

# GREEN BOND REPORT

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STENA METALL GROUP, DECEMBER 2020



# INTRODUCTION

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The Stena Metall Group issued its first green bond on May 23, 2018. The amount was SEK 800 million, with a term of five years. The net proceeds have been exclusively used for sustainable investment at the Stena Nordic Recycling Center, one of Europe's most advanced and efficient recycling facilities. This is the third yearly report. It presents the allocation of green net proceeds and adherence to the Green Terms.

Stena Metall's green bond framework states that the sole use of proceeds is to finance and refinance expenditure and future investments at the Stena Nordic Recycling Center.

At the Stena Nordic Recycling Center we take care of the materials which are the most difficult to recycle and we do it in more efficient ways than ever before. Resources that were previously lost can now be used to manufacture new products, or to provide energy for the industry. Thanks to the large quantities of raw material that we return into circulation, this facility makes a vital contribution to the circular economy and a more sustainable society. Recycling also helps to reduce large amounts of carbon dioxide emissions.

Complex products from both households and industries are fed into the plant at a steady pace. These products include everything from computers, phones and tv:s to cars and trucks. The common factor is that they all contain a wide range of materials, representing a major challenge for recyclers.

The materials are treated in a series of technologically advanced processes. These processes are conducted at high speed with the greatest possible accuracy. What comes out of our mills, magnets, sieves and sensors is a wide range of raw materials that are delivered back to industry, both in Sweden and the rest of the world. Stena Nordic Recycling Center makes the chain complete. This innovative plant takes recycling all the way from end-of-life products to high quality recycled raw materials.

This makes the Stena Nordic Recycling Center a game changer in recycling. And at the same time it plays an important role in the circular economy.

Stena Nordic Recycling Center has also established itself as a meeting spot for collaboration projects of different kinds. We call it Stena Recycling Lab. During the financial year, the most significant project was to create a vacuum cleaner together with Electrolux, made from 100% recycled material. Read more about this on page 4.

