



# Troldekt A/S Corporate Social Responsibility

Report on CSR for UN 2015

Troldekt®   
Natural acoustic solutions



# About this report

At Trolldtekt A/S, our CSR reporting is based on the Global Reporting Initiative G4 (GRI G4).

This report relates to the calendar year 2015. In publishing this report, Trolldtekt A/S confirms its continued support for the UN Global Compact initiative. At the same time, the report describes the progress we have made within CSR, while also providing a status on our ongoing objectives and initiatives.

This is the second year that our reporting is based on the methodology in the Global Reporting Initiative (GRI G4). The structure which has been chosen enhances the quality of the content and data collection. Even though the report contains GRI G4 standard information, there are deviations from the standard's guidelines.

## Stakeholders involved

The parameters in GRI G4 which we report on are the result of a thorough materiality analysis which was carried out in collaboration with the consultancy firm Carve Consulting. The GRI G4 content index can be found on pages 42-43.

In 2015, Trolldtekt has conducted a survey in which a number of key stakeholders have been interviewed about the contents of the report.

The stakeholders involved comprise Trolldtekt's employees, representatives from the local community at the company's factory in Troldhede, suppliers, distributors and architects.

In 2016, we will analyse the responses and data with a view to reviewing the structure and the GRI G4 parameters in the report which is submitted to the UN in 2017 (for 2016). Moreover, our ambition is that the report which is submitted in 2018 (for 2017) will be verified by a third party – an ambition which is included in our Cradle to Cradle roadmap of Trolldtekt's sustainable initiatives.

## CSR policy and Code of Conduct

The report covers Trolldtekt's activities, including our work with suppliers who have signed our Code of Conduct.

Trolldtekt's internal CSR policy sets out requirements regarding the company's day-to-day activities in relation to human rights, labour rights, the environment and anti-corruption. The report's five business case articles provide examples of specific activities within the areas mentioned. Read our CSR policy on pages 10-11.

Trolldtekt's cooperation with its suppliers is still very much based on our Code of Conduct, which is available on the Trolldtekt website.

At Trolldtekt, our CSR policy is anchored in the management as a strategic focal point in our Cradle to Cradle-based business strategy for achieving the company's overall objectives.

If you have any questions about the report, please contact Tina Snedker Kristensen, Head of Marketing and Communications at Trolldtekt (tel. +45 8747 8100 / tkr@trolldtekt.dk).

All Trolldtekt's CSR reports can be found at > [www.trolldtekt.com](http://www.trolldtekt.com).



This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines

# Highlights 2015 for Trolldtekt's CSR

## Waste becomes a resource

for the environment through new  
take-back strategy.

Pages 16 – 17

## New high-efficiency drying oven

uses half the energy

Page 18

## Gold for four out of five

of the Cradle to Cradle criteria with re-certification according to version 3.1 with stricter requirements.

Page 12

## 96%

of production is C2C-certified  
at silver level, in natural and  
standard colours

Pages 12 – 13



## 13%

of the workforce are  
members of health and  
safety committees

Pages 20 – 23

## Highly Commended

for the Ethical Corporation's Responsible  
Business Awards 2015 for its strategic work  
with the Cradle to Cradle concept.

## 100%

electricity consumption  
based on renewable energy,  
wind power.

Page 15

## Supplier audit completed

at a screw supplier in Taiwan, focusing on  
labour rights and human rights.

Page 27



Peer Leth, CEO of Trolldtekt, receives the Green Product Award.

# Contents

<b>About Trolldtekt</b>	<b>Page 5</b>	<b>Trolldtekt and society</b>	<b>Page 24</b>
<ul style="list-style-type: none"> <li>- Editorial</li> <li>- Company profile</li> <li>- Trolldtekt, the story</li> <li>- Process description</li> <li>- Product life cycle</li> <li>- Trolldtekt's CSR policy</li> <li>- Cradle to Cradle roadmap</li> </ul>		<ul style="list-style-type: none"> <li>- Dialogue is the way to good neighbourly relations</li> </ul>	
<b>Trolldtekt and the environment</b>	<b>Page 14</b>	<b>Trolldtekt and human rights</b>	<b>Page 26</b>
<ul style="list-style-type: none"> <li>- Cement-bonded wood wool waste becomes a new resource</li> <li>- New drying oven uses half the energy</li> <li>- Cement with clear environmental objectives</li> </ul>		<ul style="list-style-type: none"> <li>- Trip to Taiwan provided an up-to-date overview</li> </ul>	
<b>Trolldtekt and labour conditions</b>	<b>Page 20</b>	<b>GRI G4 indicators</b>	<b>Page 28</b>
<ul style="list-style-type: none"> <li>- Safety has been further heightened</li> </ul>		<ul style="list-style-type: none"> <li>- Environment</li> <li>- Labour conditions</li> <li>- Society</li> <li>- Human rights</li> </ul>	
		<b>Status and new objectives</b>	<b>Page 41</b>
		<b>GRI G4 index</b>	<b>Page 42</b>



# We will intensify the systematics

At Trolldtekt, we are devoting more attention to choosing those areas where our CSR efforts make the biggest difference. In 2015 this resulted in a number of value-creating initiatives.

In-depth activities and documented results are the keywords for Trolldtekt's CSR initiatives. Our CSR work is a dynamic process, where it is not the number of objectives which are important. Rather, it is about continually analysing which objectives carry the most weight – and then working ambitiously to achieve them.

## **New measures in 2015**

This report presents a handful of specific CSR initiatives that we implemented in 2015. From screening suppliers and significant energy optimisations to adjusting the safety procedures in our production. At the back of this report, we have compiled concrete data from the past year. In line with the GRI G4 reporting method, our data has been categorised according to the criteria we find important in our CSR work.

## **International recognition**

In 2014, Trolldtekt achieved prestigious recognition for its strategic work with Cradle to Cradle when the company received the strategy prize at the CSR

Awards. We try our utmost to live up to this honour, and I am therefore proud that in 2015 we achieved recognition for our responsible initiatives at several international awards ceremonies.

Our business strategy received the Highly Commended award at both the Circular Economy Awards and at the Responsible Business Awards. Moreover, our new wave-shaped panel, Trolldtekt wave, won the Green Product Award. We see these international awards as a big mark of approval, and confirmation that we are on the right track.

## **Strengthening documentation**

In order to further support the CSR systematics, we have welcomed a new colleague, Renate Blom. She has experience with environmental focus from LEGO System A/S and Danfoss Compressors GmbH, among others. From day one, Renate has thrown herself into the task of strengthening our documentation, so that from 2017 our CSR report can be verified by a third party – in line with our Cradle to Cradle roadmap.

## **Employees play a key role**

Even though we have now employed a dedicated project manager to work with development, the environment and certification, all Trolldtekt employees continue to play key roles in our work with CSR. Only through their daily commitment, attention and team spirit can we achieve the results we are striving for.

Hand in hand with developing our CSR initiatives, it is a pleasure to see how the employees have adopted social responsibility as a fundamental value at Trolldtekt. I am immensely grateful for this.



Peer Leth  
CEO

# Troldtekt's company profile

Responsibility has always been a fundamental value at Troldtekt and in the company's business strategy.

Since 1935, Troldtekt has produced cement-bonded wood wool products and is today one of Europe's leading suppliers of acoustic solutions. Troldtekt acoustic panels are still manufactured from the same sustainable materials as 80 years ago: Danish Norway spruce and Danish cement.

Responsibility has always been a fundamental value for Troldtekt. At Troldtekt, we believe in looking after the environment.

## The Troldtekt mission

Being a creator and communicator of innovative acoustic solutions

## The Troldtekt vision

Being a trendsetter in intelligent acoustic solutions

## The Troldtekt guiding principle

Sustainable indoor climate

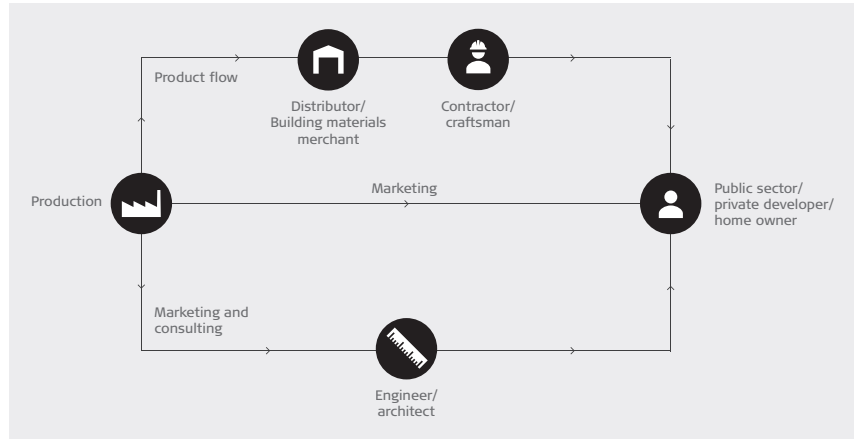
## Activities

Troldtekt's principal activity is the manufacture and sale of acoustic cement-bonded wood wool wall and ceiling panels for all types of buildings from private homes, schools, institutions, offices and industrial buildings to sports halls and swimming pools. The company supplies complete ceiling and wall cladding solutions which integrate good acoustics, lighting, ventilation, speaker systems, decoration, fire protection and a healthy indoor climate.

Troldtekt's production takes place at state-of-the-art facilities in the small town of Troldhede in western Jutland.

Sales, administration, marketing and technical support functions are located at the company's head office in Tranbjerg, a suburb of Aarhus. In 2015, Troldtekt opened an office in Hamburg.

Troldtekt also works with a number of distributors abroad, mainly in northern Europe.



## Troldtekt's role in construction

Troldtekt's direct customers are builders' merchants and DIY stores, while building consultants, architects and private clients comprise the company's indirect customers.

## Employees

Troldtekt has 80 employees. The majority of the workforce is engaged in production in Troldhede, where there are 56 employees. The remaining 24 work at Troldtekt's administration in Tranbjerg. In addition, the company employs people doing work experience, student assistants and young part-time workers.

## Suppliers

Troldtekt's Code of Conduct forms the basis for the company's cooperation with its product-related suppliers. The Code of Conduct is based on the general principles contained in international conventions. All Troldtekt's key suppliers are Danish, and either supply certified wood, cement, paint, packaging or wind energy.

## Community activities

CSR is rooted in Troldtekt's corporate culture, and it was therefore natural for the company to join the UN Global Compact. As part of this commitment,

Troldtekt has integrated the Cradle to Cradle concept in its business strategy, and the company is currently implementing the concept throughout its organisation.

Troldtekt plays an active role on a number of committees, in organisations and associations, among others:

- Green Building Council Denmark
- Sustainovation
- The board of BIPS
- DI's special building policy committee
- Committee work in Danish Standards

## Organisational changes

In 2015, Troldtekt established the subsidiary Troldtekt Deutschland GmbH, based in Hamburg.

Otherwise, no significant changes were made to Troldtekt's organisation between 1 January and 31 December 2015.

## Information

For more information on Troldtekt A/S and its products, CSR activities and technical documentation, please visit [www.troldtekt.com](http://www.troldtekt.com).



# Troldtekt, the story

Louis Hammerich takes over the business and expands the range to include wholesale products and begins to import building materials from abroad.

The business grows, and A/S L. Hammerich & Co. moves into modern new premises in Grønnegade in central Aarhus. Poul Hammerich, Louis's son, takes over management of the company.

Poul Hammerich sets up the 'Grosserer L. Hammerich og Hustru Ellen, f. Lisbergs Legat' foundation to support families and staff. Poul Hammerich dies at a young age, but the foundation is subsequently realised.

The fourth generation of the Hammerich family, Peter Hammerich, joins the company management.

Thorkild Bjerglund Andersen, who has been on the company's board of directors since 1973, purchases A/S L. Hammerich & Co.

Running out of space again, A/S L. Hammerich & Co. moves to the old Østergaard manor in Malling, which Thorkild Bjerglund Andersen has renovated while farming the adjoining land. Huge investments are made in streamlining and modernising production in Troldhede.

A/S L. Hammerich & Co. and A/S Troldhede Pladeindustri merge under the name A/S L. Hammerich & Co., with sales and administration in Malling and production in Troldhede.

