Annual Environmental Report
2024/25

Keeping people warm,
while protecting
the planet

Cadent
Your Gas Network

Welcome to Cadent's fourth Annual Environmental Report for 2024/25.

This covers the reporting period from 1 April 2024 to 31 March 2025 and aims to inform our stakeholders, customers, and members of the public about our environmental performance and progress against RIIO-GD2. RIIO-GD2 is a five-year price control period set by Ofgem, and the regulatory period runs from April 2021 to March 2026.

The report is prepared in accordance with Ofgem's RIIO-GD2 Environmental Reporting guidance, and data contained within includes all Cadent's networks, unless a specific network breakdown has been stated.

We are Cadent

We are responsible for looking after our gas network so that we can continue to deliver safe, reliable, affordable, and low-carbon energy for years to come. This means we continually explore innovative and sustainable approaches across our Network to deliver work in a safe and environmentally-conscious manner. We deliver the high-quality service that 11 million homes and businesses expect and transport gas to keep our communities safe, warm and connected.

Who we are

We play a vital role in the UK's gas supply chain by delivering gas from source to consumer. Although we don't produce, own, or sell the gas that flows through our pipes, our skilled teams work tirelessly to ensure that gas is delivered to every corner of our network, taking care of the environment in the process. We don't repair gas appliances, and the cost of our services is included in customers' gas bills, but our role encompasses comprehensive maintenance, monitoring, and significant investment in infrastructure to enhance resilience and efficiency. Safety is paramount, with robust quality assurance systems in place to protect employees, customers, and the environment.

These efforts are all driven by our RIIO-GD2 commitments:

- **Delivering a quality experience for all of our customers and stakeholders** – We promise to provide a service experience of the highest quality to all of our customers, tailored specifically to their needs.
- **Providing a resilient network to keep the energy flowing** – We are focused on delivering a resilient network to keep the energy flowing safely and reliably to all of our customers.
- **Tackling climate change and improving the environment** – We are committed to meeting the Net Zero challenge and supporting the transition to a resilient energy system.
- **Trusted to act for our communities** – We are strengthening our reputation through the actions we take, ensuring our service is transparent, valued, and trusted.
- **Turning insight into action** – We use stakeholder insights to prioritise the actions we take across our business.

Underpinned by our values

Our values guide every decision and action we take to ensure integrity, safety and sustainability in all aspects of our work.

We work *together*

We take *responsibility*

We drive *performance*

We shape *the future*

We are Cadent continued

What we do

We place a strong emphasis on innovation to drive future investment, exploring new technologies and methodologies as we continuously strive to improve network efficiency, sustainability, and resilience.

We work as one of four Gas Distribution Networks (GDNs). The remaining three are owned and managed by the following companies Northern Gas Networks, Wales and West Utilities, and SGN.

Additionally, National Gas Transmission owns and operates the high-pressure National Transmission System that transports gas quickly and safely to wherever it's needed in Britain.

We play a vital role in the UK's gas supply chain by delivering gas from source to consumer.

Although we don't produce, own or sell the gas that flows through our pipes, our skilled teams work tirelessly to ensure that gas is delivered to every corner of our network, taking care of the environment while we do so.

Production & Importation	Transmission	Cadent and other gas distribution networks	Supply
Other companies extract, produce and import gas.	National Gas owns, operates and maintains the gas National Transmission System (NTS), comprising high-pressure pipelines and associated assets.	Management and safe delivery of gas to communities › Transport gas to 11 million homes and businesses. › Connect and disconnect homes and businesses to the gas network. › Invest in and maintain the gas network. › Manage the National Gas Emergency Service.	Other companies: › Own and sell the gas that travels through the gas distribution network; and › Send gas bills to customers.

Did you know

1,751km

of Polyethylene (PE) pipe was installed in 2024/25 as part of our ongoing mains replacement work, helping to enhance the safety, resilience and reliability of our networks.

We are Cadent continued

Where we operate

We look after over 131,000km of pipeline and almost 50% of Great Britain's gas customers. We deliver our services from 28 operating areas across 4 networks, each with its own geographical and social requirements.

North West

Sitting between the Pennines and the West Coast, encompassing Ambleside in Cumbria at its northernmost tip, and Whitchurch in the south. The gas distributed in the North West network is used by 2.7m homes, businesses, and for industrial purposes; this is far higher than any other gas distribution network in Great Britain.

2.7m homes and businesses

1,567 colleagues

West Midlands

The only network without a coastline, landlocked amidst neighbouring networks – North West, Eastern and Wales, and West. The network includes the UK's second-largest metropolitan area of Birmingham and incorporates other major cities, large towns, and smaller urban areas.

1.9m homes and businesses

1,054 colleagues

North London

The network has the largest population of high-rise multi-occupancy buildings in the UK. Whilst it is stacked high, it also has many layers of buried infrastructure going back hundreds of years. The network extends from Central London, covering the north of the River Thames, to High Wycombe in the West and Southend-on-Sea in the East.

2.2m homes and businesses

1,524 colleagues

Eastern: East Midlands and East of England

Serving customers across the Eastern region; from Humberside down through Lincolnshire, Norfolk, and Suffolk. The networks also serve the cities of Sheffield in the North, Derby, Nottingham, Leicestershire in the East Midlands, and Cambridge in the South, as well as the northern part of the M25 corridor.

4m homes and businesses

2,216 colleagues

Leading the way

With reductions in both carbon emissions and waste as well as initiatives to improve local biodiversity, we are looking forward to continuing our contribution toward a greener society over the next year."

Steve Fraser
Chief Executive Officer

We deliver an essential service every day to over 11 million homes and businesses in the UK. We understand and are constantly looking for ways to manage the impact that our operations and activities have on the environment and climate.

Our commitment to keeping people warm while protecting the planet remains strong and in 2024/25, we have yet again made significant progress toward our Environmental Action Plan (EAP) targets, including:

- We reduced our Scope 1 and 2 emissions by 5% and total waste volumes in our office and depots by 19% compared to last year.
- We reached a key milestone with all company cars now either Electric Vehicles or Plug in Hybrid Electric Vehicles.
- We published our first Biodiversity Policy and aligned our environmental management system to the biodiversity benchmark requirements.
- We enhanced biodiversity and local habitats in and around our local depots with our Depot in Bloom competition.

Reflecting on our progress and ongoing commitment to Environmental, Social and Governance (ESG), we continue to achieve positive results for sustainability performance benchmarks against three separate benchmarks. We will continue to deliver on this strong performance as we approach the end of the RIIO-GD2 period in March 2026.

Looking ahead, we are working with government, industries and communities to unlock the potential of greener gasses (hydrogen and biomethane) across the UK, reduce our gas leakage and explore the value of hybrid heating systems in giving consumers choice in how they decarbonise. Increasing our biomethane connections is a key part of our strategy. Our network is connected to 47 biomethane production sites and we are looking to increase these to support the UK's climate targets while delivering enhanced energy security.

There is a continued need to invest in our networks so that we can play a crucial role in delivering net zero. Our RIIO-GD3 plan for 2026-2031 is built on this principle and the strong progress we are making in RIIO-GD2. It will take us on the next step of our journey and ensure we can do the very best for our customers in the decades to come.

Our environmental impact and responsibilities

ISO14001 Environmental Management System

Our Environmental Management System is the framework in which we identify, manage and minimise our environmental impact. A crucial part of this is identifying environmental risks, and associated controls to mitigate as far as practicable the wider impact of our operations and activities. ***Our policy*** outlines our key focus areas. This policy is embedded in Cadent through our suite of management procedures and communications to ensure we not only comply with legislation but also adopt best practices to prevent harm to the environment. Our Environmental Management System is externally audited to ISO 14001:2015 and we maintain a rigorous internal audit programme to ensure we maintain compliance and continually improve our system.

Our Environmental Strategy

We have a five-year business strategy document that describes the details behind our Environmental Action Plan and our commitments over the RIIO-GD2 price control period. Our Environmental Action Plan aims to drive the transition to Net Zero whilst improving the natural world in support of our Greener Society pillar within our sustainability framework.

You can read more about our 30 commitments on page 9

Cadent's Net Zero Roadmap

In 2024/25 Cadent emitted 1.17 million tCO_2e of greenhouse gas emissions (GHG) (Scope 1 and 2 location-based including shrinkage). Our current GHG reduction target, developed with The Carbon Trust, is to reduce Scope 1 and 2 emissions (location-based), by 43% by 2036 (2019/20 Base Year, equating to a Well Below 2-Degree pathway as per the Paris Agreement).

This target is set and based on our current RIIO-2 regulatory settlement and is supported by initiatives and commitments made in our EAP. The Science Based Targets initiative (SBTi) Oil and Gas methodology is currently on pause in 2025, meaning we are unable to verify our targets and emission reduction pathway with this body at this point. We have worked with the Carbon Trust and have successfully met their 'Taking Action' threshold against their Route to Net Zero works and now annually have our Scope 1, 2 and part of our Scope 3 data externally audited.

We are dedicated to monitoring and reviewing our performance and updating as necessary, based on the latest climate science and models, as we recognise that the future energy landscape will change rapidly during this period.

We have also undertaken screening of our Scope 3 emissions and identified action plans to improve data quality, quantity and assurance in reporting each year.

Sustainability Benchmarking

We regularly assess our sustainability maturity by benchmarking ourselves against our peers, through several internationally recognised benchmarks. This provides a transparent view to our stakeholders and allows us to develop action plans to drive improvements.

We have been assessed against three leading Environmental, Social, and Governance (ESG) benchmarks in 2024/25. These include The Global Real Estate Sustainability Benchmark (GRESB), Sustainalytics, and Morgan Stanley Capital International (MSCI). Results are currently not finalised for 2024/25 but are expected to follow the very positive results of 2023/24, reflecting our commitment to ESG and creating a positive social impact. As a result of our work in 2024, Cadent is now recognized as one of the top-performing companies rated by Sustainalytics (based on our ESG Risk Rating score).

We continue to report and review different types of ESG benchmarking, demonstrating our continued push for environmental improvements and the external recognition of our sustainability credentials.

GRESB INFRASTRUCTURE sector leader 2024 | MSCI ESG RATINGS AAA | SUSTAINALYTICS INDUSTRY TOP RATED

ESG benchmarking is a crucial process for us to understand our sustainability performance, identify areas for improvement, and ultimately drive positive change in our business operations to contribute to a more sustainable future."

Stacey Weeks
Sustainability Manager

Our environmental impact and responsibilities continued

The UN Sustainable Development Goals

In September 2015, the UN 2030 Agenda for Sustainable Development was launched to create a fairer and more sustainable world. As part of the agenda, 193 world leaders agreed on 17 Sustainable Development Goals (SDGs) and 169 targets to tackle the world's most pressing issues. These targets aim to end poverty, combat inequality, and address the urgency of climate change. They serve as indicators for the achievement of the SDGs and play a crucial role in tracking our progress towards reaching the SDGs.

Our mission aligns with the ideals set out in the SDGs. We recently completed a double materiality assessment to ensure we prioritise the environmental, social, and governance issues relating to our operations within our business.

We completed a series of workshops and engagement activities to drive clarity, purpose, and relevance into our sustainability strategy. The results developed a set of double materiality matrices that weighed the importance of an SDG to stakeholders against our ability to impact or be impacted by the topic.

United Nations Department of Economic and Social Affairs – *Sustainable Development*

We used the results to develop SDGs of high impact and high importance to form the foundation of our Force for Good strategy and the basis of corporate reporting.

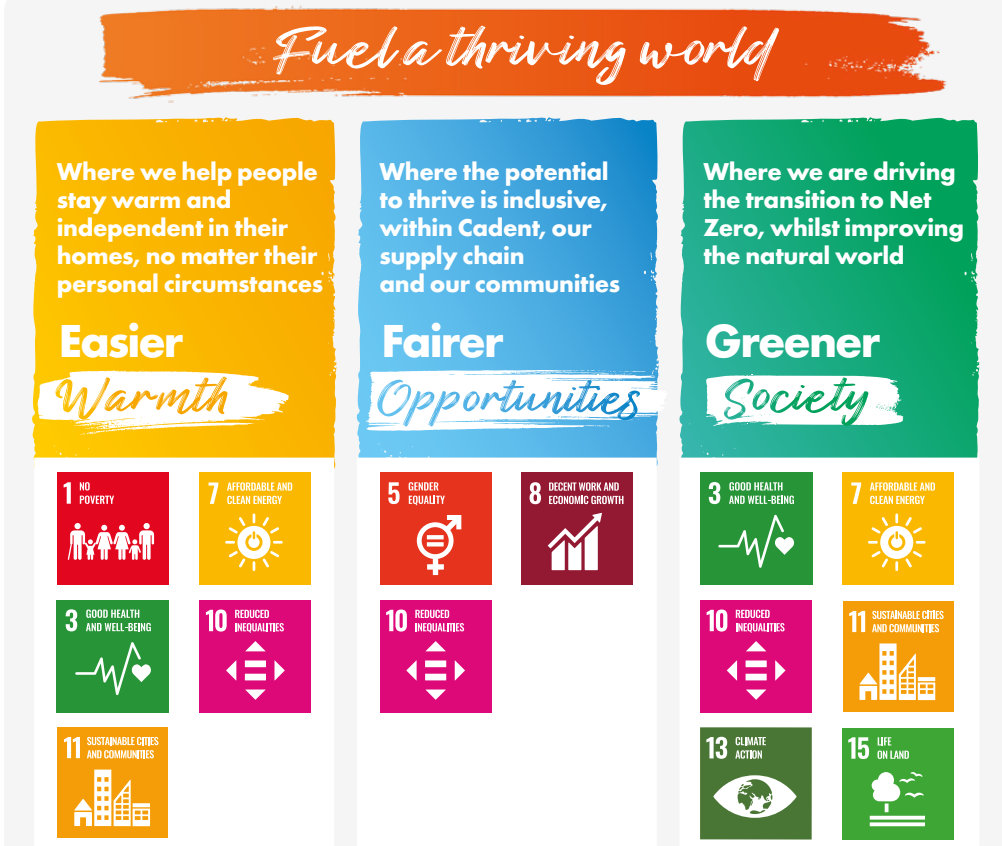
These cover topics including:

- Good health and well-being.
- Affordable and clean energy.
- Industry, innovation, and infrastructure improvements.
- Climate action.

