plastic expert

Plastic Expert Environmental Impact Assessment

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Introduction

1.0 Plastic Recycling

There are currently no UK laws specifically mandating the recycling of waste plastic.

1.1 Background and Purpose

Plastic Expert Ltd is a leading plastic recycling company based in the UK, dedicated to promoting environmental sustainability and reducing the environmental impact of plastic waste. We specialise in the recycling of various plastic polymer types, ranging from type 1 to 7, including PETE, HDPE, LDPE, PP, PVC and PS. Our comprehensive recycling expertise extends to working with skip hire companies, farming and agricultural sectors, and a diverse range of B2B companies throughout the UK.

The purpose of this Environmental Impact Assessment (EIA) document is to thoroughly evaluate the positive environmental impact of Plastic Expert's recycling operations. By recycling various plastic polymer types that would otherwise be destined for incineration or occasionally landfi ll, our company plays a crucial role in mitigating plastic waste pollution and reducing greenhouse gases and carbon impact.

The 7 Types of Plastics

Type	Description
Polyethylene Terephthalate (PETE o PET)	The most common thermoplastic polymer resin of the polyester family and is used in fibres for clothing, containers for liquids and foods, thermoforming for manufacturing, and in combination with glass fibre for engineering resins.
High-Density Polyethylene (HDPE)	It's made from petroleum. It is sometimes called "alkathene" or "polythene" when used for pipes. With a high strength-to-density ratio, HDPE is used in the production of plastic bottles, corrosion-resistant piping, geomembranes, and plastic lumber.
Polyvinyl Chloride (PVC)	PVC is the world's third-most widely produced synthetic plastic polymer, after polyethylene and polypropylene. The rigid form of PVC is used in construction for pipe and in profile applications such as doors and windows. It is also used in making bottles, non-food packaging, and cards (such as bank or membership cards)
Low-Density Polyethylene (LDPE)	LDPE is widely used for manufacturing various containers, dispensing bottles, wash bottles, tubing, plastic bags for computer components, and various moulded laboratory equipment. It's most common use is in plastic bags.
Polypropylene (PP)	It is a white, mechanically rugged material and has a high chemical resistance. Polypropylene is the second-most widely produced commodity plastic (after polyethylene) and it is often used in packaging and labelling.
Polystyrene of Styrofoam (PS)	Uses include protective packaging (such as packing peanuts and CD and DVD cases), containers (such as "clamshells"), lids, bottles, trays, tumblers, disposable cutlery and in the making of models.
Miscellaneous plastics (includes: polycarbonate, polylactide, acrylic, acrylonitrile butadiene, styrene, fiberglass and nylon)	These miscellaneous plastics and often used in medical tools and food storage.

1.2 Scope and Objectives

The scope of this EIA document encompasses Plastic Expert's extensive recycling activities, focusing on the efficient recycling of all plastic polymer types.

The key objectives of this EIA document are as follows:

Assess the significant reduction of plastic waste to incineration achieved through Plastic Expert's recycling practices for various plastic polymer types.

Highlight the successful diversion of plastic waste from incineration, leading to reduced greenhouse gas emissions and promoting environmentally friendly waste management alternatives.

Showcase how Plastic Expert's comprehensive recycling solutions contribute to the conservation of natural resources and foster a circular economy.

Analyze the positive environmental impact across different business segments including skip hire companies, farming and agricultural sectors, and B2B companies, achieved through our diverse recycling initiatives.

Emphasize the meticulous record management practices employed by Plastic Expert, ensuring transparency and traceability throughout the waste collection and recycling process.

1.3 Methodology

To accomplish the objectives of this EIA document, we will adopt a robust and multi-faceted methodology. Our data collection process will involve a comprehensive review of internal records and third-party reports.

Quantitative data, such as waste diversion rates, greenhouse gas emission reductions, and resource conservation metrics, will be collected and analyzed to provide a quantitative understanding of our positive environmental impact.