Following a business succession, A/S L. Hammerich & Co. moves to more contemporary premises on Sletvej in Tranbjerg outside Aarhus, and the company name is abbreviated to L. Hammerich A/S.

Troldtekt qualifies for Cradle to Cradle certification in the silver category and prepares a roadmap for developing Cradle to Cradle quality at Troldtekt through to 2022.

**1855**

**1884**

**1911**

**1931**

**1935**

**1936**

**1947**

**1977**

**1982**

**1988**

**1993**

**1998**

**2000**

**2003**

**2005**

**2008**

**2010**

**2012**

**2014**

J. C. Seidelin opens the first dedicated store for building materials at Fredens Torv in Aarhus.

L. Hammerich Specialforretning i Bygningsartikler is renamed Aktieselskabet L. Hammerich & Co. The public limited company has registration number 645 and is thus one of the oldest surviving public companies in Denmark.

A/S L. Hammerich & Co. acquires A/S Troldhede Pladeindustri in Troldhede. Fibreboard and the cement-bonded wood wool Troldtekt® panels are manufactured here, and a registered trademark is acquired in 1936.

Svend Hammerich joins the company management and helps re-establish the company's position following the Second World War.

The product range is extensively restructured, with a 100 per cent focus on Troldtekt and a few trade goods. All warehouse facilities are moved to Troldhede, while sales and administration are moved to new offices in Klamsagervej, Åbyhøj. Peter Hammerich leaves the company.

A/S L. Hammerich & Co. moves to the sawmill Aarhus Savværk's former premises on Søren Nymarks Vej in Højbjerg.

The new millennium marks the beginning of a period of strong product development. Troldtekt is no longer just acoustic panels, but acoustic solutions with integrated lighting, sound, ventilation and decoration.

Thorkild Bjerglund Andersen's heirs take over the company and carry on the family-owned enterprise under the management of a professional advisory board.

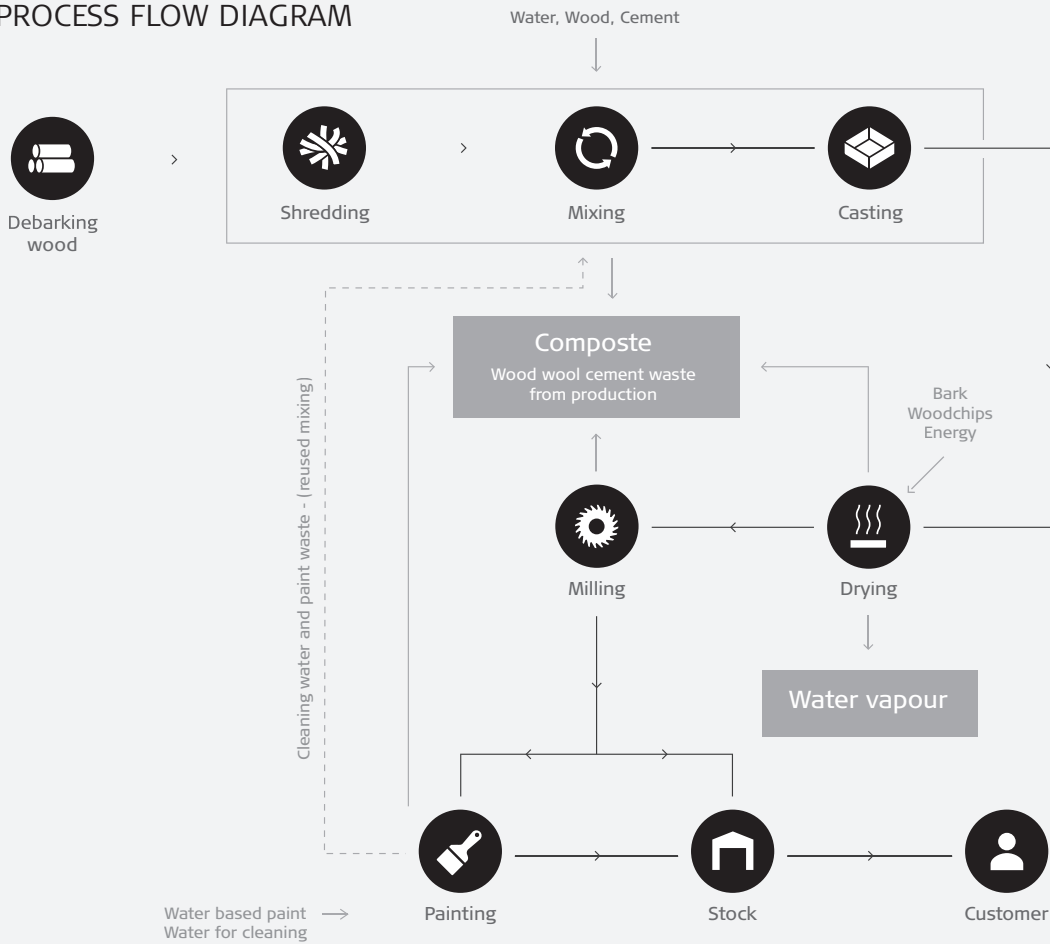
The 75th anniversary of the production of Troldtekt acoustic panels is marked by changing the company name to Troldtekt A/S. Troldtekt receives the Danish Building Industry Environment Award the same year for its focus on the environment and sustainability throughout the product's entire life cycle.

The CSR Foundation awards Troldtekt A/S the CSR Awards' Strategy Prize for its solid and strategic approach to CSR and for having established CSR in all parts of the business, including at executive level and in the business strategy.

# Process description

The raw materials wood, cement and water require considerable processing before they are transformed into finished Trolldtekt acoustic panels.

## PROCESS FLOW DIAGRAM



### Debarking

The raw wood is debarked and dried for min. 6 months.



### Shredding

The wood is shredded into wood wool with one of four different structures.



### Mixing

The wood wool is mixed with cement and water.



### Casting

The wood wool, cement and water mixture is cast in the moulds.



### Drying

The acoustic panels take three to four weeks to set, after which they are dried.



### Milling

The acoustic panels are dimensioned and milled.



### Painting

The acoustic panels are painted, and backing is fitted if necessary.



### Storage

The finished Trolldtekt acoustic panels are stored at our finished goods warehouse.



### Distribution

The Trolldtekt acoustic panels are shipped to our customers.



# Product life cycle

Materials, manufacture, production, transport, use and reutilisation.

Throughout the entire product life cycle – from cradle to cradle – Troldekt focuses on minimising the environmental impact of its products, and on optimising resource consumption and processes so that the products add value. This is the line of thought in the product life cycle which underpins Troldekt's Cradle to Cradle business strategy.

## 1. Materials

Troldekt cement-bonded wood wool is made of 100 per cent natural materials: wood and cement. We use Norway spruce from Denmark, which is PEFC™ or FSC®-certified. Both certification schemes ensure that the wood comes from responsibly managed forests. The production of Troldekt panels uses only cement from Aalborg Portland, which extracts the raw materials from the Danish subsoil with the least possible environmental impact.

Chalk and sand are the key raw materials used to make Portland cement. The chalk is extracted near Hals Barre off the coast near Aalborg, and the sand from the channel near Løgstør, where the sand dredging helps to keep the Limfjorden channels navigable. Aalborg Portland is certified according to the ISO 14001 environmental management system and the European Eco-Management and Audit Scheme (EMAS). Aalborg Portland has twice been nominated for the European Commission's prestigious EMAS Award. Read more on page 19.

## 2. Transportation

Troldekt acoustic panels are made exclusively from local raw materials, and the environmental impact from transportation is therefore minimal.

In Denmark, Troldekt panels are sold through builders' merchants, and as many of these hold stocks of Troldekt panels, it optimises transportation for end-users.

We also have a broad distribution network of local dealers in our export markets.

## 3. Production

We have been manufacturing Troldekt cement-bonded wood wool at our Troldehede factory since 1935. Production takes place at modern facilities in a closed system without any wastewater discharge. Approximately 95 per cent of the energy consumed for heating the drying oven is sourced from CO<sub>2</sub>-neutral wood fuels in the form of bark and wood, including waste products from the production of Troldekt acoustic panels. Troldekt is a DONG Energy climate partner, with all electricity used for the production of Troldekt panels derived from wind power from the Anholt offshore wind farm.

The environmental impact from the production of Troldekt panels is mapped out in our Environmental

Product Declaration (EPD), which has been prepared by the Danish Technological Institute in line with the new EN 15084 European standard.

## 4. Use

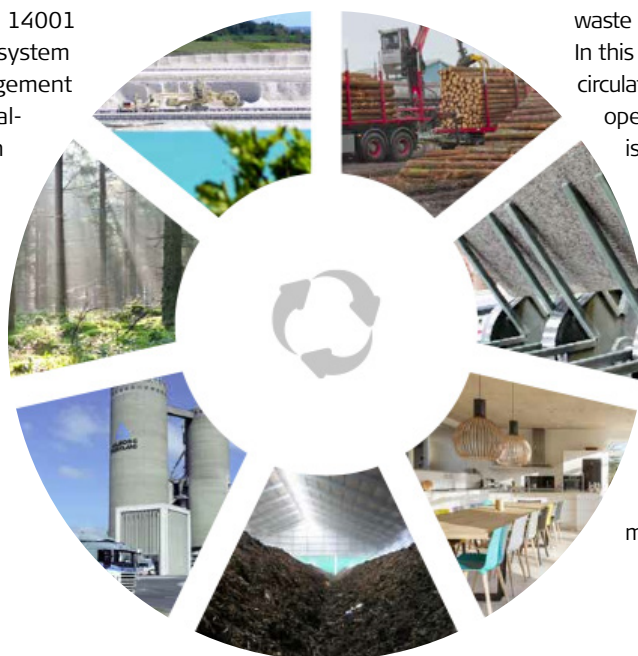
Troldekt panels contain no harmful substances or allergens, and have qualified for the best Danish Indoor Climate Labelling categories. Troldekt acoustic panels are also recognised as being hypoallergenic products by Allergy UK, and labelled in the lowest emissions class (M1) by the Finnish Indoor Air Association and the Building Information Foundation RTS, and likewise as emissionsarm (low-emission) according to the German "Der Blaue Engel" ecolabel.

## 5. Disposal

Troldekt cement-bonded wood wool panels can be composted and returned to nature as a soil conditioner. The cement in Troldekt's acoustic panels boosts oxygen levels during the composting process, while the wood adds organic material to the compost.

Production waste from our factory in Troldehede is delivered to HedeDanmark a/s, which receives, treats and refines waste products to make soil conditioners. In this way, carbon and nutrients are recirculated to agricultural land and forestry operations. The quality of the compost is regularly analysed and checked.

As part of our Cradle to Cradle business strategy at Troldekt A/S, we have established a take-back scheme which is being rolled out in several stages. The take-back scheme will ensure that construction waste and demolition waste are not disposed of, but are instead processed and reused to provide the highest possible value. Read more on pages 16-17.



# CSR policy for Trolldtekt

Trolldtekt must be an attractive employer and business partner. Corporate responsibility is therefore formalised in the company's CSR policy.

Trolldtekt wants to be a socially responsible company that promotes sustainable development and a circular economy. Therefore, we have based our business strategy on the Cradle to Cradle principles, and are dedicated to our guiding principle: Sustainable indoor climate. It commits us as a company to take sustainability as our point of departure when developing intelligent and innovative acoustic solutions.

To ensure that we live up to our ambition of being highly responsible, Trolldtekt has laid down its own CSR policy. This CSR policy provides a framework for our activities while supporting Trolldtekt as an attractive workplace and business partner. When it says 'Trolldtekt' or 'we' in this CSR policy, it means that the obligations and expectations cover Trolldtekt as a company, as well as all its employees, managers, board members etc. who are acting on behalf of Trolldtekt.

Our CSR policy is based on the premise that we comply with all applicable legislation, relevant regulations and international conventions. Therefore, it was a natural step to join the UN Global Compact in 2010. By joining the scheme, we have made a commitment to actively promote the UN's ten principles in the areas of human rights, labour rights, the environment and anti-corruption.

We also want to work with our suppliers to continually promote their corporate social responsibility. Consequently, we have drawn up the Trolldtekt Code of Conduct, a set of guidelines which form the basis for having a dialogue with our suppliers and for monitoring their CSR efforts. Our CSR policy is reflected in Trolldtekt's Code of Conduct, which is also based on respect for human rights,

labour rights, the environment and anti-corruption.

