cpi confederation of paper industries

# THE ECONOMIC VALUE OF THE UK PAPER-BASED INDUSTRIES 2021

The UK's Paper-based industries were recognised by the Government as essential during the pandemic. They played a key role in delivering products including toilet paper, hygiene products for hospitals or food packaging, corrugated boxes for online deliveries, or disposable paper PPE. Paper products have enabled UK society to continue during an international crisis.

# CONTENTS


**Introduction** 3

**Highlights** 4

**Overview** 6
- *Consumption*
- *Production*
- *Turnover*
- *Employment*
- *Sustainability*
- *Energy, Carbon and Water*
- *Decarbonisation*
- *Health and Safety*

**Future UK Investment Opportunities** 20
- *Key Barriers to Realising Opportunities*
- *Energy Cost*
- *Embedded Emissions*
- *Supply Chain*
- *Investment*
- *Skills*
- *Opportunities for Growth in the UK*

**Appendices** 24
- *Appendix 1*
  - *About CPI*
  - *Optimism, Visibility, Community and Sustainability*
- *Appendix 2*
  - *Scope of the Industry Today*
  - *Customer Groups*

**References** 26




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# INTRODUCTION

1 I would like to welcome you all to the third edition of the Confederation of Paper Industries' report into the Economic Value of the UK's Paper-based Industries.

2 2020 was a year of huge challenges, not just for our industry or for the UK, but across the whole world. The effects of the COVID-19 pandemic, coupled in the UK with the disruptive effects of the Brexit process, have led to rapid and substantial changes in the structure of markets, supply chains and society. In 2020, UK GDP fell by 9.9% and, while significant growth is forecast for 2021 and 2022, this remains at the mercy of the evolving public health situation.

3 As for Brexit, the Transition Period for the UK's exit from the EU concluded on 31st December 2020. Whilst the news of a deal has been welcomed by Industry, as the transition came to an end there were some disruptions to supply chains, especially with regards to Northern Ireland and food and drink exports. CPI recognises the issues posed by rapid change in trade policies and regulations. In the months and years to come we hope to see the EU and the UK working together to support their long-term shared interests by ensuring smooth bilateral trade.

4 The events of 2020 have also shown just how important paper is for the proper functioning of society. Whether it is toilet paper, hygiene products for hospitals or food packaging, corrugated boxes for online deliveries, or disposable paper PPE, all these paper products have enabled the UK society to continue to function at a time of great stress. As an industry we can be proud of how we have supported the UK, safely, during one of the most difficult crises of modern times.

5 This report updates the previous information on the jobs and growth within the UK's Paper-based Industries. It also sets out the challenge for the industry in terms of decarbonisation and resource efficiency, in the context of the recently published Industrial Decarbonisation Strategy and the ongoing consultation process on reforms to the UK waste and recycling system.

6 CPI strongly agrees with the views expressed by Chris Stark, CEO of the Committee on Climate Change. We say "NO" to deindustrialisation as a means for the UK to decarbonise. As this report shows, a great proportion of jobs in the UK's Paper-based Industries are outside of London. Retaining these jobs and ensuring their long-term sustainability is vital to the levelling up agenda. The UK should work to keep these manufacturing jobs here rather than outsourcing industrial activity to high-emission countries around the world. The UK is already the world's largest net importer of paper and rather than importing more, from countries less committed to decarbonisation than ourselves, we should be striving to increase UK production, where we can decarbonise as quickly as possible.

7 Therefore, we cannot decarbonise just by making fossil fuels more expensive – that way lies deindustrialisation at a pace not seen since the 1980s. What is needed is a positive environment for the substantial investments that will be required between now and the 2040s. In particular, the UK needs to match the levels of support provided to industry, leveraged from Public and Private Funds, in the European Union, which amounts to €1.85 trillion between now and 2050.

8 In particular, and regardless of whether electrification or hydrogen use is the preferred solution, UK industry needs to see government support focused on three key areas to accelerate the deployment of net-zero compatible solutions for the UK's Paper-based Industries.

- Support for the accelerated depreciation of existing fossil fuel powered CHP assets.
- Assistance to accelerate investment in net-zero compatible heat and power solutions.
- Ongoing support to bridge the price gap between current fossil fuel prices and future prices of net-zero fuel solutions.

9 These are the challenges that lie before the UK Government and UK's Paper-based Industries today. Our industry stands ready to work with the Government to drive the new wave of investment that will be required to build the net-zero future that is imperative for us all. The UK's Paper-based Industries are a key part of the solution to the UK's decarbonisation challenge, and we look forward to working towards that future.

Andrew Large
Director General, CPI

# HIGHLIGHTS

| | | |
|---|---|---|
| 3.63 million tonnes | The UK Paper Industry produced 3.63 million tonnes of paper in 2020 | Production |
| £1.2 billion | The UK's Paper-based Industries invest £1.2 billion annually | Investment |
| 69% | 69% of all raw materials used in UK papermaking are recovered fibres | Recycling |
| Reduction of 72% | Between 1990 and 2019, emissions of fossil $CO_2$ from UK paper mills fell from 6.6 million to 1.8 million tonnes – a total reduction of 72% | Emissions |

**56,000 JOBS**
56,000 people are employed in the UK manufacturing paper and paper products, with 93,000 indirect employees

**1,400 COMPANIES**
1,418 UK enterprises are engaged in manufacturing paper

**£12 BILLION TURNOVER**
UK companies manufacturing paper have a turnover of £12,117 million

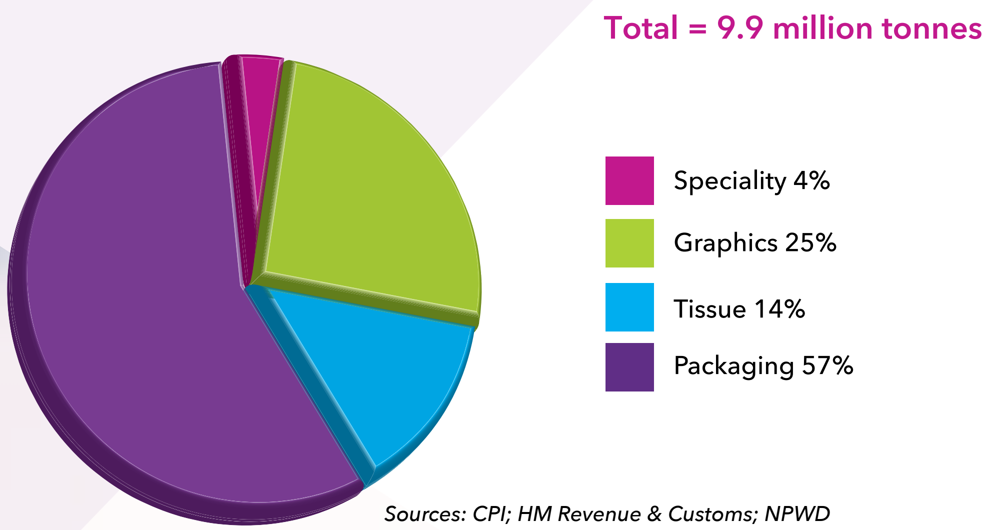
**£3.5 BILLION GVA**
UK manufacturing of paper has a Gross Value Added total of £3,583 million

# OVERVIEW

## Consumption

10 In 2020, 9.9 million tonnes of paper were placed on the UK market[1]. At current consumption rates, that equates to the average UK household using some 419 Kgs of papers and boards per household per year[2]. Chart 1 below shows that over half of all the paper and board placed on the UK market is for packaging, with exactly one quarter for the graphics sector, 14% for tissue and 4% for specialty paper products.

