

Holmen XLNT **Carbon Footprint &** **Environmental Declaration 2025**

HOLMEN

Carbon Footprint

Company	Holmen Board and Paper	
Site	Braviken Paper Mill	Hallsta Paper Mill
Product	Holmen XLNT	Holmen XLNT
Period	2024-01-01 – 2024-12-31	



Carbon Footprint Framework

The Carbon Footprint is calculated according to the guidelines given in the CEPI (Confederation of European Paper Industry) publication “Framework for the development of carbon footprints for paper and board products”. The framework is aligned with the GHG Protocol standard and is available at www.cepi.org. The carbon footprint is updated annually and based on figures from the previous year.

Greenhouse Gas Emissions	Braviken paper mill	Hallsta paper mill
	CO ₂ e (kg/tonne product)	CO ₂ e (kg/tonne product)
GHG emissions from pulp and paper production	37	4
GHG emissions associated with producing virgin or recovered fibre	15	15
GHG emissions associated with producing other raw materials	39	27
GHG emissions associated with purchased or sold electricity and steam	12	12
Transport-related GHG emissions	14	15
Carbon Footprint SUM	117	73

Biogenic Carbon uptake and storage

Annual carbon storage in Holmen forest	2.13 million tonnes	
Carbon stored in the product	Braviken paper mill	Hallsta paper mill
	CO ₂ e (kg/tonne product)	CO ₂ e (kg/tonne product)
	1555	1601

Explanations and comments to Carbon Footprint calculations

Greenhouse gas emissions from pulp and paper production

Fossil CO₂e emissions from combustion of fossil fuels during pulp and paper production. This figure also includes emissions of methane and nitrous oxide as a result of updated calculation methodology. For Fossil CO₂e emissions only, see the Emissions to Air table on page 4-5.

Greenhouse gas emissions associated with purchased electricity

Fossil CO₂e emissions associated with purchased electricity.

Greenhouse gas emissions from producing the wood fibres

Emissions from forest management and harvesting.

Greenhouse gas emissions from producing other raw materials

Fossil CO₂e emissions from production of non-wood based raw material and fuels.

Greenhouse gas emissions – general

Emissions outside of own operations consist of a mix of primary data and industry average data and are therefore subject to a degree of uncertainty. We strive to work closely together with our suppliers to secure robust and accurate data. As such, emissions from the value chain will change over time as primary data replaces industry average data.

Explanations and comments to Biogenic Carbon uptake and storage

Annual carbon storage in Holmen forest

Growing forests capture carbon. The quoted figure represents the net CO₂e capture in Holmen’s own forests the past year. For more information see Holmen’s Sustainability Report as part of the Annual Report.

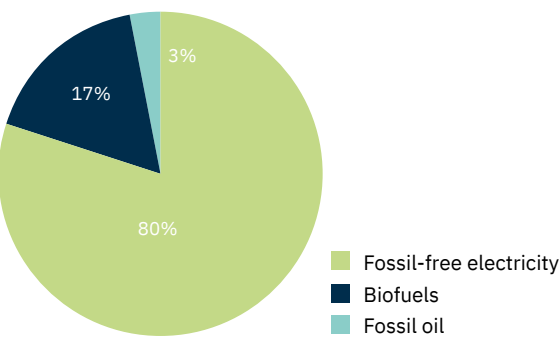
Carbon stored in the products

Biogenic carbon stored in the products.

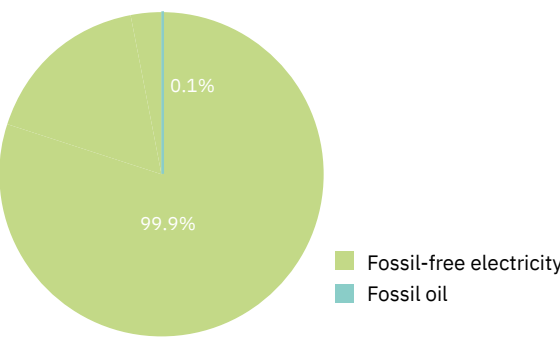


Energy

Sources for energy used in paper production at Braviken Paper Mill.