## Human rights

We respect the international human rights and labour rights as described in the International Bill of Human Rights and in the eight fundamental conventions from the International Labour Organisation. We strive to avoid any negative impacts on human rights and labour rights, and we are committed to handling and ensuring restoration should we become involved in such negative impacts.

We respect the right to privacy of our employees, business partners and customers.

We are committed to ensuring a responsible approach in the design, production and testing of our products, ensuring that they do not cause harm to life, pose a safety or health risk or have any negative environmental impact.

## Employees' human rights

We offer a safe and healthy physical and psychological working environment for all employees. We ensure a high level of job satisfaction and a good social environment. We ensure that adequate health and safety policies and procedures are established and followed.

We ensure good working conditions, and that employees are not subjected to physical punishment, threats of violence or other forms of mental or physical coercion or abuse. Disciplinary sanctions in the form of monetary fines or deduction in compensation are not allowed. We ensure that our employees have opportunities at work for personal and professional development.

As a minimum, we comply with applicable legislation and collective agreements in our area of activity as regards pay, working hours, breaks, holidays, sickness, maternity and paternity leave, and other terms of employment. We pay wages in legal tender and not less frequently than once a month.

## Labour rights

We dissociate ourselves from all direct and indirect forms of forced or compulsory labour. Our employees receive written and comprehensible confirmation of their terms of employment and have the right to freedom of movement in the course of their employment.

We dissociate ourselves from both direct and indirect involvement in child labour. If taking on young people aged between 15 and 18, they must not perform dangerous jobs or work at night.

We dissociate ourselves from discrimination and work for equal opportunities for all our current and future employees. We must neither directly nor indirectly discriminate on the basis of race, colour, sex, language, religion, political or other opinion, age, nationality, disability, social or ethnic origin, property, sexual orientation, birth or other distinguishing characteristics. Employment, pay, training, dismissal, pension or any other employment-related decisions must be based on relevant and objective criteria. Employees who take maternity/paternity leave must not face dismissal or the threat of dismissal, and must be offered the chance to return to their former job function at the same pay and benefits.

We recognise the right of our employees to freedom of association and collective bargaining. If operating



in areas where the right to freedom of association and collective bargaining is curtailed, we ensure that our employees are allowed to otherwise form associations and engage in collective bargaining.

**Environment**

We establish and maintain emergency procedures to effectively prevent and address any environmental issues and industrial accidents affecting the surrounding community or having an adverse impact on the environment. We strive to minimise any adverse environmental impacts of our activities, products and services by using environment management systems to:

- reduce the amount of waste and emissions to air, ground and water;
- handle chemicals in an environmentally sound manner;
- handle, store and dispose of hazardous waste in an environmentally safe way;
- contribute to the recycling and reuse of materials and products;
- develop and implement eco-friendly technologies.

Basing our business strategy on the Cradle to Cradle principles, we further commit not only to minimise our impact, but to also endeavour to ensure a positive impact. Troldekt's Cradle to Cradle roadmap sets clear goals for material health, material recycling, renewable energy and water resources which are to be met by 2022. All development of products and processes as well as investments are based on this roadmap.

**Anti-corruption**

We refrain from any form of corruption and bribery for the purpose of

exerting undue influence on public officials, judges or business connections. We also refrain from receiving or accepting any form of corruption and bribery.

We do not allow facilitation payments. A facilitation payment is usually a smaller sum of money, which is paid to a public official or authority to speed up the handling of a routine matter (e.g. an authorisation or a permit).

Troldekt employees may not, without prior approval from the Board of Management, accept any gifts in excess of DKK 900. If an employee is offered a trip, dinner or similar, the value of which is assumed to exceed

DKK 900, it may not be accepted without prior approval from the Board of Management.

**Reporting**

With regard to social responsibility, we want to document our most important initiatives and results. We therefore present relevant CSR information in our report to the UN Global Compact. The report is also made available on our website.

In order to ensure transparency and comparability, we report according to the international Global Reporting Initiative (GRI G4) standard.

**Values**

In 2015, Troldekt decided to update and strengthen the company's values. A large group of employees participated in the process, and the result was three new values which convey that we are:



**Innovative:** We create results through development. Innovation must ensure that Troldekt is a trendsetter within intelligent acoustic solutions that focus on a sustainable indoor climate.



**Credibility:** We do what we say, and we keep our promises. We also communicate openly about our sustainable objectives and results.



**Socially responsible:** We act responsibly in all parts of the business, including in relation to the environment, society and employees. Corporate responsibility is rooted in our strategic work with Cradle to Cradle.

It is important that the three values are easy for all employees to remember and to relate to specific aspects of our daily activities. In 2016, we are taking a targeted approach to anchoring the new values in the organisation.

# Roadmap for the development of Cradle to Cradle quality at Trolldtekt

Trolldtekt's Cradle to Cradle roadmap shows the direction of the company's work with sustainability towards 2022 within five focus areas.

CSR and sustainability are strategically integrated in the senior management at Trolldtekt. Trolldtekt A/S's business strategy is based on the Cradle to Cradle vision of creating healthy products that benefit human health and the environment, and which can be safely incorporated into the natural cycle without wasting resources. Trolldtekt has therefore entered into a strategic collaboration with Vugge til Vugge Danmark ApS, and together we have developed a roadmap which – based on the five Cradle to Cradle criteria categories – points the way to 2022. For each criteria category, we have drawn up concrete action plans to

ensure that we achieve the specific milestones and objectives. In addition, we have added general implementation as a sixth area.

### Commitment to published objectives

Trolldtekt's Cradle to Cradle roadmap is an ambitious and publicised plan for how to develop our company and its products. Many initiatives have been launched and many objectives have already been fulfilled, but the roadmap will be revised every year to include more ambitious goals for the future.

The work to improve Trolldtekt's performance within sustainability is continuing, and armed with the Cradle

to Cradle roadmap, the company is able to target its efforts. Once the objectives have been realised, the way is paved for new and even more ambitious objectives to replace the old ones.

### Multi-faceted efforts important


The environment, social responsibility and the economy are the three key aspects of sustainability which are described in the UN's Brundtland Report from 1987. The Cradle to Cradle concept recognises this definition and involves a structured approach to working with the three areas in practice.

## Cradle to Cradle scorecard

The table shows Trolldtekt's score at the Cradle to Cradle re-certification in January 2015. Relative to 2014, we have improved 'Material Reutilisation' and 'Social Fairness' from silver to gold level. In relation to 'Material







Reutilisation', the most important progress is that a take-back scheme has been established which ensures that the materials can be used in a closed cycle. In the 'Social Fairness' category, the progress can be ascri-

bed, for example, to the fact that we can account for the social conditions in the supply chain, and that Trolldtekt is actively contributing to diversity in society through its own social programmes and initiatives.

Theme \ Tier	Basic	Bronze	Silver	Gold	Platinum
 Material health			✓		
 Material reutilization				✓	
 Renewable energy				✓	
 Water stewardship				✓	
 Social fairness				✓	



# Cradle to Cradle roadmap

	Status 2012/2013	Status 2014/2015	Objectives 2016/2017	Objectives 2018/2019	Objectives 2020/2021	Objectives 2022
<b>Material Health</b> 	<ul style="list-style-type: none"> <li>✓ 92% of production certified (natural and standard colours)</li> <li>✓ C2C silver level</li> </ul>	<ul style="list-style-type: none"> <li>✓ Product development based on C2C principles</li> </ul>	<ul style="list-style-type: none"> <li>• 99% of production certified</li> <li>• C2C gold level</li> </ul>			<ul style="list-style-type: none"> <li>• C2C platinum level</li> </ul>
<b>Material Reutilization</b> 	<ul style="list-style-type: none"> <li>✓ Complete reuse of production waste in the biological cycle</li> <li>✓ C2C silver level</li> </ul>	<ul style="list-style-type: none"> <li>✓ Take-back scheme for collecting cement-bonded wood wool construction and demolition waste in Denmark established</li> <li>✓ C2C gold level</li> </ul>	<ul style="list-style-type: none"> <li>• Take-back scheme for collecting cement-bonded wood wool construction and demolition waste in Europe established</li> </ul>		<ul style="list-style-type: none"> <li>• 90% of used products collected in Denmark reused</li> <li>• 50% in the rest of Europe</li> </ul>	<ul style="list-style-type: none"> <li>• 90% of used products collected in Denmark reused</li> <li>• 70% in the rest of Europe</li> <li>• C2C platinum level</li> </ul>
<b>Renewable Energy</b> 	<ul style="list-style-type: none"> <li>✓ DONG Energy climate partner; 100% renewable energy for electricity consumption (wind power) from 2013</li> <li>✓ C2C gold level</li> </ul>		<ul style="list-style-type: none"> <li>• 20% reduction in energy consumption per produced m<sup>2</sup> compared to 2012</li> </ul>	<ul style="list-style-type: none"> <li>• 40% reduction in energy consumption per produced m<sup>2</sup> compared to 2012</li> <li>• C2C platinum level</li> </ul>		<ul style="list-style-type: none"> <li>• 50% reduction in energy consumption per produced m<sup>2</sup> compared to 2012</li> </ul>
<b>Water Stewardship</b> 	<ul style="list-style-type: none"> <li>✓ No wastewater discharge from production</li> <li>✓ C2C gold level</li> </ul>	<ul style="list-style-type: none"> <li>✓ Water-saving scheme established</li> </ul>		<ul style="list-style-type: none"> <li>• Initiatives launched towards establishing a self-sufficient water supply for production</li> </ul>		<ul style="list-style-type: none"> <li>• Self-sufficient water supply for production</li> </ul>
<b>Social Fairness</b> 	<ul style="list-style-type: none"> <li>✓ CSR reporting to UN Global Compact from 2010</li> <li>✓ C2C introduced throughout the organisation</li> <li>✓ C2C silver level</li> </ul>	<ul style="list-style-type: none"> <li>✓ CSR reporting according to GRI G4</li> <li>✓ C2C principles introduced into the value chain</li> <li>✓ C2C gold level</li> </ul>	<ul style="list-style-type: none"> <li>• CSR report according to GRI G4 verified by a third party</li> </ul>		<ul style="list-style-type: none"> <li>• CSR management system audited by a third party</li> <li>• C2C platinum level</li> </ul>	<ul style="list-style-type: none"> <li>• Value chain influenced to improve CSR</li> </ul>
<b>Overall Certification</b> 	<ul style="list-style-type: none"> <li>✓ C2C certified according to version 2.1.1 of the C2C product standard</li> <li>✓ C2C silver certificate</li> </ul>	<ul style="list-style-type: none"> <li>✓ C2C recertified according to version 3.1 of the C2C product standard</li> <li>✓ C2C silver certificate</li> </ul>	<ul style="list-style-type: none"> <li>• C2C gold certificate</li> </ul>	<ul style="list-style-type: none"> <li>• C2C gold certificate</li> </ul>	<ul style="list-style-type: none"> <li>• C2C gold certificate</li> </ul>	<ul style="list-style-type: none"> <li>• C2C business</li> <li>• C2C platinum certificate</li> </ul>

Troldtekt's Cradle to Cradle roadmap describes the overall objectives for the company's work with CSR and sustainability up until 2022.

## New silver despite more stringent requirements

In 2015, our range of Troldtekt acoustic panels was re-certified according to Cradle to Cradle version 3.1, which places new and stricter requirements for certified products. Despite this, Troldtekt advanced within several areas and now scores gold in four out of five of the Cradle to Cradle criteria.

Overall, Troldtekt is, however, still silver-certified, as the certification is

issued on the basis of the 'lowest common denominator'. To achieve gold, the product range must therefore also advance within the Material Health category. The objective is that this happens at the re-certification in 2017.

In August 2012, Troldtekt achieved Cradle to Cradle silver certification for its 'natural' product series,

and since the first re-certification in August 2013, the range of certified products has been expanded to include acoustic panels which are painted in our standard colours.

# Troldtekt & the environment

At Troldtekt, the Cradle to Cradle principles serve as a strategic management tool, guaranteeing continuity and the development of the company's work with sustainability. From raw materials, production and use to the recycling of our products.