Additionally, we will conduct interviews with key stakeholders, including Plastic Expert's management team, clients, recycling factory partners, and representatives from relevant regulatory authorities. Their insights and testimonials will provide valuable qualitative information on the significant environmental contribution made by Plastic Expert's recycling operations.

The findings and analyses in this EIA document will demonstrate Plastic Expert's commitment to environmental stewardship, showcasing how our recycling efforts across various plastic polymer types play a pivotal role in promoting sustainability and mitigating plastic waste pollution.

2. Description of Plastic Expert's Recycling Business

2.1 Overview of Plastic Expert

Plastic Expert Ltd is a pioneering plastic recycling company operating in the United Kingdom. Established with a vision to address the mounting environmental challenges posed by plastic waste, we have emerged as a prominent player in the recycling industry. Our core mission is to promote sustainable waste management practices by offering comprehensive recycling solutions for all plastic polymer types, from type 1 to 7.

As a responsible recycling entity, we are committed to reducing plastic waste's environmental impact through innovative approaches and strategic partnerships. Our operations extend beyond traditional recycling methods, encompassing collaborations with various sectors, businesses, and organizations. By combining expertise, technology, and environmental awareness, Plastic Expert aims to create a positive change in the plastic recycling landscape.

2.2 Types of Businesses Plastic Expert Works With

Plastic Expert collaborates with a diverse range of businesses and sectors, offering tailored recycling solutions to meet their unique needs. Our partnership network includes:

2.2.1 MRFs and Skip Hire Companies

Skip hire companies play a pivotal role in the waste management chain. Plastic Expert works closely with these entities to optimize plastic waste sorting processes. Our expertise aids their staff in identifying plastic materials by polymer type, ensuring efficient segregation before collection. Through our guidance and picking guides, MRFs and skip hire companies can divert plastic materials away from incineration, reducing their environmental impact.

2.2.2 Farming and Agricultural Sector

The farming and agricultural sectors generate substantial volumes of plastic waste, including grow bags, silage wrap, and containers. Plastic Expert directly engages with farmers, providing advice and training on segregating different plastic polymer types. Our collaborative efforts ensure that plastic waste from these sectors is responsibly recycled, avoiding the harmful consequences of incineration.

2.2.3 B2B Companies

Plastic Expert serves a wide range of B2B companies spanning logistics, manufacturing, construction, engineering, large retailers, and warehousing. We offer specialized recycling solutions tailored to each business's waste stream, aiming to maximize plastic waste diversion from disposal routes such as incineration. In some cases, Plastic Expert may provide balers to compact waste materials, ensuring efficient and cost-effective recycling processes.

2.3 Summary

In all these collaborations, Plastic Expert relies on efficient logistics and outsourced haulage partners to collect waste materials from various locations. The collected plastic waste is then transported to recycling factories, where it undergoes processing to transform into granules or flakes suitable for various applications.

Our approach emphasizes partnership, education, and sustainability, forging a path towards a more environmentally conscious and resource-efficient future for plastic recycling.

3. Positive Environmental Impact of Plastic Recycling

Plastic Expert's commitment to recycling all plastic polymer types, including uPVC and various others (1 to 7), has a profound positive environmental impact. By diverting plastic waste from incineration, our recycling efforts contribute significantly to addressing environmental challenges. The following points highlight the positive outcomes of Plastic Expert's recycling initiatives:

3.1 Reduction of Plastic Waste in Landfills

Plastic waste, especially non-biodegradable materials like PVC, HDPE, LDPE, PP and other plastic polymer types, poses a significant environmental hazard when disposed of via landfill. By offering comprehensive recycling solutions, Plastic Expert prevents volumes of plastic waste from ending up being landfilled. Instead, these materials are transformed into valuable resources, minimizing the environmental harm associated with plastic accumulation.

