



Putting Cornwall's waste to good use

April 2019 — March 2020



on behalf of Cornwall Energy Recovery Ltd



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The contract year 2019-2020 has seen further progress in our aims to increase the amount of materials Cornwall can recycle and recover more materials to generate energy, virtually eliminating landfill disposal – we diverted 99.9% of waste away from landfill.

Education and behaviour change continue to be high on our agenda. Our visitor centres at Bodmin materials recycling facility and Cornwall energy recovery centre have never been more popular, welcoming 3,931 visitors throughout the year – up from 2,997 the previous year. Visitors were able to see first-hand what happens to the recycling and rubbish collected from homes across Cornwall. Our education team also supported community projects like the St Blazey Recycle, Reuse and Resale Community Interest Company, organised beach cleans and supported Cornwall Council's healthy workplace programme.

In addition, we offered work placements for three secondary school students during the summer holiday. The students worked alongside staff at the energy recovery centre in all departments, giving them valuable work experience and helping nurture their future aspirations.

We opened Truro's new household waste recycling centre in September 2019, giving local residents an additional opportunity to recycle and dispose of their waste at a modern, accessible facility. It is proving popular with local residents, with 45% of materials brought to site being recycled and a user satisfaction rate of 96.3%.

We worked with local ecologists to create a biodiversity-focussed plan for the restoration of Connon Bridge landfill that will now include wet willow woodland, wet grassland, broadleaf woodland and native scrub habitats.

Despite the challenges posed by the COVID-19 pandemic, we continued delivering our services effectively and started the process of redeveloping our network of recycling and waste transfer facilities across the county to enable Cornwall Council to deliver its new collection services. These will allow residents to recycle more of their rubbish, including their food waste.

Best wishes,

John Scanlon
Chief Executive Officer
SUEZ recycling and recovery UK

Ian Sexton
Chairman
Cornwall Energy Recovery Ltd

It is a great pleasure to welcome you to the 2019-2020 annual report for the Integrated Waste Management Contract.

As ever, the scale of the day-to-day operations carried out under the Integrated Waste Management Contract is quite breath-taking – around 260,000 tonnes of waste per year are received at the facilities provided by the Contract and sent for onward treatment!

Along with the day-to-day transfer and treatment of our rubbish and recycling, the Integrated Waste Management Contract has also made much progress on a series of projects that I would particularly like to highlight.

As a long-term Truro resident, I was particularly pleased to see the opening of a new household waste recycling centre for the city. It means a lot less travelling time for many people and has really good facilities.

The closure and restoration of the Connon Bridge landfill site shows how our focus is changing. The initial plan was to return the area to agricultural land. However, in line with Cornwall Council's 2018 Planning for Biodiversity Guide and the UK Biodiversity Action Plan, the revised restoration plan is now designed to maximise biodiversity and includes extra footpaths to enable members of the public to enjoy it.

SUEZ, the Integrated Waste Management contractor, has also been doing some work at the top of the waste hierarchy of reduce, reuse, recycle by supporting St Blazey Recycle, Reuse and Resale shop. The support involves keeping an area for reusable items at several household waste recycling centres for the charity to collect for re-use in the local community, as well as direct support and advice as the project grows. From April 2019 to March 2020, the initiative has now diverted 123 tonnes of household items from disposal and has had a positive impact on the local community.

The St Dennis and Nanpean Community Trust was established to promote health, wellbeing and environmental protection in the communities surrounding the Cornwall energy recovery centre. The Trust receives a proportion of the revenue from electricity generation at the Cornwall energy recovery centre and have used it to fund projects including a school mini bus, installation of a defibrillator at Roseveor Park and gym equipment for St Dennis Playing Field, all of which make a difference to the day-to-day lives of people in the local community.

This is only a snapshot of the work that goes on in the background. Please do read the report, I am sure you will find it as fascinating as I did.

Cllr Rob Nolan

Portfolio holder for Environment and Public Protection
Cornwall Council



about this report

This report is designed to give all stakeholders details of how Cornwall Council and SUEZ recycling and recovery UK (SUEZ) are working together to ensure Cornwall's recycling and waste is managed sustainably, helping tackle the climate emergency and to protect its unique environment.

In the following sections, we will review highlights of the contract year, using case studies to show how our work is contributing to environmental improvements and delivering the priorities laid out in Cornwall Council's Resources and Waste Strategy.

Cornwall Council

As a waste disposal authority, Cornwall Council is responsible for collecting and processing around 268,000 tonnes of household waste and recycling collected from around 550,000 residents in the county and brought to the county's 14 household waste recycling centres.

Cornwall Energy Recovery Ltd

Cornwall Energy Recovery Ltd was created to manage the county's household waste, on behalf of Cornwall Council, for the duration of the contract until 2039. Cornwall Energy Recovery Ltd is made up of three shareholders: Pensions Infrastructure Platform, i-Environment Investments, and SUEZ recycling and recovery UK. In addition to being a shareholder, SUEZ is responsible for the day-to-day operation and maintenance of the network of facilities that manage Cornwall's household waste.

SUEZ Recycling and Recovery UK Ltd

Part of the global SUEZ group, SUEZ Recycling and Recovery UK Ltd employs over 5,000 people and handles more than 10 million tonnes of waste over the course of a year. Established in the UK in 1988, our company delivers innovative and environmentally-responsible solutions for the waste generated by households and businesses across the country.