The SDG Ambition Rating (by Support the Goals) rewards businesses for supporting key sustainable development areas outlined by the UN Sustainable Development Goals (SDGs). With five criteria, businesses gain stars for developing a strong sustainability strategy aligned with the SDGs, communicating their targets against this and showcasing their actions.

Our publicly disclosed information has been researched and reviewed against the SDG Ambition Rating criteria, achieving five full stars, the maximum, for our work around net zero, biodiversity, waste, gender equality and the living wage.

You can read more about our Sustainability credentials and benchmarking scores in *our 2024 Sustainability Report*



Key environmental performance indicators

Table 1 – Key performance indicators on our Environmental Action Plans

	Environmental Impact and KPI	2024/25 Performance	Find out more
Contribution to energy system decarbonisation	Annual addition of low carbon and renewable energy capacity to the Network	21,839 SCMH	Pg 17
	Annual investment in ongoing innovation activities that are primarily supporting decarbonisation and/or protecting the environment	£7.2m (on innovation (NIA) across the Future of Gas programme activities and SIF). This does not include HyNet Phase II costs, as these are under other funding mechanisms (i.e. not innovation funded).	Pg 19
Climate change impacts	Licensee's long-term greenhouse gas reduction target, aligned with a science-based methodology, and where possible validated externally such as with the SBTi or equivalent	-43% from a 2019/20 baseline (SBTI aligned) by 2036.	Pg 21
	Annual change in licensee's business carbon footprint excluding losses/ shrinkage in comparison to its end of RIIO-2 target	-8% annual change in Scope 2 and 2 emissions (excluding shrinkage). We have exceeded our 2026 target.	Pg 22
	Annual change in total shrinkage (GD only)	-4%	Pg 23
Resource use and waste	Annual total waste (office, network depots, construction)	689,214 tonnes	Pg 32
	Fate of waste: Reduced	0%	Pg 32
	Fate of waste: Prepared for re-use	0%	Pg 32
	Fate of waste: Recycled	98.04%	Pg 32
	Fate of waste: Other recovery	0.13%	Pg 32
	Fate of waste: Landfilled	1.83%	Pg 32
Sustainability procurement	Proportion of suppliers meeting the licensee's environmental supplier code or equivalent	90% by spend value.	Pg 31
Local environment	Annual investment in schemes to enhance/ restore local environmental quality	£0m	Pg 38
	Land area being treated in schemes to enhance/ restore local environmental quality	83 baseline surveys completed over RIIO-GD2.	Pg 38
	Net change in biodiversity units from network development projects granted planning consent in the year that impact the local environment	Not reported in 2024/25 (6 projects going through planning consent where mandatory 10% Biodiversity Net Gain is required).	Pg 38
	Number of reportable environmental incidents	6	Pg 41

Environmental Action Plan commitments

We deliver an essential service every day to over 11 million homes and businesses in the UK but we also understand that our operations and activities can have an impact on the environment and climate.

These interactions with the environment and climate are the basis of our environmental focus. Our Environmental Action Plan (EAP) consists of 30 targets that guide us in minimizing impacts. These targets are grouped under the following headings:

- Decarbonising our business operations (11 actions).
- Reducing our environmental impact (5 actions).
- Facilitating the low-emissions energy system transition (14 actions).

Status updates against these targets are shown below. On the following pages, additional case studies can be found that demonstrate how we strive to deliver additional improvements outside of these targets wherever we can.

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
			Part 1: Decarbonising our business		
1. Accreditation of environmental goals	**We will regularly review our long-term targets beyond RIIO-2 and pursue accreditation of our goals and programmes from the Science based Targets initiative.**	2026	Regularly review and report internally and externally our Business carbon Footprint against the SBTI target for Cadent. Work with The Carbon Trust to review and monitor Cadent's Net Zero pathway based on the SBTi target.	🟡	The amber status reflects the limiting factor with the SBTI gas and oil methodology which is on pause and will not be publicly available to assess against. We were certified against the Carbon Trust's Route to Net Zero 'Taking Action' level in 2024/25. In 2025, we have been working with The Carbon Trust for a third year to verify our 2024/25 Business Carbon Footprint data. This is partial verification of our total footprint for the financial period spanning April 2024 to March 2025.
2. Shrinkage reduction	**We will achieve and strive to outperform our reputational shrinkage incentive target for RIIO-2. We will report progress and the specific actions we have taken to achieve this in our Annual Environmental Report.**	2026	Pressure maintenance and Monoethylene glycol (MEG) leads are maintaining performance and a focus on two key areas for shrinkage reduction.	🟢	Performance against reputational output incentive targets is on track for outperformance based on 2024/25 regulatory position which is 973 GWh against a target of 1010 GWh.
3. Theft of Gas	**As one of the components of shrinkage, we will maximise the benefit to customers and stakeholders from a theft of gas incentive, and our ambition is to recover at least £8m over the RIIO-2 period.**	2026	An additional Meter Point Reference Number (MPRN) management team to aid proactive detection of theft of gas through investigation of wider industry reporting.	🟢	In 2024/25, 403 theft cases were under investigation, and we have currently recovered £3.1 million from theft of gas cases. The collective total at the end of March 2025 was £6.6 million and we are on track to meet and potentially exceed the £8 million target by the end of the RIIO-GD2 period.
4. Energy Efficiency	**We will reduce all utility energy consumption by at least 10% by 2024.**	2024	Based on a baseline from 2019/20, Cadent has reduced our overall gas and electricity consumption by 38.6% based on data received in 2024.	🔵	

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🔵 Action has been completed
⚫ This action plan is now not applicable/was not started/or not funded at the start of the RIIO-GD2 price control

Environmental Action Plan commitments continued

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
5. Renewable Energy	**We will procure 100% certified renewable energy to meet our energy needs by 2026.**	2026			In 2024/25, we maintained that both gas and electricity procured contracts are from 100% renewable energy sources, supported by Renewable Energy Certificates.
6. Business Milage	**We will deliver a 15% reduction in our business mileage emissions intensity through RIIO-2.**	2026			At the end of 2024/25, there had been a 38.8% reduction from the baseline year (2019/20) in business mileage emission intensity. Our fleet of 1,232 company cars now consists of 68% EV and 32% PHEV.
7. Vehicle fleet	**We will target a zero emission first responder vehicle fleet across all of our networks by the end of RIIO-2.**	2026			Over the RIIO-GD2 period to date, we have procured 509 EV first responder vehicles for our Cadent fleet and fitted 335 EV charging points. Cadent are leading the sector as the only GDN to have this volume of EV vehicles in our commercial fleet. We have also taken delivery of 9 larger EV vans into our Energy Operations teams to test their range before making a decision as to whether they will be a suitable operational vehicle. Although the RAG status is reflected as amber, this is due to the decision to hold the project for EV delivery based on the mileage limit in First Responder vehicles and the fleet not being fully EV.
8. Embedded carbon in pipes and fittings	**We are targeting a reduction in carbon intensity of our pipes and fittings throughout RIIO-2 by delivering the recommendations of a report to be published by 31 March 2021, setting out the opportunities and barriers to reducing the carbon intensity of PE pipe and fittings.**	31-Mar-21	Embodied PE pipe is measured in our scope 3 emissions		Regular engagement with PE pipe suppliers and the reporting of data through the Carbon Reporting Tool. For example, one supplier has reduced the embodied carbon from 2.6 to 2.3 CO_2e per tonne of saleable produce. Overall, we have seen a 29% reduction in emissions associated with embodied carbon for purchased PE pipes.
9. Work with suppliers to reduce emissions	**We will work with our suppliers to extend the measures of, and continually reduce, Scope 3 indirect emissions.**	2026	Partner of the Supply Chain Sustainability School to facilitate engagement. Metrics agreed, and monthly reporting was initiated.		Our suppliers continued to engage with the Supply Chain Sustainability School in 2024/25 by attending sustainability workshops and completing e-learning training. More information can be found on page 30.
10. Measuring the carbon intensity of major projects	**We will develop out methodology to measure and report on the carbon intensity of major construction projects.**	2026	Full Life Cycle Analysis was carried out against baseline design and reduced carbon intensity designs. Potential reduction of 84.3% carbon. The concept development phase was imminent. Exploring innovation funding for the Carbon Net Zero scope.		Completed a Carbon Life Cycle Assessment (LCA) at the Burwell AGI to establish a baseline carbon impact of the project. Throughout the design stage, the LCA was continuously updated to assess the potential carbon savings and identified that up to 84% of carbon reductions could be made if all solutions were implemented.

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Environmental Action Plan commitments continued

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
11. Carbon offsetting	**We will offset all residual unavoidable emissions to become a certified net-zero company using UN certified UK based schemes.**	2026	Following the prioritisations review, including a cost-benefit assessment, this initiative has not been taken forward during this price control period.	●	
			Part 2: Reducing our environmental impact		
12. Waste from excavations	**During RIIO-2, less than 5% of our waste from excavations will be sent to landfill.**	2026		●	3.49% of spoil from excavations was sent to landfill in 2024/25 across the Networks.
13. Minimising use of first use aggregate	**During RIIO-2, less than 10% of our backfill will be first use aggregate in the Northwest and East of England, and 5% in the West Midlands and North London.**	2026		●	Each Network has met the targets for first-use aggregate to date (31 March 2025). • 0.58% North West • 1.03% East of England • 2.64% East Midlands • 2.95% West Midlands • 1.01% North London
14. Sustainable Procurement	**In our annual environmental reporting, we will include a summary of the environmental and sustainability criteria we have used in all significant procurement events.**	2026	Continuously covered through PPQ (sustainability of a contractor) and Supply Chain Sustainability School onboarding for suppliers, including the tendering process.	●	***Supplier Code of Conduct***, available on Cadent's external webpages, details several sustainability criteria for the supply chain, including health and well-being, safety, protecting the environment, human rights, slavery and trafficking, and conflict minerals. This has undergone an annual review in January 2025.
15. Reducing our employees carbon footprint	**We will work with our employees to help them, and their communities deliver a reduction of 5,000 tonnes CO_2e a year by the end of RIIO-2.**	NA	Following the prioritisations review, including a cost-benefit assessment, this initiative has not been taken forward during this price control period.	●	We encourage our employees to use 2 volunteering days per year to give back to their communities, including the local environment, and since 2022 have offered a car share scheme.
16. Key site environmental enhancement plans	**We will publish our key site environmental enhancement plans as part of our environmental and sustainability annual reporting before the start of RIIO-2. We will then update these plans, and report on performance and delivery annually through the RIIO-2 period. We will undertake The Wildlife Trust biodiversity benchmarking process to ensure that our plans are robust and confirm to these externally assessed standards.**	2026	Key site enhancement plans are in development for 5 flagship sites, undertaking external benchmarking next summer. Biodiversity Management System in development.	●	The Wildlife Trust has been instructed to conduct the first Benchmarking assessment in the North London and West Midland Networks in July 2025. To support the Benchmark clauses, the requirements have been integrated into our Environmental Management System, which has been internally audited and supported by the publication of Cadent's Biodiversity Policy.