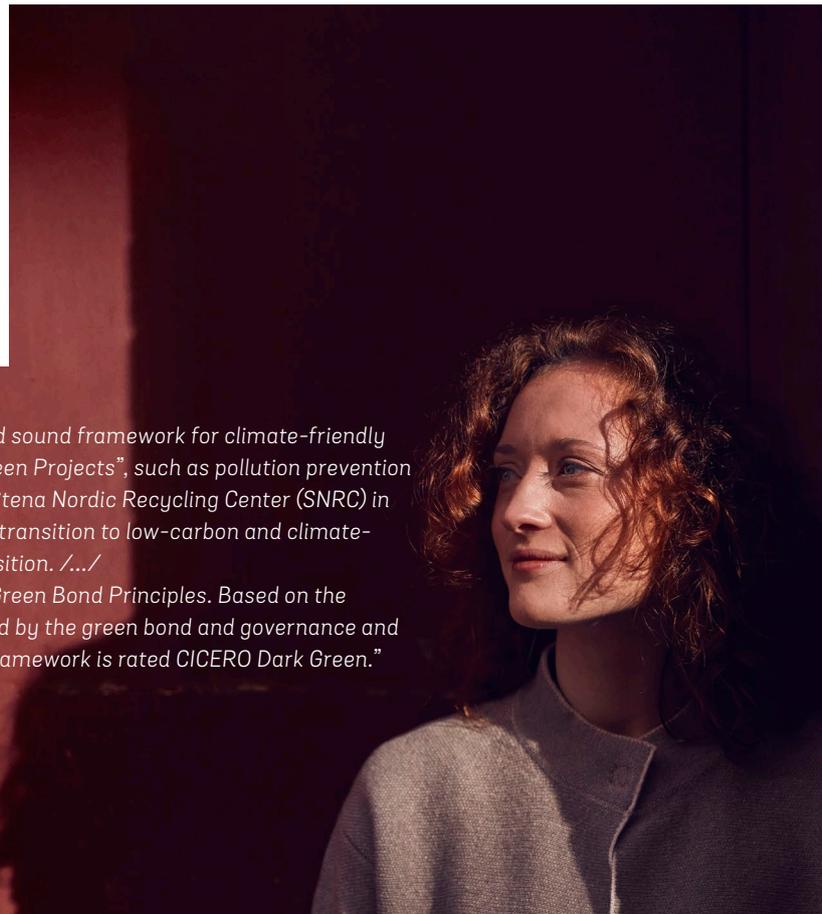
## DARK GREEN RATING BY CICERO

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A second opinion on the Green Bond Framework were provided by Cicero when the bond was issued. The full report is publicly available at the Group's website. Below is an extract of the summary.

*"Stena Metall's Green Bond Framework provides a clear and sound framework for climate-friendly investments. The framework lists eligible categories of "Green Projects", such as pollution prevention and control connected to waste recycling activities at the Stena Nordic Recycling Center (SNRC) in Halmstad, Sweden. /.../ These activities clearly promote a transition to low-carbon and climate-resilient growth and are an essential part of the green transition. /.../*

*CICERO found that the framework was aligned with the Green Bond Principles. Based on the overall assessment of the project types that will be financed by the green bond and governance and transparency considerations, Stena Metall's Green Bond Framework is rated CICERO Dark Green."*



# PROCESSES MEETING THE NEW RECYCLING CHALLENGES

The multitude of different recycling processes, gathered in one location, is what makes Stena Nordic Recycling Center unique. This also increases efficiency and reduces the need for transportation.

**1. NON-FERROUS METAL PROCESSING**  
Stainless steel, copper, aluminium and other non-magnetic metals are separated from each other. This mixture comes from vehicles and other complex products - including those from municipal recycling centres. Before processing, the materials are ground into smaller pieces in a powerful shredder.

**2. SHREDDER LIGHT FRACTION PROCESSING**  
Shredder Light Fraction is a tangled, difficult to sort residue produced when vehicles and other complex products are ground in shredders. It consists of textiles, foam rubber, wood and small fragments of plastic and metal which, in the past, was mostly sent to landfill sites. Thanks to our technology, a large proportion of the metal content can now be recycled. Much of the other material can be used as high-quality fuel for energy-intensive industries, or in the production of district heating and electricity.

**3. FIRST TREATMENT**  
All the electronic products sent to the Stena Nordic Recycling Center are handled by specially trained personnel. They remove all hazardous waste, such as batteries and components containing mercury and PCB, so that no environmentally harmful substances enter the recycling process. This is carried out manually, as there are currently no automated processes that can assure high-quality results.

**4. PRECIOUS METAL RECYCLING**  
After first treatment, decontaminated electronic products are processed in an advanced, automated system. Copper and aluminium fractions are extracted, along with circuit boards containing gold and silver. Even plastics are extracted into a recyclable fraction. Plastic containing harmful flame retardants are removed and can be used as fuel.

**5. REUSE**  
Some electronic products contain screens and other components that still function. At the Reuse Department, these are extracted and tested before being delivered to electronics manufacturers, where they can live on in new products. From a circular perspective, reuse is a better option than material recycling, whenever it is possible.

**6. PLASTIC RECYCLING**  
New raw materials are produced by recycling plastic from electronic products and packaging film. The recycled plastic raw material is equivalent to the raw material produced by oil. The major advantage is that fossil resources are saved, when existing plastics can be used again.

**7. CABLE RECYCLING**  
Used cables contain a lot of precious materials, copper being the most valuable. Recycling cables in an efficient way, with high quality output requires skilled staff and advanced automated sorting machines. The state-of-the-art cable recycling process at Stena Nordic Recycling Center has a capacity of 15,000 tonnes per year.

**8. BATTERY CENTER**  
The latest establishment at Stena Nordic Recycling Center is the Battery Center. The purpose of the Battery Center is to develop methods and processes for the handling and recycling of different types of batteries. So far the volumes of end of life vehicle batteries are small. But the volumes will grow bigger in the near future, and Stena Recycling will be ready to take care of those batteries.