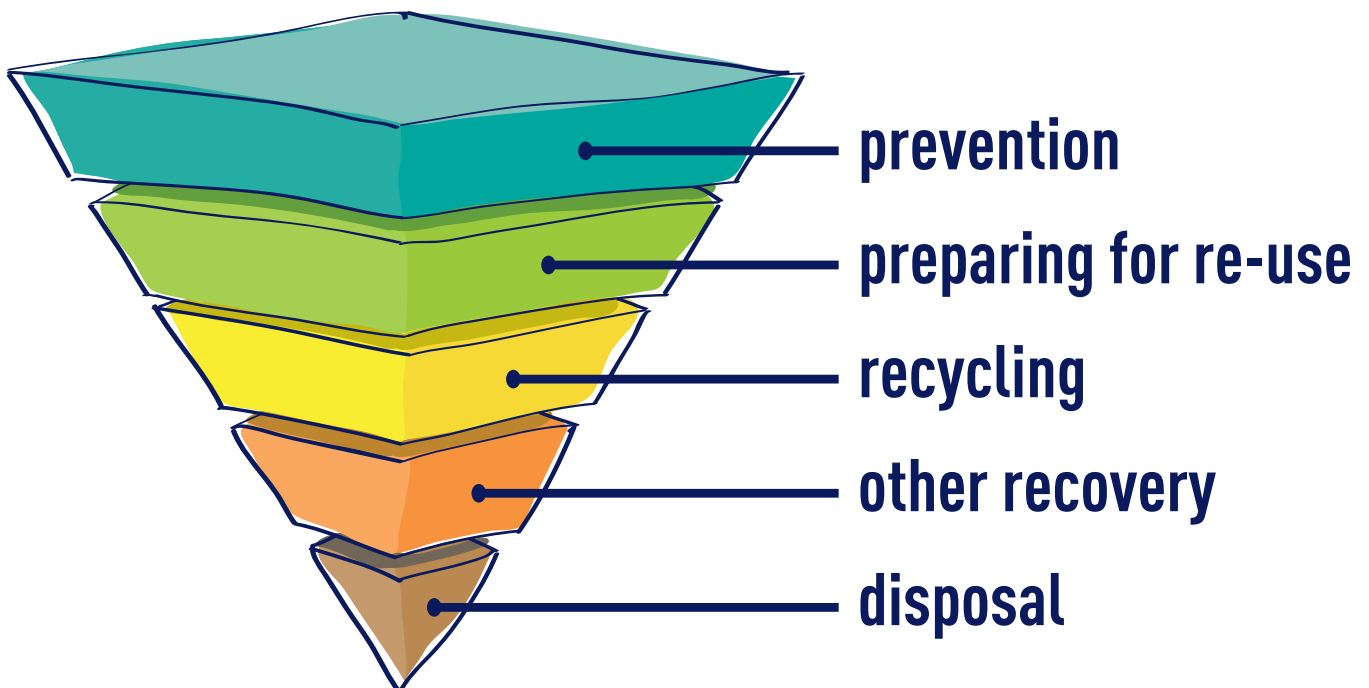


managing Cornwall's waste

In this section, we explain how we are working together to treat Cornwall's waste as a valuable resource. We use our comprehensive network of facilities to deliver the priorities laid out in Cornwall Council's Resources and Waste Strategy. We provide safe, efficient and reliable services to manage waste materials generated by residents.

The waste hierarchy

When it comes to processing recycling and residual waste, there are several different options. When ranked by their environmental impact, these options form a pyramid known as the 'waste hierarchy'. Each step in the pyramid is one step closer towards realising a society with zero waste.



Later in this report, we present case studies relative to the waste hierarchy. These case studies illustrate initiatives we have undertaken this year to help reduce waste, promote re-use, increase recycling and recover energy and materials from what's left.

Delivering an integrated strategy

Our main objective is to support the priorities in Cornwall Council's Resources and Waste Strategy by providing safe, efficient and reliable services to residents, with the aim of eliminating waste sent to landfill and increasing the amount that is reduced, reused, recycled and recovered. To date, Cornwall Council and Cornwall Energy Recovery Ltd have invested over £180 million to provide Cornwall with modern facilities that allow greater access for the community and more efficient re-use and recycling, thus moving materials up the waste hierarchy through delivery of an integrated strategy focused on the four R's: **reduce, reuse, recycle and recover**.

REDUCE

To help prevent waste being created, we work to raise awareness and educate the public to help reduce the amount of waste produced by the 280,000 households in Cornwall. The visitor centres at Bodmin materials recycling facility and Cornwall energy recovery centre host scheduled visits from schools and community groups, providing a comprehensive look at the lifecycle of waste, its environmental impact and the responsibility that lies with each individual.

REUSE

We aim to extend the useful life of unwanted items, like furniture or clothing, by working with local re-use organisations, where possible, who collect the items from our sites, refurbish them where necessary and sell them on or donate them to local families in need.

RECYCLE

We manage a network of recycling facilities across Cornwall. All of the recycling collected from the kerbside is sorted at one of our two materials recycling facilities, located in Bodmin and Pool. Most household items that cannot be collected at the kerbside can be brought to one of our 14 household waste recycling centres located across the county. The garden waste collected from households and deposited at our household waste recycling centres is turned into compost.

In September 2019, we opened the modern household waste recycling centre in Truro.

RECOVER

Waste left over after re-use and recycling is sent to the Cornwall energy recovery centre near St Dennis, where it is used as a sustainable fuel to generate energy for the local electricity grid.

The Cornwall energy recovery centre has the capacity to process all of the residual household waste produced in Cornwall, providing a local solution which is more sustainable than landfill.