As a responsible company, Troldtekt is committed to ensuring that our activities have a positive impact on the environment. Our concern for the environment is therefore crucial for Troldtekt's business. Troldtekt acoustic panels are still made from the same natural materials as they were at the outset in 1935: wood and cement.

Today, the factory is fully automated with state-of-the-art robotics. The wood in Troldtekt acoustic panels is PEFC™ or FSC®-certified and comes from forestry operations in Jutland, while the cement from Aalborg Portland is produced from sand, chalk and clay, primarily extracted from the Danish subsoil with the utmost consideration for the environment. The majority of the raw materials are thus sourced locally, minimising the environmental impact from transport.

The international Cradle to Cradle concept is at the core of Troldtekt's business strategy. Consequently, Troldtekt devotes considerable focus to sustainability throughout the life cycle of its products, from the extraction of raw materials and production to the use and reuse of the used acoustic panels.

## Sound production

Our production waste is used to generate energy or produce compost, and the acoustic panels are produced in a closed system without any wastewater discharge. The only wastewater comes from the painting facility, but this is collected and reused in panel production. Troldtekt's electricity consumption is based on 100 per cent renewable energy (wind power), and approx. 99 per cent of the energy consump-

tion for heating and processing is based on CO<sub>2</sub>-neutral fuel, which includes bark and wood waste from the production of acoustic panels.

HedeDanmark processes and reprocesses the remaining production waste (cut-offs, discarded panels etc.) for soil improvers.

## Roadmap with objectives

At Troldtekt, we believe that our sense of responsibility must be reflected in our daily work routines and in our long-term strategic decisions. In accordance with Troldtekt's affiliation with the UN Global Compact, the company's Cradle to Cradle roadmap outlines its overall sustainability and CSR objectives for the period up until 2022.

At Troldtekt, we take a targeted approach to incorporating social,







ethical and environmental initiatives into all parts of our business and supply chain. Our concern for the environment is a permanent aspect of our internal policies, and product-related suppliers must join our Code of Conduct, where environmental impact is included as a parameter.

#### **Holistic focus**

Troldtekt's credibility is an indispensable part of our philosophy – and one of our three values. Consequently, we devote considerable resources to documenting our work on sustainability through a number of labelling and certification schemes. Our Cradle to Cradle certification covers all Troldtekt cement-bonded wood wool panels, corresponding to 96 per cent of our production. The Cradle to Cradle concept focuses on a holistic approach in relation to product and production design, recycling, renewable energy, the protection of water resources and social responsibility. The certification requires that we are continually engaged in developing the company and its products. Read more about our certification and the Cradle to Cradle principles on pages 12-13.

#### **100 per cent wind power**

Troldtekt and DONG Energy have entered into a climate partnership with

a view to reducing Troldtekt's energy consumption and CO<sub>2</sub> emissions. Specifically, this means that our electricity consumption is 100 per cent based on renewable energy – wind power from the Anholt offshore wind farm.

We are also working systematically to reduce our energy consumption, but as it is predominantly based on renewable energy – which is CO<sub>2</sub>-neutral – any reductions in energy consumption will not necessarily result in reduced CO<sub>2</sub> emissions.

#### **Documented environmental profile**

Troldtekt's Environmental Product Declaration (EPD) has been prepared in accordance with the new European EN 15804 standard and is based on actual figures for the production process. The purpose of the EPD is to ensure greater transparency about Troldtekt's environmental profile. The EPD has been prepared by the Danish Technological Institute and subjected to third-party verification by the Norwegian SINTEF Building and Infrastructure. Troldtekt's EPD has been registered with EPD Norway, EPD Denmark and Institut für Bauen und Umwelt (IBU).

Troldtekt has several certifications which demonstrate that our acoustic panels do not emit harmful substances during use, for example Danish Indoor Climate Labelling, M1, the

Allergy Friendly Product Award and the "Der Blaue Engel" eco-label.

Troldtekt provides complete documentation packages for assessors and auditors of certified buildings that describe how our acoustic solutions contribute points for LEED, BREEAM and DGNB certification.

#### **Collection of cement-bonded wood wool**

At Troldtekt, we work systematically with the circular economy, and we have launched a take-back scheme which enables cement-bonded wood wool waste from building sites to be returned to nature as compost. We have also implemented service agreements to ensure that, in future, Troldtekt acoustic panels will be returned and reused. The second phase of the take-back strategy entails the reuse of cement-bonded wood wool demolition waste as a raw material in new cement. These take-back initiatives are only possible because – via our Cradle to Cradle certification – we have complete control of what our products contain. Read more about the take-back scheme on pages 16-17.

# Cement-bonded wood wool waste becomes a new resource

Troldtekt cement-bonded wood wool is made from natural materials and can therefore be returned to nature as compost. A new take-back scheme means that Troldtekt waste now becomes an environmental resource.

Unwanted cut-offs of Troldtekt acoustic panels can now be collected from building sites so they can be returned to nature as compost. The initiative, which was launched at the end of 2015, is part of Troldtekt's take-back strategy. The strategy ensures that both cut-offs from new products and used acoustic panels are processed and reused to provide the highest possible value.

– The take-back scheme is a natural step in our Cradle to Cradle business strategy. We have established partnerships with contractors and local authorities, and to begin with the scheme is being rolled out in Denmark. However, our aim is that in the coming years the scheme will be extended to our neighbouring European markets, says Peer Leth, CEO of Troldtekt.

## Safely back to nature

The new take-back scheme has been developed together with Vugge til Vugge Danmark ApS (Cradle to Cradle Denmark ApS). The project has also received start-up funding from Central Denmark Region's Rethink Business project and the Fund for Green Business Development (Grøn Omstillingsfond).

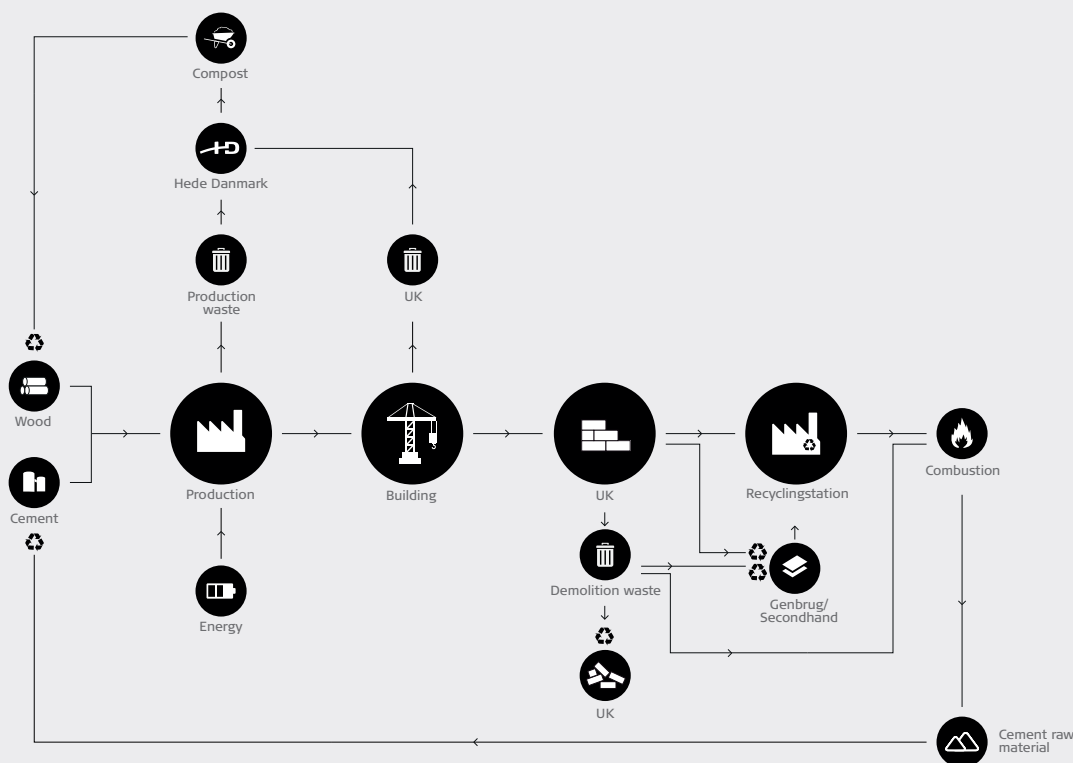
– Troldtekt acoustic panels are Cradle to Cradle-certified at silver level, and Troldtekt is thus able to document that the panels can be safely returned to nature as compost. By launching a system that adds new value to waste products and demolition waste, Troldtekt is demonstrating once again that it is at the forefront of developments within sustainability and the circular economy, says Annette Hastrup, CEO of Vugge til Vugge Danmark ApS.

## Thoroughly analysed

The cement in Troldtekt's acoustic panels boosts oxygen levels during the composting process, while the wood adds organic material to the compost. In connection with Cradle to Cradle certification, the material content of the panels has been analysed right down to 100 ppm (parts per million) and assessed for their impact on humans and the environment. In this way, Troldtekt has proved that its products do not contain any harmful substances.



# Take-back scheme: Trolldtekt in the biological cycle



### Recycling of production waste

For several years, Trolldtekt has been delivering production waste from its factory in Trolldhede to HedeDanmark, which receives, treats and refines the waste products to make soil conditioners. In this way, carbon and nutrients are recirculated to agricultural land and forestry operations. The quality of the compost is regularly analysed and checked.

### Reusing construction waste

Contractors (e.g. MT Højgaard and NCC) are working to identify building projects where cut-offs from new Trolldtekt products are gathered at the building sites. The waste is delivered to HedeDanmark, which processes and refines the waste products to make soil conditioners. HedeDanmark has waste-receiving stations on Funen, Zealand and in Jutland.

### Take-back service agreements

Trolldtekt is now offering service agreements in connection with project deliveries. Through the agreements, Trolldtekt commits to taking back the old acoustic panels when a customer purchases new Trolldtekt panels. However, it is conditional on the user not surface treating or in any other way contaminating the Trolldtekt acoustic panels during use.

### Recycling of demolition waste

The next stage of the take-back scheme involves utilising demolition waste. At the moment, allowing the used panels to become part of a circular flow is hampered by a lack of knowledge about what has happened to the panels during use. Acoustic panels have a very long lifespan – often 50-70 years – and it can be difficult for the developer/client to know whether they have been surface-treated or in some

other way affected by the surroundings during this time.

Instead, the acoustic panels can be recirculated in the production process as a raw material in new cement. The wood content of the cement-bonded wood wool panels contributes to the combustion process (energy), while the cement component becomes a raw material in new cement. Together with Aalborg Portland, demolition firms and local authorities, we are working to offer this solution in Denmark from 2018 or 2019.

### Recycling in masonry units

Trolldtekt has also started cooperating with a number of local authorities on sorting cement-bonded wood wool as a separate waste fraction for subsequent use in masonry units etc. The initiative will gradually be extended to all local authorities.



# New drying oven uses half the energy

A new, high-efficiency drying oven enables Troldekt to dry its acoustic panels considerably faster and with a significantly lower energy consumption than previously. This benefits both the environment and the company's bottom line.



Every single one of the several million acoustic panels which Troldekt produces each year has passed through the drying oven before leaving the factory. The drying oven accounts for a significant part of the company's energy consumption. Therefore, Troldekt paid a lot of attention to lifespan, capacity and energy efficiency when the old drying oven needed replacing.

– The old oven was unable to keep up with demand, and had become a bottleneck. Because of the financial and environmental benefits, it made sense for us to consider energy optimisations as soon as it became clear that we had to invest in a new oven, says Orla Jepsen, factory manager.

## Effective drying air

Troldekt contacted several potential suppliers to find the best possible solution for the new oven. Via Nicho-

laisen A/S, Troldekt was put in touch with the German oven manufacturer Venjakob, who thought that a new drying method could realise significant benefits in relation to both drying time and energy consumption.

– In the old oven, the panels were conveyed past a row of nozzles which blew hot air down onto the panel surface. Venjakob suggested that instead of heating the surface, it would be more effective to instead blow air across and through the panels, and in that way remove more moisture. Their calculations indicated that a panel could dry far faster while at the same time only using half the energy per panel, says Orla Jepsen.