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Environmental Action Plan commitments continued

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
17. Review of distributed gas entry arrangements	**We will lead an industry review of distributed entry gas commercial arrangements to establish methodologies that are robust, sustainable, and scalable, with the ambition of presenting initial change proposals to Ofgem prior to the commencement of RIIO-2.**	Before RIIO-2	Submission of revised connection charging methodology to Ofgem.	●	Throughout RIIO-GD2, Cadent has sought to develop a new set of connection charging rules for distributed entry gas that would apply to all GDNs, as our customers do not limit their operations on GDNs territory. This inevitably resulted in a slow pace of progress as not all the GDNs placed the same priority on this work. An all-network consultation was completed in 2022, and the networks then worked together to determine our preferred approach. We have now submitted our proposals for a funding re-opener and our charging conclusions report is ready for submission to Ofgem. We are now working with Ofgem to choreograph the submissions so that a coherent regulatory decision can be made on both at the same time. We are hopeful we can find a way to provide certainty to the industry to enable our customers critical projects to proceed. We now anticipate that the earliest that funding could be in place would be April 2026 at the start of RIIO-3. We are planning the associated change to the charging process which would go live in early 2026, with initial commercial offers ready for issue alongside the new funding route.
18. Funding for energy gas reinforcement	**We will establish and utilise a flexible funding regime for energy gas reinforcements, supported by an appropriate uncertainty mechanism.**	Before 2026	Submission and agreement to a Heat Policy Re-opener.	●	As per above update for EAP Target 17.
19. Entry gas customer and stakeholder forum	**We will establish an Entry Gas Customer and Stakeholder Forum to allow customers and stakeholders to raise issues, for the gas Network to test issues we have identified, to identify and action knowledge sharing and to establish and maintain and activity schedule of framework changes.**	Before 2026	The regular forums continue to be held quarterly and remain as channels for innovation ideas and key topics that are impacting the biomethane community of developers, operators and GDNs.	●	The Entry Customer Forum is established and has been running for a number of years now, supported by Future Energy Networks (run by the Institute of Gas Engineers and Managers) since the gas networks left the Energy Network Association. The Entry Customer Forum will continue to be a key channel for innovative ideas and key topics for the industry.
20. Entry gas connections methodology	**We will establish an Entry Connections Standards Methodology statement and a supporting voluntary governance arrangement to enable customers and stakeholders to propose value adding improvements.**	2026	This was being driven through the Entry Connections Technical Working Group through the Energy Network Association. Now transitioning to Future Energy Networks.	●	Standardisation for site acceptance testing, gas quality assessments and metering calibration has been a focus on the Entry Connections Technical Working Group. This group is transitioning to Future Energy Networks (run by the Institute of Gas Engineers and Managers) to drive standardisation and connection process improvements, along with the operation of biomethane plants to benefit the biomethane industry as a whole.

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Environmental Action Plan commitments continued

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
21. Off gas grid communities	**We will conduct a trial to identify small communities where the gas network can be extended at a low cost.**	2026	Following the prioritisations review, including a cost-benefit assessment, this initiative has not been taken forward during this price control period.	●	We submitted a Strategic Innovation Fund bid, in partnership with Northern PowerGrid, Electricity North West, Northern Gas Networks, National Grid ESO, and Energy Systems Catapult. We have no live plans to take forward an off gas grid community project, but will continue to consider opportunities, mindful of the emerging policy decisions involving trials and pilots for hydrogen.
22. Off grid gas communities	**We will establish a community connection support service to identify and advise communities that could economically connect to the gas grid.**	2026	Following the prioritisations review, including a cost-benefit assessment, this initiative has not been taken forward during this price control period.	●	
23 - HyNet	**Given a direction from Government and/or Ofgem, we will submit proposals to create a HyNet system operator function and to design and construct the hydrogen transformation network with a supporting commercial and operational framework, to meet customers and stakeholder requirements for hydrogen in the Northwest of England.**	2026	The project completed FEED in early 2024, with the focus then on the delivery of the Development Consent Order (DCO) submission.	●	We are awaiting the creation of the Government's hydrogen transportation business model to inform the next phase of the project.
24. Hydrogen blending	**We will ensure an efficient and effective hydrogen blending regime can operate at the earliest opportunity, with the end consumers protected financially by paying for the energy they received, and from unsafe gas blends.**	2026	The work has been completed at Winlaton and we are progressing the work to complete the impact of blended gases on industrial use. We have a further research programme set up to explore the regulatory framework needed to facilitate a blending decision and a project to set out the blueprint for the kit and equipment needed to blend.	●	We have successfully submitted the technical and safety evidence for blending hydrogen (up to 20% concentration by volume) to the HSE which will inform their recommendations to the Government. Whilst this review takes place, we are continuing to progress works to develop an effective market framework to enable hydrogen blending and to consider operational implications and implementation.
25. Hydrogen Conversion	**We will support Government plans for large scale trials of Hydrogen conversion.**	2026	Following the closure of our Hydrogen village conversion project in 2023, we have focused efforts on the technical and safety evidence needed to support conversion and also supported the SGN project in Fife (H100).	●	We continue to support the SGN led project in Fife (H100), which is a hydrogen neighbourhood conversion project. This project will support the Department of Energy Security and Net Zero (DESNZ) in their decision making around the role of hydrogen for heating. The H100 project aims to have hydrogen in homes by late 2025/early 2026.

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Environmental Action Plan commitments continued

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
26. Emergency/ back-up network role	**We will ensure that network can support increasing use in emergency, back-up, and peak conditions, serving and protecting the whole energy system.**	2026	This relates to enabling connections to support the UK's need for back-up power generation, a service which we offer through Cadent's connections processes under contract with third party Gas Transporters and utility infrastructure Providers.	Action has been completed	The Cadent network continues to supply energy, supporting the UK's need for backup electricity generation through peaking power plants. To date, 192 plants are connected to the Cadent network, generating approximately 2.3 GWh of electricity, with an additional 29 connections in the pipeline. In addition, Cadent has connected 47 biomethane injection points across its networks. The gas network supports the growth of high-tech industries by providing a dependable alternative energy source to electrify Data Centres. Cadent plays a crucial role in meeting the energy needs of our customers.
27. Decarbonisation of heating	**We will explore solutions and provide evidence that supports least cost, least disruptive options for our customers to decarbonise their heating.**	2026	We continue to deliver a defined plan that explores the role of hydrogen and other solutions for the decarbonisation of home heating.	Progress against the implementation milestone is on track	We have been developing our plan around three routes for home heating decarbonisation – hybrid heating, biomethane and hydrogen. In September 2024 we published our 'Future of the Gas Network' report setting out our strategy for the decarbonisation of the gas network. We followed this with a report (in April 2025) with specific recommendations on the benefits of hybrid heating. We continue to refine our understanding of hybrids and gather learnings from European countries. On hydrogen for heat, we have collaborated with the other gas networks to complete the full suite of technical and safety evidence required under the DESNZ hydrogen heat programme, which was provided to the HSE for evaluation. On biomethane, we co-founded the Green Gas Taskforce, a collaboration with other gas networks, biomethane producers and trade bodies, to establish what is needed to enable biomethane to grow to its full potential in the UK. As part of this, we are leading a report for the Taskforce on the Economics of Biomethane, to understand the costs and benefit impacts of achieving growth.
28. Evidence for electrification	**We will ensure all evidence for alternative options, including the wide scale electrification of heat are based on robust analysis and information.**	2026	Publication of the Hydrogen Vision report, with colleagues in the ENA. Work also continues on a report to set out the energy system resilience benefits of hydrogen and the economic value of hydrogen for heat.	Progress against the implementation milestone is on track	We recently published a report that explores the economics of hydrogen and electrification, highlighting that for hard to electrify buildings, which make up over a quarter of the UK's housing stock, hydrogen for heating is cheaper than heat pumps when you consider the entire value chain in the analysis. We also published a report prepared by market research group Savanta, looking into the importance to consumers of choice on how they decarbonise. The report highlighted that any attempt to "ban" or "force" options will trigger strong emotional resistance.

- Progress against the implementation milestone is on track
- Progress is delayed but likely to be achievable before the end of the price control period
- Progress against milestones is at significant risk and is likely to be missed
- Action has been completed
- This action plan is now not applicable/was not started/or not funded at the start of the RIIO-GD2 price control

Environmental Action Plan commitments continued

Status update on EAP commitments

EAP Commitment	Description and expected benefit	Target year	Implementation milestones	RAG indicator	Status update
29. Decommissioning plans	**We will develop robust decommissioning plans and protocols to protect consumers during the transition, following the publication of the detailed strategy and programme to install alternative systems. This may not occur during RIIO-GD2.**	2026	We are refining models to incorporate property, postcode, and asset level analysis to understand the viability of conversion at a granular level and understand the likelihood and confidence of whether, for example, an asset will convert from methane to hydrogen, continue supplying methane or decommission.	●	Given that the rollout of heat pumps is progressing slower than expected, and the Government has chosen not to ban gas boilers, it is unlikely that we will see significant changes to the use of our network with an ability to plan to decommission any assets until the 2040's at the earliest. The CCC's latest report on the 7th carbon budget also suggests that decommissioning may not happen until after 2050. We have therefore decided to keep a watching brief on the topic of decommissioning until such a time that there is more information that could enable a decommissioning strategy to be developed. We continue to focus on scenario evaluation and support the new Regional Energy System Planning process with the National Energy System Operator which may begin to provide more information over time.
30. Annual Environmental Reporting	**We will report annually our environmental performance, including progress against the actions in our RIIO-2 EAP, and any additional regulatory requirements. We will seek stakeholder feedback to continually improve our reporting through RIIO-2.**	Annually by 1st October	Publication of Cadent's Annual Environmental Report on Cadent's website.	●	The 2024/25 report will be published before 1 October 2025. Previous AER reports can be found here: ***cadentgas.com/reports/reports-and-publications***

● Progress against the implementation milestone is on track
● Progress is delayed but likely to be achievable before the end of the price control period
● Progress against milestones is at significant risk and is likely to be missed
● Action has been completed
● This action plan is now not applicable/was not started/or not funded at the start of the RIIO-GD2 price control

Innovating for decarbonisation and protecting the environment

Biomethane and other low-gas connections

We continue to work with our customers to connect new green gas supplies to our network.

The addition of biomethane into the gas grid will help the UK minimise its carbon footprint and use of unsustainable fossil fuels, whilst increasing the security and diversity of energy supplies. The connection of three further biomethane plants during 2024/25 has demonstrated a buoyant market and growth following the extension of the Green Gas Support Scheme (GGSS) out to 2028. This is further supported by 141 enquiries received during 2024/25, and 39 biomethane connection studies this year.

Green Gas connection process

The production of biogas is performed by the producer, using anaerobic digestion on the Cadent networks.

The biogas then goes through an upgrading process to remove any CO_2 and other contaminants present to leave a near pure source of methane for gas injection. Propane may be required to be added by the producer to raise the energy content of the gas. The biomethane must then be sold to a shipper before it is injected into the grid. Ofgem can provide a list of licensed shippers. Once the biogas has been upgraded to biomethane, it will be transferred to our network entry facility.

From here, the gas will be metered, and the quality monitored. An odorant called Mercaptan will be injected to give the characteristic 'gas' smell.

Once these stages have been completed, the gas can be injected into the distribution network for transportation.

We continue to work collaboratively with the Anaerobic Digestion (AD) community and the Gas Distribution Networks through the 'Customer Entry Forum' to drive standardisation for biomethane connections. Through this forum the biomethane community expressed one of the key barriers to connecting is the cost of reinforcement with the cost recovered from a single 'triggering' party rendering many projects uneconomically viable. An industry review of these pricing arrangements is in progress.

Innovating for decarbonisation and protecting the environment continued

Engagement events, stakeholders, and best practice

The Green Gas Support Scheme (GGSS) has provided the market with a sustainable financial and environmental future for biomethane to be injected into the gas grid as a direct replacement for natural gas.

We continue to work on innovative ways to unlock capacity within constrained periods of the gas network to take biomethane during the low demand summer months. These include compression for reverse flow, smart pressure control and remote automated flow to give us more control and change the way we operate from a distribution network to a system operator.

The Innovation project Optinet in the East Midlands was successfully commissioned in 2024/25 to optimise network pressures through recompression and smart pressure control. The purpose of the Optinet project is to prove the concept of a network solution that can be replicated in capacity-restricted areas to facilitate the injection of smaller distributed entry points. It has already provided valuable learnings to develop a sustainable cost-effective deployable solution across our footprint. We are looking at deploying the next three assets within the East of England area. Biomethane will play a vital part in the transition to a sustainable future, endorsed by the government and fully supported by the AD industry.

Table 2 – Connections activity for low carbon sources of gas

	Unit	2021/22	2022/23	2023/24	2024/25
Biomethane connections					
Enquires	Number	140	201	186	141
Connection studies	Number	35	36	36	39
The capacity of connection studies	SCMH	7,355	9,055	6,030	12,560
Connections	Number	5	2	2	3
Minimum contracted capacity connected	SCMH	1,700	0	900	300
Volume (energy value) of biomethane injected[1]	GWh	1,632	1,829	2,551	2,077
Average monthly flow rate (all connections)	SCMH	17,215	19,698	19,431	21,839

Table 3 – Other green gas

	Unit	2021/22	2022/23	2023/24	2024/25
Enquires	Number	0	0	0	0
Connection studies	Number	0	0	0	0
The capacity of connection studies	SCMH	0	0	0	0
Connections	Number	0	0	0	0
Capacity connected	SCMH	0	0	0	0
Volume (energy value) of other green gas injected	GWh	0	0	0	0
Average monthly flow rate (all connections)	SCMH	0	0	0	0

1 Annual variability due to biomethane source.

Innovating for decarbonisation and protecting the environment continued

Cadent continues to champion the role of hydrogen in helping the UK achieve its Net Zero ambition.