The four R's in action

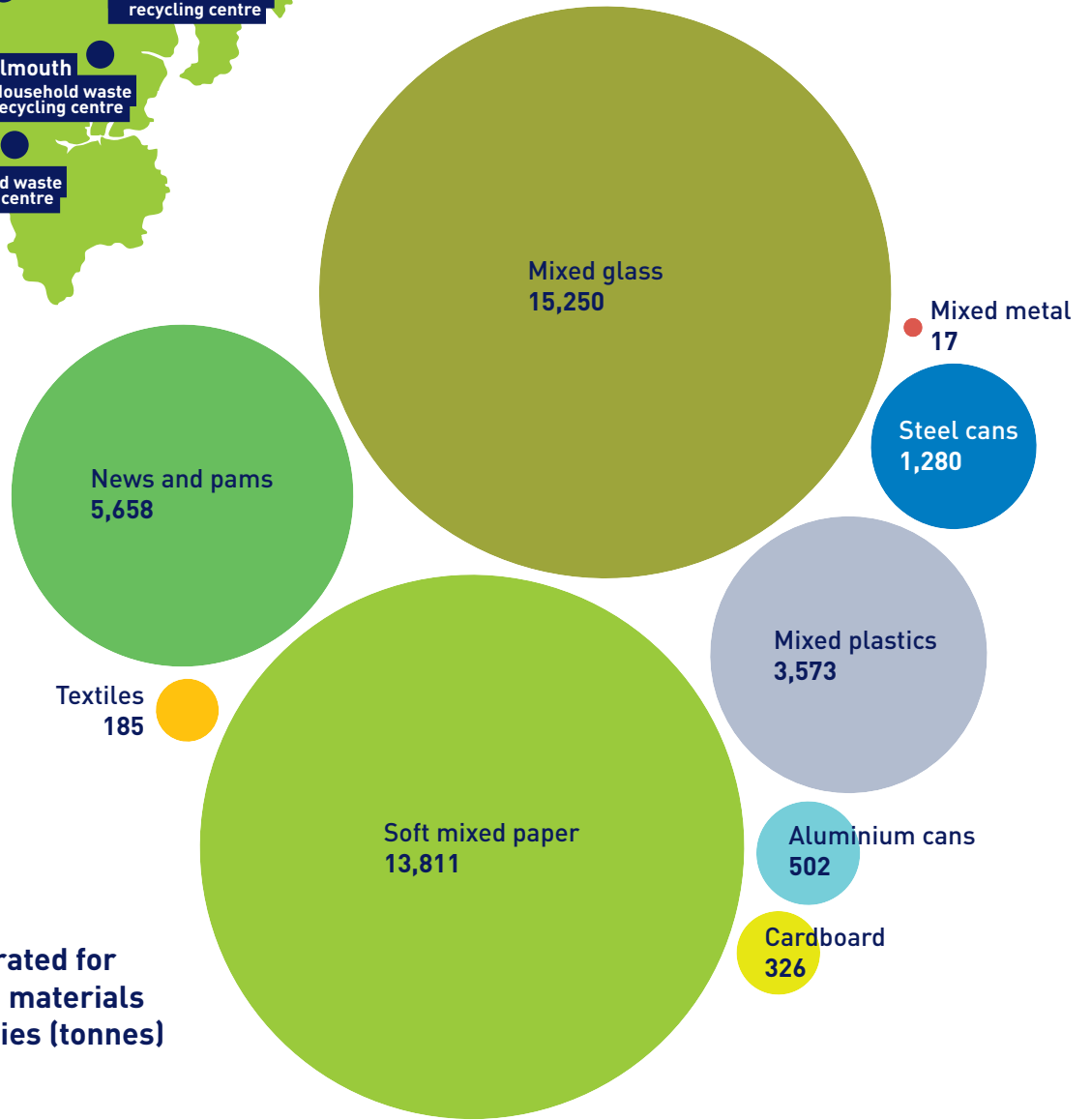
In the 2019-2020 contract year, the 550,000 residents of Cornwall produced 259,831 tonnes of waste. Managing this volume of material requires coordination and strong teamwork across a network of facilities throughout the county.

Once residual waste is collected at the kerbside, it is taken by vehicle to a refuse transfer station, where it is re-loaded onto larger bulk vehicles and taken for recovery at the Cornwall energy recovery centre. These transfer stations have an important role to play in protecting Cornwall's environment, as they reduce the number of vehicles needed, thereby reducing traffic congestion and air pollution. Waste and recycling collected near our processing facilities can be taken there directly, but our five transfer stations act as a vital link for materials collected further afield.

Over 39,000 tonnes of household recycling is collected from the kerbside and taken directly for processing at the materials recycling facilities at Bodmin and Pool.

Every day, our operations work in harmony to make efficient use of resources, protect Cornwall's unique environment and provide a sustainable solution to Cornwall's household waste.

By applying the four R's to the 259,831 tonnes of waste produced in Cornwall this year, we were able to divert 99.9% away from landfill.



Materials separated for recycling at the materials recycling facilities (tonnes)



stewardship of our assets

In January 2019, Cornwall Council declared a climate emergency, signalling their intent to take urgent action on climate change and protect Cornwall's rich natural heritage.

Working in partnership with the council, SUEZ is committed to managing our operations and the materials we process in a sustainable way, protecting Cornwall's natural environment and helping to deliver economic and environmental benefits. Our network of facilities ensures that we are able to get the most value out of Cornwall's waste.

Just as we aim to put waste to good use, we also aim to add environmental value in areas where we operate. The following case study shows how we are helping create natural habitats in Cornwall, encouraging wildlife and increased biodiversity to enhance Cornwall's unique environment.

working to deliver Cornwall Council's resources and waste strategy



In 2018, Cornwall Council published its new Resources and Waste Strategy titled “It’s in Our Hands”, setting future goals and a delivery plan to ensure that we are treating waste as a resource and recovering as much value from materials as possible.

The following section includes case studies of several highlights from the 2019-2020 contract year to illustrate how our work addresses the needs of Cornwall’s residents and helps deliver the Resources and Waste Strategy, using a circular economy approach to support the Council’s overall goal of reducing waste, increasing re-use and recycling and maximising recovery of resources.



Supporting Eco-School awards in Cornwall

Helping Bodmin College achieve Eco-School status

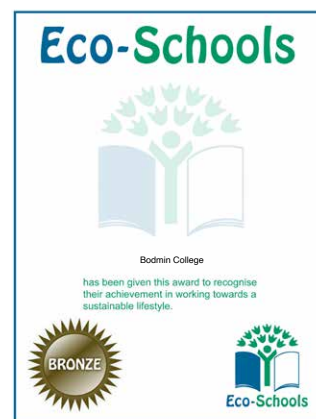
The Eco-Schools charity works with primary and secondary education institutions in the UK, to deliver an OFSTED-recognised pupil-led programme at partner schools on 10 key areas: biodiversity, energy, global citizenship, healthy living, litter, marine life, school grounds, transport, waste and water. This programme gives schools across the country a range of benefits, from cost savings through waste, water and energy reduction, to pupils leading the change they want to see at their schools.

SUEZ promotes education around waste and resources using visitor centres at the Cornwall energy recovery centre in St Dennis and materials recycling facility in Bodmin. Tours of these facilities help show residents of Cornwall what happens to their waste and recycling after it has been collected from their doorsteps. After one such tour, students from Bodmin College were inspired to go back to their school and try to make a real difference to their environment.

Since 2018, SUEZ has worked closely with Bodmin College supporting them on their journey to achieve Eco-School status, which supports Cornwall Council's Green Charter, introduced for schools in Cornwall and the Isles of Scilly in September 2019. The charter has 10 points of action with a commitment to teach young people to be environmentally literate alongside developing their skills, knowledge, motivation, confidence and practice to promote sustainability in their communities.

Managing and reducing waste

Working with teachers and students to look at the best ways to manage the waste they produce, including how to prevent waste in the first place by reducing and reusing materials, SUEZ now forms part of the Eco-Committee that meets every term.