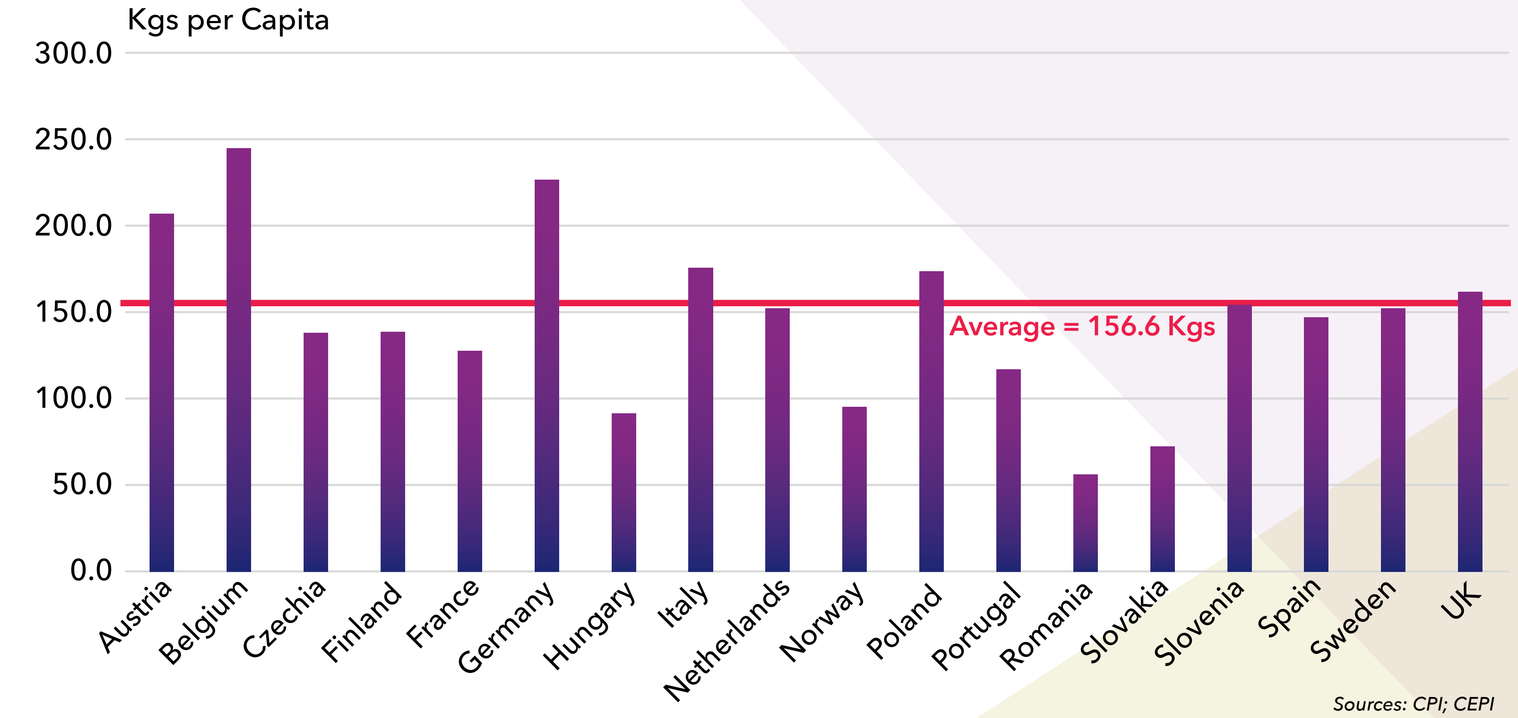
### CHART 1. UK CONSUMPTION OF PAPER AND BOARDS




*Sources: CPI; HM Revenue & Customs; NPWD*

11 The UK remains in the top six European Countries in its per-capita consumption of paper, as chart 2 shows. UK consumption remains above the European average of 156.6 Kgs per person, at 161.4 Kgs[1].

### CHART 2. EUROPEAN PER CAPITA CONSUMPTION OF PAPER AND BOARD




*Sources: CPI; CEPI*

### CHART 3. GLOBAL TOP 10 PAPER AND BOARD CONSUMERS 2019

2019 (Tonnes)

| | COUNTRY | CONSUMPTION* |
|---|---|---|
| 1 | China | 108.4 million |
| 2 | USA | 67.9 million |
| 3 | Japan | 25.5 million |
| 4 | Germany | 18.8 million |
| 5 | India | 17.1 million |
| 6 | Italy | 10.6 million |
| 7 | South Korea | 9.8 million |
| 8 | Brazil | 9.6 million |
| 9 | Mexico | 8.6 million |
| 10 | France | 8.5 million |
| ... | | |
| **12** | **UK** | **8.2 million** |

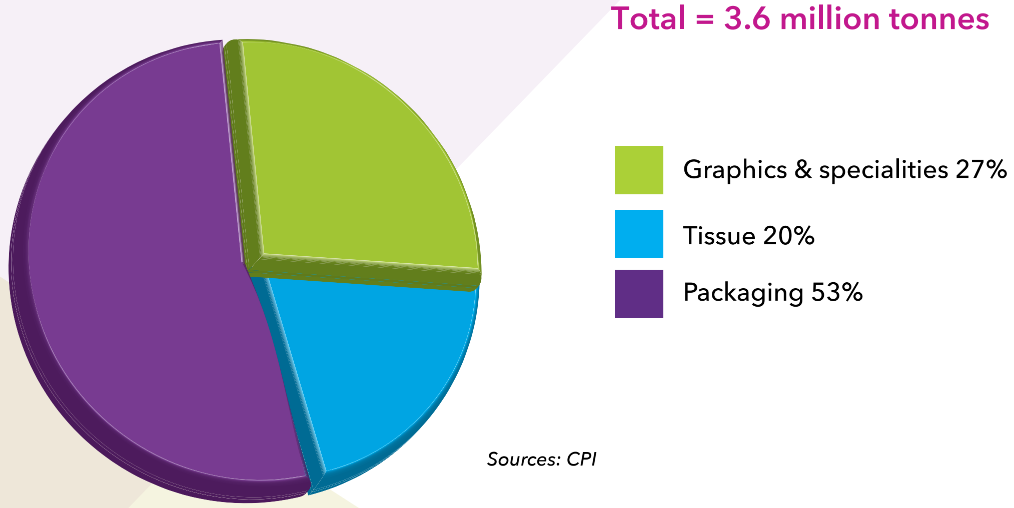
** Excludes converted products and transit packaging* *Source CEPI*

# Production

12 The UK remains a significant producer of paper and board. In 2020, the UK produced some 3.6 million tonnes of material, of which 53% was for packaging, 20% for tissue and 27% for graphics and speciality papers[1].

## CHART 4a. UK PRODUCTION OF PAPER AND BOARD 2020

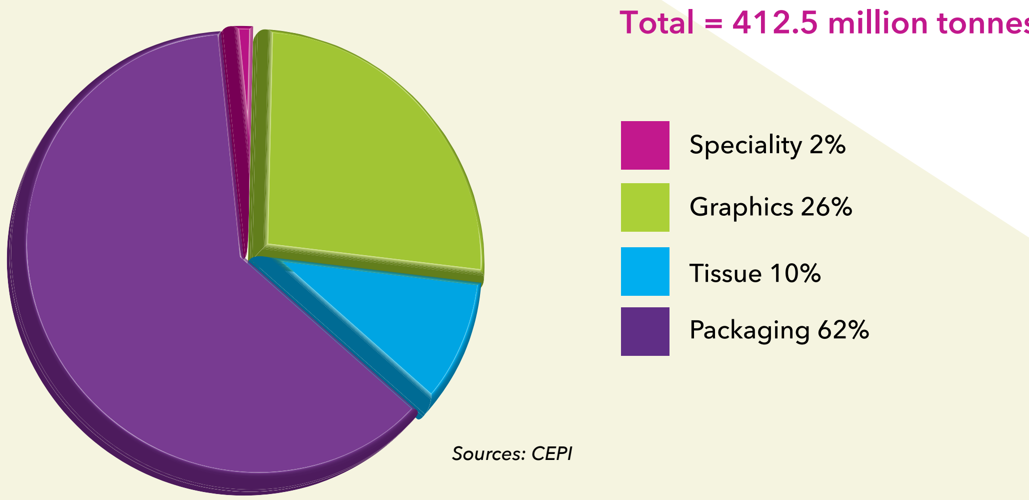
Total = 3.6 million tonnes




*Sources: CPI*

## CHART 4b. GLOBAL PRODUCTION OF PAPER AND BOARD 2019

Total = 412.5 million tonnes




*Sources: CEPI*



## CHART 4c. GLOBAL TOP 10 PAPER AND BOARD PRODUCERS

2019 (Tonnes)

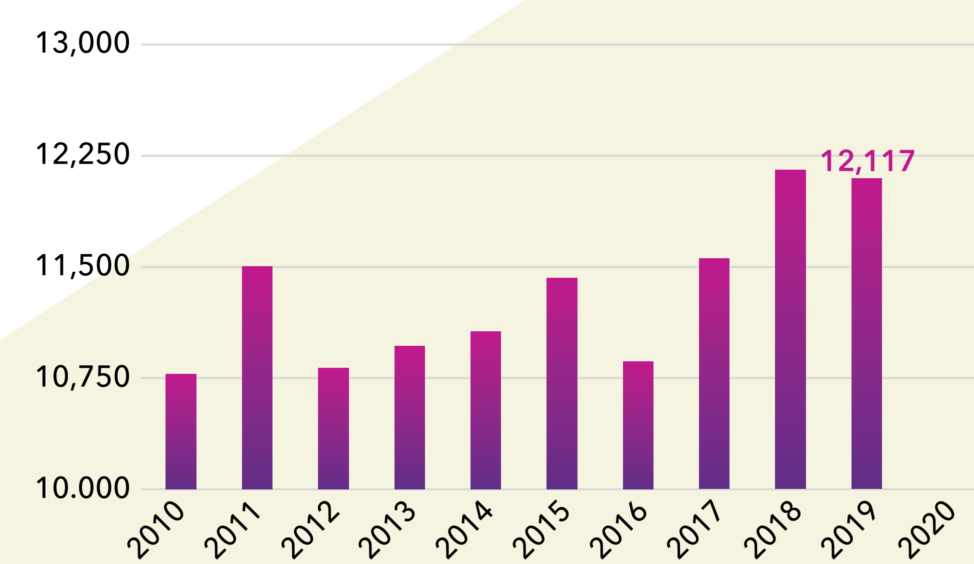
| | COUNTRY | PRODUCTION |
|---|---|---|
| 1 | China | 108.7 million |
| 2 | USA | 69.1 million |
| 3 | Japan | 25.4 million |
| 4 | Germany | 22.1 million |
| 5 | India | 15.4 million |
| 7 | Indonesia | 13.0 million |
| 6 | South Korea | 11.3 million |
| 8 | Brazil | 10.7 million |
| 9 | Finland | 9.7 million |
| 10 | Sweden | 9.6 million |
| --- | | |
| **23** | **UK** | **3.9 million** |

*Source CEPI*

# Turnover

13 The turnover of the UK's Paper-based Industries has been consistent in recent years and has proven to be resilient despite the challenges posed by the COVID-19 pandemic. The industry turnover is £12,117 million showing stable performance since 2010[1].

