Operation Clean Sweep®

Make **ZERO** pellet loss your goal

New Zealand Programme Guide

PLASTICS NZ
NEW ZEALAND'S INDUSTRY ASSOCIATION

Contents

Operation Clean Sweep®

1 | Using this Guide

1.1 | Disclaimer

The Operation Clean Sweep New Zealand (OCS NZ) Guide provides recommendations to help plastics industry stakeholders minimise the loss of plastic pellets, flakes, and powders to the environment. These recommendations are designed for a wide range of operations, including suppliers, processors, logistics, and warehousing. Each procedure and step outlined may or may not be applicable to your specific operation and companies are encouraged to adapt the recommendations based on their unique goals and operational needs.

Certification under the OCS NZ programme requires a formal third-party audit to ensure compliance with OCS NZ standards (outlined in this guide). While following the recommendations in this guide will help you to prepare for an audit, it does not automatically guarantee certification.

None of the recommendations in this guide are intended as a mandate. Compliance with national and local environmental regulations is mandatory. Companies must perform their own site-specific assessments to ensure they meet all relevant legal and environmental standards. Plastics New Zealand accepts no liability for actions taken by companies using this guide.

1.2 Copyright

1.3 Acknowledgements

Operation Clean Sweep® is a global, industry-led programme that supports companies towards the goal of achieving zero plastic resin loss. OCS was founded by the Plastics Industry Association (USA) in 1991 and is managed in partnership with the American Chemistry Council (ACC)'s Plastics Division. Today, OCS operates in more than 60 countries around the world, enabling companies across every region to join the cause. We thank all individuals and organisations involved in their combined efforts to mitigate plastic resin loss.

1.4 Information

For any questions, feedback, or suggestions for improving this guide, please contact Plastics New Zealand at **(09) 2555 662** or **ocs@plastics.org.nz**. Additional resources and information can be found at www.operationcleansweep.org.nz.

2 | Introduction

Plastic resins (including pellets, flakes, and powders) are the essential building blocks of countless products that underpin modern society. However, if these materials escape into the environment, they can become a significant pollutant.

Plastic resins are lightweight and easily carried by wind and rain into stormwater systems, which lead to natural waterways. Even small losses can harm ecosystems. Pellets are often mistaken for food by marine life and birds, causing physical damage and contributing to microplastic pollution in the food chain.

In Aotearoa New Zealand, this issue carries particular importance. As an island nation with over 15,000 kilometres of coastline, our environment and way of life are deeply connected to our awa (rivers) and moana (oceans). From recreational water sports to the gathering of kai moana (seafood), our relationship with water is central to both our culture and economy. Protecting these natural resources from plastic pollution is not only vital for maintaining biodiversity but also for preserving the unique lifestyle we value.

While consumers are responsible for the proper disposal of the products they use, the plastics industry must focus on proper containment of the materials we handle – plastic resin. All employees in every aspect of the plastics industry must be educated on how to properly handle and dispose of plastic resin to work towards the goal of zero resin loss.

2.1 | How Can You Help?

Preventing plastic resin pollution requires a united effort across the plastics supply chain. All companies handling plastic resins must ensure a strong commitment across their organisation to properly contain materials by following the recommendations outlined in this guide. From employees on the ground to leadership teams, everyone has a role to play in achieving zero pellet loss.

All plastic resin handling sites in New Zealand – including plastics manufacturers, recyclers, & reprocessors, and logistics & warehousing operations – can demonstrate their dedication to this goal by achieving Operation Clean Sweep NZ (OCS NZ) certification. For companies operating overseas, OCS programmes are now available in over 60 countries globally.

The value chain extends beyond resin handling companies, and other players can also contribute to this important mahi (work)! Distributors, brands, and retailers can become OCS NZ Supporters, advocating for best practice and driving OCS NZ certification across the supply chain. Companies offering practical benefits, such as stormwater drain filters, spill kits, or clean-up equipment and services, can support the programme by becoming OCS NZ Partners. More information on these initiatives can be found on the OCS NZ website: **www.operationcleansweep.org.nz.**

Plastic pellets recovered from Waihi Beach.

2.2 | Why Join OCS NZ?

The primary reason to join OCS NZ is clear – to protect Aotearoa's precious resources and environment, for us and future generations. By preventing plastic resin pollution, companies contribute directly to the preservation of our waterways, coastlines, and natural ecosystems, reflecting a commitment to sustainable and responsible manufacturing.