To help reduce waste, SUEZ provided the sixth form with reusable bamboo cups to use at their on-site café and as a result, the college no longer uses disposable cups for in-house and external events, therefore reducing the amount of waste they produce. In November 2019, an Eco-Café supplied refreshments to the performers and guests at the 20th annual community dance platform, aptly named 'Turning Point', where homemade cake, hot and cold drinks and refreshing raspberry lemonade was served, with no single-use plastic in sight.

Building on success

This great work was rewarded in December 2019 when Bodmin College were awarded Bronze Eco-School status. SUEZ continues to work alongside Bodmin College, who are now working towards their goal of achieving the silver award in 2020, supporting waste initiatives such as the deployment of recycling stations in the college, the introduction of weekly recycling collections run by students, the introduction of recycling bins in every classroom and the collection and recycling of crisp packets through the TerraCycle¹ crisp packet recycling scheme.

¹ Partnered with SUEZ in 2016, TerraCycle offers free recycling programmes funded by brands, manufacturers, and retailers around the world to help collect and recycle hard-to-recycle waste. terracycle.com

Supporting St Blazey Recycle, Reuse, Resale CIC

A second chance: supporting St Blazey's efforts to increase re-use

In 2018, Cornwall Councillor Pauline Giles created the St Blazey Recycle, Reuse, Resale Community Interest Company (CIC), with the aim of reducing waste and helping members of the local community.

The CIC collects used household items in good condition from the household waste recycling centres at St Austell, Connon Bridge, Bodmin and Newquay and puts them back into use through resale or donation to families and individuals in need.

Creating social value from waste

We put waste to good use. There is value in what is thrown away and we strive to maximise its potential, whilst making a positive contribution to wider environmental initiatives.

We have actively supported the CIC's objectives by providing facilities on household waste recycling centres to capture materials suitable for re-use, volunteered in the shop and donated a van in 2018.

SUEZ continues to support Councillor Giles with environmental improvement initiatives, as well as the ongoing collection of good quality household items for re-use.

Over the last year, Councillor Giles has worked closely with the community and local caseworkers to support families facing high levels of deprivation within the area. Councillor Giles said: *"This initiative all started because I was shocked to see families being given keys to social housing with many of them coming out of bed and breakfasts with nothing. One family lived in a flat for a month with an electric cooker as the only item in it. They were all sleeping on the floor and living out of black bags."*

The re-use of items that would have otherwise gone to waste has enabled the CIC to make a real difference to local families.

Making a greater impact

Working with local volunteers, the CIC has also taken on 'makeover' projects which have seen, amongst many, a single parent's family home transformed to provide a mother and her daughters with a welcoming bedroom and lounge.

All the furniture, soft furnishings, carpets, ornaments and toys used to create the makeover came from the St Blazey Recycle, Reuse and Resale shop. Talking about this particular makeover, Councillor Giles said: *"Mum has had friends around for coffee and the children are proud to show off their beautiful bedroom. This isn't just about the furniture, this is also about what it does for the family going forward, it has made such a big and wonderful difference."*



Going from strength to strength

From April 2019 to March 2020, the initiative has now diverted 123 tonnes of household items from landfill or energy recovery, making a real difference to the lives of many families in need.

The CIC has now relocated to larger premises and has added a café on site. The café's kitchen was fully fitted with reused and donated fixtures and fittings.

Finally, the social benefits for local residents are delivering above and beyond expectations, with the café's kitchen being used to facilitate NVQ training to members of the community, by providing them with skills to improve their employment opportunities in the area.

Putting more plastics to good use

SUEZ and Cornwall Council introduced a new scheme to extend the range of plastic recycling, with the addition of pots, tubs and trays to the kerbside recycling collection. This initiative was progressively rolled out across the county and successfully completed by December 2017.

Increasing volumes and quality of materials

Cornwall's residents have been fully and actively participating in the mixed plastic recycling scheme, which has led to a large increase in mixed plastics being recycled across the county. In the last two years, we have seen a 29% increase in plastics collected from the kerbside.

Householders have taken meticulous care in their segregation of recycling materials, resulting in a very low contamination rate at our Pool and Bodmin materials recycling facilities, enabling 99.5% of the mixed plastics to go on to reprocessors for recycling. An impressive 3,587 tonnes – which equates to around 12,696 bales – of plastic from Cornwall's materials recycling facilities went on to be recycled in the UK in 2019.

Education and awareness drive behavioural change

Members of the public, schools and businesses alike have found inspiration from a variety of sources, including documentaries such as David Attenborough's 'Blue Planet', first aired in 2001, and later 'Blue Planet 2' in 2017. These programmes have encouraged people across the world to explore in more detail the impact of plastic pollution and how we can all change our behaviour to help save our planet.

The education and community engagement teams within SUEZ and Cornwall Council have observed a vast increase in interest from residents across Cornwall asking for more information about recycling, especially around plastics. This increased level of awareness has resulted in a 43% increase in visitors attending tours over the past year to our visitor centre in Bodmin materials recycling facility, with bookings arising predominantly from Cornish schools.

In conjunction with tours of our facilities for groups and open days for individual members of the public, we have consolidated the success of our campaign to raise awareness and provide education to the community through organised beach cleans as part of our #suez4ocean campaign – which have seen participation from members of SUEZ staff, their friends and families and engagement from the wider community – as well as litter picks within local communities. SUEZ has also participated in significant events such as the Royal Cornwall Show, at which we demonstrated to visitors how we put plastic received from Cornish householders to good use.



New Truro household waste recycling centre

A modern recycling centre in Truro

To continue delivering Cornwall's waste strategy, a new and modern household waste recycling centre was opened in Truro during the last contract year. The site was successfully opened and started to accept waste from residents on 11 September 2019.

Strategically located in Tregurra Park, the new facility bridges the gap between the St Austell, Falmouth and United Mines household waste recycling centres, ensuring the growing population of Truro can keep putting their waste to good use whilst minimising journey times and unnecessary travel.

Recycling made easier and safer

The modern, split-level design of the site also incorporates a one-way system, to help with traffic flow and ease of use, making it much easier and safer for residents to recycle more of their household waste.

Councillor Rob Nolan, Portfolio Holder for the Environment and Public Protection for Cornwall Council said at the time: *"We are very pleased to be opening the new Truro household waste recycling centre which gives our residents another way to increase their recycling and cut down on waste"*.

Creating infrastructure for the future

The opening of Truro household waste recycling centre brings the total number of household waste recycling centres in Cornwall to 14, providing a comprehensive network of facilities for residents for years to come.