## CHART 5. PAPER SECTOR TURNOVER




*Sources: ONS, Annual Business Survey 2020*

# Employment

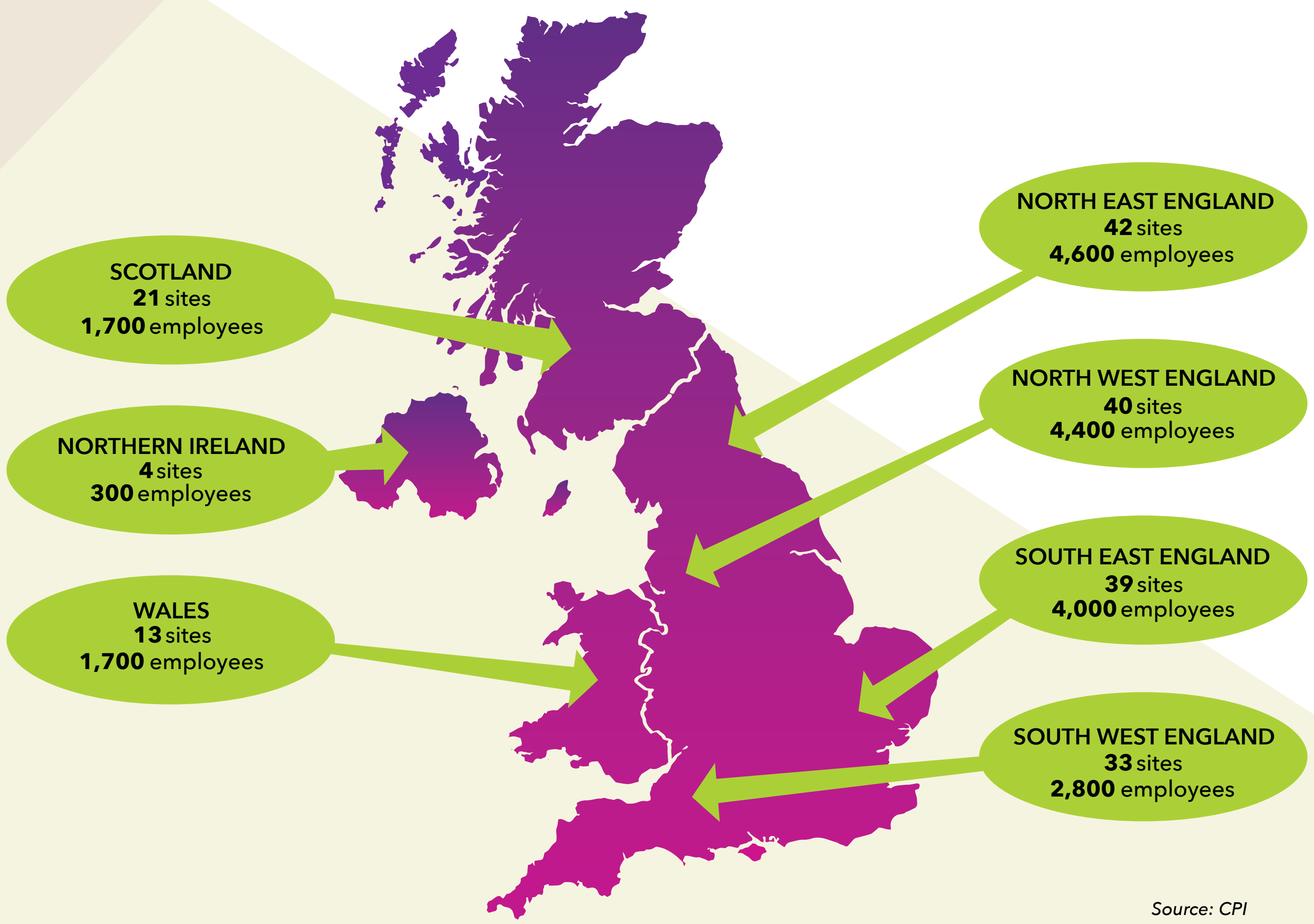
14 The UK's Paper-based Industries are a major employer in UK manufacturing. In 2020 the total direct employment in the CPI membership was 20,501[1].

15 This employment is sub-divided into 9,000 in paper and board manufacturing (including tissue), 11,000 employed in manufacturing corrugated board and boxes, and 1,000 employed in the collection and processing of recovered paper for recycling[1].

16 The Office of National Statistics reports that there are 56,000 employed in the industry overall[1], and the direct supply chain for paper manufacturing and processing supports a further 93,000 jobs in the wider UK economy[2].

17 As well as being significant employers, perhaps more important is the geographical distribution of jobs in the UK's Paper-based Industries. The majority of these jobs are outside of London and the South East. Retaining these jobs and ensuring their long-term sustainability is vital to the levelling up agenda in a post Covid economy. These manufacturing jobs play a vital role in supporting communities and the local economy.

## CHART 6. INTEGRATED PAPER, PACKAGING, TISSUE AND RECYCLING IN THE UK



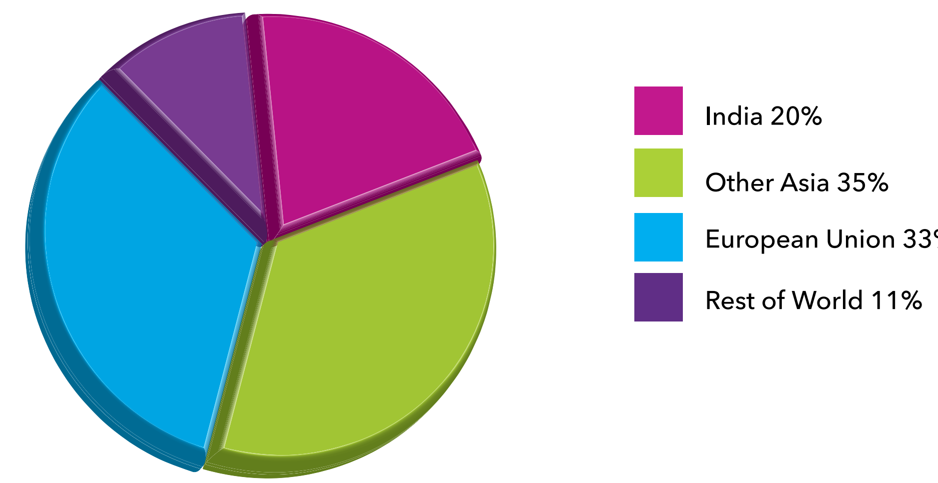

*Source: CPI*

# Sustainability

18 Paper and board are inherently renewable, recyclable, and therefore sustainable materials. The pandemic has shown the importance of corrugated packaging with more people requiring packaged goods than ever before, with countless deliveries during lockdown.

19 Recovered paper is globally traded and in the UK, the recycling of paper is a national success story stretching back over 100 years from when cotton rags were picked for papermaking.

## CHART 7. RECOVERED PAPER EXPORTS BY DESTINATION 2020




*Sources: HM Revenue & Customs*

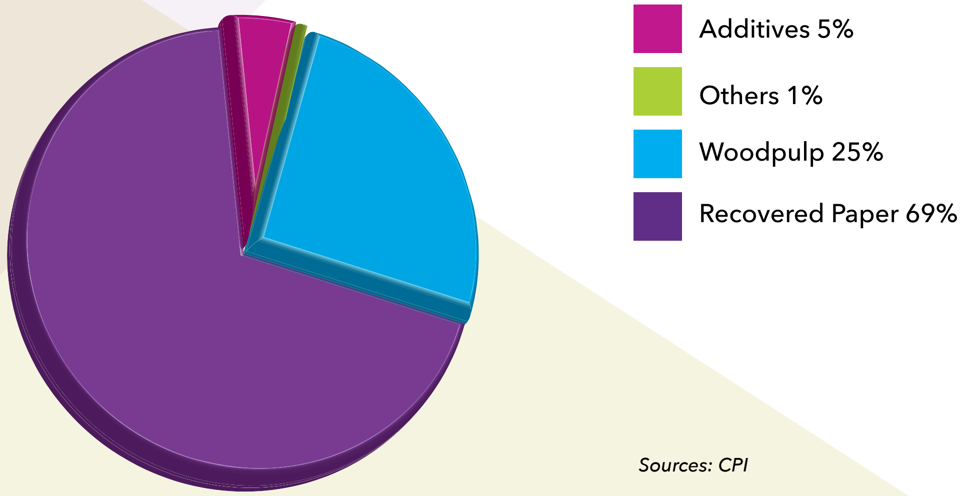
20 Recycling is an intrinsic part of the paper loop. Paper recycling is not a knee-jerk response to environmental pressure. It is an integral part of the UK Paper Industry and it has its own sophisticated infrastructure.