In addition to this critical mission, joining OCS NZ provides several tangible benefits:

Resource Efficiency:

Minimising resin loss saves valuable materials, reducing waste and improving cost efficiency.

Operational Excellence:

Implementing OCS NZ practices supports smoother operations by promoting cleaner and more organised worksites.

Regulatory Compliance:

Meeting OCS NZ standards helps companies align with current and emerging regulations, reducing the risk of fines or other penalties.

Health and Safety Benefits:

Properly managing resin reduces the risk of slips, falls, and other workplace hazards, creating a safer environment for employees.

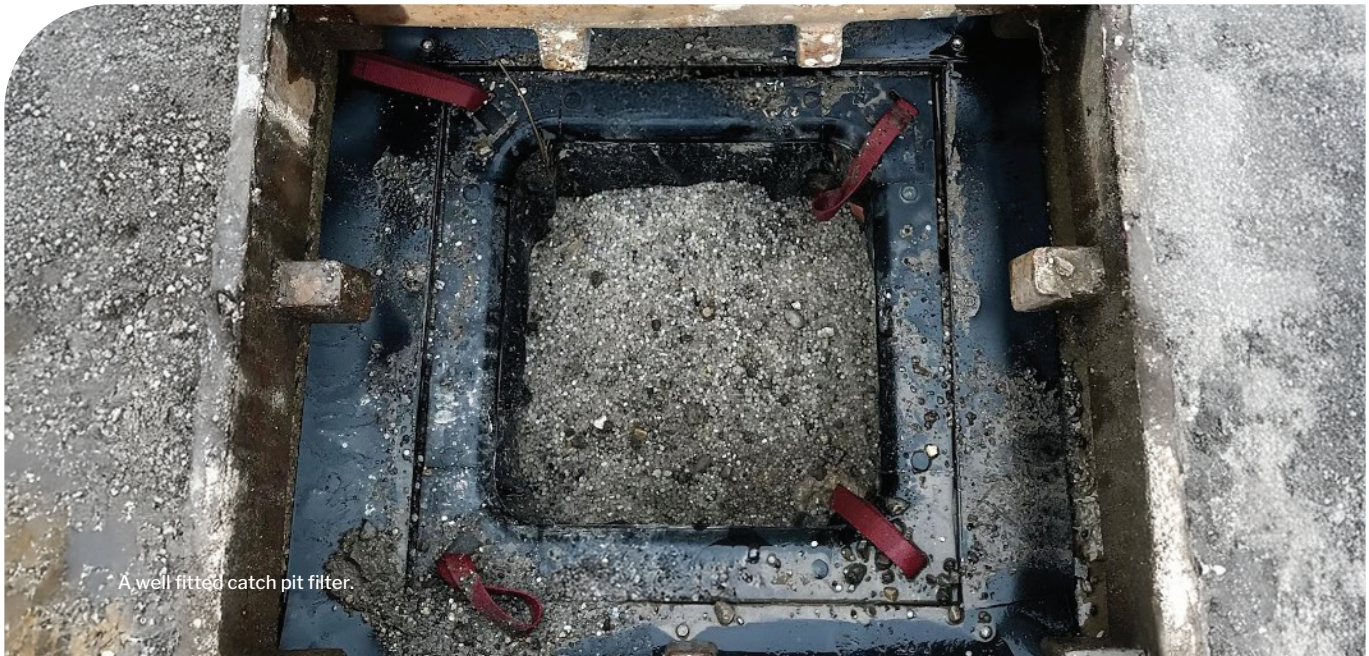
Enhanced Reputation:

Certification demonstrates your company's commitment to responsible manufacturing, strengthening your reputation with customers, clients, and the wider community.

Industry Leadership:

Being part of OCS NZ enhances the image of the plastics industry as a whole, showing leadership in environmental stewardship and promoting positive change across the sector.

Joining OCS NZ is more than a compliance exercise – it's an opportunity to lead by example, protect our environment, and elevate the plastics industry's role in creating a sustainable future.



A well fitted catch pit filter.

2.3 | OCS NZ Certification Process

Pre-Audit

Read this guide to learn about the OCS NZ requirements. Contact Plastics NZ directly on **ocs@plastics.org.nz** to discuss your site-specific needs and receive a tailored quote.

Audit:

A Plastics NZ appointed, independent auditor will conduct an audit of your site. They will assess your compliance with OCS NZ standards and provide helpful guidance where corrective actions are needed.