Sources for energy used in paper production at Hallsta Paper Mill.



GHG Protocol Reporting

GHG Protocol reporting - site emissions

	Braviken paper mill CO ₂ e '000 tonne	Hallsta paper mill CO ₂ e '000 tonne
Scope 1: Direct GHG emissions	15	1
Scope 2: Indirect GHG emissions from electricity	5	6
Scope 3: Other indirect GHG emissions from upstream value chain	38	37
Greenhouse Gas emissions	58	44

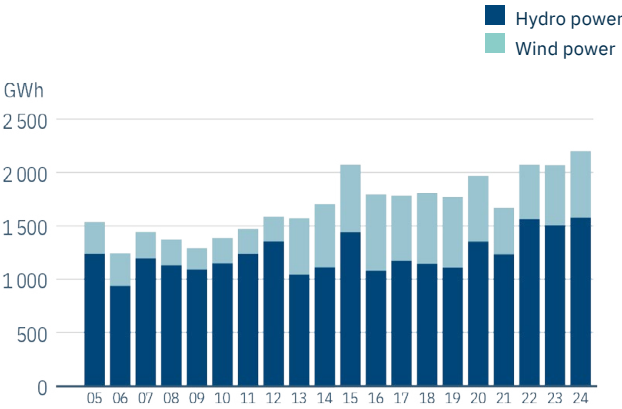
Sustainability information is reported in accordance with the Global Reporting Directive’s GRI Standards in Holmen’s annual report. Braviken and Hallsta Paper Mill emissions are a part of the Holmen sustainability information that is audited by PwC.

Scope 3 emissions consist of a mix of primary data and industry average data, and are therefore subject to a greater degree of uncertainty. We strive to use as much primary data in our calculations as possible and continuously work with our suppliers to secure robust and accurate data. As such, Scope 3 emissions will change over time as primary data replaces industry average data.

Explanations and comments to Energy reporting

The electricity that we buy for our mills is fossil-free and purchased with a guarantee of origin. In our steam converters, thermal energy is recycled to be reused in several steps. 34 % of the heat from Braviken Paper Mill is transferred and used at the co-located Braviken Sawmill. Bark and residue from the Hallsta Paper Mill is sold for producing energy and heat in the Stockholm area.

Holmen Group deliveries of hydro and wind power, GWh



Holmens deliveries of energy from own hydro power and wind power contributes to a great extent with renewable electricity to the Swedish Grid.

Explanations and comments to GHG Protocol reporting

Scope 1: Calculated in accordance with the GHG Protocol Corporate Standard and includes the six greenhouse gases covered by the Kyoto Protocol. Our Scope 1 emissions are reported in to Swedish authorities.

Scope 2: Calculated in line with market-based methodology, with EPDs (Environmental Product Declaration) from Electricity supplier, Vattenfall, Sweden.

Scope 3: Calculated using primary data when available and industry averages when needed from data bases like Sphera/GaBi and EcoInvent.

Environmental Declaration

Company	Holmen XLNT
Site	Braviken Paper Mill, Holmen
Period	2024-01-01 – 2024-12-31



Certified management systems

Environmental management system	SS-EN ISO 14001
Energy management system	SS-EN ISO 50001
Occupational health and safety management system	SS-EN ISO 45001
Quality management system	SS-EN ISO 9001

Emissions to water

COD	5.2 kg/t
AOX	0.003 kg/t
Nitrogen	0.14 kg/t
Phosphorus	0.0063 kg/t
Water use	22 m³/t

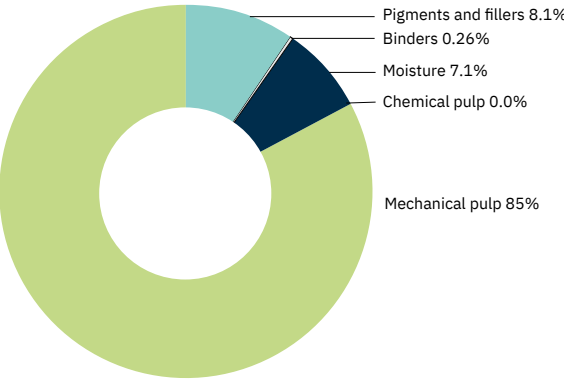
Emissions to air

SO ₂ (total)	0.055 kg/t
NO _x	0.14 kg/t
CO ₂ e (from fossil sources)	29 kg/t

Waste to landfill

0.57 kg/t
Purchased electricity
3256 kWh/t

Product composition



Environmental parameters

The figures are based on methods and procedures of measurement approved by the local (or national) environmental regulators at the production site. The figures include pulp and paper production.