21 Around 80% of UK-made paper utilises recovered paper which is by far the biggest source of recyclate from domestic waste streams. The UK Paper and Board Industry currently recycles around 3 million tonnes of recovered paper (used paper) annually[1]. In 2020, around 6.6 million tonnes of used paper and card were recovered in the UK for recycling, of which 3.8 million tonnes were exported to overseas markets[2].

22 Despite a significant proportion of the public recycling there is still widespread confusion around what should be recycled which has led to increased contamination of paper for recycling, with negative impact on cost efficiency.

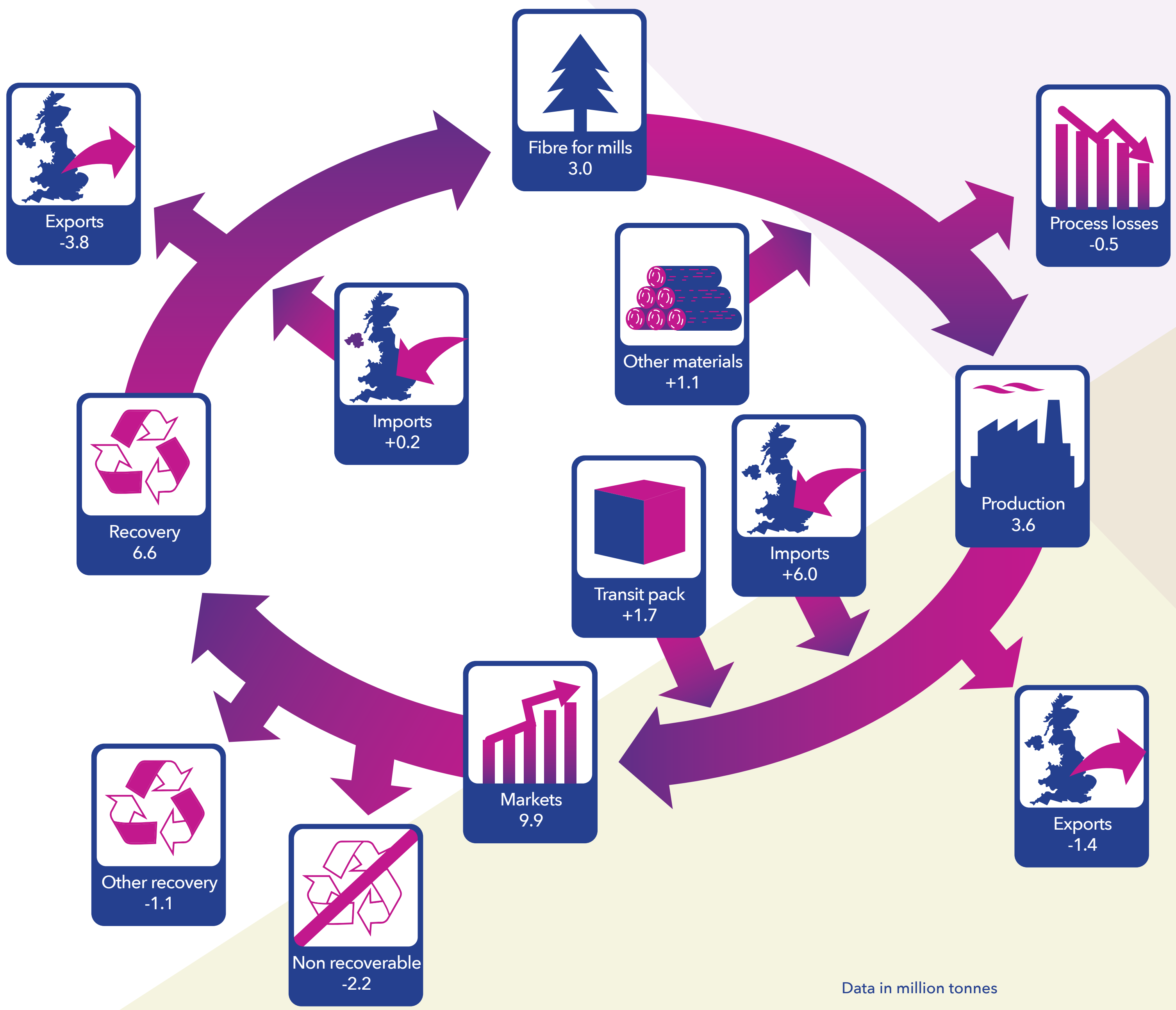
23 CPI has been working hard to promote the environmental and practical credentials of corrugated as a material and discussing in the media the importance of recycling and living a sustainable lifestyle in the modern world as we work towards a more circular economy.

## CHART 8. PAPERMAKING RAW MATERIALS 2020




*Sources: CPI*

## THE PAPER RECYCLING LOOP




Data in million tonnes

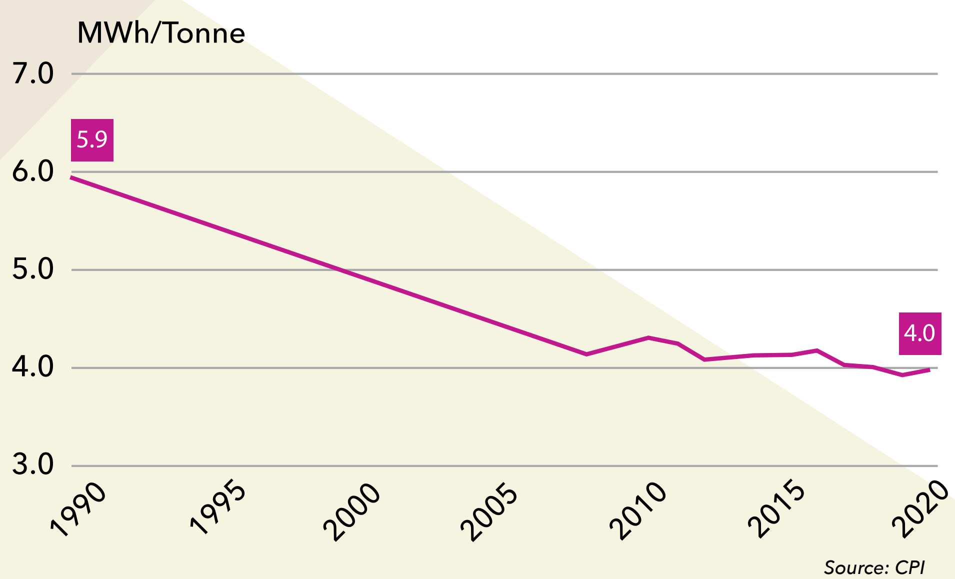
# Energy, Carbon and Water

24 The UK Paper Industry supports the objective of reducing UK Carbon Emissions and reaching net-zero by 2050. The Industry has developed a roadmap in partnership with Government to plan for further emissions reductions in the sector to play its part in delivering the national target. As an energy intensive industry this comes with considerable challenges in respect to cost and effectiveness. It is important the Industry does not decarbonise by deindustrialising.

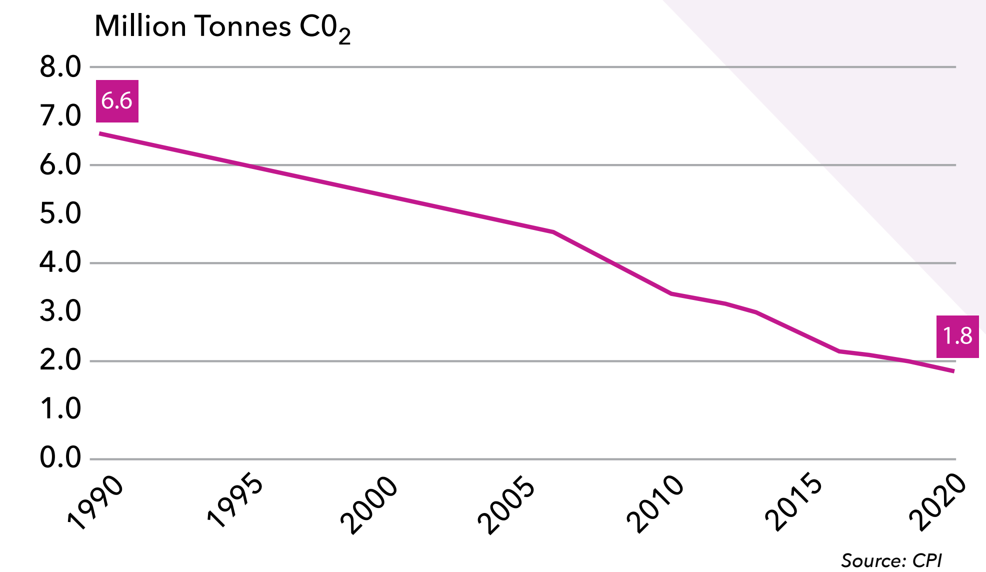
25 UK papermakers have already acted to reduce carbon emissions as set out in chart 10. Between 1990 (the base year for the UK Climate Change Act) and 2020, annual emissions of fossil $CO_2$ (arising from both direct and indirect fuel consumption) from UK paper mills fell from 6.6 million to 1.8 million tonnes – a total reduction of 72%[1].