Post Audit

A follow up report will be provided. Compliant sites will receive OCS NZ certification. Non-compliant sites will be given an action plan and time to implement changes. Evidence must be provided before certification is granted.

3-Year Cycle

OCS NZ certification runs on a three-year cycle. Participating sites will be audited in year 1 and complete self-assessments in years 2 and 3. Failure to submit self-assessments may result in removal of certification. A re-audit must be completed after three years to maintain certification.

Fees

OCS NZ membership fees are in place to cover the costs of running the programme, conducting audits, and reporting. Fees are charged on an annual basis, with higher fees in audit years and a reduced fee during self-assessment years. The initial audit is free for Plastics NZ members. Fees are based on site size and operations – contact Plastics NZ for a tailored quote. Additional re-audits will be quoted separately.

3 | OCS NZ Requirements

OCS NZ is proud to have led the way as the first country to implement an audit system as a prerequisite for joining the programme. We recognise the importance of a robust approach to ensuring accountability and meaningful action. This section highlights the requirements that must be met to pass the OCS NZ audit and receive certification.

3.1 | Spill Plans and Procedures

A spill plan outlines the procedures, responsibilities, and resources required to effectively manage and respond to spills. All sites handling raw plastics should have a spill plan in place.

A spill plan should:

- Identify high risk areas such as stormwater drains, material transfer points, loading/unloading zones, storage areas, and operations.
- Evaluate potential pathways for resin to enter stormwater drains or the environment.
- Define step-by-step actions for handling both large and small spills, including immediate containment, clean-up, disposal, and reporting.
- Include emergency contacts for additional support or reporting if required.

A spill plan might:

- Include protocol for different materials (e.g. pellets vs. powders).
- Assign specific responsibilities to team members for spill response, containment, and clean-up.
- Designate a spill response coordinator to oversee and manage incidents.

Logistics Companies will also need to consider specific protocol for off site spills, including within trucks, at other sites, and on roads. This should include contact details for assistance and advice if a spill results from a road accident.

Minimum Requirements	Ideal
• A risk assessment is completed. • A written spill plan is in place. • The plan highlights the need to bag loose material before disposal. • Spill procedures are highlighted to staff, e.g. through posters.	• The risk assessment is updated annually. • The spill plan is detailed. • A spill response coordinator is assigned. • Staff are trained in the spill plan and there is evidence of training.

3.2 | Clean Up Equipment

All sites handling plastic pellets, flakes, and powders should have suitable clean up equipment for all staff to use. Examples of clean-up equipment include:

- Brooms, dustpans, and rakes
- Heavy-duty vacuums for inside use.
- Portable vacuums suited to site specific terrain (e.g. paving or gravel) for outside use.
- Tape for repairing bag or box damage.
- Options for sealed material containment, such as using polybags and scrap pellet containers.
- Catch trays or traps.
- A copy of the spill procedures and checklists to assist in follow-through.

Necessary clean up equipment should be kept in all high risk areas, in high visibility spill stations. These should be clearly marked to make sure all equipment is returned/easily identified if missing. A shadow board is a good way to achieve this (see image below).

Logistics Companies and companies using forklifts should also consider fitting vehicles with appropriate spill clean-up equipment such as brooms, dustpans, buckets, and portable vacuums.

Minimum Requirements	Ideal
• Basic clean-up equipment is well organised in high risk areas and includes: • Brooms and dustpans • Adhesive tape • Sealable bags	Specialised clean-up equipment for specific sites is in place, this could include: • Ride on sweepers • Vacuums (indoor and outdoor) • Vehicle clean-up kits

Well organised spill clean-up equipment.

3.3 | Material Handling Practices

Careful handling can help to mitigate spills and their associated risks. To reduce the risk of spills, steps can be taken by stakeholders across the plastics supply chain within Aotearoa, from transporting materials, through to recycling.

3.3.1 | Transporting Materials

The following steps can be taken by companies that transport plastics within New Zealand, such as logistics companies.

Secure Containment: Sealed containers or packaging should be used during transport. Avoid overfilling containers to minimise accidental spills.

Packaging Inspection: Inspect all containers for damage before transport. Repair weak seals or torn packaging (e.g., with tape) to prevent leaks.

Truck Inspection: Inspect empty trucks for damaged walls or defective floors that could tear bags. Cover problem areas with corrugated liner board if necessary.