3.2 Diverting Waste from Incineration

Incinerating plastic waste, particularly materials that could be recycled, contributes to air pollution and greenhouse gas emissions. Plastic Expert's recycling efforts ensure that various plastic polymer types are repurposed rather than incinerated. By diverting plastic waste from incineration, we help minimize carbon dioxide emissions and promote cleaner waste management alternatives, thus fostering a more sustainable environment.

Education is a critical part of our process, this involves supplying the waste producers with training including recycling picking guides. This ensures quality segregation and therefore significantly helps in aiding the recycling process further down the chain.

3.3 Reduction of Greenhouse Gas Emissions

Through efficient recycling, Plastic Expert plays a vital role in mitigating greenhouse gas emissions associated with plastic waste disposal. By avoiding incineration and reducing the need for new plastic production, our recycling initiatives contribute to a lower carbon footprint. The decrease in greenhouse gas emissions helps combat climate change, benefiting both local communities and the global environment.

3.4 Conservation of Natural Resources

Recycling plastic polymer types reduces the demand for virgin raw materials required for plastic production. By diverting waste back into the production cycle, Plastic Expert promotes the conservation of natural resources, including fossil fuels used in plastic manufacturing. This approach contributes to the preservation of non-renewable resources and supports the transition to a more sustainable and resource-efficient economy.

3.5 Contribution to a Circular Economy

Plastic Expert's recycling initiatives are aligned with the principles of a circular economy, where materials are reused and recycled, reducing waste and the need for constant resource extraction. By closing the loop on plastic materials, we can create a self-sustaining system that prolongs the life of plastic products, benefits the economy, and minimizes the environmental impact. Our commitment to the circular economy is instrumental in promoting a more resilient and sustainable plastic industry.

Our focus in the coming years is to investigate and invest into closed loop recycling processes. This can often be challenging as the demand for particular polymer types and specific grades of material are not always available through a closed loop system.

Our leadership team has identified closed loop recycling and creating a more circular economy as an area for growth and improvement.

4. Assessment of Environmental Benefits by Business Segment

Plastic Expert's recycling efforts yield significant environmental benefits across various business segments. By collaborating with different sectors, we ensure that plastic waste is responsibly managed and diverted from harmful disposal methods. The following points provide a concise assessment of the positive environmental impact achieved in each business segment:

4.1 Skip Hire Companies and MRFs

Waste Stream Sorting: Plastic Expert's assistance in waste stream sorting at MRFs and skip hire companies enhances the efficient identification and segregation of plastic materials by polymer type. This process ensures that recyclable plastics are appropriately diverted for recycling, reducing their presence in incineration. This is particularly the case for LDPE plastics film and rigid plastics such as PP and HDPE which have historically been incinerated.

Through effective plastic waste segregation, Plastic Expert contributes to a considerable reduction in incineration of recyclable plastics. By diverting plastic waste from these disposal routes, we significantly decrease greenhouse gas emissions and other environmental pollutants.

As a point of note, landfill is much less common in the UK and EU due to the introduction of incineration plants and the environmental pressures of landfill closures.

4.2 Farming and Agricultural Sector

Segregation and Recycling of Plastic Waste: Plastic Expert's direct engagement with the farming and agricultural sector facilitates the proper segregation and recycling of plastic materials, such as grow bags, silage wrap, and containers. By offering guidance on recycling practices, we prevent these plastics from being incinerated or disposed of improperly.

Alternatives to Incineration: Our collaboration with farmers and agricultural businesses ensures that plastic waste from this sector is not directed towards incineration. This practice minimizes the environmental impact associated with incineration, such as air pollution and greenhouse gas emissions.

4.3 B2B Companies

Waste Compaction and Recycling: Plastic Expert's engagement with B2B companies, including logistics, manufacturing, construction, engineering, large retailers, and warehousing, promotes efficient waste compaction and recycling. By providing tailored recycling solutions, we encourage responsible waste management practices and reduce the need for incineration disposal.

Where required, we supply baling and compaction equipment for customers. These are provided by a 3rd part on a rental, lease or outright purchase option.

