CO₂e emissions include increasing the share of recycled input materials; aggregates and reclaimed asphalt pavement (RAP), and increasing energy efficiency; reducing production temperature by covering, insulating & ventilating to reduce moisture in components and production units etc.

The distribution of investments and residual values as of December 2023 and the total share to reduced CO₂e emissions since 2012 are shown below.

Distribution of investments and residual value as of December 2023

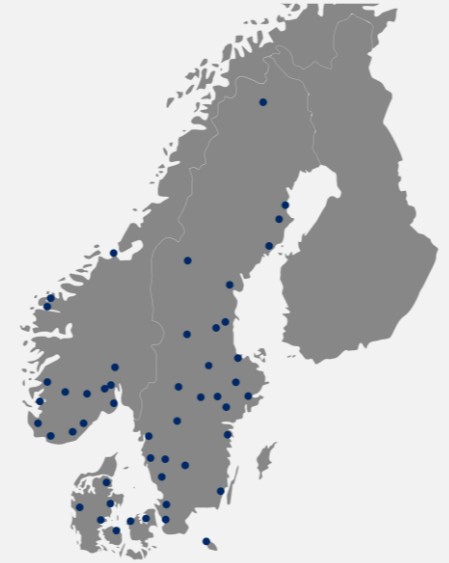
	Energy conversion, %	Energy efficiency, %	Recycling, %	Summarized value
Distribution of investments	54.5	9.5	36.0	SEK 347.3 M
Distribution of residual value	42.1	11.8	46.0	SEK 122.4 M

Environmental impact asphalt plants

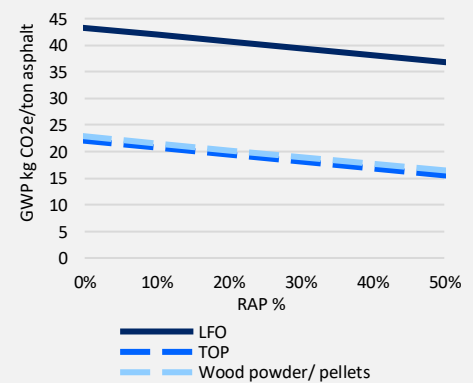
Emissions of greenhouse gases (expressed by Global Warming Potential, GWP) for asphalt production mainly depend on the quantity and type of fuel used to heat the product and the quantities of resources, such as aggregates and virgin bitumen, used. The diagram A illustrates the combined effect of the fuel type used and the amount of recycling for a typical asphalt type. As indicated, converting from fossil LFO to biofuel combined with increased amounts of recycling (RAP) yields a substantial decrease in GWP for the asphalt. The effect of each percent of increased recycling is approximately a reduction of 0.13 kg CO₂e/ton asphalt.

The reduction of scope 1 fossil CO₂e emissions is presented in diagram B showing the effect of the investments made in energy conversion from fossil to renewable fuels, which reduces the scope 1 fossil CO₂e emissions and energy efficiency measures during 2015-2023 in all NCC Industry's asphalt plants. There was initially a slight increase from 2015 until 2017, because the use of fish oil as a biofuel in Norway stopped after 2015. The Scope 1 fossil CO₂e emission per ton of produced asphalt in all plants of NCC Industry was reduced by 35 percent, from 12.8 to 8.4 kg CO₂e/ton, from 2015 until 2023. This is equivalent to a reduction of ~20,170 tons of CO₂e for the total asphalt production in 2023.

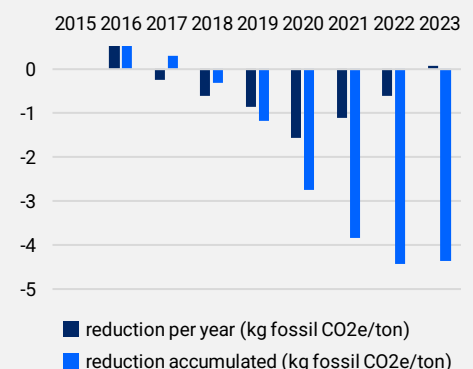
Map of location of asphalt plants



A – Effect of fuel type and amount of recycling on cradle-to-gate GWP for asphalt



B – Reduction of Scope 1 fossil CO₂e emissions per ton produced asphalt at all NCC Industry's asphalt plants during 2015-2023, kg CO₂e/ton

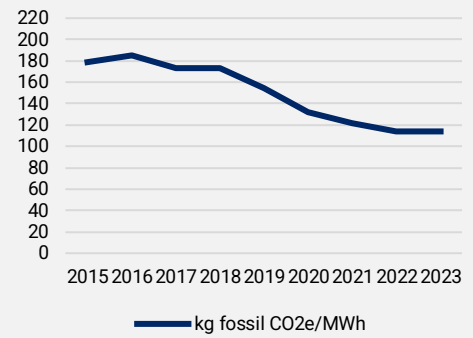


When converting to biofuels, fossil CO₂e emissions per energy unit consumed in production will drop. The Scope 1 fossil CO₂e emissions per MWh was reduced by ~37 percent in all NCC Industry's asphalt plants, from 179 to 114 kg CO₂e/MWh, from 2015 until 2023 (diagram C).