# STENA RECYCLING LAB

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Besides state of the art recycling technology, the Stena Nordic Recycling Center also houses the Stena Recycling Lab. The lab serves as a collaboration arena for entrepreneurs, researchers, students, and companies and acts as a catalyst for innovation and the development of sustainable materials and products.

Stena Recycling Lab is located right at the heart of Stena Nordic Recycling Center. The meeting and collaboration areas are designed and built with sustainability in focus. Re-used furniture, building materials made from recycled materials are mixed with old sustainable building techniques, like the wood block flooring in the canteen.

## MATERIAL LIBRARY

The material library at Stena Recycling Lab consists of a variety of different types of recycled materials, materials that need new technologies to be recycled, and products made from recycled materials. The materials consist of everything from different plastics to mixtures of metals and mineral materials. The purpose is to inspire and simplify the development of new materials, products and processes.

## MACHINERY AND EQUIPMENT

Stena Recycling Lab also offer access to machines for test driving, a mill for crushing materials and space for storing materials.

## EXPERTS TO COOPERATE WITH

Stena Recycling Lab offers access to experts from different parts of Stena Recycling. This includes both experts on various materials and personnel with detailed knowledge of the processes currently used in recycling.



## A PROTOTYPE FOR CHANGE

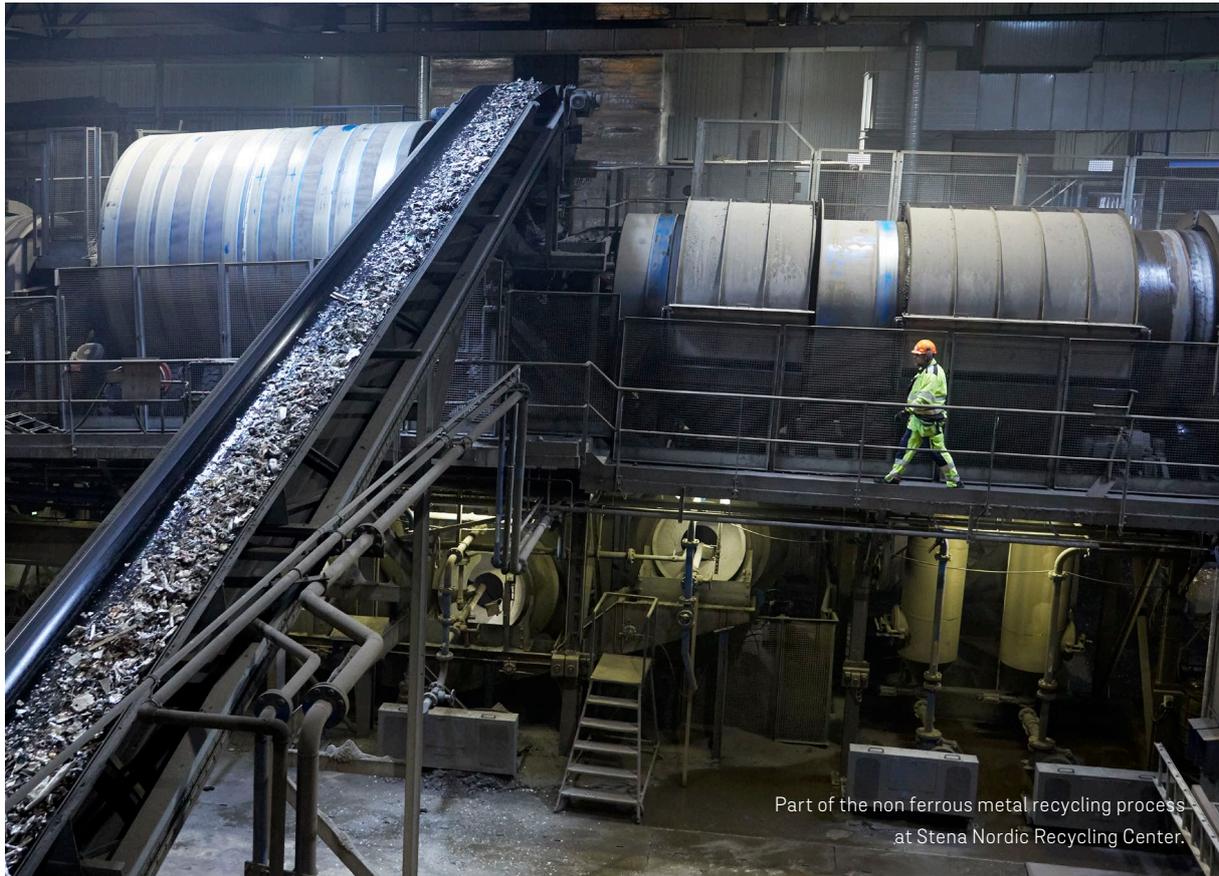
During the year, there has been an intense collaboration going on between Stena Recycling and Electrolux. The goal was to create a vacuum cleaner made of 100% recycled plastic and reused parts. Both the plastic and the components were taken right out of the recycling processes at Stena Nordic Recycling Center. The collaboration was successful in all aspects. During the autumn, the partners proudly presented a series of fully functioning prototypes. The result gained a lot of attention from media around the world.