Content reported in accordance with Paper Profile

Emissions to water

Braviken Paper Mill is situated on the shores of the Baltic Sea, which is classified as a highly sensitive marine ecosystem. The mill complies with the emission levels set for it by the Swedish environmental authorities by continually measuring discharged water at several test points. Holmen constantly monitors the conditions of the marine eco-systems around the mill to ensure that their balance is not disturbed.

Process water discharge

Braviken Paper Mill is geographically located in an area of abundant water supply and there is no shortage of availability. Process water is recirculated and reused within the production process a number of times before final discharge to the receiving water, process water is treated in three steps which includes mechanical, biological and chemical treatment, a combination of treatment technologies considered as Best Available Technology.

COD

Chemical oxygen demand is a measurement of the amount of oxygen consumed in the decomposition of organic compounds. The presence of organic byproducts such as bark and wood chips gives rise to a COD value. The Swedish environmental authorities set emission levels based on COD deemed acceptable acceptable to the local conditions and the marine environment adjacent to the mill.

AOX

Adsorbable organic halogen is formed in the pulp making process. High levels of AOX negatively affect marine organisms. Here, too, limits are set to be acceptable to local conditions and the marine environmental adjacent to the mill.

Nitrogen and phosphorus

Nitrogen and phosphorus are elements that when present in large amounts contribute to the overfertilisation (eutrophication) of marine environments.

Emissions to air – SO₂ och NO_x, sulphur dioxide and nitrogen oxides

These normally arise from combustion processes used in the production of energy. They contribute to eutrophication, acidification and the creation of groundlevel ozone. All emissions are regulated and monitored by the Swedish licensing authorities.

CO₂e (from fossil sources)

Carbon dioxide is an invisible gas that occurs naturally but its increased emissions from fossil fuel use are contributing to global climate change. This figure indicates the emission of fossil CO₂ from the onsite production. The figure should not be confused with the far broader concept of carbon footprint, which encompasses much of the product's lifecycle.

More information about Paper Profile can be found on www.paperprofile.com

Environmental Declaration

Company	Holmen XLNT
Site	Hallsta Paper Mill, Holmen
Period	2024-01-01 – 2024-12-31



Certified management systems

Environmental management system	SS-EN ISO 14001
Energy management system	SS-EN ISO 50001
Occupational health and safety management system	SS-EN ISO 45001
Quality management system	SS-EN ISO 9001

Emissions to water

COD	5.8 kg/t
AOX	0.0048 kg/t
Nitrogen	0.11 kg/t
Phosphorus	0.0051 kg/t
Water use	11 m³/t

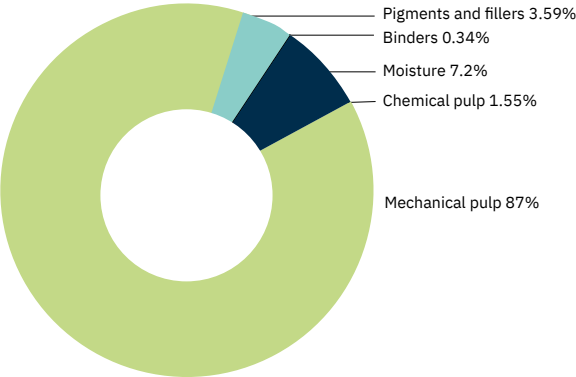
Emissions to air

SO ₂ (total)	0.0071 kg/t
NO _x	0.0186 kg/t
CO ₂ e (from fossil sources)	0.32 kg/t

Waste to landfill

0.35 kg/t
Purchased electricity
3333 kWh/t

Product composition



Environmental parameters

The figures are based on methods and procedures of measurement approved by the local (or national) environmental regulators at the production site. The figures include pulp and paper production.