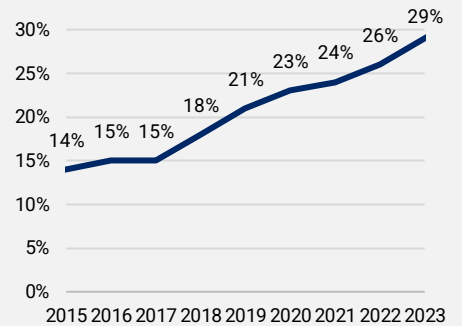
Using reclaimed asphalt pavement also gives a pronounced effect on the cradle-to-gate emissions of asphalt. Over the years NCC Industry has successively increased the amount of recycling and in 2023 the amount of RAP in asphalt mixtures averaged 29 percent in all the asphalt plants (diagram D).

By combining a higher share of biofuels, energy efficiency measures (lower humidity in the raw material and lower temperature in production) and a larger proportion of RAP, the climate impact of asphalt mixtures from NCC will successively be reduced.

C – Scope 1 fossil CO₂e emission per MWh consumed in all NCC Industry's asphalt plants during 2015-2023, kg CO₂e/MWh



D – Proportion of RAP in asphalt mixtures 2015-2023 (average value)



Investments by year and investment category

Location	Country	Year	Investment category		
			Energy efficiency	Energy conversion	Recycling
Gävle	Sweden	2009-2019	X	X	X
Säter	Sweden	2009-2021	X		X
Hudiksvall	Sweden	2010-2022	X	X	X
Gothenburg	Sweden	2010-2020	X	X	X
Ålesund	Norway	2011-2015	X		
Bollnäs	Sweden	2011-2020	X	X	X
Rugsländ	Norway	2011-2022	X	X	X
Trige	Denmark	2012-2018	X		X
Brejning	Denmark	2012-2020	X		
Maribo	Denmark	2012-2021	X		X
Eskilstuna	Sweden	2013-2019	X	X	X
Tau	Norway	2013-2019	X		
Eikefjord	Norway	2014	X		
Gammelrand	Denmark	2014	X		
Grinda	Norway	2014	X		
Rådal	Norway	2014			X
Lierskogen	Norway	2014-2015	X		X
Uddevallå	Sweden	2014-2016	X	X	X
Västerås	Sweden	2014-2016	X	X	X
Etnå	Norway	2014-2017	X		
Hålmstad	Sweden	2014-2018	X	X	X
Jönköping	Sweden	2014-2018	X	X	X
Karlstad	Sweden	2014-2019	X	X	X
Norrköping	Sweden	2014-2019		X	
Borås	Sweden	2014-2020	X	X	X
Stockholm, north	Sweden	2014-2020	X	X	X
Umeå	Sweden	2014-2020	X	X	
Kolding	Denmark	2015	X		
Piteå	Sweden	2015-2022	X	X	X
Odense	Denmark	2015-2022	X		X
Kiruna	Sweden	2015-2019	X	X	X
Lidalen	Norway	2015-2021	X		X
Klodeborg	Norway	2016	X		
Mobil 4	Norway	2016-2018	X		X
Hjallerup	Denmark	2016-2018	X		X
Astec DB	Sweden	2016-2019		X	X
Bondkåll	Norway	2016-2019	X		X
Lund	Sweden	2016-2019	X	X	
Kalmar	Sweden	2016-2022	X	X	X
Mora	Sweden	2016-2020	X	X	X
Östersund	Sweden	2016-2021	X	X	X
Lia	Norway	2016-2022	X	X	X
Stockholm, south	Sweden	2017-2020	X	X	X
Klippan	Sweden	2018-2019	X	X	X
Örebro	Sweden	2018-2019	X	X	
Sundsvåll	Sweden	2018-2019	X	X	
Skellefteå	Sweden	2018-2022	X	X	X
Mobil 5	Norway	2019-2023		X	X
Steinskogen	Norway	2019-2021		X	X
Astec Six-pack	Sweden	2019-2022		X	X
Ejby	Denmark	2021	X		X
Astec XHR	Sweden	2021		X	X
Mobil 1	Norway	2023		X	
Ålesund	Norway	2023	X	X	

Quarries

Between 2019 and 2023, six sites were electrified to enable electrically powered mobile crushing. Investments were also made in 6 mobile crushers and 9 mobile screens, which can be used in any electrified site.