We believe hydrogen can actively support industry, particularly those industries that rely on molecular energy. Hydrogen also provides a solution for security and resilience in the UKs energy supplies. Throughout 2024/25, we have continued our focus on the development of evidence to support the safe use of hydrogen in our networks. We have aided the Health and Safety Executive (HSE) in their review and subsequent recommendations to the government, who have shared their minded to position is to enable hydrogen to be blended into our networks.

Following the announcements on the Government's new Hydrogen Transportation Business Model, we are considering preparing a bid in line with Governments timeline for the next stage of our HyNet Phase 2 pipeline. We also continue to progress other hydrogen infrastructure projects in support of the hydrogen economy and decarbonisation of industry.

The following are updates for two of our flagship projects that are contributing to the low-carbon transition.

1. HyNet Phase II – Hydrogen Pipeline

The HyNet Scheme continues to be the UK's flagship industrial decarbonisation project incorporating the full value chain of the future hydrogen economy. It consists of hydrogen production & storage, carbon capture & storage - which are promoted by others and Cadent's HyNet hydrogen pipeline. The Scheme contributes to Governments growth and clean power missions through fuel switching of industry and power generation.

The HyNet Scheme is split into several projects and relies upon a series of supportive business models. In 2025/26, we are considering bidding the hydrogen pipeline into DESNZ's competitive process. The outcome of the bid had been anticipated in 2026.

It is our intention to submit the Developmental Consent Order (DCO) in Q2 of this year, but is dependent on gaining a clearer understanding of upcoming Hydrogen Transportation Business Model. The delays to Hydrogen Business Models across the Scheme have had a knock-on impact on the target date for Commercial Operation, DESNZ's latest requirements are the networks to be operational by 2031.

The Scheme is recognised as being a key enabler for decarbonising industry in the North West and has achieved significant support from both political and other key stakeholders. We therefore are regularly engaging with the Government to help them address their funding constraints, to help drive this Scheme and Cadent's Project forward.

More information about HyNet can be found *here*

2. HyDeploy (Hydrogen Blending)

Cadent has continued to champion the role of Hydrogen Blending as a means of increasing the growth of hydrogen production in the UK and having an immediate impact in reducing greenhouse gas emissions across the gas networks. The HyDeploy 2 project, which looked to provide evidence that blending hydrogen into our networks (up to 20% concentration by volume) is safe both within our networks and in customer's homes and businesses, was completed in early 2024.

Following this, the focus has been on the provision of the resultant safety and technical evidence from this project and other supporting projects into the Health and Safety Executive (HSE), which has now been submitted.

For more information about our role in delivering net zero, refer to *The Future of the Gas Network report*

Innovating for decarbonisation and protecting the environment continued

Innovating to support the low carbon transition

Innovation	Issues or barrier	Annual achievements	Expected benefits	Timescales
HyNet – Phase II	Industry in the North West needs to meet Net Zero and ESG targets and therefore needs low-carbon energy. The Government have a Clean Power Mission which the scheme can support through low carbon electricity production. This can be achieved through the production, Carbon Capture Utilisation and Storage (CCUS) and distribution of low carbon hydrogen in the North West. The scheme will create jobs and support the Growth Missions set out by the Government.	In 2024 the Project completed the Front End Engineering Design and the preparation of the Development Consent Order (DCO) for the planning of the Project. The Project is now positioned to progress at pace pending further detail on the Hydrogen Transportation Business Model.	Production of circa 3.85 GW pa of hydrogen, to decarbonise industry and power generation in the North West.	DESNZ's Hydrogen Transportation Business Model update released in July 2025 has set the Commercial Operating target date of 2031.
HyDeploy (Hydrogen Blending)	Need to demonstrate that the existing gas networks can be repurposed to transport a blend of up to 20% hydrogen by volume.	Following two trials (where a blend of up to 20% hydrogen by volume was delivered into customer's homes), the resultant evidence has been submitted to the HSE for their review. The evidence shows that there were no issues with the network pipe or components and that residents experienced no change to the functionality of their gas appliances.	Technical and safety evidence to support the HSE recommendation that the existing gas network(s) can be repurposed to transport a hydrogen blended gas.	The project has now completed, and the evidence submitted to the HSE, to be able to support the recommendations to the UK Government (the Department of Energy Security and Net Zero (DESNZ)).
Technology to reduce Venting & Purging of Gas	Gas network companies have assets that vent gas by design, and we undertake thousands of operations where we purge gas into the atmosphere as part of work procedures. These practices are as old as the industry. Technologies have been emerging to address the many and varied sources of purge and venting of gas and we want to adopt these technologies wisely, by using the most effective ones first in our ongoing mission to cut emissions from our activities.	In 2024/25 our engineering, operational and innovation teams undertook a 'horizon scanning' exercise to identify a wide range of technological options. We have scoped a study to impartially review the scale and cost of the impacts that these could have, based on how many and how much emissions we cause through our assets and operations. We've commissioned a third-party study on these areas to generate an impartial assessment of their value. In parallel we have been proactive by purchasing and trialing some of the items and practicing their use in our networks.	We estimate that about 70,000 tCO_2e are caused each year by Cadent's purging and venting activities combined. Through our approach, we will be tactical and informed in our use of the RIIO-GD3 Use It Or Lose It (UIOLI) shrinkage monies to tackle these emissions efficiently.	Cadent aims to complete the study and our internal field trial and testing processes by March 2026, in readiness for RIIO-GD3. We will then be well placed to implement the most effective carbon-reducing technologies from the start of the next price control when new UIOLI allowances are made available.
Electrification of field tools for noise, emissions and welfare benefits	Diesel power has driven tools and equipment in streetworks construction sites for years. This involves running generators or vehicles so that tools can be powered. These tools have gotten the job done but not without drawback; the noise, emissions and vibration of them are all problematic. Technology has moved forward in this area, and it is increasingly possible to use battery powered tools without diesel engines needing to run. Further, modern designs improve the vibration and dust suppression of the tools to improve health and welfare.	During 2024/25 Cadent delivered a comprehensive trial of a wide range of kit in partnership with Speedy Hire. This set of trials will capture information about the performance of the equipment in every aspect so that a proper assessment about which tools are the right ones to move Cadent's operational teams forward.	The benefits of this technology could be wide ranging and whilst small individually, across thousands of hours of use across thousands of sites, they will add up considerably. By reducing noise and air pollution in neighbourhoods, and exposure to dust and vibration for operatives, there are significant improvements that we must explore fully.	Cadent's field trial testing took place in Spring & Summer 2025 to inform decisions made during the next price control.

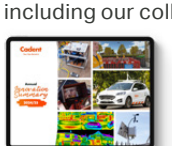
Innovating for decarbonisation and protecting the environment continued

Innovating to support the low carbon transition

Innovation	Issues or barrier	Annual achievements	Expected benefits	Timescales
Low cost flow metering development	Growing green gas volumes on our network is central to Cadent's 10-year strategy and there are many focus areas connected with doing this. One challenge we face is that to manage a network with vastly more supply points bringing in green gases like biomethane, we will need more information than we've ever had before about where the gas from those supplies is flowing to. This means we need more flow meters. Installing traditional flow meters at scale would be extremely expensive – perhaps prohibitive. We wanted to deliver low-cost metering in order that we can solve part of the green-gas challenge efficiently.	Through partnering with YZ systems & Bohr, who have some incredible and inspired thinkers, we have managed to create not one but two flow meter designs. One of which has been installed at multiple locations on our network already. The technologies work in different ways and can be retrofitted straightforwardly onto existing gas network pressure reduction stations, like district governors.	Understanding flow in greater and wider detail on the network has many potential benefits. A gas network is – after all – a very large hydraulic system. With flow being a critical factor, it can help us make better decisions in many aspects of network planning, design and operations. In the context of biomethane, flow data will help us to configure our network to ensure we help get the maximum flows from our biomethane customers which in some places will mean marginal gains, in others, probably some giant leaps. We are evaluating what a scale up might look like for RIIO-GD3.	The two products developed should be completed before RIIO-GD3 and field trials will grow in scale. As more flow meters are installed and data from them is plugged into our systems for operational control and modelling, we will steadily be able to optimise for more biomethane during RIIO-GD3 and beyond.

A special thank you to all of our innovation partners including YZ Systems, Bohr, Speedy Hire and Pipetech.

We're driving remarkable innovation across our industry, and our Annual Innovation Summary Report 2024/25 captures exactly that. You can read all about our latest insights, explore the projects we delivered throughout 2024, and learn more about the exciting developments still underway — including our collaborations with leading industry partners.



Our Annual Innovation Summary 2024/25 can be found at *documents.cadentgas.com/view/667444520/*

GECO (Gas Eco) pump – recirculating gas to prevent venting (Pipetech)

Flow probe (YZ Systems)

Climate change impact

Business carbon footprint – Scope 1 and 2

As part of our decarbonisation strategy, we aim to reduce our Greenhouse Gas (GHG) emissions to Net Zero in line with the UK Government's ambition by 2050. We measure our Business Carbon Footprint in line with the Greenhouse Gas Protocol to monitor, review and reduce our emissions. There are three 'Scopes' of emissions:

- **Scope 1 –** Direct emissions that are owned or controlled by Cadent, for example, the combustion of fuel in vehicles, plant, and machinery.
- **Scope 2 –** Indirect emissions from the energy purchased and used by Cadent. For example, the electricity used in our offices and buildings.
- **Scope 3 –** Emissions not produced by Cadent, but from those in our value chain, for example from materials and products from our suppliers or contractors. More information on our Scope 3 emissions is covered here.

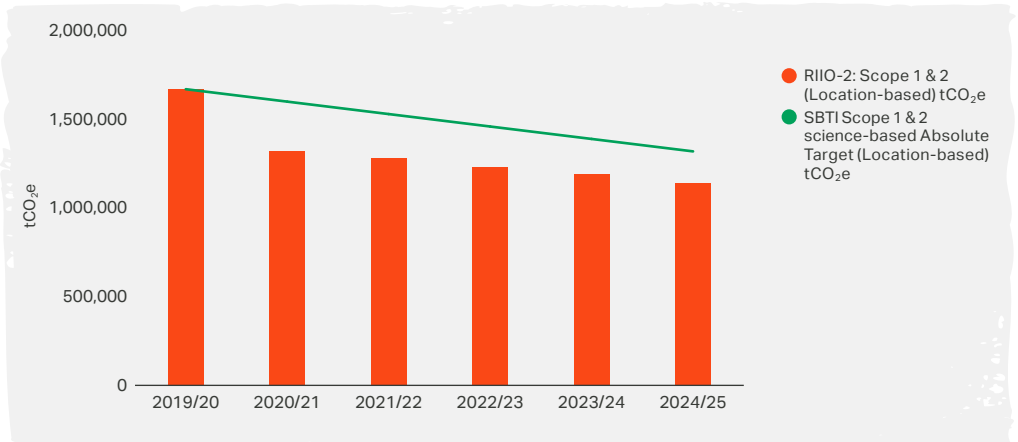
Whilst The Science Based Targets Initiative (SBTi) has paused the update to the Gas and Oil Sector Methodology, our current Net Zero emission reduction targets cannot be verified; however, we have developed our Scope 1 and 2 emission reduction pathway necessary to meet the Paris Agreement of limiting global warming by Well Below 2 Degrees Celsius.

Our market-based Scope 2 (electricity procured for office and building use through contracts) is based on Renewable Energy Guarantees of Origin (REGO) certified renewable electricity from our suppliers.

At the end of RIIO-GD2, we have set a target to reduce our Business Carbon Footprint in the following areas (excluding shrinkage): Gas in offices and depots, own use gas, electricity use, commercial vehicles, business mileage, PE pipes and contractor fuel use by 26,750 tCO_2e.

Our current GHG reduction target, developed with The Carbon Trust, is to reduce Scope 1 and 2 emissions (location-based), by 43% by 2036 (2019/20 Base Year, equating to a well below 2-Degree pathway). This target is set and based on our current RIIO-GD2 regulatory settlement and is supported by initiatives and commitments made in our Environmental Action Plan. We are dedicated to monitoring our performance and reviewing it, updating as necessary based on the latest climate science and models, as we recognise that the future energy landscape will change rapidly during this period.

Scope 1 and 2 (Location-based) tCO_2e against SBTI Emission Target



We are working towards collecting a broader range of data from our suppliers to understand our Scope 3 emissions and will move this forward during the remainder of RIIO-GD2. This is part of Action 9 of our commitment to 'work with our suppliers to extend the measures of, and continually reduce, Scope 3 indirect emissions'.

We were certified against the Carbon Trust's Route to Net Zero 'Taking Action' level in 2024/25. In 2025, we have been working with The Carbon Trust for a third year to verify our 2024/25 Business Carbon Footprint data. This is partial verification of our total footprint for the financial period spanning April 2024 to March 2025.