26 Allowing for changed production levels, this means that in 1990, each tonne of UK made paper resulted in 1.3 tonnes of fossil $CO_2$ being released, while in 2020 this figure has been reduced to 0.5 tonnes – a reduction of more than 60%[1]. This impressive result has been delivered by a combination of new plant and equipment, investment in CHP, improvements in energy efficiency, fuel switching to lower carbon energy sources, and in recent years, a reduction in the carbon content of UK electricity.

## CHART 9. SPECIFIC ENERGY CONSUMPTION FOR PAPERMAKING




## CHART 10. FOSSIL FUEL CARBON DIOXIDE EMISSIONS FOR PAPERMAKING

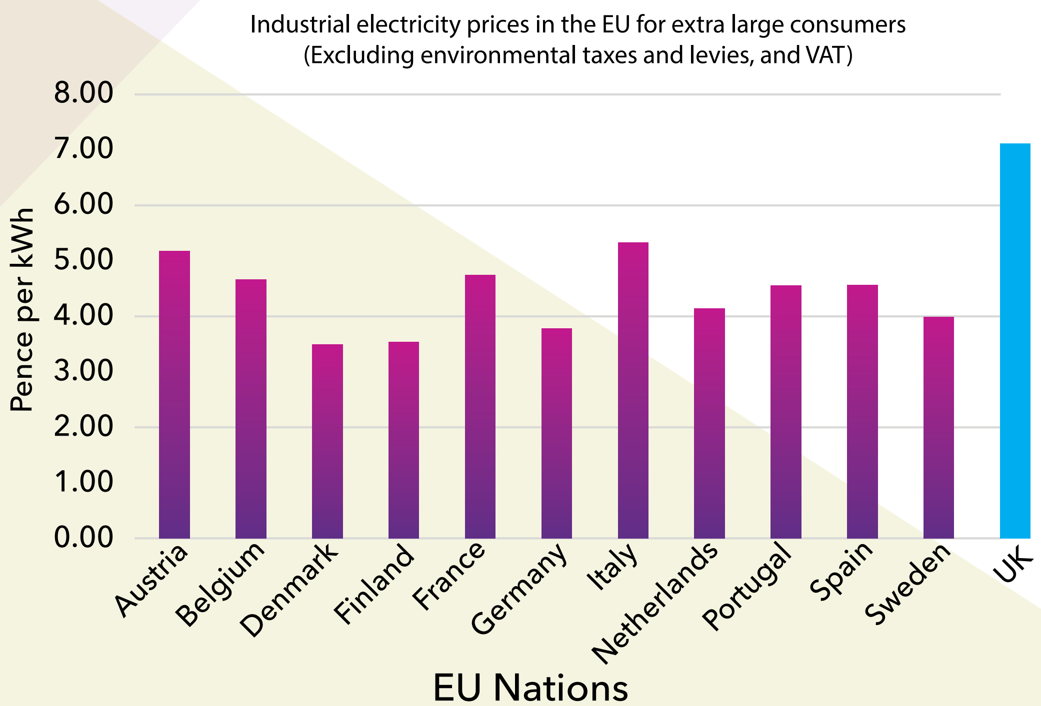



27 Whilst CPI welcomes Government initiatives and policies like the Green Industrial Revolution 10-point plan and the Industrial Strategy Challenge Fund, there are many areas which still need addressing to help support UK industry in the transition to net-zero. There needs to be a greater focus on decarbonising existing foundation industries, which will sustain jobs across the UK.

28 UK industrial energy prices for large users are the highest in Europe, as illustrated below they cost more than double than Germany (7.11 pence per kWh in comparison to 3.80 pence per kWh). These costs need to come down to help stimulate investment in the UK.

29 Natural gas still has an important role to play as a transitional energy source, as alternative technologies are either not yet proven, are unrealistic, or currently uneconomic. Until these alternatives are ready, natural gas, as the lowest carbon fossil fuel, has an important role to play as part of the energy transformation. A key challenge is providing realistic and competitively priced, zero carbon alternatives to natural gas for manufacturing.

## CHART 11. INDUSTRIAL ELECTRICITY PRICES IN THE EU FOR EXTRA LARGE CONSUMERS



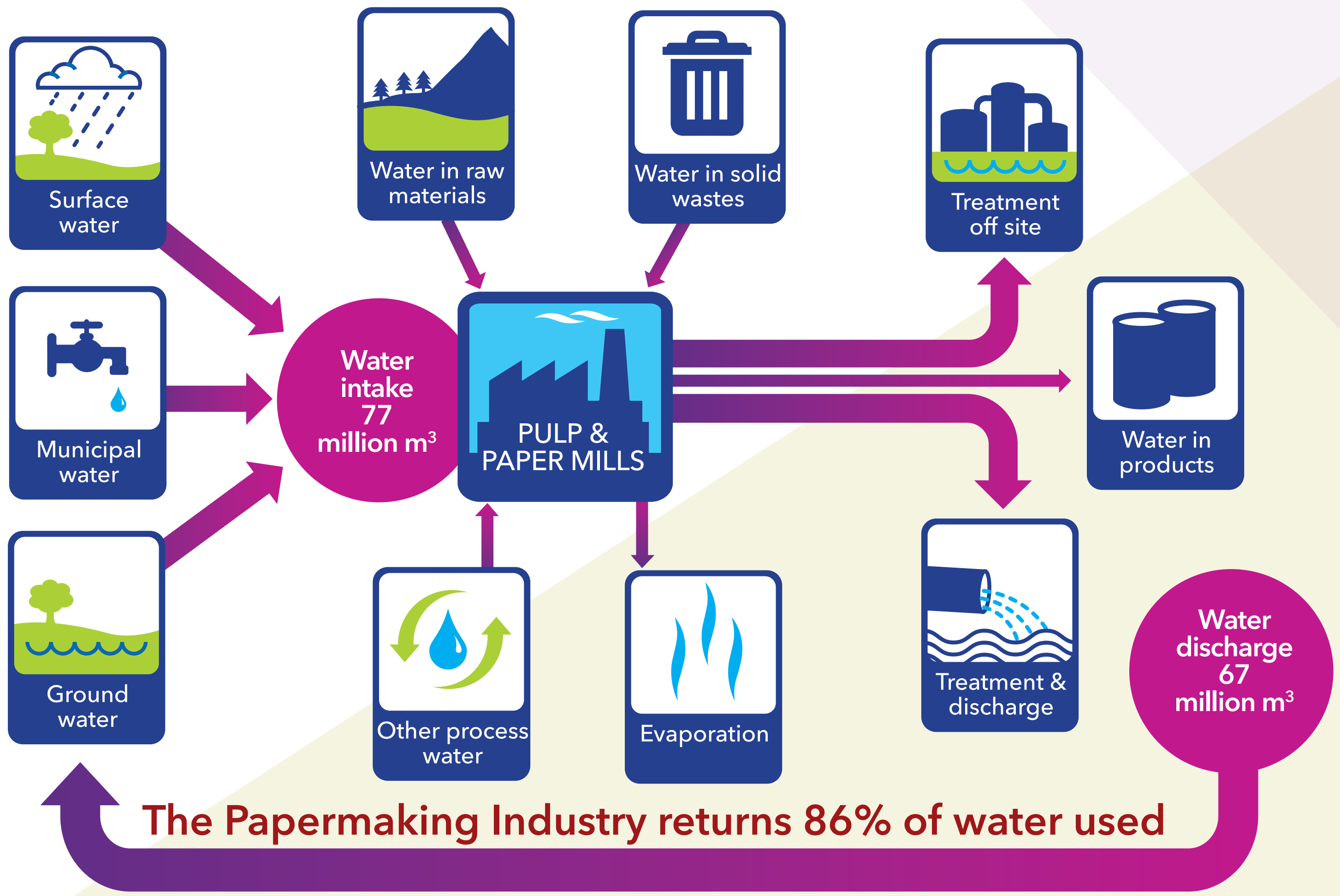

*Source: Department for Business Energy and Industrial Strategy*



30 The UK's Paper-based Industries are a major user of water in the production process. As an industry, we work with Regulators to ensure sustainable abstraction and best practice in efficient water use. Annually, the UK industry takes in (or more accurately borrows) 77 million m³ of water[1].