Content reported in accordance with Paper Profile

Emissions to water

Hallsta Paper Mill is situated on the shores of the Baltic Sea, which is classified as a highly sensitive marine ecosystem. The mill complies with the emission levels set for it by the Swedish environmental authorities by continually measuring discharged water at several test points. Holmen constantly monitors the conditions of the marine eco-systems around the mill to ensure that their balance is not disturbed.

Process water discharge

Hallsta Paper Mill is geographically located in an area of abundant water supply and there is no shortage of availability. Process water is recirculated and reused within the production process a number of times before final discharge to the receiving water, process water is treated in three steps which includes mechanical, biological and chemical treatment, a combination of treatment technologies considered as Best Available Technology.

COD

Chemical oxygen demand is a measurement of the amount of oxygen consumed in the decomposition of organic compounds. The presence of organic byproducts such as bark and wood chips gives rise to a COD value. The Swedish environmental authorities set emission levels based on COD deemed acceptable acceptable to the local conditions and the marine environment adjacent to the mill.

AOX

Adsorbable organic halogen is formed in the pulp making process. High levels of AOX negatively affect marine organisms. Here, too, limits are set to be acceptable to local conditions and the marine environmental adjacent to the mill.

Nitrogen and phosphorus

Nitrogen and phosphorus are elements that when present in large amounts contribute to the overfertilisation (eutrophication) of marine environments.

Emissions to air – SO₂ och NO_x, sulphur dioxide and nitrogen oxides

These normally arise from combustion processes used in the production of energy. They contribute to eutrophication, acidification and the creation of groundlevel ozone. All emissions are regulated and monitored by the Swedish licensing authorities.

CO₂e (from fossil sources)

Carbon dioxide is an invisible gas that occurs naturally but its increased emissions from fossil fuel use are contributing to global climate change. This figure indicates the emission of fossil CO₂ from the onsite production. The figure should not be confused with the far broader concept of carbon footprint, which encompasses much of the product's lifecycle.

More information about Paper Profile can be found on www.paperprofile.com

Wood supply and certifications

Chain of custody certifications	FSC® TUEV-COC-002398 (License: FSC®-C020071)
	PEFC TUEV-PEFC-COC-251179 (License PEFC/05-33-134)
	Holmen Board and Paper AB, Vattengränden 2, 601 88 Norrköping, Sweden, Braviken, Östra Bravikenvägen 20, 601 88 Norrköping, Sweden, Hallsta, Tulkavägen, 763 34 Hallstavik, Sweden.

FSC®, PEFC and EU Ecolabel certified products available at request

According to the standard PEFC ST 2002:2020 and FSC-STD-40-004 version 3.1, the supplier shall have access to the following information:

A. identification of the material/product, including its trade name and type,

B. identification of tree species included in material/product by their common name and/or their scientific name where applicable,

C. country of harvest of the material and where applicable sub-national region and/or concession of harvest.

Wood sourcing compliance

All fibre sourcing, including Due Diligence requirements, complies with the current EU Timber Regulation (Regulation EU No 995 /2010). The EUTR is replaced by EU Deforestation regulation (Regulation EU No 2023/1115) entered into force on June 29 2024 and will enter into application on December 30 2025.

Wood sourcing information, Braviken and Hallsta paper mills 2024

Country of harvest	%	Species	Species – scientific name	Forest region
Sweden	94,8	Spruce	Picea abies	Whole country, Holmen Skog
Estonia	3,3	Aspen	Populus tremula	
Latvia	1,4	Pine	Pinus sylvestris	
Norway	0,3			
Finland	0,2			
Chemical pulp*				
Chemical pulp from spruce, Picea abies, pine, Pinus sylvestris and larch, Larix x marschlinsii from Sweden (89%), Götaland, Latvia (9%), whole country, Estonia (1%), whole country and Poland (1%), whole country, may be used in Holmen’s paper products.				