Climate change impact continued

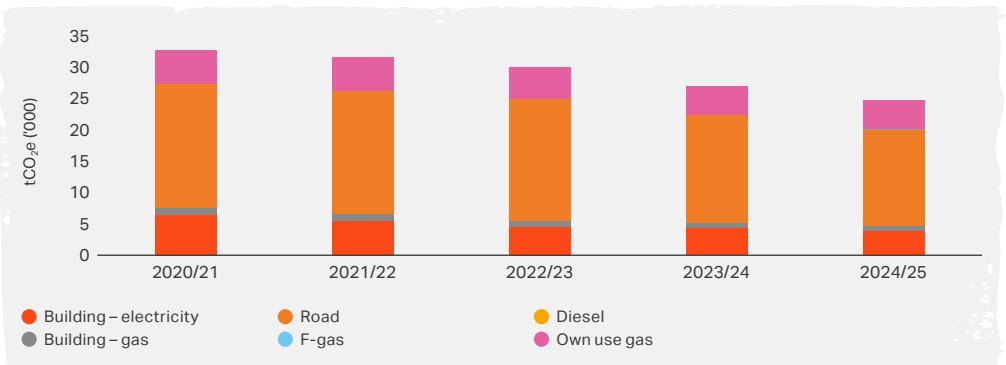
Scope 1 and 2 emissions

Table 4 – Scope 1 and 2 emissions

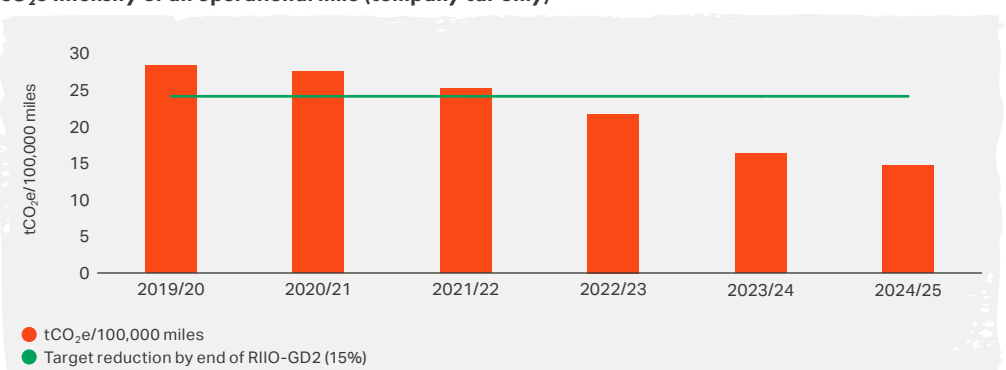
Emissions in tCO_2e	Specific area	2020/21	2021/22	2022/23	2023/24	2024/25
Building energy use	Building – electricity (location-based)	6,446.08	5,527.45	4,545.33	4,267.32	3,871.12
	Building – gas (location-based)	1116.56	987.68	852.19	869.79	826.25
Operational transport	Road	19,683.78	19,675.65	19,538.51	17,205.07	15,242.71
Other	F-Gas	–	–	–	–	54.26
Fuel Combustion	Diesel	–	–	–	88.09	84.04
	Own Use Gas	5,471.20	5,432.59	5,068.67	4,598.30	4,770.50
Gas Shrinkage[1]		1,283,861.65	1,244,704.87	1,1978,78.42	1,162,064.20	1,113,547.79
Total excluding shrinkage		32,717.62	31,623.37	30,004.92	26,940.48	24,848.88
Total including shrinkage		1,316,579.27	1,276,328.24	1,227,883.13	1,189,004.65	1,138,396.67

1 Including Leakage and Theft of Gas.

RIIO-2 Scope 1 and 2 emissions (excluding shrinkage)



CO_2e Intensity of an operational mile (company car only)



Based on business mileage only, the graph above shows how we have exceeded our target for emission intensity in company cars over the RIIO-GD2 price control period.

Climate change impact continued

Shrinkage

Shrinkage refers to the gas that is lost from the gas distribution network, and is made up of Leakage, own use gas and Theft of Gas values:

- **Shrinkage** is combusted gas that isn't metered and is used in either routine operations or lost through theft. This includes Own Use of Gas and Theft of Gas.
- **Leakage** is un-combusted gas escaping from the transportation system through leaking, venting equipment, or third-party damage to the pipes.

In 2024/25, Shrinkage represents 98% of Cadent's Scope 1 and 2 Business Carbon Footprint and is being managed through many activities. Key emission reduction elements for Shrinkage include the mains replacement programme, where the old iron mains are being replaced with new Polyethylene (PE) Pipes, gas pressure management, and other initiatives and innovation projects.

We will be continuing to replace older and higher-risk iron pipes to meet our statutory obligations, reduce leakage of gas, and prepare the network for the transportation of hydrogen as part of the decarbonisation demands of society.

Table 5 – Leakage volumes

GWh	2021/22	2022/23	2023/24	2024/25
Low-Pressure Mains	620.19	594.41	583.05	558.10
Medium-Pressure Mains	106.52	104.94	102.78	101.65
Services	85.25	72.51	60.35	48.11
AGI	191.74	192.38	192.68	191.24
Interference	3.37	5.17	2.03	1.98
Total	1,007.07	969.41	940.89	901.08
Target Total	1,038.94	1,035.03	997.10	959.16

Table 6 – Leakage emissions
Conversion factor: 1,226.42 tCO_2e/GWH

tCO_2e	2021/22	2022/23	2023/24	2024/25
Total	1,235,091.50	1,188,907.30	1,153,925.37	1,105,104.44
Target Total	1,274,180.04	1,269,379.20	1,222,866.36	1,176,330.51

Table 7 – Other shrinkage volumes

GWh	2021/22	2022/23	2023/24	2024/25
Own Use	29.55	27.57	25.01	25.95
Theft	52.30	48.80	44.27	45.93
Total	81.85	76.37	69.28	71.87

Table 8 – Other shrinkage emissions
Conversion factor: 183.85 tCO_2e/GWh

GWh	2021/22	2022/23	2023/24	2024/25
Own Use	5,432.60	5,068.67	4,598.42	4,770.50
Theft	9,615.22	8,971.10	8,138.80	8,443.35
Total	15,047.82	14,039.77	12,737.22	13,213.85

The following assumption is used to determine the quoted conversion factor:

- CV MJ/m^3 natural gas: 39.6
- % of CH4 in natural gas: 82.97%
- Density of CH4 in kg/m^3: 0.656
- Global Warming Potential of CH4 in tCO_2e: 25
- The proportion of CO_2 in natural gas: 2.4%
- Density of CO_2 kg/m^3: 1.98

Theft of gas is one of the components of shrinkage. We will maximise the benefits to customers and stakeholders by an anti-theft of gas incentive, and our ambition is to recover at least £8 million over the RIIO-GD2 period. In 2024/25, 403 theft cases are under investigation, and we have currently recovered £3.1 million from theft of gas cases. The collective total at the end of March 2025 was £6.6 million and we are on track to meet, and potentially exceed, the £8 million target by the end of RIIO-GD2.

Climate change impact continued

CASE STUDY

Proactive Leak Detection

A smarter, data-driven approach to reducing emissions from our gas network.

Gas leak detection has traditionally relied on reactive methods— above all, relying on customer reports of a 'smell of gas'. But with the urgency of climate targets, we have transformed our approach to cut greenhouse gas emissions faster.

In 2019, we challenged the market to help us innovate. By 2021, we began trialing Picarro's vehicle-mounted methane detection technology in North London, supported by Transport for London. These hydrogen-fuelled vehicles enabled us to pinpoint emissions with precision, allowing for faster and more targeted interventions to cut leakage.

Since then, our approach has evolved significantly. To date we have surveyed over 30,000 km of our North London network and completed hundreds of proactive repairs.

What's new in 2024/25?

- **Emissions Measurement Tech Trials:** We have trialed a range of advanced leak detection technologies. These include vehicle-based for our pipe networks, fixed sensors for our large sites, and handheld devices that help our operatives pin-point leakage. With these tools we can detect leaks efficiently and target ourselves at the most value-add repair works.
- **Digital Platform for Leakage Analytics (DPLA):** We have developed an IT platform which integrates the data from the suite of detection technologies mentioned above. This platform enables us to pull together gas emissions information from right across our asset base and create a complete and highly accurate picture of our network's emissions profile over time, supporting more informed and timely decision-making.
- **Cadent received the IGEM Award for Innovation** for its use of Advanced Leak Detection (ALD) technology and proactive approach to leak detection and emissions reduction, acknowledging the project's contribution to the industry.
- **Environmental Impact:** By identifying and addressing leaks earlier, we are reducing methane emissions and contributing to improved air quality and climate resilience in the communities we serve. By embedding this 'proactive' approach over time, we will be able to reduce the amount of reactive repairs and the associated disruption and cost too.
- **Forward Planning:** Insights from DPLA and our detection technologies are informing our business planning and investment strategies. During RIIO-GD3 we will expand proactive emissions management right across Cadent's networks. Through leak detection tech, enhanced analytics, targeted repairs and replacement works, we will cut emissions faster than we have achieved before.

If you can already smell gas and/or think there could be a leak, you should call us immediately on 0800 111 999 at any time of the day or night.[1]

More information at *cadentgas.com/smell-gas*

1 All calls are recorded and may be monitored.

Looking ahead

We are not just detecting leaks—we are transforming how we manage our network. Our proactive, data-led strategy is helping us meet environmental targets, reduce risk, and deliver a safer, cleaner gas network for the future. Through DPLA, we are also keeping a close eye on emerging technologies and market developments, ensuring we remain at the forefront of innovation in emissions management.

Climate change impact continued

Business Carbon Footprint – Scope 3 emissions

Scope 3 emissions are defined as all indirect emissions not included in Scope 1 or 2 and occur in the value chain (i.e., supply chain). For Cadent, this means emissions from the products and services used, contractor emissions and other sources not owned or controlled by us.

In March 2021, a screening exercise by The Carbon Trust was performed to highlight Scope 3 emission categories that are materially relevant to our operations. This screening activity has helped shape our efforts over RIIO-GD2 in establishing our Scope 3 footprint and identifying sufficient data collection processes to increase our reporting Scope 3 emissions.

Scope 3 Category Applicability Matrix

A Scope 3 category applicability matrix was used to determine both the quantitative and qualitative basis of our key Scope 3 emissions areas. The screening process followed the Greenhouse Gas (GHG) Protocol Corporate Value Chain Accounting and Reporting Standard, identifying Scope 3 emissions based on size, influence, risk, stakeholders, and sector guidance.

Upstream activities for Cadent	Downstream activities to Cadent
Purchased goods and services	Transportation and distribution
Capital goods	Processing of sold products
Fuel and energy-related activities	Use of sold products
Transportation and distribution	End-of-life treatment of sold products
Waste generated in operations	Leased assets
Business travel	Franchises
Employee commuting	Investments
Leased assets	

Scope 3 hotspot areas and recommendations

The screening identified that our Scope 3 emissions largest sources are from the following:

- **Category 1 –** Purchased goods and services. Operational costs were used in the assessment. Suggest seeking out supplier-embodied carbon for materials where possible.
- **Category 2 –** Capital Goods. To start collecting raw data and seek out supplier-embodied carbon for materials used where possible.
- **Category 3 –** Fuel and Energy related activities
- **Category 4 –** Upstream transportation and distribution. Data from our contract partners who deliver the mains replacement programme.
- **Category 5 –** Waste Generated in Operations. Raw data is collected, such as tonnage of office waste, spoil from excavations and PE pipe and should be converted into tCO_2e.
- **Category 6 –** Business Travel.
- **Category 7 –** Employee Commuting – data not yet collected or available for reporting.
- **Category 12 –** End-of-life treatment of sold products.

Assumptions, methodology and the data sources used in the screening and reporting can be found in Appendix 1.