31 This water comes from a variety of sources, both abstraction from natural water sources as well as embedded water within raw materials. However, the industry does not consume all this water, as some 67 million m³ of water is discharged back to rivers and other water courses every year after treatment. In fact, the sector directly returns some 86% of all water used in our processes back into the environment[1], as the following chart shows.

## CHART 12. WATER USE FOR PAPERMAKING




*Source: CPI*

# Decarbonisation

32 The UK's Paper-based Industries accept the challenge of net-zero emissions by 2050, UK papermakers have already acted to reduce carbon emissions. However, this does lead to challenges, particularly around decarbonising production and long-term investment cycles. The industry is already seeing the impact of this and whilst substantial progress has been made in both energy and carbon efficiency, CPI believes that further long-term support will be needed for energy intensive industries, like the UK's Paper-based Industries, to meet this target. Businesses cannot bear a disproportionate burden of the costs of decarbonisation and remain internationally competitive.

33 **To move towards a decarbonised UK Paper-based industry there needs to be a partnership with Government to deliver:**

- **33.1 Innovation:** Support for research, development, and deployment of new solutions; de-risking financing programmes, and mitigating the first-mover risk from investment in unproven new technologies.
- **33.2 A realistic transition**: Natural gas still has an important role to play as a transitional energy source, as alternative technologies are either not yet proven, are unrealistic, or currently uneconomic. In the absence of such new technologies, natural gas remains the lowest carbon fossil fuel and therefore continues to have a key part to play in the energy transition.
- **33.3 Combined heat & power technology (CHP) is a good fit for the sector.** In the UK, 77% of paper is made at sites using either gas or biomass fuelled CHP, which delivers significant energy and cost savings compared to the alternative of grid supplied electricity and stand-alone boilers used by smaller sites. Removing CHP from the sector would increase carbon emissions by around 28%.

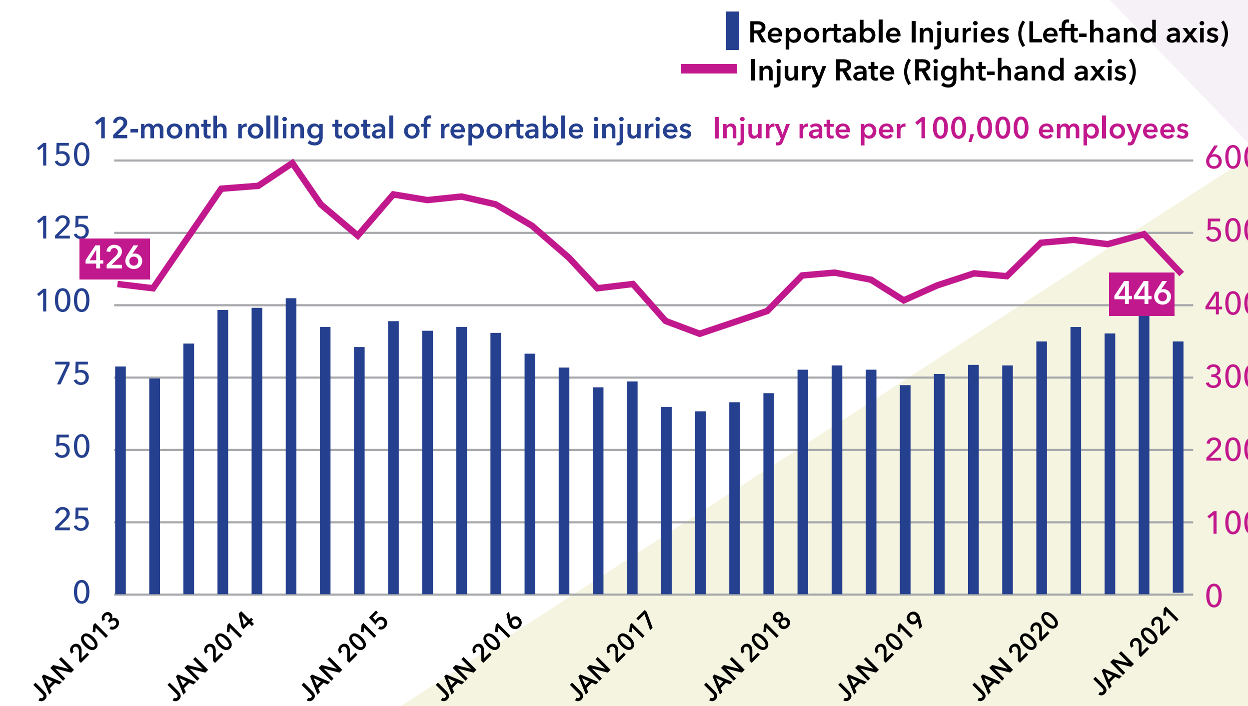


# Health and Safety

34 The health, safety and wellbeing of all employees and workers in the UK's Paper-based Industries continues to be the highest priority for the industry at large. The Paper and Board Industry Advisory Committee (PABIAC), together with CPI, has played a critical role in the efforts to improve standards in the industry and reduce the levels of incidents and injuries.

35 In recent years there has been a significant improvement in performance, and the challenge for the industry is to work to ensure that this is sustained and enhanced. In July 2019, PABIAC launched its new 4-year strategy for industry health and safety, with the aim of driving further reductions in incidents and injuries across the industry. The following chart shows the long-term success of the strategy that the UK's Paper-based Industries have adopted[1].

## CHART 13. SAFETY IN THE UK'S PAPER-BASED INDUSTRIES




*Source: CPI*

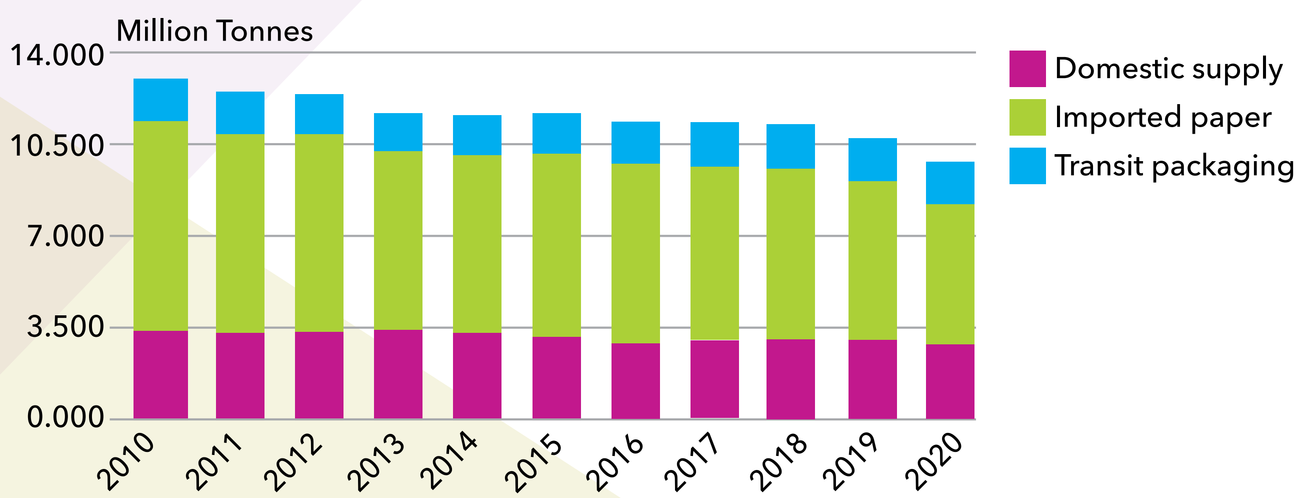
# FUTURE UK INVESTMENT OPPORTUNITIES

36 As the UK works towards post-COVID recovery there is an opportunity to protect and strengthen the UK's Paper-based Industries. Increasing trade with other nations is vital as the UK Paper Industry is a major exporter.

37 In a post-Brexit Britain, trade policy has become a UK competence again. The UK paper industry hopes for a level playing field so that the UK's Paper-based industries can thrive based on their competitiveness and not be damaged by unfairly traded goods on the UK market, nor by unfair barriers to export markets.