The amount of waste brought to this site by householders in Cornwall has steadily increased since opening in September 2019, with 1,614 tonnes accepted by the site by the end of March 2020. The site is beginning to enjoy a regular user base, which is set to expand further with an increase in population and as more local residents become familiar with the location and layout of this new facility. During these early days of operation, the site is already achieving a recycling rate of 45%.



Sustainability from the outset

Sustainable development is at the heart of everything we do. The centre itself has been constructed using some recycled materials that have been sourced locally, as approximately 11,000 tonnes of incinerator bottom ash aggregate from the Cornwall energy recovery centre were used to raise the level of the site during construction. This has meant that even before the site opened, we have been able to provide a further benefit to the county and its natural environment.

Preserving and promoting local heritage

During the first phase of this project, a team of archaeologists from the Cornwall Archaeological Unit worked closely with SUEZ and Cornwall Council to excavate the area in advance of the construction, during which time, they discovered artefacts from the Neolithic, early Bronze Age, the Iron Age, Medieval and post Medieval times.

To mark the fascinating and important archaeological history of this site, a set of information boards have been produced and installed on the completed site to provide information and details of the excavation work and the history uncovered. These boards are located at the main hub building in the park-and-ride area.



Increasing recovery of resources

Before the Cornwall energy recovery centre became fully operational in March 2017, all the non-recyclable general waste was sent to landfill at Connon Bridge or transported out of the county to be processed elsewhere. The vast majority of residual waste that is not suitable for recycling is now sent to the Cornwall energy recovery centre to be used as a fuel to generate energy.

In order to ensure more items were suitable for the energy recovery centre, our bulky waste shredding operation was introduced on a trial basis at Connon Bridge refuse transfer station in May 2018.

The purpose of the shredding operation is to reduce the size of bulky residual waste material to render it suitable for processing through the Cornwall energy recovery centre. This allows the recovery of energy from this material which would otherwise have been sent to landfill for disposal.

Amongst the large items received at Connon Bridge for shredding, SUEZ processes around 1,000 mattresses per week from Cornwall residents. Once they are shredded, the materials go to the Cornwall energy recovery centre and the metal is then separated and collected as part of the incinerator bottom ash recovery process.

From its introduction in May 2018 to March 2020, the shredding operation has enabled SUEZ to divert 35,030 tonnes of waste away from landfill.

Streamlining the process and reducing our carbon footprint

In a continuing effort to increase recovery rates in Cornwall, a 'black-bag sorting' trial was introduced in July 2017. The trial began initially at three sites – Connon Bridge, Launceston and St Erth – and sought to encourage householders to separate their black-bag household waste from their bulky household waste.

The purpose of the trial was to try and minimise the amount of material sent to landfill and the number of miles waste was hauled on Cornwall's roads, by pre-sorting and separating the waste streams on site. As the trial was such a success at these three sites, the initiative was then rolled out in two phases across 12 out of 14 household waste recycling centres in Cornwall during 2019/2020.

We have installed new separate containers with signage that clarifies the difference and explains where each type of waste goes. Using this system, we have diverted 10,273 tonnes of waste away from the shredding operation based at Connon Bridge, reduced lorry movements involved and contributed to a reduction in greenhouse gas emissions.





creating social value in Cornwall

Funding for local community projects

At SUEZ, we strive to be an active member of and positive influence in the communities in which we share and serve. In the 2019-2020 contract year, over £179,480 in funding was donated to local community initiatives through the independently-run SITA Cornwall Trust and through Cornwall Energy Recovery Ltd's St Dennis and Nanpean Community Trust.

SITA Cornwall Trust

The SITA Cornwall Trust funded community-based projects in Cornwall through the Landfill Communities Fund. Its remit encompassed community facilities, historic buildings and structures, sport and recreation facilities, land reclamation projects and the restoration or enhancement of natural habitats. As landfill has declined in Cornwall, so the Trust's funding from landfill tax has declined and as such, closed in 2019 after two decades of supporting local community projects in the county.

In the 2019-2020 contract year, the last project SITA Cornwall Trust supported was St Merryn's Community Hall, a £132,000 project to which a contribution of £55,000 was granted.

We are immensely proud of the positive impact the Trust has had on so many local community projects over the last decade and of having achieved the end of landfill for Cornwall's household waste. We are delighted to be able to continue to support community projects in Cornwall through the SUEZ Communities Trust. This independent, not-for-profit funding organisation is dedicated to making lasting improvements to community life and the natural environment.

St Dennis and Nanpean Community Trust

Jointly funded by Cornwall Energy Recovery Ltd and Cornwall Council, the St Dennis and Nanpean Community Trust was established to promote health, wellbeing and environmental protection in the communities surrounding the Cornwall energy recovery centre.

The Trust receives a fixed percentage of revenue from electricity generation, estimated to be around £100,000 per year, during the operational life of the Cornwall energy recovery centre.

In the 2019-2020 contract year, the St Dennis and Nanpean Community Trust provided £124,480 of funding for 11 projects in the area surrounding the Cornwall energy recovery centre.

Some of the highlights include:

- ▶ A school minibus for Nanpean school
- ▶ Gym equipment for St Dennis playing field
- ▶ Installation of a defibrillator at Roseveor Park
- ▶ Purpose built early-years facility at St Dennis Primary School



Investing in Cornwall's Young Entrepreneurs

SUEZ now has four members of staff trained as business advisors to work with schools, supporting them in all areas of running a business. SUEZ has sponsored the costs of joining the Young Entrepreneur Programme this year, giving more students in Cornwall the opportunity to take part in Young Enterprise.

In line with government recommendations, the Young Enterprise Company programme supports the Gatsby benchmarks of Good Career Guidance and helps students gain key employability skills, including teamwork, communication, problem-solving, digital skills, resilience, initiative, organisation and financial capability.

Working with Richard Lander School students, the group formed a company which developed eco amps, made from sustainable bamboo, which can be used with all types of mobile phones to amplify music. The team also reused old wetsuits donated by local surf schools to form part of their product.

Business Teacher Laura Ford at Richard Lander School was delighted with the initial feedback the team received from members of the public during their first trade fair held at Sainsbury's in Truro. The team produced a great product and were optimistic about reaching the regional finals.



Encouraging healthy workplaces

During this contract year, SUEZ has continued to support Cornwall Council's Healthy Workplace programme. Hosting a healthy workplace seminar at the Cornwall energy recovery centre in October 2019, we welcomed 40 attendees from businesses across Cornwall who are working towards achieving the Cornwall and Isles of Scilly Healthy Workplace Award. Attendees learned new ways to encourage physical and mental wellbeing at work, shared best practices and ways to promote healthy lifestyles amongst colleagues.