Climate change impact continued

Table 9 – Scope 3 emissions

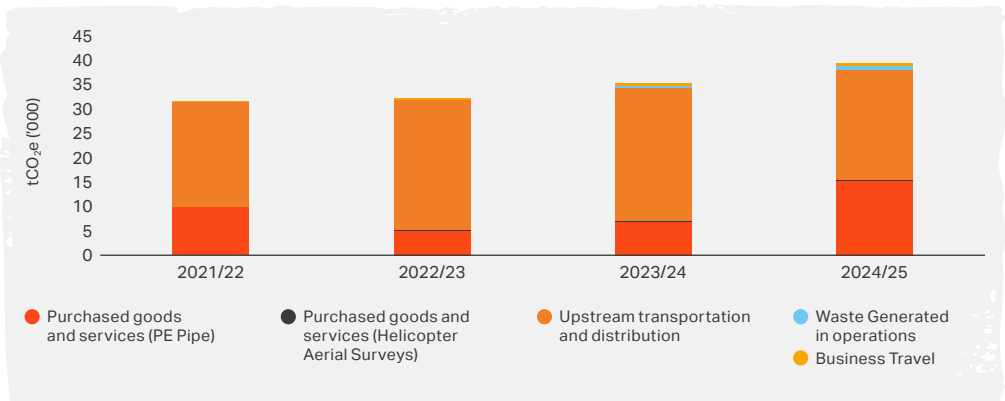
Category	2021/22	2022/23	2023/24	2024/25
Purchased goods and services (PE Pipe)	9,784.99	4,970.79	6,864.42	15,294.22
Purchased goods and services (Aerial Surveys)	96.52	90.03	95.99	104.41
Capital goods[1]	0.00	0.00	0.00	0.00
Fuel and energy-related activities[1]	0.00	0.00	0.00	0.00
Upstream transportation and distribution	21,526.71	26,818.25	27,379.29	22,541.87
Waste generated in operations	Not reported	Not reported	367.41	869.47
Business Travel Vehicles not owned/ controlled by the company	222.15	293.26	319.84	245.58
Business Travel Hotels	Not reported	Not reported	Not reported	250.54
Business Travel Rail	13.11	28.95	41.90	45.52
Business Travel Air	0.42	40.40	102.15	107.67
Business Travel Ferry	0.00	0.00	0.00	0.00
Business Travel Hire Cars	11.47	22.09	18.97	8.03
Employee commuting[1]	0.00	0.00	0.00	0.00
Upstream leased assets[1]	0.00	0.00	0.00	0.00
Total	31,655.37	32,263.77	35,189.97	39,467.32

1 Category not yet calculated.

We are actively engaging with our suppliers to improve data transparency within our data reporting process. This is aligned with the GHG Protocol Corporate Value Chain Accounting and Reporting Standard.

The increase in Scope 3 emissions is primarily attributable to improvements in data quality. As more accurate, granular, and comprehensive data becomes available we are able to better quantify emissions from these sources.

RIIO-2 Scope 3 emission composition



Climate change impact continued

Embodied carbon

Embodied carbon is defined in the UK Green Council "as the total greenhouse gas emissions produced in a built asset. This can include emissions from the manufacture, processing, transportation and assembly of products and elements to build assets".

There are two approaches to embodied carbon that we can report on. The first is 'final design' and the other is based on 'as built'. A project can often diverge from the 'final design' as a result of changes made to adjust and optimise construction work.

As per previous Annual Environmental Reports, a Life Cycle Assessment (LCA) was conducted for our Burwell Net Zero project which was used to inform potential carbon savings as we are establishing a calculation methodology for embodied carbon.

CASE STUDY

Eco Welfare Units

We are continuing to use Eco Welfare Units which provide a range of benefits.

These units are powered by clean, renewable energy through solar panels, eliminating the need for fossil fuels. They feature backup power sources e.g. biofuel or hydrogen. As they are designed for high energy efficiency, they allow "Near Zero" emissions. By avoiding traditional diesel generators, the units also significantly reduce noise pollution.

Beyond energy performance, these welfare units are built to conserve water through a rainwater harvesting and recycling system. Sterilised rainwater is used to supply sinks, and the greywater is then recycled for flushing toilets – reducing dependence on mains water.

Examples of Eco Welfare Units from our London Network

Climate change impact continued

Gas Pipeline Diversions

CASE STUDY

Saltley Viaduct Pipeline Diversion

This project involved a 270m diversion of Cadent's 18" Intermediate Pressure gas pipeline to accomodate infrastructure developments.

Throughout this complex project, we ensured there were regular toolbox talks on sustainability topics such as waste management. Data of material use, waste generated and fuel, electricity & water consumption were also tracked and reported for this project.

Examples of environmental initiatives employed:

- Use of solar-powered tower lights and security systems.
- Use of eco welfare cabins.
- Treatment of contaminated water on site to allow disposal into the foul sewer in line with the Severn Trent Water trade effluent consent. This saved the equivalent of approx. 30 loads of contaminated water from needing to be taken offsite for disposal.
- There were known bats (2no. day roosts and 2no. potential hibernation roosts of common pipistrelle bats (Pipistrellus pipistrellus)) in the central span of Saltley Viaduct close to our working area. We installed a structure made of acoustic barriers to protect the bats and ensure no disturbance was caused to them by our works. The acoustic barriers were taken by another contractor for reuse to avoid having to dispose of them.
- We crushed and reused c.400m^3 (equivalent to c.40 loads) of hard standings to repurpose as hardcore. This removed the need to import virgin hardcore and removed approximately 40 wagons off the road.

Figure 1 Bat Protection Structure

Figure 2 Drone capture of the project

"This diversion involved a lot of complex engineering including shafts and tunnels as well as a multitude of environmental constraints from contaminated water to bats, working next to a main river and a canal. A collaborative approach ensured the works were completed efficiently, to programme and budget and without any environmental incidents."

Asha Mistry
Senior Environmental Advisor – Capital Delivery

Climate change impact continued

Gas Pipeline Diversions continued

CASE STUDY

M54 Project

This project involved the diversion of a section c.600m long of the existing Cadent 24" Alrewas to Ebstree High Pressure Steel Pipeline to facilitate the construction of a new motorway link between the M54 and M6 by National Highways.

A collaborative approach between Cadent, our main works contractor and National Highways allowed as many trees to be retained as possible within the working area. The root protection areas of the retained trees were protected by fencing and signage. Additionally, there were areas of Japanese Knotweed identified which were managed via exclusion zones, signage and chemical treatment methods.

In order to gain access to a section of the working area, the site teams were required to cross an ordinary watercourse. Ecological checks for Great Crested Newts, Water Voles and Otters were carried out and a temporary flume crossing was installed in line with the land drainage consent obtained from Staffordshire County Council.

Fencing for tree protection

High pressure diversions in rural and agricultural landscapes brings its own set of constraints especially around soil management. Meticulous planning by the project teams allowed this project to be completed successfully with the environment at the forefront."

Paul Hudson
Lead Project Security Manager

CASE STUDY

Tree Root Damage guide

The London network have developed and distributed a tree protection information card. On the back of this credit-card-sized quick reference guide, there is a summary of the National Joint Utilities Group (NJUG) guidance for digging near trees alongside a 25mm gauge to measure the circumference of roots.

The card has been distributed via network supervisors, and awareness of the card and its usage has been raised via posters, TV screens at our depot sites, emails and meetings. This has also been shared via an article as part of National Tree Week and 500 cards have been distributed so far.

Sustainable procurement, resource use and waste

Supply chain

We recognise the value of sustainability. For us this means that we are committed to business practices and activities that preserve natural resources, save money and that are good for the community within and beyond our network.

This is why we make decisions that have a positive impact on environmental factors linked to our operations and on social and economic factors. We look to our suppliers to support us in meeting our environmental objectives and to take a proactive approach to reduce our environmental impact.

We have developed Cadent's Supply Chain Sustainability and Social Value framework for all of our suppliers covering the full supplier lifecycle (pre-qualification, tender, contract delivery and post contract). Our Supply Chain Framework aligns to Cadent's Sustainability strategy, which is based on the UN Sustainable Development Goals and consists of three main pillars:

- Easier Warmth
- Fairer Opportunities
- Greener Society

The framework recognises the diversity within our supply chain, both in terms of different types of supply (Goods, Works, Services and Consultancy) and also the size and complexity of the organisations with whom we do business. Our framework, therefore, is designed to provide clarity for all our supply partners as to what is expected from them in terms of our sustainability ambitions. This is in the process of being rolled out to our supply chain.

This year we celebrated the exceptional achievements and positive impact our suppliers are making to Cadent's Sustainability Strategy at an awards event. Bringing together our partners was a great opportunity to learn, network and share our sustainability and social value ambitions, foster innovation and reinforce Cadent's commitment to being a `force for good` in the communities it serves.

Congratulations to all our suppliers who made it to the shortlist, and a special shoutout to our winners! Thank you to every organisation that submitted an entry.

	Easier Warmth	Fairer Opportunities	Greener Society
Small/ Micro	BRANDWOOD CENTRE		Carr
Medium		PWS	
Large	clarity	united living	ARMSTRONG

Greener Society Winners:

- **Small – Carr Civil Engineering:** For their innovative 'Back Grouting Process' reducing environmental impact.
- **Medium – Elliott Group:** For creative material use aligned with key SDGs.
- **Large – Armstrong Fluid Technology:** For cutting-edge solutions that boost efficiency and cut carbon.

Sustainable procurement, resource use and waste continued

Our organisation is committed to embedding sustainability at the heart of our procurement practices. Our Procurement Policy guides buyers to actively consider environmental, social, and economic sustainability throughout all procurement activities. This is reinforced by our Supplier Code of Conduct, which outlines clear expectations for suppliers in these areas.

We require 100% of active suppliers and all participants in tender events to either accept our Supplier Code of Conduct or demonstrate that they have an equivalent policy in place that meets our standards. Sustainability considerations are integrated into our Procurement Standard, ensuring that relevant questions, evaluation criteria, and contract terms—including performance KPIs—are consistently applied throughout the tendering and contracting process.

These principles form the foundation of our purchasing values and inform our supplier selection and management decisions. We view this as a collaborative effort, and we expect all suppliers to:

- Comply with all applicable legal requirements and obligations.
- Operate an environmental management system aligned with recognised standards such as ISO 14001.
- Support and contribute to the United Nations Sustainable Development Goals (UN SDGs), focusing on those most relevant to their operations and our shared activities.
- Join the Supply Chain Sustainability School (SCSS)—a free resource that supports environmental learning and reporting across the supply chain.

We are actively engaged in sustainability working groups within the SCSS and have played a key role in the creation and development of Utilities Against Slavery (UAL). As a signed-up partner, we are helping to drive a coordinated, sector-specific approach to tackling modern slavery and promoting ethical practices across the utilities sector.

We have strongly promoted the take-up and usage of resources provided by the SCSS.

Engagement between our suppliers and the SCSS in numbers during 2024/25:

- 1905 supplier attendees attended sustainability workshops.
- 4218 e-learning resources completed.
- 2 speaking slots at public events including virtual conferences.
- 67,665 resources viewed.
- 6,592 CPD training hours delivered.
- 3,499 CPD e-learning hours completed.

Resource efficiency

Table 10 – Purchased goods ranked by spend

Material ranking	2021/22	2022/23	2023/24	2024/25
1	PE Pipe	PE Pipe	Plastic & Metals	PE Pipe
2	Metal	Metals	PE Pipe	Metal
3	Plastic	Plastic & Metals	Metal	Plastic & Metals
4	Textile (PPE)	Fibreglass	Tools, Chemicals, Appliances	Tools, Chemicals, Appliances
5	Steel	Cast iron	Cast Iron	Steel
6	Chemicals	Steel	Textile	Textile
7	Cast Iron	Plastic	Plastic	Cast Iron
8	Fibre glass	Textile	Copper & Brass	Copper & Brass
9	Copper and Brass	Chemicals	Steel	Chemicals
10	–	Copper & Brass	Chemicals	Paper

Table 11 – Sustainable procurement performance indicators

Supply Chain	Unit	2021/22	2022/23	2023/24	2024/25
Percentage of suppliers (by value) meeting Cadent's supplier code	%	100 (based on the assumption to opt-out)	90 of relevant spend value	91 of relevant spend value	90 of relevant spend value
Percentage of suppliers (by value) that have their own sustainability metrics of KPIs	%	Not available	Not available	Not available	50

Sustainable procurement, resource use and waste continued

Waste

Table 12 – Total Waste (tonnes)[1]

Waste generated	2021/22	2022/23	2023/24	2024/25
Total metric tonnes of waste	1,152,978	703,005	671,247	689,214
General waste	1,682	1,242	1,117	948
Wood	275	276	283	288
PE Pipe	503	1,186	847	845
Construction and demolition	88	537	115	46
Rubber	1	0	0	0
Dry Mixed Recycling (including confidential paper)	250	293	325	299
Metal	287	291	306	263
Plastics	144	286	277	221
Spoil	1,149,219	674,995	660,473	685,916
Food/Organic/ Biodegradable	91	119	134	71
Hazardous – solids (including sharps)	435	261	193	269
Hazardous – liquids (such as septic tank sludge, sewage)	Not reported	23,517	6421	0[2]
Non-hazardous liquids	Not reported	3	737	0[2]
Non-hazardous solids	Not reported	Not reported	18	47

Table 13 – Waste disposal routes for 2024/25 (%)[1]

	Reduced	Prepared for re-use	Recycled	Other Recovery (including diverted from landfill)	Landfilled
Total Waste by Cadent (Office, network depots, reinstatement and emergency works)	0	0	98.04	0.13	1.83
General waste	0	0	1.43	93.64	4.93
Wood	0	0	100	0	0
PE Pipe	0	0	100	0	0
Construction and demolition	0	0	100	0	0
Dry Mixed Recycling (including confidential paper)	0	0	100	0	0
Metal	0	0	100	0	0
Plastics	0	0	100	0	0
Spoil	0	0	98.17	0	1.83
Food/Organic/ Biodegradable	0	0	100	0	0
Hazardous – solids (including sharps)	0	0	97.6	0	2.40
Hazardous – liquids (such as septic tank sludge, sewage	0	0	0	0	0[2]
Non-hazardous liquids	0	0	0	0	0[2]
Non-hazardous solids	0	0	100	0	0

1 As calculated by our National Waste Contractors.
2 Due to a change in contract, data was not available for this category at the time of reporting.