Impact on Different Sectors: Our diverse recycling initiatives have a positive impact on various industrial sectors. By recycling plastic materials, we contribute to resource conservation and minimize the environmental consequences of plastic waste generation.

Throughout these business segments, Plastic Expert collaborates with haulage partners to ensure efficient and timely waste collection, which further strengthens our commitment to responsible waste management. A key aspect of our recycling initiatives is to use (where possible), back-haulage and offer a "mixed load" collection service. This means we can take multiple polymers types on one trailer, therefore reducing the environmental impact of collections.

The positive environmental impact achieved in each segment is a result of Plastic Expert's dedication to recycling all plastic polymer types, efficiently diverting plastic waste from incineration. By providing tailored solutions and fostering responsible waste management practices, we contribute to a cleaner and more sustainable environment.

5. Waste Collection and Transportation

5.1 Outsourced Haulage Operations

Plastic Expert's waste collection and transportation operations are carried out through strategic collaborations with outsourced haulage partners. These partnerships enable us to efficiently collect plastic waste from various businesses and sectors across the UK. By leveraging the expertise of experienced haulage companies, we ensure reliable and timely waste collection services, reducing potential delays and environmental impacts associated with transportation.

5.2 Efficient Logistics and Emissions Reduction Measures

To minimize the environmental footprint of waste transportation, Plastic Expert employs efficient logistics and emissions reduction measures. We optimize collection routes to minimize distances traveled, thereby reducing fuel consumption and greenhouse gas emissions. Regular maintenance and upgrade of haulage vehicles ensure they meet the latest emissions standards, contributing to cleaner and more sustainable transportation practices.

In addition, we prioritise "mixed load" collections whenever possible, aiming to maximize each transport load's capacity. By efficiently managing collection schedules, we reduce the number of journeys required for waste transportation, further decreasing emissions and traffic congestion.

5.3 Collaboration with Recycling Factories

Once collected, the plastic waste is transported to one of our reputable recycling factories specialising in processing various plastic polymer types. Our collaboration with these recycling facilities ensures that the waste is appropriately transformed into granules, flakes, or other suitable forms for downstream applications.

Plastic Expert's strong partnership network with recycling factories enables us to deliver plastic waste directly to facilities with advanced recycling technologies. This approach minimizes additional transport stages and optimizes the recycling process, reducing energy consumption and emissions associated with plastic processing.

Throughout the waste collection and transportation process, we maintain detailed record management practices. Every load of plastic waste collected is thoroughly documented and tracked in our CRM system. This includes detailed information such as the date and location of collection, quantity and type of plastic waste collected, and the recycling facility it is delivered to.

Plastic Expert's dedication to efficient waste collection and transportation, combined with our emphasis on record management, ensures that plastic waste is managed responsibly and sustainably. By prioritising environmentally conscious logistics and strategic partnerships, we contribute to the reduction of greenhouse gas emissions and promote a cleaner and more sustainable waste management system.

6. Environmental Compliance and Regulations

6.1 Adherence to Local and National Environmental Regulations

Plastic Expert Ltd operates in full compliance with UK legislation and regulations pertaining to waste management and recycling activities. We work closely with regulatory bodies such as the UK Environment Agency to ensure the correct documentations and records are made.

6.2 Environmental Certifications

Plastic Expert Ltd operates under a valid Upper Tier Broker and Waste Carrier issued by the UK Environment Agency. This license authorizes us to collect and transport plastic waste for recycling purposes. Additionally, we hold necessary permits and licences for facilities which process the end of life plastic.

6.3 Collections of waste plastic

As part of the duty of care process laid out by the UK environment agency, each collection will have a waste transfer note detailing the type of waste, EWC code, waste producer and factory destination. For shipments of waste plastic from the UK to EU countries, the collection will have a completed Annex 7 document.