Investing in Cornwall's workforce

Recognising the importance of investing in and growing a local workforce, the team at the Cornwall energy recovery centre welcomed three local secondary school students on work placements in July 2019. The students worked alongside staff at the energy recovery centre in all departments, including shadowing our plant engineers, giving them valuable experience and helping to nurture their future aspirations.

Volunteering in the community

This year, SUEZ teams across Cornwall joined together to support a number of different local causes by raising money, volunteering their time or collecting goods to donate to charitable causes. Highlights of voluntary initiatives from the 2019-2020 contract year include:

- ▶ In May 2019, staff at Bodmin's materials recycling facility raised £250 to donate to a local charity, Bowel Cancer West.
 - ▶ In September 2019, staff took part in the Macmillan coffee morning event, and raised £550 by making and selling cakes and through a raffle prize draw.
 - ▶ In September 2019, SUEZ employees and volunteers took part in an annual Autumn beach clean at Mawgan Porth beach at which over 23 kilogrammes of waste was collected.
- ▶ In December 2019, staff donated food items for the Cornwall Christmas Box appeal. Started over 16 years ago by Truro Vineyard Church, this initiative collects boxes filled with all the ingredients to provide a Christmas dinner to residents struggling over the festive period. The scheme is administered through Cornwall Council's social services team who are able to identify those most in need.
 - ▶ In December 2019, dog-loving staff were keen to support the doggy Christmas shoebox appeal. Donations were collected for the Dog House in Helston, a charity which benefitted from two big boxes and four bags full of goodies and equipment to distribute over the festive season.