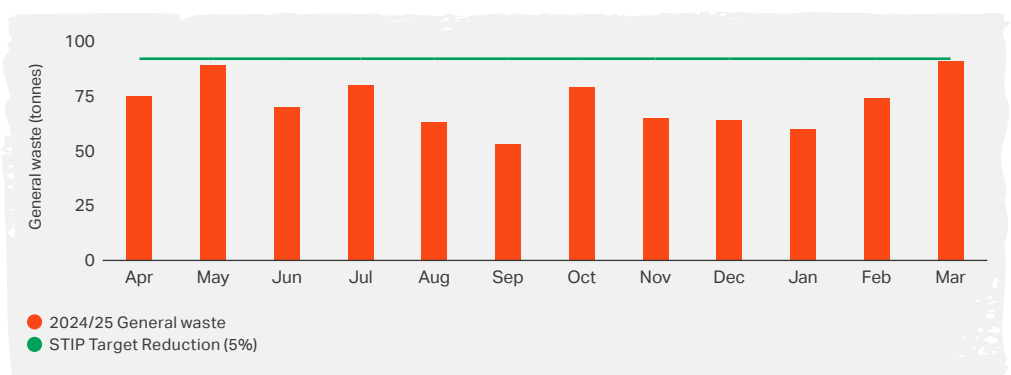
Sustainable procurement, resource use and waste continued

Cadent's waste target for 2024/25 (Office and Depot waste only)

We set annual environmental targets through short and long-term incentive plans as a mechanism to ensure colleagues are incentivised to drive continuous improvement in key areas of the business.

The 2024/25 general waste reduction target was set at a 5% reduction and was designed to drive high levels of performance against waste as a key business metric, adding a direct link to personal financial incentives with Cadent employees. The result reflects the positive engagement, hard work and commitment shown by the networks in understanding and improving our waste management, waste segregation and reducing waste generated at source across all teams.

YTD 2024/2025 General Waste tonnage vs. STIP Target



CASE STUDY

Depot Daily Waste Check – London Network

In 2024/25 the London network has implemented and shared a waste management plan that resulted in significant reductions in the amount of general waste it produces. In 2023/24, London generated an average of 23 tonnes of general waste a month, but with the implementation of the waste management plan, this has since reduced by 63% to an average of 8.5 tonnes per month.

This was achieved by multiple initiatives ranging from physical control of access to waste areas, to changing the type, size and layout of waste facilities on site, as well as improving knowledge and awareness of waste issues via posters, depot TV screens, emails, meetings, roadshows and more.

Every day, each depot is expected to submit photos of the contents of the waste skips via a dedicated online form to help monitor and improve waste segregation, reduce cross-contamination and support fly-tipping investigations.

63%

reduction in general waste with the implementation of the London network's waste management plan

Sustainable procurement, resource use and waste continued

CASE STUDY

PPE Recycling

Recycling of PPE is important for keeping waste out of landfill, reducing the need for virgin materials, and conserving energy and water used in the production of new PPE.

In the past year, we have been working with PWS and Avena to roll out a new PPE recycling scheme at 3 sites within the West Midlands Network and 6 sites within the North London Network.

By working with PWS and Avena, our PPE Recycling Process includes:

- Quarterly collections from main depots (items do not need to be in bags, reducing plastic usage/waste).
- Top-to-toe PPE recycling – including boots, glasses, gloves, helmets and corporate office wear.
- Secure shredding of our PPE items, with a certificate of destruction supplied by Avena.
- Certificated average CO_2 savings tracked and shared per individual depot.

Once our PPE has been collected, Avena apply their "Tiered Approach" which is shown below:

1. Avena's primary, preferred route is a truly circular re-use process to use the broken-down fibres to create the same type of product as the original textile post secure destruction. Typical outputs include yarns and fabrics.
2. Avena's secondary outlet involves an advanced remanufacturing process to re-purpose textiles into a range of different products. This includes further life products such as insulation, geotextiles, sound boarding, and further bespoke innovations.
3. Finally, if the above two routes are not possible for materials, the calorific energy used to create the item will be recovered and fed back into the grid via a Refuse Derived Fuel process.

Through our PPE recycling partnership with PWS and Avena, we have successfully collected a total of 153 kg of uniform across all depots so far in 2025. This initiative has resulted in an estimated carbon saving of 75 kg of CO_2, contributing to our ongoing commitment to sustainability and responsible waste management.

This carbon saving is equivalent to:

191

miles driven by an average gasoline-powered passenger vehicle

6,064

number of smartphones charged

Discussions have now begun to expand this positive recycling scheme to the East Midlands Network.

Local Environment

Climate Change Resilience

Climate Change Adaptation and resilience go hand in hand with our approach to a changing environment and how we can prepare and plan our day-to-day operations around climatic hazard events. Adaptation is the process taken to adjust to the actual or expected climate and its effects, whereas resilience to climate change is the capacity to prepare for, respond and recover from those hazardous climatic events.

Our Climate Resilience Strategy distinguishes the type of risks to which we aim to adapt our network. This is based on our understanding of climate exposure, as well as aligning this with international reporting and disclosure frameworks i.e. Task Force for Climate Financial Disclosure (TCFD). This includes the following risks:

- **Acute:** Severe storms (wind), riverine flood events (pluvial and fluvial causes), coastal flooding, wildfire, heat stress, cold extremes.
- **Chronic:** Warmer winters, soil subsidence and erosion (from drought conditions), asset inefficiency due to heat, impact of heat/cold on gas demand/supply.

Those are the hazards that we will be adapting our network for as the physical risk they present to our assets will evolve with the changing climate.

CASE STUDY

Building Resilience: The Release of our Climate Adaptation Report

In December 2024, we reported to the Department of Environment, Food and Rural Affairs (DEFRA) our fourth round of climate change adaptation report under the Climate Change Act 2008.

Understanding climate change and the impact that it has on our assets and operations is critical to ensure that we safeguard life and property, and secure energy supply to the 11 million homes and businesses that we serve.

Our report used Met Office Climate Projections modelled data from 2018, and in collaboration with the Energy Network Association (ENA) five climate variables were identified to report on:

- Precipitation
- Temperature
- Wind
- Wildfire
- Sea-level rise

Against these variables, the ENA and partner organisations identified 22 risks. Each risk is broken down to provide an industry response and risk assessment, including details on how Cadent plans to, or is currently mitigating our exposure to these risks.

For example:

- ARG11, risk of flooding of contaminated sites. Mitigation measures put in place include:
  - For new and replacement above-ground installations and pressure regulating installations, vulnerability to flooding (and other natural events) is reviewed and a flood risk assessment is carried out under our Specification for Hazard Identification Studies (CAD/SP/HAZ/8).
  - Developed Engineering Management Procedure for Extreme Weather Events: Flooding
- ARG3, Risk and action owners not identified at the senior leadership team. Mitigation measures put in place include:
  - A Natural Events Working Group has been created chaired by our Director of Safety, Health and Environment (SHE). This working group brings together senior leaders from across our business in areas relating to operations, environment, engineering, asset investment and capital delivery.

To access the Climate Adaptation 4th round report and read more on the 22 identified risks please click on the link *Climate Adaptation Report 2024*

Local Environment continued

CASE STUDY

Cadent's Natural Events Working Group (NEWG)

Cadent's gas distribution system consists of numerous above-ground assets, pipelines, and associated infrastructure. Adverse/extreme weather can impact the safe and efficient operation of the networks in many ways, ranging from damage to assets, to loss of access and a failure to complete critical or regulatory tasks. In March 2023 we established an internal Extreme Weather Network Resilience Working Group to review and share best practices and lessons learnt from external stakeholders and working groups around climate change adaptation and resilience.

It was soon recognised that damage from wider natural environmental conditions (including lightning, wind, sunshine, snow and ice, and flooding) is a key threat to gas supply and could lead to a critical transportation constraint within the Distribution Network. The working group was therefore renamed as the Natural Events Working Group, and provides a mechanism for representatives from relevant business functions to work collaboratively to improve network resilience and reliability to the threats posed by extreme weather events. The Working Group has the following remit:

- Support the organisation in anticipating, preventing, withstanding, responding, and recovering promptly from disruptive challenges posed by natural events impacting the gas distribution network in line with our Resilience Policy Statement.
- Ensure Cadent manages the principal risk that climate change poses to its operations, assets and activities.
- Ensure Cadent meets commitments made to DEFRA for climate change adaptation under the Climate Change Act 2008.
- Steer the direction and drive the progression of the Climate Resilience Strategy including the development of metrics within Ofgem.

The Natural Events Working Group continues to meet quarterly and is chaired by the Director of Health and Safety, with representatives from across the business.

Local Environment continued

CASE STUDY

Our Future Talent Group Dive Deep into Flood Risk

Throughout 2024, colleagues from Cadent's Future Talent Programme investigated the below question "What is the flood risk of above-ground assets from catastrophic dam failure?"

Key Findings:

- **Low but Significant Risk:** While the probability of a dam failure is deemed low, the potential severity of such an event necessitates careful planning and mitigation strategies by the asset owner.
- **Asset Vulnerability:** The study modelled Cadent's assets against the Environment Agency reservoir flood maps, and identified specific above-ground assets which are most vulnerable to damage from the force of flood water.
- **Customer Impact Modelling:** Using Geographic Business Network Analysis (GBNA), the cohort modelled the potential customer impact in the event of asset failure due to flooding. The results highlighted the potential for disruption to thousands of domestic, commercial, and industrial customers.

The Future Talent Cohort's work provides valuable insights and recommendations that will inform Cadent's approach to mitigating the risks associated with potential dam failures. By proactively addressing this low-probability but high-impact event, Cadent can further strengthen its commitment to ensure our business is safe, secure & resilient and that we can continue to deliver efficiently and brilliantly for customers.

This work was fed into Cadent's Round 4 update on Climate Change Adaption to DEFRA.

CASE STUDY

Flood Resilience Framework – Storm Babet October 2023

Storm Babet hit the UK between 18th and 21st October 2023, leading to widespread societal disruption. Our East Midlands and North West Networks were the most significantly impacted parts of our network. The storm provided us with the first opportunity to test our operational Engineering Management Procedure for Extreme Weather Events (Flooding).

We used the Environment Agency's Targeted Flood Warning Service to successfully identify 61 flood alerts and flood warnings (fluvial and tidal flooding) for sites across our network (i.e. Offtakes, PRS's and District Governors). We also used the Flood Guidance Statement from the Flood Forecasting Centre to identify sites and above ground assets potentially at risk of flooding. We identified 82 exposed pipeline sections and 80 sites to be within Amber risk areas.

This allowed us to prepare contingency plans within the first day of the alert so we could ready our resources and teams whilst the impact of the storm was monitored.

Local Environment continued

Biodiversity

Biodiversity is described as all the different kinds of life you'll find in one area – the variety of animals, plants, fungi and even microorganisms that make up our natural world. Each of these species and organisms works together in ecosystems to maintain balance and support life. It supports everything in nature that we need to survive; food, clean water, medicine and shelter. There is growing societal concern over continuing biodiversity loss, and this is seen increasingly as an issue of similar magnitude "and linked with" the climate crisis.

Our focus during RIIO-GD2 is primarily:

- To work within the current license conditions to deliver the commitments we have made in our EAP to seek innovative and creative ways to enhance biodiversity on our key sites.

Over RIIO-GD2, we have instructed ecologists to conduct 83 baseline surveys using the DEFRA Biodiversity Metric methodology, across a selection of operational and depot sites. The DEFRA Biodiversity Metric 4.0 (a Natural Capital Value tool) is designed to quantify biodiversity to inform and improve planning, design, land management and decision-making. It provides a standardised approach that is widely accepted across the industry and environmental communities.

Each ecology survey has been shared with relevant site contacts for review and approval and is available on the Environment Management System (EMS). The reports detail action plans and proposed measures from the ecologist that if implemented will provide ecological enhancement within the above-ground installations (AGI) and Depots.

In our RIIO-GD2 EAP, we noted that 'we will undertake the external biodiversity benchmarking process to ensure that our action plans are robust and conform to these externally assessed standards'.

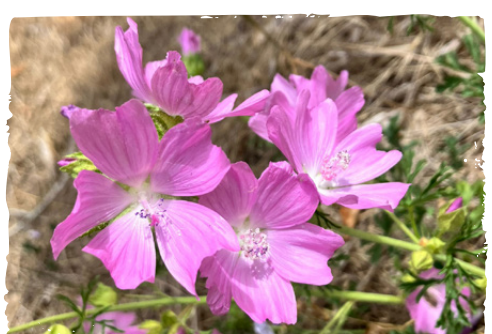
This process involves a third-party certification of our management systems against the standard specification, to do this:

- We have created a company-wide Biodiversity Policy created in January 2025, outlining our commitments to Biodiversity: ***Biodiversity Policy Statement***
- We have identified 5 flagship sites which will undergo external assessment to achieve the benchmark status. These sites have been resurveyed in 2024/25 to align with the requirements for the external benchmark.
- We have set up appropriate governance and reporting structures for all initiatives under this strategy.