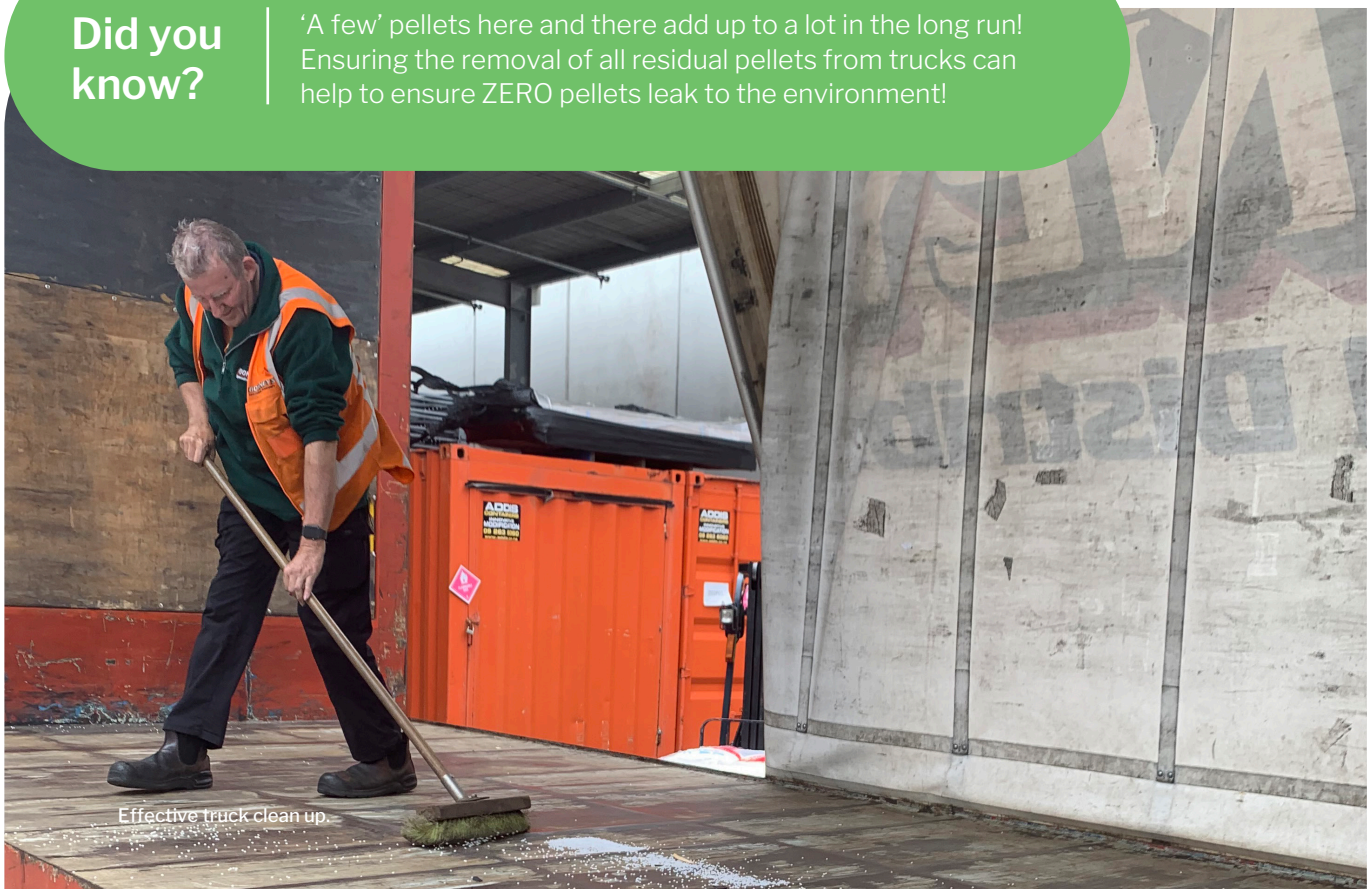
Spill Kits on Vehicles: Equip transport vehicles with spill kits and train drivers in spill containment and reporting procedures.

Cleaning Schedule: Regularly clean trucks, ensuring that cleaning is conducted in areas with wastewater collection and filtration systems.

Minimum Requirements	Ideal
• Material is stored in sealed bags and containers for transport. • Bags/containers are inspected for damage before and post transport.	• Trucks are inspected and risks addressed before loading. • Trucks are thoroughly cleaned after deliveries.

Did you know?

'A few' pellets here and there add up to a lot in the long run! Ensuring the removal of all residual pellets from trucks can help to ensure ZERO pellets leak to the environment!



Effective truck clean up.