Jens Leffler, Sustainability Lead Wellbeing, Electrolux, and Pär Håkansson, Business Area Manager Electronics, Stena Recycling in a workshop at Stena Nordic Recycling Center.



# FUTURE OUTLOOK

To maintain its position as the leading industrial recycling company, and to meet the changing demands of the manufacturing industry, Stena Recycling is taking new steps to develop and test new technique and processes. Together with Combitech and ABB, Stena Recycling is currently running a comprehensive project to optimize complex scrap recycling.



Part of the non ferrous metal recycling process at Stena Nordic Recycling Center.

## SETTING A NEW STANDARD FOR INDUSTRIALIZED RECYCLING

The collaboration between ABB, Combitech and Stena Recycling focuses on getting more material to circulate from one of society's most challenging waste streams, the complex scrap. The goal of the project is resource optimization and increased recycling rates. A successful project would mean increased production of approximately 3,500 tonnes of recycled aluminum per year and annual carbon dioxide savings of just over 45,000 tonnes. With the help of newly developed measurement methods, we will be able to determine the quality of the recycled product and give buyers a more accurate table of contents of the recycled material. The complex scrap consists of material from municipal recycling centers, industrial waste, and scrapped cars. Producing good quality recycled raw materials from this stream requires advanced processes for fragmentation and sorting. Given the large variations, traditional automation,

robotisation and digitization can not simply be used here. The way forward is to investigate and test how digital solutions from the process industry and the manufacturing industry can be combined with the latest technology into new solutions. The ambition is to create a new standard for industrialized recycling. This project is part-financed by Vinnova.

### R&D PROJECTS

During the financial year, there have been eight different projects with external funding connected to the work and the processes at Stena Nordic Recycling Center. Recycling of Neodym, increased traceability of electronic products, and testing sensors to improve recycling rates, are just a few of the subjects in the projects. All of them are aiming to improve future recycling in one or another way.

# USE OF PROCEEDS

The net proceeds from the issue of the Green Bond are used exclusively to finance and refinance investment in Stena Nordic Recycling Center.

From September 2013 until August 31, 2020, the Group has invested SEK 944 million in the Stena Nordic Recycling Center. These investments are built on collaborations with customers and partners, not least vehicle manufacturers and suppliers of electrical and electronic goods.

Since start, large investments (SEK 309 million) have been made in adaptations to make the site suitable for industrial recycling and meet environmental and workplace safety requirements.