Examples of identified benefits across the locations include scrub and woodland management to allow the expansion of microhabitats, specific cutting and planting regimes, low intensity mowing for grassland enhancement, and pesticide reduction.

In addition to the 5 flagship sites, we are planning to expand this work to ~15 sites into the RIIO-GD3 to increase the habitat units, which will also contribute to our internal 30% Biodiversity Net Gain by 2030 target.

We currently have 6 projects going through planning permission where the 10% mandatory Biodiversity Net Gain (BNG) is required, and the number of projects where this is required will continue to increase. We have worked with external consultants in developing a BNG strategy to ensure a correct and consistent approach to the legislation is applied across the company.



Local Environment continued

CASE STUDY

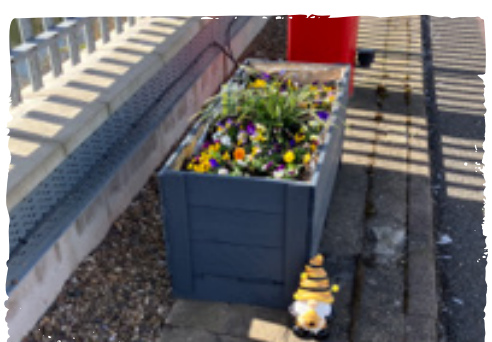
30:30 Biodiversity Competition

At the start of 2025, we set our networks a Depot in Bloom competition to see how they could utilise up to £1,000 in funding and enhance the biodiversity and local habitats on their sites. With the support from colleagues and guidance from local site ecological plans, we received fantastic innovative entries.

Supporting our 30:30 target by improving measured biodiversity scores by 30% by 2030, the entries showcased how creative and dedicated our colleagues are in improving biodiversity on our sites. Whether it was adding pollinator-friendly plants, creating a small wildlife habitat, or installing bird feeders, the networks have been hard at work.

This includes:

- installation of bird and bat boxes – including the first resident of bats after only four weeks;
- up-cycling pallets into planters and bug hotels;
- creation of wildflower areas, with Wild Red clover, Greater Birdsfoot and Wild Carrot seeds;
- installation of bird feeders;
- sunflower growing competitions; and
- creation of new flower bed areas.



We received fantastic projects from across the networks, and can see how hard everyone has worked in creating these amazing spaces for wildlife."

Lorna Pilbin
Head of Environment and Resilience

The whole process has been a joy for everyone on site. We're greeted by plants and flowers, which follows the theme around the site, it's brimming with colour and the number of bees that we have has certainly increased"

Lucy Walters
Fleet and Logistics Manager, West Midlands

Local Environment continued

Enhancing the local environment

Volunteering

We aim to be a Force for Good in Society, making things 'Easier, Fairer and Greener' for those living and working in our networks. Cadent gives all employees two paid days a year to volunteer for the good causes that align to the social impact framework of making life easier, fairer, and greener. 60% of employees have given back to the communities in 2024/25 through volunteering.

In 2024/25, a minimum of 2,521 volunteering hours were logged across the topics of environmental clean-up, gardening and conservation. The good causes included animal sanctuaries, education projects, forest schools and biodiversity groups.

CASE STUDY

Eco-friendly outdoor learning and wellbeing space

In March 2025, the Chief Financial Officer (CFO) Team recently volunteered at a school in Coventry to help transform their overgrown pond area into an eco-friendly outdoor learning and wellbeing space. This initiative, led by the sixth formers, aims to promote education and mental health. The three students leading the project presented their vision to the volunteers, further developing their leadership skills.

The team cleared the area of leaves, cut back branches, and removed roots to get the project underway. In addition to a small pond, there is a large pond area that requires clearing, and the students are committed to revitalising both ponds and integrating them into the school's outdoor learning curriculum.

Before

After

Local Environment continued

Environmental incidents

A reportable environmental incident is an incident that has the potential to cause harm or damage to the environment, such as polluting a watercourse, damage to local biodiversity or non-compliance with permit requirements. At Cadent, we manage and monitor environmental incidents through our Incident Management System.

We use this system to track the frequency and severity of incidents, create and manage action plans, and drive continuous improvement through any lessons learned.

For 2024/25, there was one incident reported to the Environment Agency. This incident was related to an accident which resulted in vehicle damage and a fuel leak. The spill was contained at the time of the event. During internal investigation of the incident, the root cause was identified and the investigation has been closed.

The incidents reported to the Local Authority related to tree root damage incidents. A root cause was identified during internal investigation of these incidents. The investigations are now closed. We have launched awareness initiatives on this important topic.

Please see page 29 for more information

Table 14 – Reportable Environmental Incidents

	Unit	2021/22	2022/23	2023/24	2024/25
Reportable to the Environment Agency	Number	0	0	0	1
Reportable to the Local Authority	Number	0	0	1	5
Warning letters received	Number	0	1	1	0
Formal undertakings, enforcement notices, monetary penalties	Number	0	0	0	0
Prosecution	Number	0	0	0	0

Employee Engagement

Safe+Well programme

Our Safe+Well survey is used to gather employee feedback across several areas so we can use insights to drive improvements through our Safe+Well multi-year programme. The Safe+Well programme sits at the heart of Cadent's purpose, 'keeping people warm whilst protecting the planet' and aims to create a psychologically safe culture where continuous learning and improvement are embraced. Over the past two years, we have been inviting our colleagues to share their views and experiences on health, safety, well-being and sustainability at Cadent

Over 4,300 of our employees have had their say during 2024/25.

We introduced two new question areas in 2024/2025: Process Safety and Social Purpose. We also asked our people about how involved they felt in the 2024 action planning process. The remaining questions were kept the same to ensure we can benchmark against previous years. Our key insights show improved scores across financial health and sustainability, and environment.

Since the last survey, we have been able to build on the feedback we received from you.

- Introducing a new range of incorporated high-visibility PPE, improved footwear options and expanded gloves range.
- Employee engagement on our new formatted Environmental Management System pages.
- Launching a range of wellbeing support, such as Mental Health line manager training, wellbeing health checks and stress risk assessments.
- Enhanced our financial wellbeing support and advice, including free will writing service, regular lunch and learns and support resources.
- Launched our critical risk and lifesaving controls.

Some key highlights:

- Cadent has clear social and environmental plans, with commitments to overall sustainability throughout the organisation.
- 68% are aware that Cadent must follow environmental compliance, and know where to find supporting information for their role, increasing from the previous year.
- 63% of employees feel that Cadent has clear commitments towards environmental sustainability.

Statement on scope and quality of data

Scope

Overview

This Annual Environmental Report (AER) provides our progress against the RIIO-GD2 Environmental Action Plan approved by Ofgem and other reporting requirements in the Annual Environmental Reporting guidance RIIO-GD2 Version 1.0. This AER covers the second year of the price control period RIIO-GD2 and covers the financial year 1 April 2024 – 31 March 2025. Data collection and reports in the AER have been done so against the Annual Environmental Reporting guidance RIIO-GD2 Version 1.0 and Regulatory Reporting Pack (RRP).

Reporting boundary

This AER included data from from each network – North London, Eastern (East Midlands & East of England), West Midlands and the North West. Unless stated otherwise, the data reported is Cadent's total, as most of our RIIO-GD2 Action Plans are targeted at a company level.

Quality

Data Collection

For 2024/25, the data collection process and reporting have been assured in line with Ofgem's Data Assurance Guidance (DAG) either through the environmental reporting in the Annual Financial report or as part of the Regulatory Reporting Pack (RRP). As per DAG, our assurance process included undertaking a risk assessment to understand the probability and impact of data submissions. This determines the level of data assurance activities and processes followed for data collection, review and sign-off. We are always looking to improve our data assurance and reporting process over the RIIO-GD2 period.

Completeness of information

Throughout the AER, the data and narrative detailed in this report are to the best of our knowledge at the time of reporting. If there are any data gaps, such as incomplete data or data not collected in the current reporting year, we will be working to address these, where applicable, for future reporting.

The Carbon Trust data certification

In 2025, we have been working with The Carbon Trust for a third year to verify our 2024/25 Business Carbon Footprint data. This is partial verification of our total footprint for the financial period spanning April 2024 to March 2025.

The scope of work included the following GHG emission categories which were verified in accordance with ISO 14064-3:

- **Scope 1:** Stationary fuel combustion, mobile fuel combustion, process emissions, fugitive emissions.
- **Scope 2:** Purchased electricity (location- and market-based).
- **Scope 3:** Category 6 – Business Travel only.

During 2024/25 we remained committed to the 'Taking Action' tier of the Route to Net Zero Standard. We continue to deliver measurable year-on-year emission reductions within our current operations. We are committed to ensuring good quality data, preferably deriving from primary sources, to be able to quantify our successes and identify target areas.

Extensive internal stakeholder engagement across the business is required for such verification activities, including sharing of data collection processes, interviews and providing primary data. Once again, we would like to thank and congratulate all colleagues involved in the process who have enables us to maintain our organisational carbon footprint verification.

We will be actioning any improvements and recommendations by the Carbon Trust ahead of the next emissions verification audit.

Appendix 1 – Scope 3 Categories

Screening assessment

Each category was assigned a weight to reflect its relative importance in determining Scope 3 category hotspots. The largest contributor is the estimated portion of emissions from the relevant category. Influence and risk were considered the next most important factors in determining Scope 3 applicability. The level of influence Cadent may have over implementing emission reduction activities in a particular Scope 3 categories may warrant focus in that area and contribute to material emission reductions, even if the size of that category's emissions relative to all Scope 3 emissions would not indicate it as a hotspot. Evaluating risk is an important consideration as seeking to reduce risk will ultimately drive business decisions across the organisation and climate-related risk is increasingly growing. Finally, sector guidance, stakeholders and level of outsourcing were assigned lower weights, as they should be considered when determining Scope 3 hotspots but should not be the determining factors.

Category #	Scope 3 Category	Applicability	Overall Data Quality
	Upstream		
1	Purchased goods & services	77	62
2	Capital goods	60	61
3	Fuel- and energy-related activities	57	70
4	Upstream transportation & distribution	53	76
5	Waste generated in operations	55	91
6	Business travel	27	100
7	Employee commuting	28	13
8	Upstream leased assets	22	56
	Downstream		
9	Downstream transportation & distribution		
10	Processing of sold products		
11	Use of sold products	7	18
12	End-of-life treatment of sold products	51	56
13	Downstream leased assets		
14	Franchises		
15	Investments		

The data were evaluated in line with GHG Protocol data assessment criteria (Table 7.4, Table 7.6, and Box 7.2 from GHG Protocol Corporate Value Chain Accounting and Reporting Standard).

Appendix 1 – Scope 3 Categories continued

Scope 3 – Emission screening results

Category	Methodology and assumptions	Data sources	Confidence in data (completeness and accuracy) RAG Rating
Purchased goods and services	The total spend was entered into a value chain footprint model developed by The Carbon Trust and an emission estimate was determined on a spending basis	2020 expenditure was used as a proxy FY 2019/20, for the allocation of spend for purchased goods and services	🟡
Capital goods	The total spend was entered into a value chain foot printing model developed by The Carbon Trust and an emission estimate was determined on a spending basis	Spend on light commercial vehicles, mobile phones, computers, and portable gas detected. Expenditure in 2020 was used as a proxy for FY 2019/20.	🟡
Fuel and energy-related activity	Emissions from sources used to calculate fuel and energy-related activities	Emissions from transmission and distribution losses and well-to-tank emissions for shrinkage, natural gas consumption on site, electricity use and fuel use in vehicles.	🟢
Upstream transportation and distribution	This has been calculated based on spending data	N/A	🟡
Waste generated in operations	Spoil data was provided which is either landfilled or recycled and multiplied by the corresponding DEFRA 2019 emission factor	Spoil waste data from 2019 was used. A 20% uplift was applicable for other waste generated from operations.	🟡
Business Travel	Total travel reported by Cadent employees through the expense claim process	Business travel emissions were calculated from emissions for air, car hire, ferry, and rail	🟢
Employee commuting	Employee commuting emissions were estimated. The total figure was implemented into a value chain model developed by The Carbon Trust to determine an approximate footprint based on the number of employees	Calculated based on 3583 full-time employees and 304 part-time staff.	🟡
End-of-life treatment of sold products	This has been calculated by determining the mass of the PE pipe in 1km. The diameter and weight from suppliers were converted into kg/km and multiplied by the total used in a year.	Based on the mass of 1km of 63mm PE Pipe	🟡
Downstream transportation and distribution	Not applicable to Cadent		⚪
Processing of sold product	Not applicable to Cadent		⚪
Use of the sold product	Not applicable to Cadent		⚪
Downstream leased assets	Not applicable to Cadent		⚪
Franchises	Not applicable to Cadent		⚪
Investment	Not applicable to Cadent		⚪

🟢 Accurate data is available and in full
🟡 Estimated or modified data available or partially collected
🔴 No data or estimate is available for the report
⚪ Not applicable for Cadent's Scope 3 reporting boundary or applicable category

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