## Meticulous testing

Troldekt and Venjakob decided to jointly test whether the new method worked as assumed. First a mini-oven

was built in Germany, which showed promising results. Then a full-scale oven was built at the supplier in order to test the method.

– The complete drying oven consists of ten individual units, which each cost more than DKK 1 million. So we had to be absolutely sure that the oven lived up to our requirements specification before we ordered the other nine. We were in close dialogue with the supplier throughout the whole process. And their technicians paid regular visits to Troldhede. DONG Energy was also involved as a climate partner, and they provided advice and produced calculations of energy subsidies, says Orla Jepsen.



# Cement with clear environmental objectives

Cement production accounts for most of Troldekt's carbon footprint. It is therefore vital that Aalborg Portland, which delivers all the cement for Troldekt's acoustic panels, works strategically to reduce its environmental impact.

The majority of Troldekt's CO<sub>2</sub> emissions stem from the production of cement, which together with water and certified Norway spruce constitute the raw materials in Troldekt cement-bonded wood wool. Troldekt therefore places considerable emphasis on the fact that Aalborg Portland shares its environmental values.

– For Troldekt, it is a conscious, strategic and crucial decision to have a cement supplier that also takes a targeted approach to reducing CO<sub>2</sub> emissions, says Renate Blom, project manager for development, environment and quality at Troldekt.

## Environment anchored in senior management

Common to both Troldekt and Aalborg Portland is the fact that the companies' environmental initiatives are clearly anchored at senior management level, and that the environmental objectives are part of the overall business goals.

– At Aalborg Portland, cutting CO<sub>2</sub> emissions is rooted in our environmental management system as well as in our environment and energy group. We started introducing certified environmental management at an early stage, and we boast a range of environmental and energy cer-

tifications, for example ISO 14001, ISO 50001 and the European EMAS certification, says Preben Andreasen, environmental and energy manager at Aalborg Portland.

## Clear energy reduction targets

Each year, Aalborg Portland sets clear targets for, among other things, CO<sub>2</sub> reductions and energy efficiency improvements. An overriding goal of the measures is to ensure that Aalborg Portland's customers can achieve their environmental objectives, among other things by developing eco-friendly cement and concrete products and improving the life cycle of concrete.

– In our white cement, for example, we use desulphurised gypsum, which is a recycled material produced in connection with pre-cleaning the factory's flue gas of sulphur. We reuse our own desulphurised gypsum and also source it from local power stations.

As a result, we do not have to ship as much natural gypsum from Canada. Unfortunately, in 2015 there was less desulphurised gypsum available than in the past, says Preben Andreasen.

## Cement-bonded wood wool returns to the cycle

Aalborg Portland also involve its customers in its environmental work, including Troldekt.

– In 2015 we started cooperating with Troldekt on taking back construction materials. In future, we hope to be able to use cement-bonded wood wool from demolished buildings as a sustainable fuel and as a raw material in new cement. The challenge is to organise a collection system from building sites and recycling stations, but we are working on it, says Preben Andreasen.



## Concrete environmental results at Aalborg Portland

- Completion of plant which makes it possible for 60 per cent of the energy used for cement production to come from alternative fuels.
- Alternative fuel now accounts for 41 per cent of the energy used to produce grey cement.
- Alternative fuel now accounts for 20 per cent of the energy used to produce white cement.

# Troldtekt & labour conditions

Our employees are our most important asset. Consequently, their safety and health are of vital importance. We are continually seeking to improve the working environment and make Troldtekt an even more attractive place to work.

The responsibility which Troldtekt shows towards its employees is a cornerstone of the company's business strategy, among other things as part of our commitment to the UN Global Compact. Troldtekt supports and looks after its employees to provide the best possible basis for high levels of job satisfaction and well-being. We do this in acknowledgement of the fact that our employees represent the company's most important asset.

At Troldtekt, we want to see a high level of information and knowledge sharing internally in the company.

This is why we strive towards a flat organisational culture characterised by an open dialogue between employees and management. All Troldtekt em-

"We listen closely to the suggestions of individual employees"

Kim Snebang, production manager

ployees will receive a printed copy of this report, which contains facts about and descriptions of our CSR initiatives.

## Focus on safety

Safety and health are permanent focus areas at Troldtekt. We want all current and future employees to see Troldtekt as an attractive workplace. Based on Troldtekt's CSR policy, we aim to continuously improve the working environment throughout the company.

With a view to improving the health and safety of our employees, Troldtekt regularly offers free first-aid courses to all employees. Also, defibrillators have been installed at several places around the factory site, and all employees







are covered by Trolldtekt's work and leisure accident insurance.

We take a targeted approach to minimising the number of industrial injuries. As a company we have a responsibility to organise the workplace in a way that minimises the risk of accidents. Read more about the initiatives that have been implemented to ensure a safe workplace on pages 22-23.

### Healthy working environment

For a number of years, Trolldtekt has invested heavily in improving the physical environment at our production facilities in Trolldhede. Particular focus has been on improving dust and noise conditions, reducing the amount of heavy lifting and reducing pressures of work and time.

At Trolldtekt, we promote respect and diversity in the workplace. Therefore, we strive to retain employees who fall ill so they can continue working for Trolldtekt. In addition, we have good experience with helping people who want to enter or return to the labour market as employees under

the work experience scheme and as flexitimers.

"We do everything possible to retain employees in Trolldtekt."

Orla Jepsen, factory manager.

### Influence on own work

We think it is important that the company's employees are able to influence their own situation. Consequently, Trolldtekt has a works council, in which three of the five seats are occupied by employee representatives. The council analyses and evaluates the general policies for Trolldtekt employees and their development. For example, the council has previously launched a programme of Danish language courses for the company's employees of non-Danish origin. Overall, more than 13 per cent of the total workforce are members of formal committees in

the organisation.

Trolldtekt's staff manual and the company's CSR policy provide guidance on how managers and employees ensure a good working environment.

### Collective agreement, staff fund and screening

Trolldtekt adheres to the Confederation of Danish Industry's current collective agreement. Moreover, production workers are provided with free workwear, and a staff association has been set up. Trolldtekt also offers flexible working hours for employees with special needs as well as health insurance for all salaried employees.

Being a responsible business has always been part and parcel of Trolldtekt's culture. Back in 1936, the founder and then managing director and owner Louis Hammerich established a staff fund which still exists. The aim was and still is to provide financial support for employees and former employees who have been hit by misfortune, in either their working or private lives.



When driving with fork-lift trucks, the area is now completely cordoned off. The only exception to this is the maintenance and cleaning staff who first have to contact the truck driver.



Visitors are no longer able to access the factory area with their vehicles without prior permission.



A camera has been installed on the truck so that the driver is better equipped to spots any hazards via a monitor in the cab.



# Safety enhancements implemented

In 2015, Troldekt's safety organisation was put to the test by a serious accident. Following the incident, Troldekt has checked safety at the factory and launched several new initiatives.

Safety is an integral part of the working day at Troldekt, which is committed to preventing accidents and work-related injuries through safety committees, workplace assessments and first-aid courses. When Troldekt, despite extensive preventive measures, experienced a serious accident in 2015, the emergency procedures were put into effect both during and after the accident.

– One of our employees was distracted by a call on his mobile and stepped out into the designated area for fork-lift trucks. This happened at the same time that a fully loaded fork-lift was being driven along the

roadway. The fork-lift operator had to perform an emergency stop, and the employee was trapped when the load from the fork-lift fell onto his foot. His colleagues immediately provided the correct first aid, and our emergency response was also activated in order to provide psychological crisis help. Fortunately, the employee mercifully did not suffer serious injury as a result of the accident, which obviously affected everyone at the factory, says Orla Jepsen, factory manager.

## Safety rules adjusted

Following the accident, Troldekt's safety committee and the management

both decided to conduct a safety review at the factory to find out whether the existing safety rules needed revising. The process examined potential safety risks, with the frequent use of fork-lift trucks a particular focus area.

– The review confirmed that using fork-lift trucks is one of the biggest risk factors in our production. When a fork-lift is fully loaded, the driver has very poor forward visibility, and it is not possible to drive backwards in this area. Therefore, in close consultation with the safety committee and the affected employees, we decided to adjust a number of our safety rules, says Orla Jepsen.



Troldekt's black workwear has now been replaced with a new model in a high-visibility orange colour.

# Troldtekt & society

At Troldtekt, we want to be involved in the surrounding community and to be in dialogue with our stakeholders.

Troldtekt wants to play an active role in society.

For example, we always involve local citizens when the factory needs to expand its facilities in such a way that it might have an impact on the area.

At the end of 2015, we discussed future expansion possibilities with the local authority, the main focus being the forthcoming revision of the district plan. The usual procedure is that consultation proposals are sent to the affected neighbouring properties. However, the local authority agreed to wait for feedback from us, as we first wanted to hold a dialogue meeting with the neighbours whose properties were affected.

What we want is an informal discussion at which we can talk about the company's development and future plans so that we can take our neighbours' wishes and ideas into account as part of our long-term planning.

The stakeholders will thus be informed of the reason for the consultation which the local authority then submits in connection with proposed changes to the district plan. Read more about dialogue as a path to good neighbourly relations on the next page.

## Anti-corruption in CSR policy

Troldtekt wishes to be a responsible and transparent business whose business procedures are proper and fair in every respect. Troldtekt's CSR policy and the company's Code of Conduct clearly state that corruption and bribery are strictly prohibited. This goes for everyone working in the Troldtekt organisation as well as for all suppliers, business partners and others related to Troldtekt. The company's internal CSR policy is incorporated in our staff manual, which all employees are informed about. Read the CSR policy on pages 10-11.



## Healthy and safe products

In terms of product safety and health, we take a precautionary approach. This means that we maintain a comprehensive documentation programme.

A sustainable indoor climate is the guiding principle of our business strategy, and Troldtekt acoustic panels promote a healthy indoor climate once installed. The acoustic panels are indoor climate-certified and carry the Allergy Friendly Product logo. In addition, via our Cradle to Cradle certification, we are able to fully document that the panels do not contain any substances which are harmful to human health or the environment.

Troldtekt is covered by the EU's Construction Products Regulation (CPR), and our products are CE-marked according to the European EN 13168 and EN 13964 standards.

The products are fire-tested in accordance with EN 13501, and are also classified and approved in accordance with a number of international fire safety standards.

## Natural business partners

At Troldtekt, we primarily focus our CSR efforts on areas where we can offer our expertise and make a real difference. We hold talks, offer acoustics consultancy and provide financial support to associations and organisations with whom we have a natural shared interest. The list is long, but includes:

- Danish Association of the Hard of Hearing
- CradlePeople
- Astma-Allergiforbundet (Asthma-Allergy Association)
- Danish Acoustical Society
- Foreningen for Unge Trælastfolk (Association of Young Timber Merchants).

Crises and catastrophes unfortunately occur at regular intervals around the world, and here we provide financial support to carefully selected aid organisations.



# Dialogue is the way to good neighbourly relations

As the Troldekt factory lies within a relatively short distance from its neighbours, openness and dialogue have a high priority. Orla Jepsen, the factory manager, handles all grievances face to face, and in 2015 Troldekt took measures to mitigate several nuisances for neighbours.

It is important to show consideration for your neighbours when you run a busy production plant in an urban environment. On the one hand Troldekt provides jobs and income for the local community in Troldehede, but on the other it is difficult to prevent the nuisance effects of light and noise from affecting nearby residents. At Troldekt, openness, understanding each other's expectations and personal dialogue are the most important ways of maintaining good neighbourly relations.

- We are very conscious of the role that Troldekt plays in Troldehede. Therefore, it is very important for us to be open, to talk about our plans and to be sympathetic. We know that people do not complain without reason. If a neighbour contacts us, I always invite them in for a one-to-one meeting where we discuss what can be done in the short and long term, says Orla Jepsen, factory manager.

## Closed gable walls shield the light

In 2015, Orla Jepsen had the coffee cups out a couple of times as two people living close to the factory in Troldehede contacted the company about things which annoyed them.

One of them was Thomas Thomsen, who found that he was being dazzled by the spotlights when Troldekt's trucks drove around a warehouse with open gable walls. As a result of the grievance, Troldekt closed the end wall.