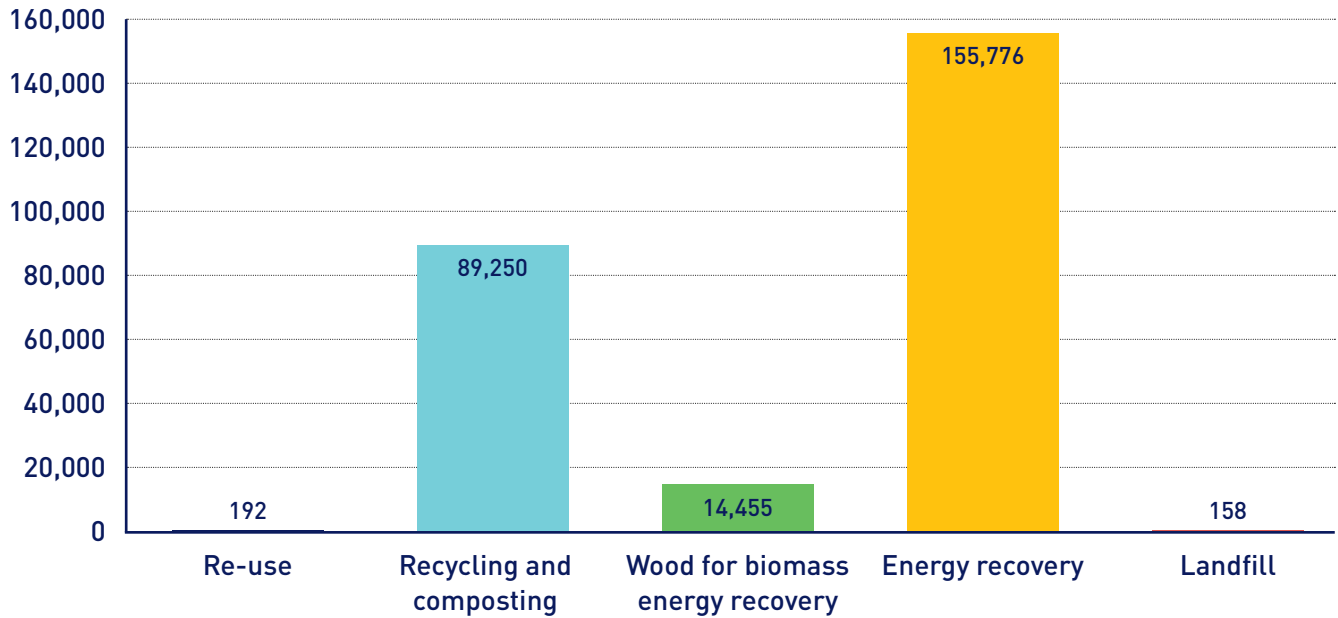


appendices

All appendices use 2019/2020 contract data

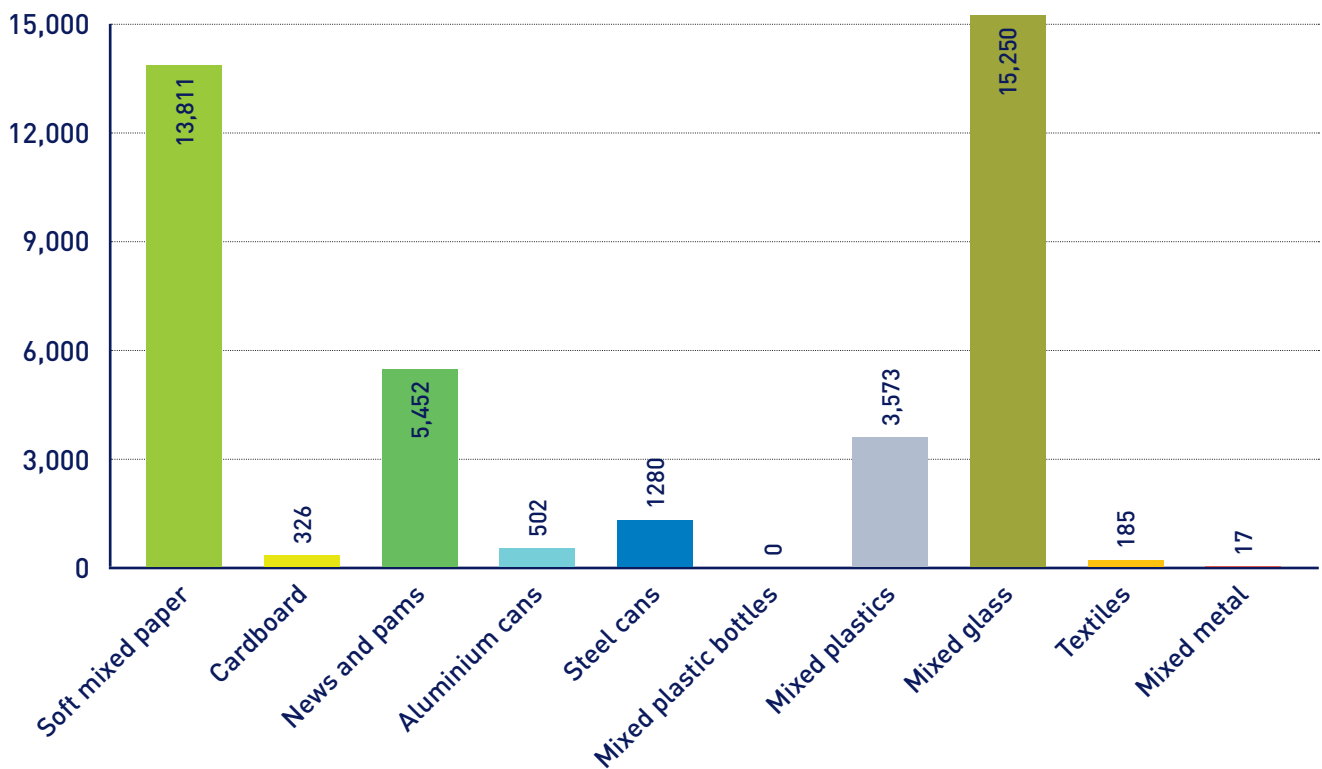
Appendix one

How we processed Cornwall's household waste (tonnes)



Appendix two

Materials separated for recycling at the materials recycling facilities (tonnes)



Appendix three

Recycling at the household waste recycling centres

	Recycling rate
Bodmin	46.99%
Bude	52.07%
Connon Bridge	48.97%
Dudnace Lane	77.97%
Falmouth	50.15%
Helston	51.72%
Launceston	53.95%
Newquay	43.27%
Saltash	46.66%
St Austell	48.54%
St Erth	50.11%
Tintagel	48.92%
Truro	45.00%
United Mines	42.41%

Appendix four

Customer satisfaction at the household waste recycling centres

	Customer satisfaction rate
Bodmin	93.6%
Bude	95.5%
Connon Bridge	95.5%
Dudnace Lane	86.7%
Falmouth	97.2%
Helston	98.4%
Launceston	95.9%
Newquay	96.8%
Saltash	94.3%
St Austell	91.5%
St Erth	97.3%
Tintagel	94.3%
Truro	96.3%
United Mines	94.3%

Appendix five

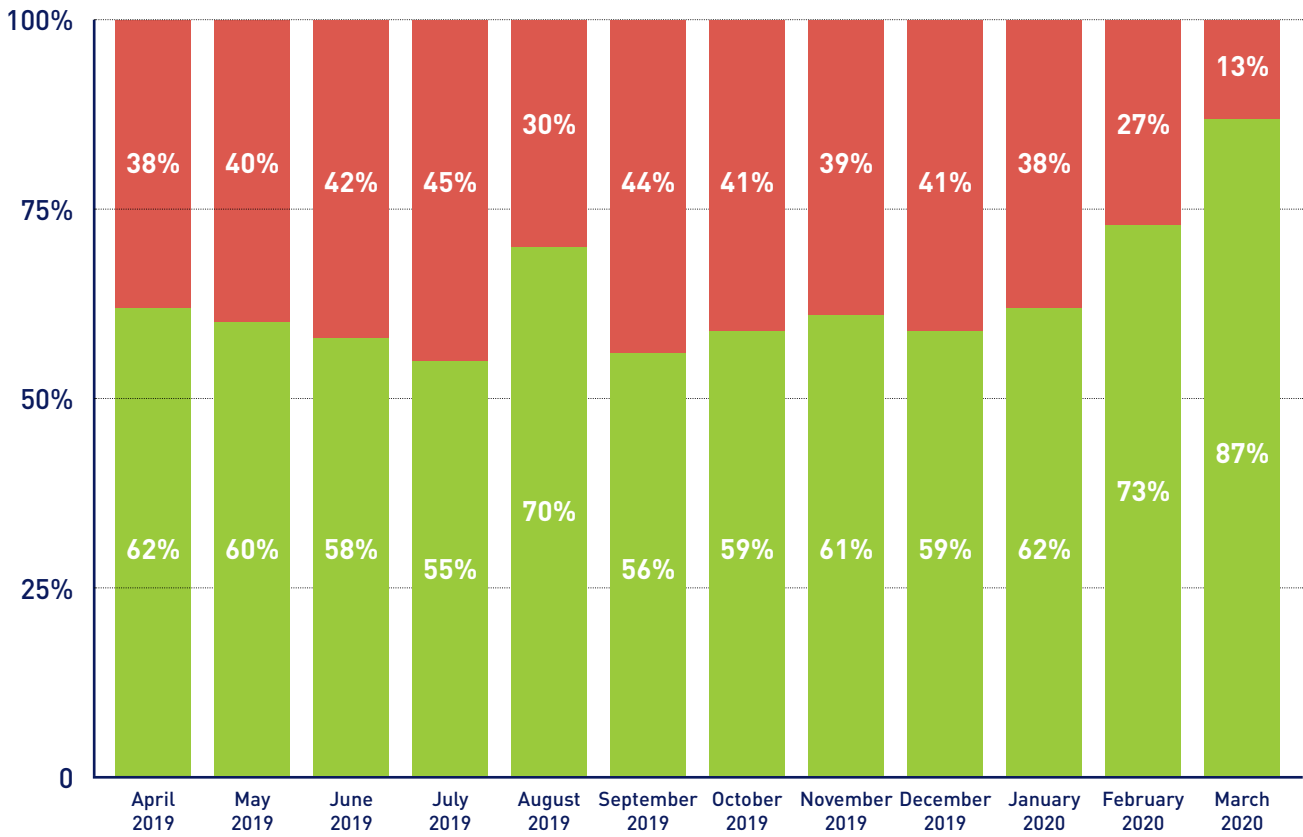
Visits to our visitor centres

	Total number of visitors	Total number of visits	Total number of school visits
Bodmin materials recycling facility	2,423	84	48
Cornwall energy recovery centre	1,508	85	22