The single largest investment (SEK 278 million) has been in non-ferrous metal (NF) processing - sorting metals from other material and from each other. The latest steps added are x-ray and laser sorting machines. These machines use advanced technology to separate mixed metals into clean metal fractions that can be sold directly to metal smelters.

One fifth of the investment (SEK 169 million) was used to create Europe's largest precious metals recycling (PMR) facility, where precious metals are extracted from electronic products. Before being fed into the process, hazardous substances are removed at a pre-treatment unit. The pre-treatment unit was moved from another facility and, therefore, incurred costs of only SEK 3 million.

An innovative process has been installed to recycle shredder light fraction in an efficient way (investment SEK 94 million). SLF is a difficult to recycle mix of plastic, metal, rubber, textiles and other material, in small fragments, that results when cars and other products are ground up in a hammer mill.

The processes for recycling soft plastic and plastic from electronic products required investments of SEK 11 million and SEK 43 million respectively. These processes produce plastic raw material in the form of pellets, which act as a sustainable substitute for plastic produced from virgin sources.

The process for cable recycling has required an investment of SEK 36 million. This highly efficient process, produces clean metal fractions to be sold to metal smelters around the world.

Improvements related to working environment and the environment for visitors are made continuously. Stena Nordic Recycling Center attracts a lot of visitors, and today there is a structured way of handling all these visits and to guide groups around the plant in a professional way. However, the plant has been closed for visits during half of the financial year, due to the coronavirus.

## INVESTMENTS

PROJECT	AMOUNT (SEK MILLION)
PMR	169
Plastic (from electronic products)	43
First treatment	3
Property	309
NF	278
SLF	94
Plastic (soft plastics)	11
Cable	36
Other	1
<b>TOTAL</b>	<b>944</b>

# IMPACT AND PERFORMANCE METRICS

For its investment in the Stena Nordic Recycling Center, the Stena Metall Group has developed relevant impact and performance metrics, in accordance with the main Green Bonds Principles category Pollution Prevention and Control and the secondary categories (i) Waste Management and Waste Recycling, (ii) Environmental Monitoring and Reduction of Negative Environmental Externalities, (iii) Eco-efficient, Circular and Value Added Products from Waste and Remanufacturing as well as (iv) Energy and Resource Efficiency.

Presented in the tables below are the key figures for the financial year 2019/20.

## KEY FIGURES

1	Processed waste	238,847 tonnes	
2	Fractions and volumes of sorted waste		
	Fe (incl stainless steel)	43,058 tonnes	
	Al	51,768 tonnes	
	Cu	14,321 tonnes	
	Other metals	3,585 tonnes	
	Plastic	8,521 tonnes	
	Glass	0 tonnes	
	Other reuse and recycling	115 tonnes	
	Total material recovery	121,367 tonnes	
3	Processed numbers of cars per year	183,215	
4	Percentage of recyclable materials from cars	96.8 %	
5	Prevented CO <sub>2</sub> e emissions due to recycled material	859,865 tonnes	
6	Water consumption, per tonne of material processed	0,089 cbm	
7	Energy consumption and GHG emissions		
	<b>ENERGY TYPE</b>	<b>CONSUMPTION</b>	<b>EMISSIONS</b>
	District Heating	6,988,600 kWh	776 tonnes CO <sub>2</sub> e
	Electricity	20,402,884 kWh	184 tonnes CO <sub>2</sub> e
	Diesel, machinery	283,487 liters	823 tonnes CO <sub>2</sub> e
	<b>Total</b>	<b>-</b>	<b>1,782 tonnes CO<sub>2</sub>e</b>