7. Community Engagement and Education for businesses

7.1 Collaboration with Businesses and Industries

Plastic Expert Ltd actively engages in collaborative efforts with various businesses and industries across the UK to promote responsible plastic waste management and recycling practices. By fostering partnerships and promoting awareness, we aim to drive positive environmental change and create a more sustainable future. The following aspects highlight our collaboration with businesses and industries:

7.1.1 Tailored Recycling Solutions

Plastic Expert understands that each business and industry has unique waste streams and recycling requirements. To address these specific needs, we provide tailored recycling solutions designed to maximize waste diversion and recycling efficiency. By offering customized recycling programs, we empower businesses to adopt sustainable waste management practices that align with their operational goals.

7.1.2 Training and Education

Collaboration involves educating businesses and industries on the importance of responsible plastic waste management. Plastic Expert conducts training sessions and regular marketing communications to enhance the understanding of proper waste segregation, recycling best practices, and the environmental benefits of recycling. Through these educational initiatives, we empower businesses to make informed decisions and actively participate in sustainable waste management efforts.

7.1.3 Clear Reporting and Environmental Impact

Integrity is paramount in our collaborations, and Plastic Expert provides businesses and industries with clear and comprehensive reporting on their plastic waste recycling efforts. This includes recycling certificates and helping our customers to include plastic recycling and incineration avoidance as part of their environmental policies.

7.1.4 Continuous Improvement

Plastic Expert's collaborations are built on a foundation of continuous improvement. We engage in open dialogue with our partners, seeking feedback to refine and enhance recycling programs continually. This approach fosters a dynamic relationship with our clients, enabling us to adapt and evolve our recycling solutions to address emerging challenges and opportunities.

7.1.5 Environmental Leadership

Through collaboration, Plastic Expert aims to inspire environmental leadership among businesses and industries. By showcasing the positive impact of recycling and sustainable waste management, we encourage other organizations to adopt similar environmentally responsible practices, creating a ripple effect of positive change throughout the UK.

Overall, Plastic Expert's collaborations with businesses and industries are guided by our vision for a greener and more sustainable future. Through proactive engagement, education, and customized recycling solutions, we aspire to drive widespread adoption of responsible plastic waste management, making a lasting contribution to environmental preservation.

8. Record Management in Waste Collection Process

Effective record management is a cornerstone of Plastic Expert's waste collection process. By maintaining these records, we ensure accountability throughout the entire waste collection and recycling journey. The following outlines the key steps involved in our record management system:

8.1 Inspection of Waste Material

Each new waste collection location begins with an inspection of the materials being recycled. Our team, equipped with the necessary expertise, carefully examines the plastic waste, to verify its condition and suitability for recycling.

8.1.1 Photos and Documentation

As part of the inspection process, we capture photographs of the waste material. These images serve as visual documentation, providing essential records of the condition and quantity of the plastic waste. Alongside photographs, we maintain written documentation detailing the type and volume of plastic waste collected.

8.2 Signed Purchase Agreement and Rebates

Once the inspection is complete, Plastic Expert enters into a signed purchase agreement with the client. This agreement outlines the terms of the waste collection, including the agreed-upon rebate provided to the client for the collection of the plastic waste. The purchase agreement ensures a clear understanding of the financial arrangements and responsibilities between Plastic Expert and the customer.

8.3 Collection Logistics and Agreements

After the purchase agreement is in place, we arrange the logistics for waste collection in collaboration with our outsourced haulage partners. The collection date is agreed upon with the client, and the necessary arrangements for transportation are made to ensure a smooth and efficient process.

8.3.1 Collection Date Agreed

Plastic Expert ensures that the collection date aligns with the client's convenience and operational schedule. Flexibility in scheduling allows for a seamless waste collection process, minimising disruptions to the client's business activities. Where required, Plastic Expert also offers a "self loading" collection option using a "Moffett" forklift.

8.3.2 Haulage Partner Arrangement

Our close relationship with outsourced haulage partners guarantees reliable and timely collection services. We work closely with these partners to maintain efficient communication and coordination during the waste collection process.