- The light from spotlights shone right into our windows, but after a couple of calls Troldekt dealt with the problem. It seems to me that they listen, and I certainly understand that they can't take money out of the



budget and make big changes overnight. After the gable end has been closed, it's far less of a problem, so I'm very happy," says Thomas Thomsen.

## Insulation on the saw

The second grievance came from another neighbour, Karsten Damgaard Therkelsen, who found the noise from a saw and from a loader rather irritating.

- I described the problems we were experiencing in an email. I soon

received a reply, and an invitation to come in for a meeting where Troldekt promised to sound-insulate the saw. That definitely helped, and the loader now largely operates at the opposite end of the site outside of normal factory hours. Troldekt has also created an earth berm noise barrier alongside our plot which blocks some of the noise. It means a lot to us that we can meet face to face, and that Troldekt is willing to talk things through, says Karsten Damgaard Therkelsen.

# Troldektek & human rights

As part of its commitment to the UN Global Compact, Troldektek is committed to supporting and promoting human rights.

At Troldektek, we are keen to promote sustainability and CSR in the building industry. An important aspect of this work is supporting and promoting human rights. Troldektek has also made a commitment to this through joining the UN Global Compact in 2010.

Troldektek's CSR policy is the foundation for the company's own activities and for how its employees conduct themselves in the course of their day-to-day work. Using our Code of Conduct, we can be certain that our product-related suppliers respect human rights.

We have introduced a set of follow-up questions which all suppliers

who have signed our Code of Conduct must answer every four years to confirm that they meet the terms of the cooperation agreement. Read more about screening suppliers and follow-up questions on the next page.

### Multi-faceted efforts in 2016

In 2016, Troldektek will expand its Code of Conduct, so that it not only covers our product-related suppliers, but also companies supplying services such as cleaning, waste management etc.

We want service companies to sign our Code of Conduct in recognition of the fact that focusing on human rights is also important in Denmark and

"The Code of Conduct is the cornerstone of our work with human rights, and therefore we are still maintaining a keen focus on this area in 2016."

Renate Blom, MSc, project manager for development, environment and quality

our neighbouring countries. Here the conditions are usually good, but we do not take compliance with human rights for granted.



In conducting an audit of its screw supplier in Taiwan, Troldektek could see for itself that the supplier meets the requirements within labour rights and human rights.



# Trip to Taiwan provided an up-to-date overview

In 2015, Troldekt conducted an audit of the company's screw supplier in Taiwan. Here, Troldekt could see through a personal inspection that the supplier meets the requirements within labour rights and human rights.

Each year, Troldekt sells screws for a double-digit million sum. The screws are supplied by a producer in Taiwan who has signed Troldekt's Code of Conduct via a previous importer. After establishing direct contact with the supplier in recent years, in 2015 Troldekt decided to conduct an audit at the factory in Taiwan.

– Most of our suppliers are in Denmark and Germany, and because they are close by we have a close dialogue, and a good sense that they live up to our Code of Conduct. We have categorised our screw supplier in Taiwan in a medium risk group, which means that we pay close attention to whether they meet our requirements, says Peer Leth, CEO of Troldekt.

## Safety and rights under control

Peer Leth travelled to Taiwan together with Flemming Østergaard, one of Troldekt's buyers. The two men visited the screw producer and the subcontractor who surface-treats the screws.

– We found that both employee safety and rights were at a satisfactory level. Among other things, there was an air-extraction system in production, the employees wore personal protective equipment, and there was lifting gear and other equipment for handling heavy loads, says Peer Leth.

– We also had the opportunity to join the employees for their joint lunch break, where we could observe how the right to a one-hour break in the middle of the day is complied with. In general, the visit confirmed that our supplier lives up to our Code of Conduct, and left us with the sense that improvements have generally been made by the professional businesses in Taiwan.



## Troldekt follows up with questions

As a new initiative, suppliers who have signed Troldekt's Code of Conduct must answer a number of follow-up questions every four years. The eight-page-long questionnaire contains questions on compliance with the UN Global Compact's principles, which basically fall into four categories:

- Human rights
- Labour rights
- Environment
- Anti-corruption

By answering the questions, the supplier confirms that they still live up to the requirements in the Code of Conduct. In addition, Troldekt supplements with a personal follow-up (audits) with suppliers where this is deemed relevant.

Troldekt categorises its suppliers in high, medium and low-risk groups on the basis of the guidance in the CSR Compass, which is backed by the Danish Ministry of Business and Growth as well as the Confederation of Danish Industry.



# GRI G4 indicators

The purpose of GRI G4 is to increase comparability between organisations. In preparing this report, Troldekt has carried out a materiality analysis based on GRI G4. This has resulted in 37 indicators which Troldekt is reporting on in 2015. Due to the scope of this report, Troldekt has chosen not to include the full analysis.



# Environment

The world's natural resources and fossil fuels are under pressure as a result of population growth and growing demand. There is nothing to suggest that this demand will decline in future. This is resulting in environmental impacts in the form of large volumes of waste, general resource constraints and increased emissions of greenhouse gases, and will lead to increased commodity and energy costs for businesses and consumers.

Troldtekt's survival and prosperity will depend on continued access to energy and the natural materials which are used to manufacture the company's products. Troldtekt's position on the Danish market in particular enables the company to not only minimise the impact of its activities on resource scarcity and greenhouse gas emissions. Troldtekt is also able to have a positive influence on its business partners. As a responsible company, we therefore give priority to environmental concerns in our own activities and those of our product-related suppliers. In 2015, 85 per cent of the wood purchased by Troldtekt was PEFC™ or FSC®-certified.

## G4-EN1 – Materials consumption, tonnes

All materials are purchased from external suppliers. The data is obtained from supplier invoices or statements provided by the supplier.

Material	Volume 2015	Unit	Renewable material
<b>Raw materials</b>			
Wood	35,464	m <sup>3</sup>	yes
Cement, grey	2,270	tonnes	no
Cement, white	13,396	tonnes	no
Accelerator	160,732	litres	no
Sodium silicate	208,560	litres	no
Painting	334,094	litres	no
<b>Associated process materials</b>			
Water	15,580	m <sup>3</sup>	yes
Asphalt cleaner	1,630	litres	no
Mould oil, bio	155,392	litres	no
<b>Packaging</b>			
Cardboard	65	tonnes	yes
Foil	21	tonnes	no
Wood pallets	45,265	pcs	yes

## G4-EN2 – Percentage of recycled materials

Each Troldtekt panel contains cement, which is partially produced from recycled materials (the cement can contain ash and sand from offshore channels).

Recycled materials in grey cement: 20.5 per cent, corresponding to 465 tonnes

Recycled materials in white cement: 2 per cent, corresponding to 268 tonnes

In 2014, Aalborg Portland used 3 per cent recycled materials in its white cement. This has resulted in a decrease in our percentage of recycled materials from 3.5 per cent in 2014 to 2.5 per cent in 2015.

See the article on page 19.

Material	Volume in per cent
Total proportion of recycled materials as a percentage of total materials consumption	2.5%



**G4-EN3 – Energy consumption within the organisation**

The tables below provide an overview of Troldekt's energy consumption in 2015. Only energy consumption at the factory in Troldekte is calculated.

	Energy consumption	Unit	Percentage from renewable energy sources
Total for 2015	72,836	GJ	95%

Consumption is distributed across the following entries.

	Volume	Unit	Percentage from renewable energy sources	Contributes to emissions	Produced externally/internally	Percentage of total energy consumption
Electricity consumption	18,193	GJ	100	No	Externally	25%
Biofuel	51,034	GJ	100	No	Internally + externally	70%
Heating oil	448	GJ	0	Yes	Externally	1%
Gas (trucks)	715	GJ	0	Yes	Externally	1%
Diesel (trucks)	2,447	GJ	0	Yes	Externally	3%

**G4-EN5 – Energy intensity**

The energy intensity per produced m<sup>2</sup> of acoustic panel has been reduced by 3 percentage points since 2014. EN3 shows the extent to which the energy comes from internal or external sources.

	Volume	Unit	Index (2014 = 100)	Development affects Troldekte's environmental performance
Energy consumption per m <sup>2</sup> of produced panel	27.54	MJ	97	Positively

**G4-EN6 – Reduction of energy consumption**

In 2015, Troldekte has achieved total energy savings of 2,526 GJ. The company uses 100 per cent wind power and is continually implementing energy optimisation measures. The two most important energy-saving measures implemented in 2015 are:

- New drying oven installed in September - Saving on biofuel and electricity
- Insulation of facades at the casting facility - Saving on biofuel

**G4-EN15 – Direct CO<sub>2</sub> emissions (Scope 1)**

The table presents an overview of direct CO<sub>2</sub> emissions from sources that are owned or controlled by Troldekte.

Direct sources of emissions	Tonnes CO <sub>2</sub>	Index (2014 = 100)
Biofuels for drying*	0	100
Heating oil	32	103
Gas for trucks	75	110
Diesel for trucks	169	100
Total	276	103

\*Biofuels are regarded as a CO<sub>2</sub>-neutral energy source.

**G4-EN16 – Indirect CO<sub>2</sub> emissions (Scope 2)**

Troldtekt has no indirect CO<sub>2</sub> emissions (Scope 2), because we only buy wind energy for the production of Troldtekt acoustic panels (from the Anholt offshore wind farm with Climate Investment).

Indirect sources of CO <sub>2</sub> emissions	Emissions in kg	Index (2014 = 100)	Development affects Troldtekt's environmental performance
Electricity	0	100	Status quo

**G4-EN17 – Other indirect CO<sub>2</sub> emissions (Scope 3)**

This indicator covers a number of other indirect emissions of CO<sub>2</sub> from sources that are not owned or controlled by Troldtekt, but where the CO<sub>2</sub> emissions result from the company's activities. More than 95 per cent of CO<sub>2</sub> emissions stem from the production of raw materials, primarily cement. Therefore, this component is our key focus area within Scope 3.

The consumption of cement has increased in 2015. CO<sub>2</sub> emissions have not increased correspondingly, as Aalborg Portland has reduced the CO<sub>2</sub> emissions for both types of cement.

See the article on page 19.

Indirect sources of CO <sub>2</sub> emissions	Tonnes CO <sub>2</sub>	Index (2014 = 100)
Transport raw materials/packaging	98	108
Suppliers' production of purchased materials	19,398	115
Total	19,496	115

**G4-EN18 – CO<sub>2</sub> emissions intensity**

This shows the intensity of CO<sub>2</sub> emissions per produced m<sup>2</sup> of acoustic panel both in total and broken down according to the information from EN15, EN16 and EN17.

The amount of CO<sub>2</sub>/m<sup>2</sup> panel has increased due to a change in the product mix in 2015, where the proportion of panels with a higher density has increased.

	Volume (tonnes)	Kg CO <sub>2</sub> /m <sup>2</sup>	Index (2014 = 100)	The development affects Troldtekt's environmental performance
In Scope 1	276	0.10	95	Positively
In Scope 2	-	-	-	Status quo
In Scope 3	19,496	7.37	102	Negatively
Total CO <sub>2</sub>	19,772	7.48	101	Negatively

**G4-EN19 – Reduction of direct and indirect CO<sub>2</sub> emissions (Scope 1 & 2)**

In EN6, we described how Troldtekt has achieved a number of energy savings. The savings have all been achieved in CO<sub>2</sub>-neutral areas in production. As such, the energy savings thus do not reduce CO<sub>2</sub> emissions any further. The increased production in 2015 has resulted in increased fork-lift truck traffic. The increase in gas consumption has resulted in greater CO<sub>2</sub> emissions under Scope 1 of approx. 8 tonnes relative to 2014. The savings in energy consumption have been realised in areas where no CO<sub>2</sub> is emitted (power from wind energy and heating from biofuels).

**G4-EN20 – Emissions of ozone-depleting substances**

This shows information about Troldtekt's discharges of ozone-depleting substances. The increase in emissions of ozone-depleting substances reflects the increase in production.

CFC-11 equivalent Kg	Index (2014 = 100)
4.35E-03	111

**G4-EN21 – SO<sub>x</sub>**

The table below shows information about Troldekt's discharges of SO<sub>x</sub>. The increase in SO<sub>x</sub> emissions reflects the increase in production.