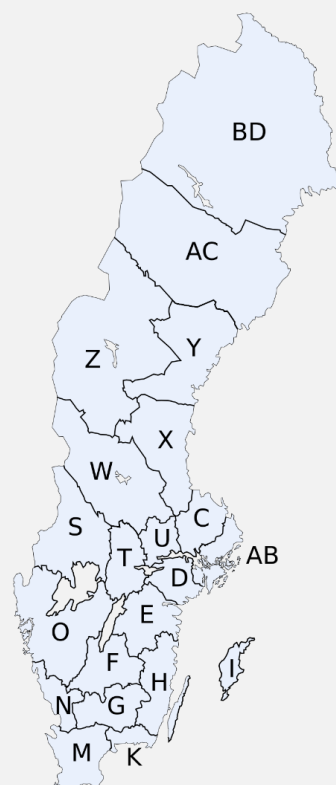
Investments and residual values for electrification of mobile crushing as of December 2023

	Total
Investments	SEK 128.7 M
Residual value	SEK 83.2 M

Geographical location (county) and year when site was electrified or invested in diesel-electric mobile crusher or screen

Location (county)	Year	Category	
		Energy efficiency	Energy conversion
<i>Sites:</i>			
Arlanda (AB)	2019	X	X
Vetlanda (F)	2020	X	X
Rydbo (C)	2021	X	X
Skårlunda (E)	2021	X	X
Gökhem (O)	2022	X	X
Stjärnarp (N)	2022	X	X
<i>Crushers and screens:</i>			
Screen JS1818/3W (AB, C)	2021	X	X
Screen JS1836/3W (AB, C)	2021	X	X
Crusher GP550 (AB, C)	2021	X	X
Screen JS1632/3W (AB, C)	2021	X	X
Screen JS1214/3 (AB, C)	2021	X	X
Crusher L5500 (F)	2021	X	X
Crusher GP550 (O)	2022	X	X
Screen JS1214/3 (O)	2022	X	X
Screen JS1632/3W (O)	2022	X	X
Crusher CH660 (D, T, U)	2022	X	X
Screen JF1632/3 (D, T, U)	2022	X	X
Screen JF1214/3 (D, T, U)	2022	X	X
Crusher C120 (AB, C)	2022	X	X
Crusher L5500 (O)	2023	X	X
Screen JF1632/3 (D, T, U)	2023	X	X
Screen JS1632/3W (AB, C)	2023	X	X

Map of Sweden's counties with county letters



Investments in facilities for production of NCC Machine Sand have been made in NCC's quarries since 2018. The total investments, residual values and total investments by site (incl. geographical location), year and investment category are shown below.

Investments and residual values for facilities for production of NCC Machine Sand as of December 2023

	Total
Investments	SEK 63.8 M
Residual value	SEK 32.0 M

Geographical location and year when site invested in facility for production of NCC Machine Sand

Location (country)	Year	Category
		Maintaining biodiversity and delivering ecosystem services

Sites:

Arna, Bergen (Norway)	2018, 2022	x
Hedrum, Larvik (Norway)	2019-2020	x
Skien (Norway)	2018, 2020	x

Environmental impact quarries

Emissions of greenhouse gases from aggregate production largely depend on the energy type consumed during production. As can be seen in diagram E, converting from 100 percent fossil diesel to green electricity results in a substantial reduction in fossil CO₂e emissions (the average cradle-to-gate emissions from mobile crushed material using 100 percent fossil diesel is 3-4 kg fossil CO₂e/ton aggregates).

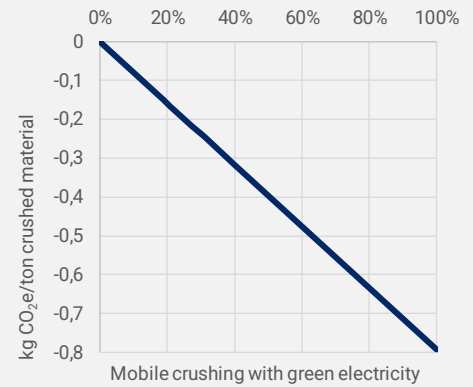
The table below presents the effect of the investments made on electrification during 2019-2023. It shows the CO₂ reduction and the reduction in energy consumption obtained from using electricity with guarantees of origin instead of 100 percent fossil diesel.