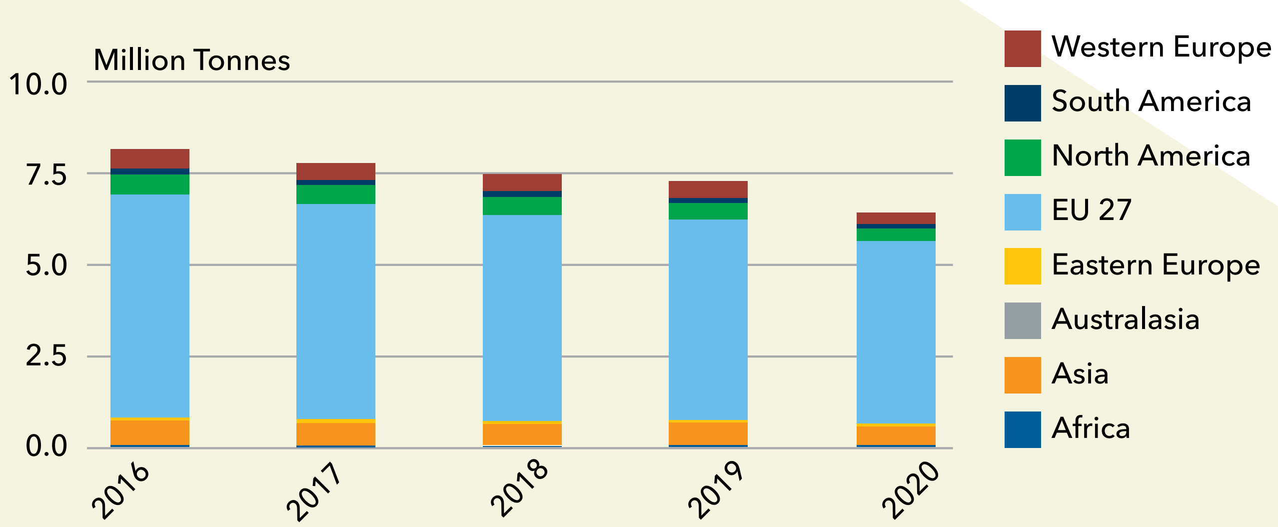
38 In the years ahead the UK must look to attract inward investment, working to see headquarters of major companies here in the UK rather than relying on imports from elsewhere and displacing UK jobs. In the long term the UK must bolster competitiveness to unleash economic opportunities.

### CHART 14. SOURCES OF UK PAPER AND BOARD CONSUMPTION




*Sources: CPI, HM Revenue & Customs : NPWD*

### CHART 15. UK PAPER AND BOARD IMPORTS BY REGION




*Sources: HM Revenue & Customs*

## Key Barriers to Realising Opportunities

39 There are several key barriers in realising opportunities for the UK Paper Industry, particularly in respect to the transition to net-zero while also retaining and building a competitive industry in a post pandemic environment.

### Energy Cost

40 UK industrial electricity prices for large users are the highest in Europe, and they need to come down to help stimulate investment in the UK. A key challenge is providing realistic and competitive zero carbon alternatives to natural gas for manufacturing. There needs to be a wider conversation held around carbon pricing, especially in the context of the UK leaving the EU and the EU Emissions Trading System.

41 Where government provides existing compensation and exemptions for the high energy costs, CPI is calling for these schemes to be extended to bolster the global competitiveness of UK manufacturing.

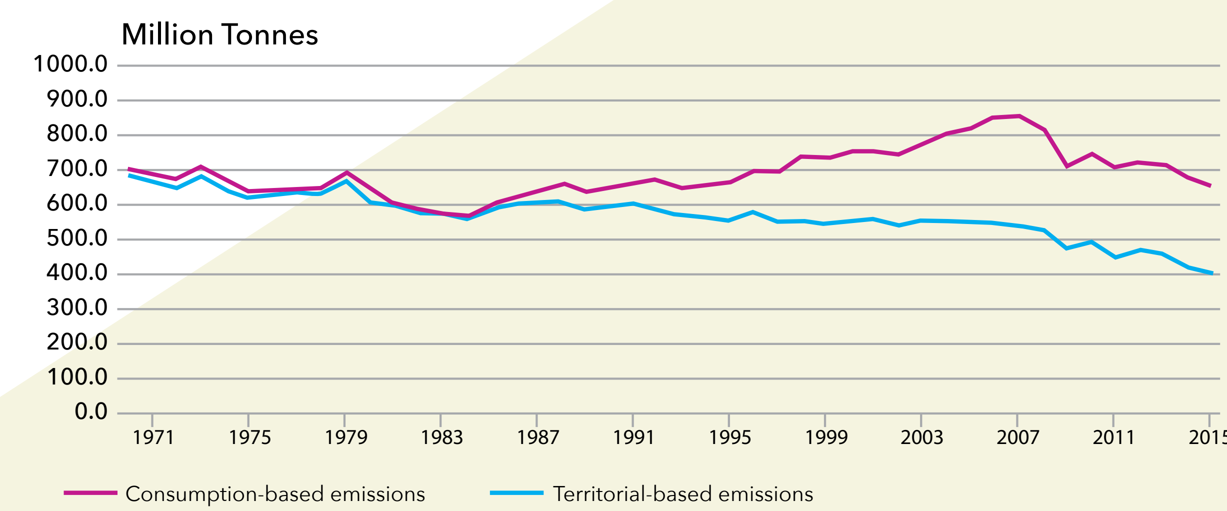
42 Continued action is required on energy cost as a pre-requisite to secure investment on the scale required to deliver the 2050 targets; the alternative is further deindustrialisation.

### Embedded Emissions

43 CPI continues to urge the Government to reform the mandate of the Committee on Climate Change to ensure that it is balanced and considers carbon emissions embedded in imported products in the same way as carbon emissions from UK production. This will remove an incentive for the offshoring of industry and its emissions outside the UK.

44 The Government currently has no explicit ambition to reduce consumption emissions, nor a consumption emissions carbon budget. We argue strongly that such a budget is essential to ensure a balanced decarbonisation across the whole UK economy. There is a need to analyse the desirability and feasibility of a dual pillar approach to carbon accounting, to develop a coherent and responsible climate change policy that delivers for business and the environment in the context of the UK's position as both a territorial producer of emissions and a purchaser of products with embedded emissions.

### CHART 16. CONSUMPTION BASED ON TERRITORIAL EMISSIONS




*Decoupling of GDP per head from $CO_2$ emissions. Source: Euro, 2019. World Resource Institute 2017 and Department for Business, Energy and Industrial Strategy.*
*https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/compendium/economicreview/october2019/thedecouplingofeconomicgrowthfromcarbonemissionsukevidence*

# Key Barriers to Realising Opportunities (continued)

## Supply Chain

45 The pandemic has highlighted the vulnerability of UK supply chains and challenges around the coordination of those supply chains. Unfortunately, one characteristic of the UK's Paper-based Industries is the significant number of non-UK owners of capital assets in the UK. For example, of the ten largest UK papermakers, eight are headquartered outside the UK. This is not a concern in principal, however it raises logistical concerns about the coordination of supply chains, especially where European or global customers are agreeing geographically wide-ranging supply contracts with European papermakers.

46 As we work towards economic recovery through the lens of the levelling up agenda, a key challenge for the UK industry is to ensure that UK facilities are among the most competitive, efficient, and profitable in the portfolio of their owners, such that they are in the first row when investment decisions are being made. The industry, the Government and CPI all have a role to play in supporting this long-term competitiveness.

## Investment

47 In the context of a Paper Industry that is largely owned outside the UK, a key challenge is in securing and retaining the levels of investment required. New investment is vital for this industry if it is to break its dependency on long lived assets and embrace the opportunities offered by transformational change. Moreover, a wider pool of investors is required, with new sources of capital seeking the returns that the circular bio-economy can offer. In each case, both the UK as a location, and the UK-based industry must show themselves to be competitive and at the head of the queue when it comes to investment decision making, much of which takes place outside the UK.

## Skills

48 One of the key cross cutting issues for the UK's Paper-based Industries is the challenge of ensuring that the right skills are available at the right time for the economy. Economically, younger people have been disproportionately affected by the pandemic and their skills must be utilised. It is vital that we work to cultivate right skills for 21st Century manufacturing here in the UK labour market.

49 Previously, CPI has piloted the development of an Apprenticeship Framework for papermaking and welcomes the Government's emphasis on apprenticeships, particularly in manufacturing, however, more needs to be done, particularly in recognition of a shift in the employment market.

# Opportunities for Growth in the UK

50 While the recent history of UK paper production has been challenging, there are real opportunities for future growth in the UK manufacturing of paper. As we work towards post-COVID recovery there needs to be a move towards a 'Green Industrial Revolution' and providing sustainable manufacturing jobs for the next generation.

51 Seizing these opportunities will require a new business model that uses high quality UK recovered paper as a valuable raw material for UK manufacturing, rather than an export commodity for world markets.