## DEFINITIONS

- Total amount of waste processed at SNRC. Calculated as the sum of all outbound fractions from the processes at SNRC.
- Material recovery from waste processed at SNRC. Calculated from outbound fractions and contents of processed materials.
- Number of recycled end-of life vehicles (ELV) from which waste is processed at SNRC. Calculated as the sum of processed ELVs at the shredders that delivers material to SNRC for further upgrading.
- Recycling rate of ELV material processed at Stena Recycling shredders and SNRC, including energy recovery for residual fractions. The recycling rate for car bodies delivered to Stena Recycling is based on batch tests at Stena shredders and SNRC. Data regarding disassembly before delivery to Stena comes from Bil Sweden reporting.
- Prevented CO<sub>2</sub>e emissions when recycled material is used instead of virgin material. Calculated based on the amounts of materials recovered at SNRC and established factors for CO<sub>2</sub>e prevention for different materials.
- Water consumption at SNRC per tonne of processed material. Calculated with input from KPI 2 and input from reading of flowmeters (water) also confirmation from supplier invoice.
- Total energy consumption and GHG emissions from SNRC.

# HOW THE PLANT CONTRIBUTES TO THE SDG'S

With the aid of advanced technology and efficient processing, the Stena Nordic Recycling Center aims at continuously increasing the recycling rates. Producing raw materials from recycled material helps to conserve the earth's resources and avoid carbon dioxide emissions. These are the main drivers behind the plant's contribution to the Sustainable Development Goals.

## The investment in the Stena Nordic Recycling Center targets the following SDG's



Through collection of waste and responsible waste treatment the risk of hazardous substances leaking into the nature and fresh water system is reduced.



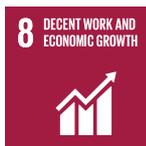
By processing waste and refine it either for recycling or reuse the work at SNRC contributes to a circular economy and hereby a sustainable consumption and production.



SNRC is powered by renewable electricity. Through recycling processes new recycled raw material is produced that can substitute virgin materials and decrease the energy need in raw material production.



SNRC is our arena for several cross industry collaborations and meeting place to share knowledge and insights about recycling and circular possibilities.



SNRC is an important employer in the region of Halmstad and has continued to expand and recruit more people. It is also the hub for recycling process technology development in Stena Recycling and contributes to a proper care of the waste produced by society.

### Further reading:

[https://www.stenametall.com/siteassets/investor-relations/arsredovisning/stenametall\\_annual-review\\_and\\_sustainability\\_report\\_2019-20\\_eng.pdf](https://www.stenametall.com/siteassets/investor-relations/arsredovisning/stenametall_annual-review_and_sustainability_report_2019-20_eng.pdf)

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## Independent Auditor's Limited Assurance Report on Stena Metall's Green Bond Report

To Stena Metall AB, Corporate identification number 556138-8371

We have been engaged by the Board of Directors of Stena Metall AB ("Stena Metall Group") to perform a limited assurance engagement of Stena Metall's *Green Bond Report* for 19/20 ("the Report").

### Responsibilities of the Board of Directors and Group Management

The Board of Directors and Group Management are responsible for preparing the Report in accordance with applicable criteria. The criteria are described in *Stena Metall Group Green Bond Framework* ("the Framework") dated April 2018 (page 7-9) that is available on Stena Metall's website ([www.stenamettall.com](http://www.stenamettall.com)), that are applicable to the Report, as well as the accounting and calculation principles that the company has developed. This responsibility also includes the internal control which is deemed necessary to establish a sustainability report that does not contain material misstatement, whether due to fraud or error.

### Responsibilities of the auditor

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

We conducted our limited assurance engagement in accordance with ISAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* issued by IAASB. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the management of bond proceeds and for the preparation of the Report, and applying analytical and other limited assurance procedures, including inspection of documentation, and limited sample testing of selected information.

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with IAASB's Standards on Auditing and other generally accepted auditing standards in Sweden. The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance conclusion.

Our firm applies ISQC 1 (*International Standard on Quality Control*) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent towards Stena Metall in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

Our procedures are based on the criteria defined by the Board of Directors and the Group Management 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 and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Report is not prepared, in all material respects, in accordance with the reporting criteria.

Gothenburg, December 2, 2020

PricewaterhouseCoopers AB

Johan Rippe  
Authorised Public Accountant

Åsa Ekberg  
Sustainability Expert Member of FAR