8.4 Collection and Transportation

On the agreed collection date, our haulage partners pick up the plastic waste from the client's location and transport it to designated recycling factories. Throughout the collection and transportation process, Plastic Expert ensures that the waste is handled safely and responsibly.

8.4.1 Weight Tickets and Reports

At the recycling factory, the collected plastic waste is weighed, and weight tickets are generated to provide accurate records of the quantity of waste received. These weight tickets form part of our detailed reports, providing essential data for tracking waste diversion rates and environmental impact.

8.4.2 Documentation of Material Received at Recycling Factory

Upon receipt at the recycling facility, we maintain comprehensive documentation of the plastic waste material. This documentation includes records of the waste types, volumes, and relevant information required for subsequent recycling processes.

8.5 Invoicing and Purchase Orders

Following successful recycling, Plastic Expert invoices the recycling facility for the processed plastic waste. The recycling facility pays Plastic Expert for the material, completing the financial transaction related to the waste collection.

8.5.1 Invoicing the Recycling Factory

Invoices are generated and documented, ensuring accuracy and compliance with UK accounting standards.

8.5.2 Purchase Order Issuance to Customers

Plastic Expert issues a purchase order to the customer for the waste collection service provided. This purchase order enables the customer to invoice Plastic Expert for the collection service, thus finalising the financial transaction.

8.6 Record Management through CRM

To streamline and centralise record management, Plastic Expert utilises a Customer Relationship Management (CRM) system. This CRM system captures and organizes all relevant data, including inspection photos, purchase agreements, weight tickets, invoices, and purchase orders. The CRM system ensures that information is readily accessible for reporting, analysis, and tracking purposes.

Through effective record management, Plastic Expert maintains accountability and transparency at every stage of the waste collection and recycling process. This comprehensive approach enables us to optimize our recycling operations, track environmental impact, and continuously improve our services to better serve our clients and the environment.

9. Conclusion

9.1 Recap of Positive Environmental Impact

In conclusion, Plastic Expert Ltd stands at the forefront of the plastic recycling industry in the UK, making a positive impact on the environment through its responsible waste management practices. By recycling a diverse range of plastic polymer types (1 to 7), we contribute significantly to reducing plastic waste's environmental impact.

Throughout this Environmental Impact Assessment (EIA) document, we have highlighted the various aspects of Plastic Expert's recycling methodology and the positive environmental implications. Our commitment to compliance with UK legislation and regulations, collaboration with businesses and industries, and effective record management in the waste collection process underscores our dedication to environmental responsibility and sustainability.

Plastic Expert's tailored recycling solutions for MRFs, skip hire companies, farming and agricultural sectors, and diverse B2B clients ensure that plastic waste is efficiently diverted from incineration and landfill. By promoting the circular economy principles and offering education and training, we empower our partners to embrace sustainable waste management practices and contribute to a greener future.

The positive environmental impact of Plastic Expert's recycling efforts is evident in the reduction of plastic waste going for incineration (and in rarer cases, landfill), minimised greenhouse gas emissions and conservation of natural resources. We continuously seek opportunities for improvement and maintain close collaboration with regulatory bodies, partners, and clients to drive positive environmental change.

Plastic Expert's commitment to record management ensures accountability in the waste collection and recycling process. Through our CRM system, we document each step, from inspection to recycling, enabling us to monitor our environmental impact.

As we move forward, Plastic Expert remains dedicated to environmental stewardship, striving to expand our recycling initiatives, forge new collaborations, and support businesses and industries in adopting sustainable practices. By working together, we can create a cleaner, more sustainable future and protect our planet for generations to come.

In conclusion, Plastic Expert's recycling efforts are making a tangible difference in the battle against burning plastic, setting a precedent for responsible waste management and sustainable practices in the UK.