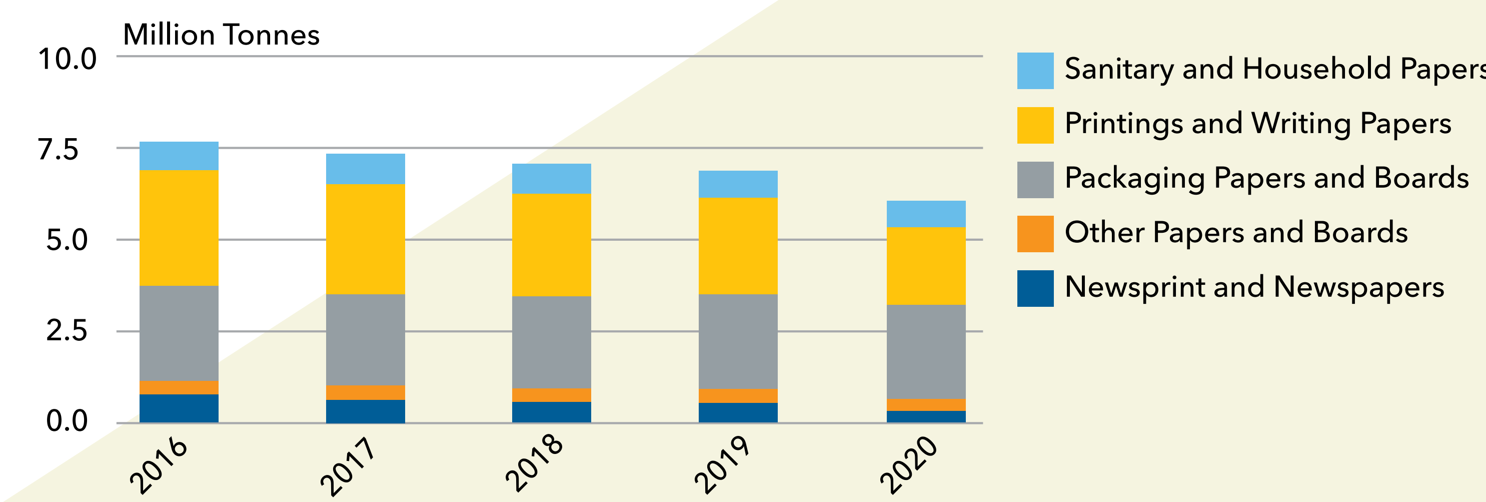
52 In terms of Government policy, a mixture of policies are required to promote growth in UK manufacturing, support the levelling up agenda, and promote sustainable employment across the whole of the UK. Further to this there is a chance to recognise opportunities for paper-based products to build a circular bioeconomy and meet to the carbon and recycling challenges ahead.

53 The biggest market driver for this growth comes from demand for sustainable packaging materials (such as corrugated cardboard with its excellent environmental performance and convenience, as demonstrated by the dependence upon the material for increased deliveries during lockdown) and increased demand for hygiene products, even post-pandemic, as we become ever more hygiene conscious in the pursuit of keeping the virus under control.

54 For sectors such as printings and writings, where competition from digital media has led to a reduction in demand, the level of imports is such that there are good opportunities for UK growth to satisfy a greater proportion of UK demand. Across all sectors therefore, there is a very significant opportunity for increases in production to displace material that is currently imported and drive growth in UK manufacturing.

55 The scale of this opportunity can be seen in the following table.

### CHART 17. UK PAPER AND BOARD IMPORTS BY SECTOR




Sources: HM Revenue & Customs

# APPENDICES

## Appendix 1

### About CPI

56 The Confederation of Paper Industries (CPI) is the leading trade association for the UK's Paper-based Industries. CPI was formed in 2000 as a confederation of the individual trade associations for the steps in the paper supply chain.

57 CPI represents 79 companies in that supply chain. These include paper and board manufacturers and converters, corrugated packaging producers, makers of soft tissue papers and collectors and processors of paper for recycling.

58 The CPI is working to promote:

- a positive image for paper
- secure energy supplies at competitive prices
- resource efficiency within a coherent waste strategy
- the benefits of packaging
- a sustainable UK Paper Industry
- manufacturing as a vital part of a balanced economy
- a competitive, level playing field for the UK's Paper-based Industries

### Optimism, Visibility, Community and Sustainability

59 CPI has four core values. We must be optimistic about the future of the Paper-based Industries in the UK. The Paper-based Industries in the UK have much to be proud about. They have cut carbon emissions by 63% relative to 1990 levels, they innovate in the development of new and exciting packaging and they lead the UK in recovery and recycling.

60 Our optimism needs to go hand in hand with greater visibility in and engagement with Westminster, Whitehall and Brussels. We need to shout louder, more often and in the right ears if we are to successfully influence UK Industrial Strategy and secure any opportunities arising from Brexit.

61 CPI will also help its Members develop roots in their local communities. Our industry is often one of the larger employers in a town, and our "licence to practice" depends on good relations locally and a positive perception of the benefits our industry brings to the community.

62 The fourth value is that of sustainability. CPI must retain attention on the fact that paper is a uniquely renewable and recyclable material and that these qualities make it the sustainable choice for a wide range of applications, today and long into the future.

## Appendix 2

### Defining the Industry

63 Papermaking in the UK has been in existence for hundreds of years, dating back to the 15th century, and the principles of making paper and some of the skills that were used back then are still evident today.

64 In a fiercely competitive global market, innovation, quality, design and service levels are critical to maintaining market share. The level of skills and techniques required to maintain, not only the traditional skills of papermaking, but also the knowledge and essential skills to operator in all other aspects of modern hi-tech industry are crucial to sustaining the UK's Paper-based Industries.

### Scope of the Industry Today

65 The scope of this report covers the following areas of the UK's Paper-based Industries.

- The manufacturing of paper
- The conversion of paper into corrugated packaging
- The conversion of paper into tissue for hygiene products
- The recovery and recycling of paper from both business and consumers

### Customer Groups

66 Paper is a ubiquitous product. Products made of paper and board are sought after by a wide variety of customer groups. Some customers, such as printers, use paper as an intrinsic part of their final product. For others, paper-based packaging is essential in ensuring that their own products get to market with the highest quality.

67 The following list is a small sample of the key customer groups for paper products and the products that they use:

- The NHS
    a. Surgical masks
    b. Surgical clothing
    c. Disposable sanitary products
- Food manufacturers
    a. Transit and shelf-ready packaging for food products
    b. Cereal boxes, egg boxes
    c. Tea bag papers
    d. Greaseproof papers
- Industrial manufacturers
    a. Electrical insulation
    b. Battery separators
    c. Plasterboard liner for construction
    d. Engine filter papers
    e. Industrial hygiene products
- Online retailers
    a. Corrugated boxes for delivery shipments
- Supermarkets
    a. Point of sale packaging and promotional materials
- Printers and publishers
    a. Newsprint for newspapers and magazines
    b. Graphic papers for posters and promotional materials
    c. Papers for book and document printing
- Fast Moving Consumer Goods (FMCG)
    a. Packaging for high-end consumer goods
- Domestic consumers
    a. Toilet tissue
    b. Kitchen paper
    c. Nappies
    d. Hygiene products
    e. Stationary and school books
    f. Passports

# REFERENCES


10.1 - Sources: CPI; HM Revenue & Customs; Environment Agency's 'National Packaging Waste Database', https://npwd.environment-agency.gov.uk/ Paper and board consumption calculated as: [Domestic production of papers and boards] + [Net imports of paper and board products] + [Net imports of paper-based transit packaging around imported commodities]

10.2 - Sources: as 10.1 plus ONS population estimates https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates and ONS average family size (2015 data) https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/adhocs/006257averagefamilysizeukandconstituentcountries2015 UK average family size was 2.84 persons in 2015

Chart 1 - Sources: as 10.1

11.1 - Sources: CPI, as 10.1 and 10.2; Confederation of European Paper Industries (CEPI), Annual Statistics 2020

Chart 2 - Sources: as 11.1

Chart 3 - Source: CEPI global statistics 2019

12.1 - Source: CPI

Chart 4a - Source: CPI

Chart 4b - Source as Chart 3

Chart 4c - Source as Chart 3

13.1 - Source: ONS Annual Business Survey https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/uknonfinancialbusinesseconomy/previousReleases

Chart 5 - Source as 13.1

14.1 - Source: CPI data collected from members

15.1 - Source: CPI data collected from members

16.1 - Source: ONS Annual Business Survey, as 13.1. Total employment average during the year, 2019.

16.2 - Source: As 16.1 with 'Employment multiplier' for SIC 17 = 1.66 from ONS Type 1 employment multipliers and effects by SU114 industry and sector, reference year 2015 https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/ukinputoutputanalyticaltablesdetailed

Chart 6 - Source: CPI data collected from members

Chart 7 - Source: HM Revenue & Customs

21.1 - Source: CPI data collected from members

21.2 - Sources: CPI data collected from members; HM Revenue & Customs

Chart 8 - Source: CPI

25.1 - Source: CPI

26.1 - Source: CPI analysis of data collected from members

Chart 9 - Source: CPI

Chart 10 - Source: CPI

28.1 - Source: IEA

30.1 - Source: CPI surveys of member environmental data

31.1 - Source as 30.1

Chart 10 - Source as 28.1

Chart 11 – Source : Department for Business Energy and Industrial Strategy, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/947040/table_541.xlsx

35.1 - Source: CPI sectoral accident and injury surveys

Chart 12 - Source as 30.1

Chart 13 - Source as 35.1

Chart 14 - Source as 10.1

Chart 15 - Source: HM Revenue & Customs

Chart 16 - Source: ONS

Chart 17 - Source: HM Revenue & Customs

# Paper - the sustainable, renewable choice

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