Appendix six

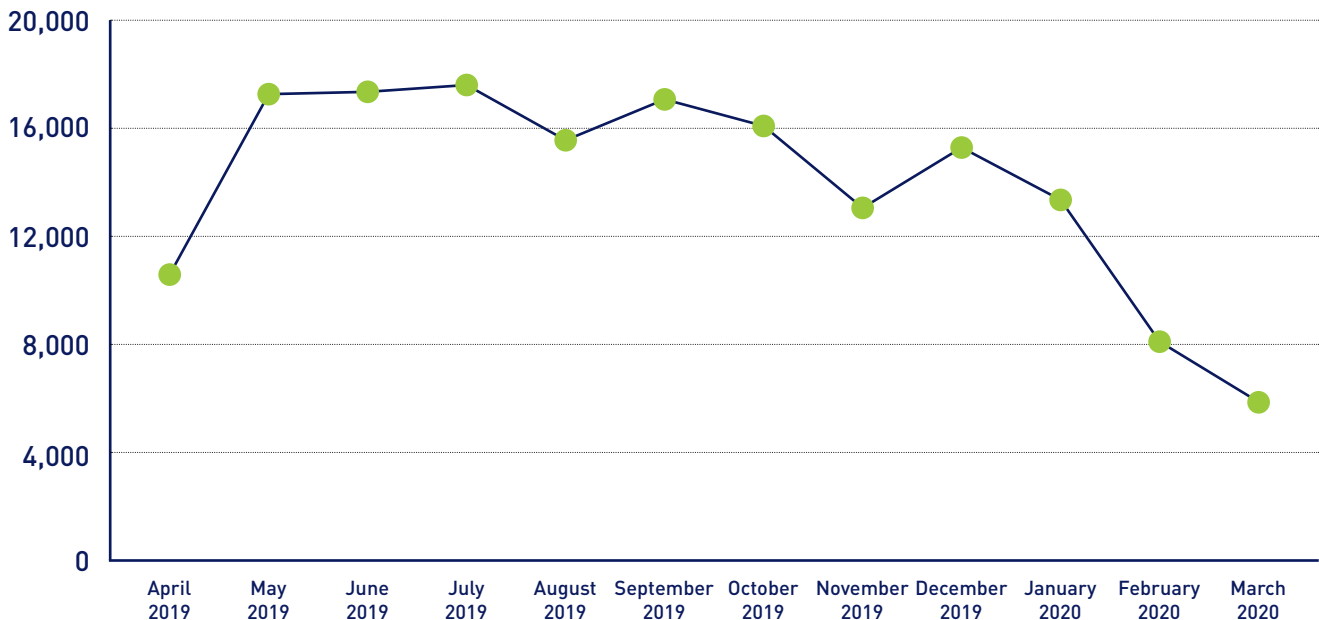
Household and business waste processed at the Cornwall energy recovery centre

■ Contract waste
■ Non-contract waste



Appendix seven

Energy generated by the Cornwall energy recovery centre (megawatt hours)



Appendix eight

Cornwall energy recovery centre outputs

Incinerator bottom ash (tonnes)					
	Aggregates to recycling	Aggregates to landfill restoration	Metals to recycling	Residue to landfill	Total
April 2019	1,887.8	0.0	585.0	0.0	2,472.7
May 2019	4,317.9	0.0	982.2	0.0	5,300.2
June 2019	4,364.0	84.5	776.7	0.0	5,225.2
July 2019	5,266.3	778.7	888.7	0.0	6,933.6
August 2019	2,752.1	1,084.7	650.4	0.0	4,487.1
September 2019	2,046.6	581.8	680.1	0.0	3,308.6
October 2019	3,524.1	0.0	811.8	0.0	4,335.8
November 2019	3,536.1	0.0	793.5	0.0	4,329.6
December 2019	3,808.4	0.0	508.5	0.0	4,316.9
January 2020	2,910.4	0.0	1,005.2	0.0	3,915.5
February 2020	5,581.9	0.0	770.1	0.0	6,352.0
March 2020	4,100.3	0.0	619.8	0.0	4,720.1

Air pollution control residue to landfill (tonnes)	
April 2019	662.8
May 2019	576.9
June 2019	478.6
July 2019	540.7
August 2019	496.1
September 2019	531.0
October 2019	496.1
November 2019	397.6
December 2019	566.6
January 2020	549.0
February 2020	369.4
March 2020	352.0

Appendix nine

Cornwall energy recovery centre
permit limits and average daily emissions

	Permit limit	Line one	Line two
	Daily average per line (mg/m ³)	Daily average (mg/m ³)	Daily average (mg/m ³)
Particulates	10	0.46	0.92
Carbon monoxide	50	8.23	8.32
Sulphur dioxide	50	13.9	5.67
Hydrogen chloride	10	6	5.79
Oxides of nitrogen	200	134.83	138.17
Total organic carbon	10	0.45	0.13
Ammonia	10	0.27	0.24
Hydrogen fluoride	1	0.04	-0.15



What are the emissions?

Particles

Particles, also called particulates, are formed during the combustion process. These are captured in bag filters and form part of the air pollution control residue (APCR) which is sent for disposal off site in sealed containers.

Carbon monoxide and VOCs as total organic carbon

High temperatures, a good mix of waste and sufficient air are all needed to achieve complete combustion and limit the formation of carbon monoxide and total organic carbon.

The temperature of the furnace is carefully controlled and additional burners can be used to bring up the temperature if it starts to drop.

A good mix of waste is achieved, initially using the grab in the bunker, but also on the moving grate in the furnace which keeps the waste moving throughout combustion.

The air flow into the furnace is controlled using fans alongside and underneath the grate.

Sulphur dioxide, hydrogen chloride and hydrogen fluoride

Many of the things we throw away, including batteries and plastics, contain either sulphur, chlorine or fluorine. These are released during combustion and react with the air to form sulphur dioxide, hydrogen chloride and hydrogen fluoride.

We use hydrated lime and lime slurry to neutralise these gases and convert them into a solid which can be captured in the bag filters. This excess lime, particulates, salts and carbon dust make up the air pollution control residue, which is sent for disposal off site in sealed containers.

Oxides of nitrogen and ammonia

Whenever anything is burnt in air, oxides of nitrogen are formed – this is because the air we breathe is made up of nitrogen (78%) and oxygen (21%) which combine during combustion. Nitrogen dioxide and nitrogen monoxide are known as oxides of nitrogen or NO_x.

To control these in the combustion process, we inject ammonia into the furnace, which reacts with the oxides of nitrogen to produce nitrogen and water.



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