*) For more information on product content, please see page 4 and 5.

All pulp for the production is produced internally within the Braviken and Hallsta paper mills. All wood procurement for the product is handled by Holmen Group’s business area Holmen Skog (Holmen Forest), holder of the above certificates.

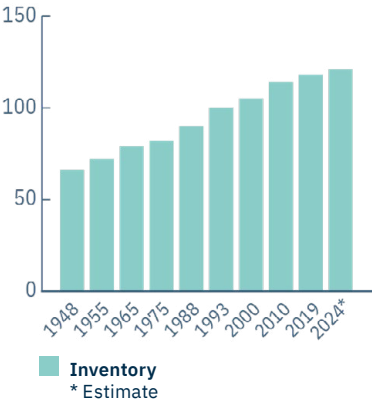
Sustainable forestry

Holmen’s forest management practices must be run with the aim of achieving high-volume and sustainable production of forest raw material. The forests must be managed responsibly in a way that ensures the long-term survival of native plants and animals in the forest landscape and the protection of biodiversity. All wood must be traceable back to its origin.

Holmen’s forests 2025

Total land acreage	13 030 km²
Total forest land acreage*	11 600 km²
of which nature conservation areas	2 110 km²
Productive forest land**	10 450 km²

Volume of standing timber, m³ growing stock, solid over bark per hectare of productive forest land



Contact information:
Jonas Bergström, Sustainability Manager, Sweden
jonas.bergstrom@holmen.com

Certificates and Endorsements



CDP

Holmen has reported to the CDP Climate Program since 2007 and to the CDP Forest Program since 2013. The results show that we have a good strategy and management to mitigate negative impacts of climate change.

In the 2023 assessment, Holmen was rated A in the CDP Climate Program and was one of 30 companies to be rated A in the CDP Forest Program.

EcoVadis

The international analysis company EcoVadis assesses participating companies' performance with respect to the environment, sustainable purchasing, ethics, workers' rights and human rights. The Platinum rating confirms being in the top 1% of all the companies examined. Holmen's paper mills have been awarded the highest possible rating every year an assessment has been made. Next assessment is planned for spring 2026.

MSCI

ESG Ratings from MSCI ESG Research are designed to measure a company's resilience to financially material environmental, societal and governance (ESG) risks. MSCI's ESG Ratings provide a window into one facet of risk to financial performance. Holmen is ranked as a leader in the paper and forest products industry.

SBTi

In 2021, Holmen's Group management set the target of reducing greenhouse gas emissions. Figures are compared with 2019 levels and the emissions targets are in line with the UN's climate goals under the Paris Agreement, as confirmed by the UN-backed organisation the Science Based Targets initiative (SBTi).

The UN's Sustainable Development Goals

We have been building our experience for 400 years and we constantly work to find long-term solutions to current challenges. Thanks to the sustainable use of our forests' ecosystems, today we are able to operate a circular, renewable and biobased business that benefits our customers, shareholders, employees and local communities. Our production, business and organisation contribute to the UN's Sustainable Development Goals and thus also to the 2030 Agenda.

UN Global Compact

As members in UN Global Compact, Holmen annually reports on a "Communication on Progress" (COP) that describes how the work with Global Compact's principles for responsible business practice is progressing.

GRI – Global Reporting Initiative

Holmen has opted to base its sustainability reporting on the reporting option Core in the guidelines for sustainability reporting issued by the Global Reporting Initiative (GRI). Holmen has appointed PwC to conduct a general review of the content in the Group's GRI reporting. The sustainability report is presented in Holmen's Annual report. A complete GRI register and auditors' report can be found on Holmen.com.

Nasdaq ESG Transparency Partner

Holmen has been certified as a Nasdaq ESG Transparency Partner 2023. The certification is used by Nasdaq to signal engagement in market transparency and in raising environmental standards. The Nasdaq ESG Matrix includes data points from Environmental, Social, Corporate Governance as well as Future Sustainability Goals all of which Holmen considers in its operation.





HOLMEN

holmen.com/boardandpaper