SO <sub>x</sub> equivalent Tonnes	Index (2014 = 100)
55	111

**G4-EN23 – Total weight of waste by type and disposal method**

Waste types	Tonnes	Treatment
Cement-bonded wood wool	4,516	Recycled
Wood	54	Recycled
Packaging, cardboard	4	Recycled
Foil	4	Recycled
Ash from biofuels	14	Recycled
Hazardous waste for reuse	1	Recycled
Hazardous waste for landfill*	28	Landfill
Suitable for incineration	49	Incineration

\*In 2015, the ash from biofuels in Troldekt's production was disposed of through one of the company's partners who forwarded it for landfill. The ash can be used directly for agricultural purposes without prior processing. This was implemented in Q4 2015.

All waste disposal is carried out by approved suppliers. Waste data has been compiled and supplied by these suppliers. We would like to point out that almost 97 per cent of Troldekt's total waste, or the equivalent of 4,516 tonnes, is composted. At Troldekt, we work with sustainability based on the Cradle to Cradle principles, where waste is regarded as a valuable resource if it can be returned to the technical or biological cycle. As the residual materials from Troldekt's production are returned to the natural biological cycle as soil conditioners, in the Cradle to Cradle system they are not defined as waste.

**G4-EN27 – Extent of mitigation of environmental impacts**

At Troldekt, we use the Cradle to Cradle concept as a strategic management tool in our work with sustainability, which is documented by means of Cradle to Cradle product certifications. Troldekt's Cradle to Cradle certification was renewed in 2015.

In 2015, Troldekt implemented the following initiatives:

- Paint in standard colours are currently approved in accordance with C2C silver. In 2015, steps were taken to substitute ingredients in the recipes so they are now ready for approval in accordance with C2C gold in 2016.
- The first steps in the take-back scheme were established – A take-back scheme for construction waste (cut-offs from new panels) was established.  
See the article on page 16.
- New drying oven developed and implemented in September 2015. The system is based on a new drying concept, which in practice means that the energy consumption per m<sup>2</sup> in this process has been halved. See the article on page 18.

**G4-EN28 – Percentage of products sold and packaging materials recycled**

The proportion of wood pallets returned by customers has fallen from 36 per cent in 2014 to 31 per cent in 2015. This may be due to the fact that we have not focused sufficiently on encouraging our customers to return used pallets. Therefore, in 2016 we are launching activities to support the increased return of pallets. However, we do not expect to see the results of these activities until 2017.

At the end of 2015 we launched a take-back scheme so that cut-offs remaining after fitters and contractors have installed Troldekt acoustic panels can be recovered and reused.



**G4-EN29 – Sanctions for non-compliance with environmental laws and regulations**

Troldtekt has not been sanctioned for failing to comply with environmental laws and regulations in the reporting period. On 1 July 2015, Falck Teknik serviced our foam fire extinguishing system. Less than a day later, the Municipality of Ringkøbing-Skjern contacted us regarding contamination of the Troldhede sewage treatment plant. White foam could be traced back to our factory in Troldhede. We immediately discovered that a 450-litre container with soap had overflowed and run into the drains. This was due to a technical error in the system following the service inspection by Falck.

Falck acknowledged the error and assumed full responsibility for the spillage. Falck subsequently resolved the issue with the Municipality of Ringkøbing-Skjern. Technical improvements have been made to the foam fire extinguishing system to prevent a repeat incident. Troldtekt did not receive any claim from the local authority in connection with the spillage.

**G4-EN31 – Total environmental protection expenditures and investments**

	In DKK
Waste management, including cement-bonded wood wool	1,052,117
External environmental management services	347,959
External certification of environmental management systems	44,144
Extra costs of green purchases	944,284
Total	2,388,504

**G4-EN32 – Percentage of screened suppliers – Environment**

Troldtekt wants to engage in stable and long-term cooperation with its suppliers as we devote considerable resources to formalising our cooperation in the initial phase in connection with the integration of Troldtekt's Code of Conduct. Given the low turnover of suppliers, reporting on the screening of new suppliers becomes less essential. Instead, Troldtekt focuses on all product-related suppliers under this indicator.

Troldtekt's Code of Conduct provides guidelines for the company's cooperation with its suppliers, including environmental criteria. Twenty-seven of Troldtekt's main product-related suppliers have all signed Troldtekt's Code of Conduct. This means that approx. 90 per cent of our product-related purchases come from suppliers who have signed our Code of Conduct.

**G4-EN33 – Environmental impacts in the supply chain**

All suppliers who have signed our Code of Conduct are categorised in low, medium or high-risk groups. This happens, among other things, on the basis of their specific risk of having a negative environmental impact. We have no suppliers in the high-risk group. Should this happen in future, we will maintain our relations with such suppliers in order to exert a positive influence.

No. of suppliers who have signed Troldtekt's CoC	Percentage categorised in low-risk group	Percentage categorised in medium-risk group	Percentage categorised in high-risk group
27	96%	4%	0%

**G4-EN34 – Grievances about Troldtekt's environmental impacts**

In 2015, Troldtekt received two grievances regarding problems with noise and light.

In each case, the neighbour concerned was invited in for a meeting, and asked to explain the problem. In both cases, remedial measures were taken to alleviate the problems for the neighbours. The two cases are described in detail on page 25.

# Labour conditions

As a responsible business, it is essential for Troldekt to ensure a good environment and working conditions for its employees.

The employees represent the company's most important resource and asset, and the management is very aware that they have a decisive influence on whether Troldekt meets its environmental and financial objectives.

Therefore Troldekt gives considerable priority to social considerations in its own activities and in its cooperation with suppliers.

## G4-LA1 – Workforce and employee turnover

The table below is a summary of the number of employees and staff turnover in Troldekte and Tranbjerg, and how employees are distributed according to their terms of employment. Please note that the table includes flexitimers and paid student interns, while young workers and employees doing work experience are not included.

Age	Salaried employees, women	Salaried employees, men	Hourly paid workers, women	Hourly paid workers, men	New employees, women	New employees, men	Women who have left Troldekte	Men who have left Troldekte
<b>Tranbjerg</b>								
- 30	0	0		2	0	0	0	0
31-50	7	6	0	0	4	0	0	2
51 -	5	6	0	0	1	0	0	0
<b>Troldekte</b>								
- 30	0	0	0	1	0	0	0	0
31-50	2	3	0	34	0	7	0	0
51 -	3	0	1	13	0	0	0	0

Employment	No. in Tranbjerg	No. in Troldekte
Full-time employees	19	54
Part-time employees, incl. flexitimers	2	2
Permanent employees	24	56
Short-term contracts, including paid student interns	2	0
Total	26	56

## G4-LA5 – Percentage of total workforce represented in formal committees

In addition to the statutory working environment committee, Troldekte has set up a works council. Both employees and the management are represented on both. Of the total workforce, just over 13 per cent is represented in these formal safety and health committees in Troldekte.

**G4-LA6 – Industrial accidents and absence due to illness**

The figures include the 55 employees at the factory in Trolldhede. From H2 2016 we expect to be able to include the figures for the 25 employees at the office in Tranbjerg.

	2015
No. of lost-time injuries	2
Injury frequency (no. of industrial injuries/1 million hours worked)	22.49
Absence as a result of industrial injury (hours/1,000 hours worked)	7.24
Absence due to illness, total (%)	4.57

**G4-LA12 – Composition of senior employees according to gender and age**

The following provides a summary of the composition of senior employees in Trolldtekt broken down by age and gender in per cent.

	Women <30	Women 30-50	Women >50	Men <30	Men 30-50	Men >50
Distribution of senior employees in per cent*	0%	14%	14%	0%	43%	29%

\*The figures are rounded off.

**G4-LA14 – Percentage of screened suppliers – Labour rights**

Trolldtekt wants to engage in stable and long-term cooperation with its suppliers as we devote considerable resources to formalising our cooperation in the initial phase in connection with the integration of Trolldtekt's Code of Conduct. Given the low turnover of suppliers, reporting on the screening of new suppliers becomes less essential. Instead, Trolldtekt focuses on all product-related suppliers under this indicator. See the article on page 18.

**G4-LA15 – Risk of negative labour practices in the supply chain**

Product-related suppliers must sign the guidelines in Trolldtekt's Code of Conduct, including criteria relating to labour rights. They are classified in low, medium or high-risk groups. The status is that 96 per cent of suppliers who have signed Trolldtekt's Code of Conduct are placed in the low-risk group, and 4 per cent are in the medium-risk group. There are no suppliers in the high-risk group. A single supplier accounts for the 4 per cent placed in the medium-risk group, being based in a country where good labour conditions are not enforced through statutory legislation. There have not been any incidents among Trolldtekt's suppliers which required reprimands or other measures.





# Society

As a responsible business, it is very important for Troldekt that it contributes to the local communities where the company is represented. Troldekt therefore has specific and formalised guidelines regarding anti-corruption, and the company also ensures that its products contribute to the health and safety of its customers.

Through a few of its product-related suppliers, Troldekt is represented in countries where social responsibility cannot be taken for granted. Thus, there is a risk that, in light of its activities, Troldekt contributes negatively to its surroundings. This may result in financial sanctions against Troldekt and have a negative impact on the company's reputation. Therefore, at Troldekt we believe that our position as market leader in Denmark within the production and supply of acoustic solutions gives us the opportunity to set a good example and actively influence the market in a positive direction.

## G4-S03 – Percentage of screened suppliers – Anti-corruption

Troldekt wants to engage in stable and long-term cooperation with its suppliers as we devote considerable resources to formalising our cooperation in the initial phase when working to integrate Troldekt's Code of Conduct. Given the low turnover of suppliers, reporting on the screening of new suppliers becomes less essential. Instead, Troldekt focuses on all product-related suppliers under this indicator.

Troldekt's Code of Conduct provides guidelines for the company's cooperation with its suppliers, including criteria relating to anti-corruption. Twenty-seven of Troldekt's main product-related suppliers have all signed Troldekt's Code of Conduct. This means that approx. 90 per cent of our product-related purchases come from suppliers who have signed our Code of Conduct in relation to cases of corruption.

## G4-S04 – Implementation of guidelines for anti-corruption

All employees are informed at canteen meetings and office meetings about the company's CSR policy, and the CSR policy is also incorporated in the company's staff manual, of which the employees have also been informed.

Furthermore, in 2016 we want to identify groups of employees who may be particularly exposed to bribery or corruption. These employees will receive instructions and training in how to reject bribes and corruption.

Number of suppliers screened with CoC*	Percentage categorised in low-risk group	Percentage categorised in medium-risk group	Percentage categorised in high-risk group
19	96%	4%	0%

\*The figures are rounded off.

## G4-S05 – Cases of corruption or bribery

No cases of corruption or bribery were identified at Troldekt in 2015.

## G4-S08 – Sanctions for non-compliance with laws and regulations

Troldekt was not sanctioned for non-compliance with laws and regulations in 2015.

## G4-S09 – Percentage of screened suppliers – Society

Troldekt wants to engage in stable and long-term cooperation with its suppliers as we devote considerable resources to formalising our cooperation in the initial phase when working to integrate Troldekt's Code of Conduct. Given the low turnover of suppliers, reporting on the screening of new suppliers becomes less essential. Instead, Troldekt focuses on all product-related suppliers under this indicator.

Troldekt's Code of Conduct provides guidelines for the company's cooperation with its suppliers, including criteria relating to their impact on society. Troldekt's main product-related suppliers, who account for 90 per cent of our purchases, have all signed Troldekt's Code of Conduct. These suppliers are selected on the basis of a risk assessment. See the article on page 26.

**G4-SO10 – Risk classification of suppliers – Society**

Those of our product-related suppliers who have signed our Code of Conduct in relation to their risk of breaching the guidelines in our Code of Conduct are classified in low, medium or high-risk groups. The status is that 96 per cent of suppliers who have signed Troldekt's Code of Conduct are placed in the low-risk group, and 4 per cent are in the medium-risk group. There are no suppliers in the high-risk group. A single supplier accounts for the 4 per cent placed in the medium-risk group, being based in a country where companies' positive impacts on society are not enforced through statutory legislation. There have not been any incidents among Troldekt's suppliers which required reprimands or other measures.