Total reduction in CO₂e emissions and energy consumption in mobile crushing due to electrification between 2019 and 2023

CO ₂ emissions reduction (ton CO ₂ e)	Energy consumption reduction (MWh)
9,467	22,113

The total CO₂e emissions were reduced by 31 percent for the production from 2019 until 2023, which is equivalent to 9,467 tons CO₂e. The total energy consumption was reduced by 11 percent from 2019 to 2023, which is equivalent to 22,113 MWh.

E - Average effect of green electricity share in mobile crushing on cradle-to-gate kg CO₂e emissions per ton aggregates





Auditor's Limited Assurance Report of Investor Report Green Bonds

To NCC AB (publ), Corporate identification number 556034-5174

Introduction and Scope

We have been engaged by the Executive Team of NCC AB ("NCC") to undertake limited assurance of NCC's Investor Report Green Bonds ("the Report") for 2023. The scope of our work is limited to assurance of pages 9-10 in the Report.

Responsibilities of the Executive Team

The Executive Team is responsible for the preparation of the Report in accordance with applicable criteria. The criteria is described in *NCC Green Finance Framework* ("the Framework") dated June 2022 (page 13-14, section 4) that is available on NCC's website, that is applicable to the Report, as well as the accounting and calculation principles that the company has developed. This responsibility includes the internal control which is deemed necessary to establish an impact report that is free from material misstatements, whether due to fraud or error.

Responsibilities of the Auditor

Our responsibility is to express a conclusion on the selected information specified above based on the limited assurance procedures we have performed. Our assignment is limited to the historical information that is presented and thus does not include future-oriented information.

We conducted limited assurance procedures in accordance with ISAE 3000 (revised) *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the selected information in the Report, and applying analytical and other limited assurance procedures. A limited assurance engagement has a different focus and a considerably smaller scope compared to the focus and scope of an audit in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden.

The audit firm applies ISQM 1 (International Standard on Quality Management) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent in relation to NCC according to generally accepted auditing standards in Sweden and have fulfilled our professional ethics responsibility according to these requirements.

The procedures performed in a limited assurance engagement do not allow us to obtain such assurance that we would become aware of all significant matters that could have been identified if an audit was performed. The conclusion based on a limited assurance engagement, therefore, does not provide the same level of assurance as a conclusion based on an audit has.

Our procedures are based on the criteria defined by the Executive Team as described above. We consider these criteria suitable for the preparation of the Report.

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

Conclusion

Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the selected information disclosed in the Report is not prepared, in all material respects, in accordance with the reporting criteria.

Stockholm, the date of our electronic signature

PricewaterhouseCoopers AB

Ann-Christine Hägglund

Authorized Public Accountant

Partner in charge

Appendix - Calculation approach

NCC follows the Greenhouse Gas Protocol. The Scope 1 emission factors used for fuels are supplied by DEFRA and are, when relevant, country specific (cf. Swedish environmental protection agency). For project-specific emissions from property development projects NCC uses the local supplier's emission factor (district heating and cooling) and the Nordic residual mix for electricity. Regarding emissions from electricity used at asphalt plants and mobile stone crushers (Scope 2), NCC adopts the market-based approach using the country-specific residual mix emission factor for electricity without certificates of Guarantee of Origin, and an emission factor of zero for electricity with certificates of Guarantee of Origin.

Both reduced and avoided CO₂e is generated from the investments. Avoided CO₂e occurs when the energy usage in our products is lowered, and reduced CO₂e when the energy is switched to renewable origin.

Scope 1 and 2 emissions generated from asphalt plants are calculated based on production volume, type and amounts of fuels invoiced. The reduction in Global Warming Potential (GWP) for asphalt production from the use of reclaimed asphalt pavement (RAP) is established based on nominal resource use (aggregates, bitumen, and RAP) and corresponding emission factors from the Life Cycle Assessment (LCA) software GaBi Professional, to produce a standard asphalt type. Calculations are made according to the requirements specified in EN 15804 and Product Category Rules 2019:14, version 1.2.4 of September 7, 2022.

Scope 1 and 2 emissions generated from mobile stone crushers are calculated based on production quantities and on measured energy consumption per produced ton at sites in the Stockholm area.

Definitions

CO₂e	Carbon dioxide equivalents
GWP	Global-warming potential
LFO	Light fuel oil
LCA	Life Cycle Assessment
RAP	Reclaimed asphalt pavement
TOP	Tall-oil pitch



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