9.2 Future Goals and Sustainability Efforts

As a forward-thinking and environmentally conscious organization, Plastic Expert Ltd is committed to driving continuous improvement and innovation in the plastic recycling industry. Building on our existing achievements, we aspire to explore new solutions for recycling more challenging plastic waste materials and further promoting the circular economy. The following outlines our future initiatives:

9.2.1 Innovation for Difficult-to-Recycle Plastics

While we have made significant strides in recycling various plastic polymer types, Plastic Expert acknowledges that some plastics present greater recycling challenges due to their complex composition. As part of our ongoing commitment to environmental sustainability, we are investing in research and development to find innovative solutions for recycling more difficult-to-process plastics.

Plastic Expert believes a huge part of this still remains in training and education to businesses so they can segregate waste plastic most effectively. Our goal is to create additional education resources, on-site support through employing additional personnel and expanding our marketing and communication efforts. This will result in the avoidance of burning plastic which is common in businesses as “landfill avoidance” has been the leading conversation, rather than the objective of reducing GHG through the waste plastic incineration process.

Through strategic partnerships with recycling factories, research organisations, and industry experts, we seek to explore further recycling initiatives that can unlock the recycling potential of challenging plastic waste materials. By overcoming these barriers, we aim to significantly increase the range of plastics that can be recycled, further reducing the environmental impact of plastic waste.

10. References and Case Studies

As part of this Environmental Impact Assessment, Plastic Expert has outlined some examples of recycling projects that have taken place over the last 7 years. The selection is an example of the positive impact Plastic Expert has made in diverting plastic waste from incineration and in a few cases, landfill.

Case Study 1: Agriculture and farm plastic recycling

Customer location: Norfolk

Customer background:

The customer performs a waste disposal aggregation centre for farmers in the East of England. This business takes in plastic waste derived from agricultural activities. This material is predominantly LDPE such as silage wrap, grow bags and crop cover.

The challenge:

Plastic from agricultural activities can be extremely problematic for farmers across the UK. Historically, much of this waste plastic material has been illegally burnt or disposed of due to ever increasing costs to deal with this waste stream, and lack of regional disposal infrastructure.

The solution:

It was decided to locate and nominate a 3rd party central disposal point for farmers in the region, who brought in their used silage wrap, grow bags and crop cover waste plastic in bulk. We ran a logistics disposal operation that allowed us to collate and discharge off all farm waste and prove our methodology that a regional recycling hub for agriculture would be successful. The farm waste plastic was sent in bulk to our nominated recycling processing partner in the Netherlands.

The results:

Avoidance of incineration of farm waste which led to the recycling of over 5000 tonnes of plastic waste and the resultant reduction of GHG & CO2 emissions.

Case Study 2: LDPE recycling from construction

Customer location: London, UK

Customer background:

The customer is a skip hire business based in a busy part of North London, they provide skips to much of the booming construction sector. As a result, plastic is placed into these skips. To save on disposal costs and avoid incineration of plastic, the customer has a sorting facility.

The challenge:

Sorting the plastic into polymer type was a challenge before Plastic Expert's intervention, identifying different polymers wasn't so easy for the workforce. The time and sorting costs needed to stack up financially, therefore producing bales of good quality plastic was essential from an economic perspective.

The solution:

As a result, Plastic Expert has made multiple (over 10 visits) to the customer's site and given the staff "picking guides". The customer now pulls out over 700 tonnes per year of plastic which would otherwise go for incineration. The waste plastic LDPE material is collected by Plastic Expert 's approved hauliers and delivered to factories in the EU. Here the material is turned into a pellet to be used by manufacturers.