**G4-PR1 – Assessment of products**

Through Troldekt's work with Cradle to Cradle certifications, a raw materials assessment has been carried out of Troldekt's acoustic panels. The status in 2015 is that all the harmful substances have been phased out. Troldekt acoustic panels are therefore Cradle to Cradle-certified in the silver category, and the panels have also been recognised for their contribution to a healthy indoor climate, for example the Danish indoor climate label Indeklimamærket, the Finnish quality label M1 and Allergy Friendly UK. The Cradle to Cradle-certified Troldekt acoustic panels account for approx. 96 per cent of our total product range.

**G4-PR9 – Sanctions for non-compliance with laws and regulations concerning use of products**

Troldekt was not sanctioned for non-compliance with laws and regulations concerning the provision and use of products in 2015.

# Human rights

As a responsible business, it is essential for Troldekt to comply with human rights and facilitate the dissemination of information about human rights, which the company has committed itself to since joining the UN Global Compact in 2010. Through a few of its product-related suppliers, Troldekt is represented in countries where respect for human rights cannot be taken for granted. Thus, there is a risk that, in light of its activities, Troldekt contributes negatively to compliance with human rights. This may result in financial sanctions against Troldekt and have a negative impact on the company's reputation. Therefore, at Troldekt we believe that our position as market leader in Denmark within the production and supply of acoustic solutions gives us the opportunity to set a good example and actively influence the market in a positive direction.

**G4-HR5 – Risk of child labour**

Troldekt deems there is no risk of child labour in our organisation. In 2015, we employed two young workers aged 15-17 years. They only perform work which does not involve heavy lifts or similar risks etc.

Troldekt works actively to eliminate child labour. In so far as possible, suppliers are found in countries with a low risk of child labour. Troldekt has a single supplier based in a country where there is a general risk of inadequate respect for human rights and labour rights. This supplier has signed our Code of Conduct, and an on-site inspection has been conducted at the supplier's premises in Q1 2015. Troldekt regularly assesses its suppliers on the basis of the guidelines in our Code of Conduct. See the article on page 27.

**G4-HR10 – Supplier screening related to human rights**

Troldekt wants to engage in stable and long-term cooperation with its suppliers as we devote considerable resources to formalising our cooperation in the initial phase when working to integrate Troldekt's Code of Conduct. Given the low turnover of suppliers, reporting on the screening of new suppliers becomes less essential. Instead, Troldekt focuses on all product-related suppliers under this indicator. See the article on page 27.

**G4-HR11 – Risk classification of suppliers – Human rights**

Our product-related suppliers have signed our Code of Conduct according to the guidelines in our Code of Conduct regarding compliance with human rights. They are classified in low, medium or high-risk groups. The status is that 96 per cent of suppliers who have signed Troldekt's Code of Conduct are placed in the low-risk group, and 4 per cent are in the medium-risk group. There are no suppliers in the high-risk group. A single supplier accounts for the 4 per cent placed in the medium-risk group, being based in a country where compliance with human rights is not enforced through statutory legislation. There have not been any incidents among Troldekt's suppliers which required reprimands or other measures. See the article on page 27.

# Status and new objectives

Category	Description of objectives	Status
General	Comply with the obligations undertaken in connection with Troldekt joining the UN Global Compact.	Realised
General and C2C roadmap	CSR report for 2015 verified by third party.	Verification of the CSR report postponed until CSR report 2017
General	Increase share of suppliers screened for their environmental performance and their performance within the areas of labour rights, human rights, anti-corruption and product liability. The proportion must be increased to include suppliers who account for 93 per cent of our production-related purchases.	90 per cent of our product-related suppliers have signed our Code of Conduct.
General	All Troldekt product-related suppliers who have signed Troldekt's Code of Conduct in the 2012-2014 period must sign a set of follow-up questions.	Not realised. 26 out of 27 suppliers have signed.

Category	Description of objectives	Status
Environment	Investment in climate certificates corresponding to Troldekt's total CO <sub>2</sub> emissions stemming from heating oil, truck transport and personal transport.	Realised
Environment	The total waste volume was reduced by a further 2 percentage points compared to 2013.	Our focus is changing so that instead of cutting waste volumes, we are implementing an extensive project aimed at improved waste sorting and recycling.
Environment and C2C roadmap	Sanitary wastewater discharge reduced by 10 percentage points compared to 2012.	In relation to water consumption in production, this target is not relevant.
Environment	Maintain 100 per cent wind power in production.	Realised
Environment and C2C roadmap	Cradle to Cradle recertification according to version 3.1 in the silver category for all currently certified products.	Realised
Environment	Reduce the energy intensity per produced m <sup>2</sup> to index 82 compared to 2013.	The target has not been realised. Our energy consumption in 2015 compared to 2013 is at index 86, and in relation to 2014 at index 97. The new drying oven was commissioned in September 2015.
Environment	Take-back scheme for used Troldekt acoustic panels up and running in 2015.	The first phase of the take-back scheme was launched at the end of 2015. Cut-offs from new Troldekt panels can be collected from building sites and sent to HedeDanmark for composting.
Environment	0 tonnes of bioash waste for depositing from 1 June 2015.	The ash from our on-site boiler is now sent for composting at HedeDanmark.
Environment	Phase 1 – Analysis prepared and planned with a view to phasing out oil for heating. Phase 2 – Project implementation.	Not realised Phase 1 is being realised in 2016, and phase 2 will be realised in H1 2017.
Environment and C2C roadmap	20 per cent reduction in CO <sub>2</sub> per produced m <sup>2</sup> compared to 2012.	The target is not relevant. We use 100 per cent wind power for electricity, and 99 per cent of the energy used for heating is also CO <sub>2</sub> -neutral. We choose instead to focus on the total energy consumption.
Environment	88 per cent PEFC™ or FSC®-certified wood in production.	The target has not been realised; 85 per cent of the wood was certified. Our suppliers had difficulties obtaining the desired quantities.



Category	Description of objectives	Status
Society	Maintain and strengthen our affiliation with voluntary labelling schemes regarding product safety and health. <ul style="list-style-type: none"> <li>• Indoor climate-labelled (DK)</li> <li>• M1 (F)</li> <li>• Allergy Friendly Products UK (UK)</li> <li>• Cradle to Cradle (Silver)</li> </ul> In 2015, it will be expanded to include: <ul style="list-style-type: none"> <li>• "Der Blaue Engel" (DE)</li> </ul>	Realised
Society	Continued cooperation with relevant educational institutions and including students and interns in our organisation.	Realised
Society	Five large and 40 smaller acoustics seminars held for players in the building industry.	Not realised. Deemed to be no longer relevant.
Society	Zero confirmed cases of corruption internally at Troldekt or among our suppliers.	Realised

Category	Description of objectives	Status
Labour conditions	Absence due to illness max. 2 per cent among production employees.	Not realised. Working environment committee revises the target for 2016.
Labour conditions	Green working environment smiley from the Danish Working Environment Authority.	Realised
Labour conditions	Elimination of heavy lifting of top panels in the drying and edging workshop.	Partially realised. Heavy lifts in the drying hall have been eliminated. Manual lifting of top panels in the edging workshop is being eliminated in connection with a new layout which is being implemented 18-30 July 2016.
Labour conditions	No industrial injuries or max. one lost-time injury among production employees.	Not realised. There were two lost-time injuries in 2015.
Labour conditions	Taking on a number of flexitimers and persons doing work experience up to max. 5 per cent of Troldekt's total workforce, which in 2014 corresponds to four persons.	Realised
Labour conditions	Maintain the percentage of employees on workplace health and safety committees at min. 10 per cent.	Realised
Labour conditions	Complete a fire-fighting course, so that all functions and shifts at Troldekt are covered.	Realised
Labour conditions	Complete a first-aid course which includes defibrillator instruction so that all functions and shifts at Troldekt are covered.	Realised
Labour conditions	All new employees are informed about Troldekt's guidelines regarding e.g. anti-corruption via the staff manual.	Realised
Labour conditions	Zero confirmed cases of child labour internally at Troldekt or among our suppliers.	Realised







# New objectives for 2016

1. Review of suppliers in relation to the Code of Conduct; evaluation of the current criteria for the classification of suppliers and implementation of a new risk assessment.
2. Focus on safety culture. An external presentation is held which must pave the way for a subsequent competition on the best safety measures which have been implemented.
3. Review and optimisation of waste management at the Trolldhede factory.
4. 10 per cent saving on total energy consumption per m<sup>2</sup> produced panel relative to 2015.
5. Initiate activities that encourage customers to return more used pallets.
6. Identify groups of employees who may be particularly exposed to bribery or corruption. These employees will receive instructions and training in how to reject bribes and corruption.





# GRI G4

## Content index

Indicator	Description	Page no.
<b>General</b>		
G4-1	Management statement	5
G4-3	Company name	6
G4-4	Troldtekt's primary brands, products and services	6
G4-5	Geographical location of Troldtekt's head office	6
G4-6	Countries where Troldtekt is represented	6
G4-8	Markets	6
G4-10	Troldtekt's workforce	6
G4-12	Troldtekt's supply chain	6
G4-16	Committees and associations in which Troldtekt is represented	6
G4-18	Materiality analysis	26
G4-24	Stakeholder involvement	13
G4-28	Reporting period	25
G4-29	Date of latest report	2
G4-30	Frequency of reporting	2
G4-31	Contact information	2
G4-56	Values CSR policy Code of Conduct	11 10 17
<b>Environment</b>		
G4-EN1	Materials consumption	26
G4-EN2	Percentage of recycled materials	27
G4-EN3	Energy consumption within the organisation	27
G4-EN5	Energy intensity	27
G4-EN6	Reduction of energy consumption	28
G4-EN15	Direct CO <sub>2</sub> emissions (Scope 1)	28
G4-EN16	Indirect CO <sub>2</sub> emissions (Scope 2)	28
G4-EN17	Other indirect CO <sub>2</sub> emissions (Scope 3)	28
G4-EN18	Intensity of greenhouse gas (GHG) emissions	29
G4-EN19	Reduction of greenhouse gas (GHG) emissions	29
G4-EN20	Emissions of ozone-depleting substances	29
G4-EN21	SO <sub>x</sub>	29

Indicator	Description	Page no.
G4-EN23	Total weight of waste by type and disposal method	30
G4-EN27	Extent of mitigation of environmental impacts	30
G4-EN28	Percentage of products sold and packaging materials recycled	30
G4-EN29	Sanctions for non-compliance with environmental laws and regulations	31
G4-EN31	Extra costs and investments in connection with environmental protection	31
G4-EN32	Percentage of screened suppliers – Environment	31
G4-EN33	Risk classification of suppliers – Environment	31
G4-EN34	Grievances about Troldekt's environmental impacts	31
<b>Labour conditions</b>		
G4-LA1	Workforce and employee turnover	32
G4-LA5	No. of employees in formal committees	33
G4-LA6	Industrial accidents and absence due to illness	33
G4-LA12	Composition of senior employees according to gender and age	33
G4-LA14	Percentage of screened suppliers – Labour rights	34
G4-LA15	Risk classification of suppliers – Labour rights	34
<b>Society and product responsibility</b>		
G4-SO3	Percentage of screened suppliers – Anti-corruption	35
G4-SO4	Implementation of anti-corruption guidelines	35
G4-SO5	Cases of corruption or bribery	35
G4-SO8	Sanctions for non-compliance with laws and regulations	35
G4-SO9	Total number of screened suppliers – Society	35
G4-SO10	Risk classification of suppliers – Society	36
G4-PR01	Assessment of products	36
G4-PR09	Sanctions for non-compliance with laws and regulations concerning use of products	36
<b>Human rights</b>		
G4-HR5	Risk of child labour	37
G4-HR10	Percentage of screened suppliers – Human rights	37
G4-HR11	Risk classification of suppliers – Human rights	37




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**About Troldtekt**

Troldtekt acoustics solutions for ceiling and wall cladding are among the leading products for ensuring good acoustics, efficient fireproofing and a healthy indoor climate. The company's main product is Troldtekt acoustic panels which are made from wood and cement and which are Cradle to Cradle-certified in the silver category. Troldtekt acoustic panels are the obvious choice for ceilings in most types of buildings – from offices and commercial buildings to schools, institutions, swimming pools, sports centres and private homes. Troldtekt A/S was founded in 1855 as a trading company in Aarhus. Since 1935, the company has produced Troldtekt cement-bonded wood wool in Trolldhede in western Jutland.

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**Certifications**