The results:

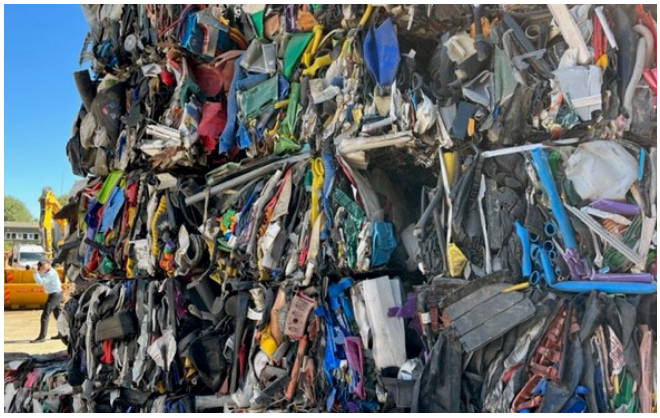
The result is a big cost saving to the client, as they now receive a rebate for their waste plastic and save on incineration cost. The biggest win of all, is the reduction in GHG emission by avoiding the incineration of plastic which is recyclable.

Case Study 3: HDPE and PP recycling from skip companies

Customer location: Bedford, UK

Customer background:

The customer is a skip hire business based in the heart of Bedfordshire, they provide skips to much of the booming construction sector and households. As a result, plastic is placed into these skips. To save on disposal costs and avoid incineration of plastic, the customer has a sorting facility.



The challenge:

Large volumes of rigid plastic were being placed in skips from their customer base. This primarily includes items such as pipes, buckets, crates, containers, road barriers and cones. The waste plastic material was being sent for incineration.

The solution:

As a result, Plastic Expert has made multiple (over 8 visits) to the customer's site and given the staff "picking guides". The customer now pulls out over 400 tonnes per year of plastic which would otherwise go for incineration. The waste plastic HDPE and PP material is baled on site and collected by Plastic Expert 's approved hauliers and delivered to factories in the EU. Here the material is turned into a pellet to be used by manufacturers.

The results:

The result is a big cost saving to the client, as they now receive a rebate for their waste plastic and save on incineration cost. The biggest win of all, is the reduction in GHG emission by avoiding the incineration of plastic which is recyclable.

Case Study 4: HDPE Recycling from end of life oil tanks (Atlantis)

Customer location: Middlesborough, UK

Customer background:

Atlantis tanks are a supplier and installer of above ground heating oil tanks made from HDPE plastic. They collect old tanks as part of their routine operations for installation of new. Historically the old tanks were disposed of through incineration because the use of the tank was for oil and until recently contaminated plastic was an un-viable product for recycling.

The challenge:

How can this highly recyclable waste plastic be diverted from incineration. Heavy HDPE plastic for applications such as this; are desirable for recyclers in the right circumstances.

The solution:

We sought a recycling operation that could remove the contamination (oil) within the plastic, prior to processing. Inorder to meet the demands of the recycling operation, we had to introduce a size reduction process at the client site, which led to tanks being cut down and folded within each other for safe loading and maximisation of transport. Once in the hands of our recycling partners the tank material was further size reduced, cleaned and washed ahead of further size reduction and then colour sorting and granulation to 5mm.

The results:

The material waste plastic generated by this company is no longer at risk of being incinerated as the waste now follows a route to recycling carefully orchestrated by Plastic Expert. This process has led to approximately 100 tonnes of incineration diversion with this one company per annum, and proof of a scalable recycling process that can be used by other companies in this sector.

Case Study 5: LDPE and PP Recycling from adhesives manufacturing company

Customer location: Milton Keynes, UK

Customer background:

The company manufactures industrial adhesives from its UK site, and historically was disposing of all its waste into waste bins destined for incineration. Waste included highly recyclable materials such as plastic.

The challenge:

Supply a solution where the recyclable material could be sorted from the general waste by the employees.

The solution:

Plastic Expert identified the recyclable plastic from the general waste output and made available picking guides for staff to follow in the successful picking and sorting of the valuable polymers. The company was encouraged to lease compacting machines which in this case were mill-sized balers, so that the diverted recyclable plastic could be made ready for onward transportation and maximum utilization.

The results:

The client benefited from an instant saving in waste disposal costs and was at last able to report green credentials within its CSR policy. The site has significantly reduced the amount of waste originally being sent to incineration, and has created a strong culture of sustainability within.

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Prepared by the directors and management team of Plastic Expert Ltd

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