3.3.2 | Loading and Unloading

There is a risk of spills whenever material is handled. From logistics through to recycling, loading and unloading must be conducted carefully by all plastics handling sites to help mitigate this risk.

Designated Handling Areas: Establish specific loading/unloading zones away from stormwater drains, ideally in enclosed areas. Equip these areas with spill prevention measures such as catch trays and barriers.

Loading and Unloading Procedures: Use pallets or secure shelving to stabilise containers. Consider the use of catch trays where appropriate to contain loose materials.

Inspection: Inspect deliveries carefully and document the condition of bags and pallets received. If a shipment is significantly damaged, notify the transporter and supplier and consider refusing the delivery.

Controlled Material Transfer: Where possible, use enclosed material transfer systems such as hoppers or vacuum transfer systems to help minimise spillage risks.

Bulk Silos: Make delivery drivers responsible for clean up of any spills before they leave site. Have a spill tray/platform in place to catch spilled or residual materal.

Forklift Handling in Transport: Designate clear pathways for forklift operations to reduce the risk of collisions or spills during transport. Forklift operators should be well trained to minimise bag punctures or container damage caused by improper use of tines. Placing layers of cardboard between bags and pallets could help to reduce risk of puncture.

Minimum Requirements	Ideal
• Loading and unloading areas are away from stormwater drains. • Deliveries are inspected for damage upon arrival. • Loading and unloading zones are equipped with clean-up equipment. • Forklift drivers are trained and aware of high risk routes around site	• Loading and unloading areas are enclosed. • Catch trays and bunding are used in delivery areas to contain spilled material. • A clean-up is conducted after all deliveries. • Layers of cardboard are placed between bags and pallets.

Clean up equipment located in Bulk Silo area.

3.3.3 | Storing Materials

Proper material storage not only helps to prevent spills – it supports workplace safety and effective business operations as well. All plastics handling sites should employ appropriate material storage practices.

Clear Labelling: Label containers for easy identification. This helps to reduce unnecessary movement of material and keeps operations running smoothly.

Location: Consider material storage locations carefully. The logical flow of operations, ground stability, and proximity to high-risk areas (e.g., stormwater drains, high traffic areas, etc.) should be considered when choosing storage locations.

Secure Containment: Ideally, materials should be stored indoors to reduce the risk of spills, damage, or vandalism. Where this is not possible, secondary containment (e.g., bunding) should be used. If material is stored outdoors, covers can help to reduce photo-degradation.

Secure Palletising: Stack bags in tight, interlocking patterns on pallets. Use shrink/stretch-wrap and cardboard caps to stabilise stacks and minimise damage risks. Use good quality pallets, ensuring that the gaps between planks are small and that no bags overhang the pallets.

Forklift Handling in Storage: Avoid stacking pallets too high, which can increase the risk of tipping or spills during forklift transport. Forklift operators should be well trained to minimise bag punctures or container damage caused by improper use of tines.

Regular Inspection: Regularly inspect storage areas for signs of damage or spills. If issues are identified, damaged bags or containers should be repaired, and clean-ups conducted immediately.

Bulk Silos: Ensure clean up equipment is kept in silo delivery areas. A clean-up should be conducted after every delivery. Silo areas should also be surrounded by containment, e.g., bunding.

Minimum Requirements	Ideal
• Materials are stored indoors/within secondary containment (e.g., bunding). • Materials are stored safely. • Forklift drivers are trained good stacking practices.	• Materials are stored indoors. • Stored bags/containers are regularly monitored for damage. • Stored materials are clearly labelled.

A forklift transports well stacked pallets.

3.3.4 | Converting, Recycling, and Reprocessing

Plastics converters, recyclers, and reprocessors operate complex systems, making them high-risk for material leakage. In addition to the risk of spilled resin, flakes, and powders, dust generated through conveying and manufacturing processes poses a further challenge. Measures can be taken to mitigate these risks.

Process Automation: Where possible, invest in automated systems to minimise manual handling. Use sensors to detect leaks or blockages and respond to these immediately.

Manual Handling: Where manual handling is required, ensure it is conducted in defined areas with catch trays, secondary containment, clean up equipment, and 'clean-as-you-go' protocols in place.

Clearing Blockages: Anticipate pellet loss when opening a line to clear a blockage and use catch pans or traps to contain spills.

Sealing Equipment: Maintain and repair seals on storage silos, tanks, and transfer systems to prevent leaks.

Recycling and Reuse Systems: Establish collection systems for spilled materials to reintroduce them into production cycles where feasible.

Dust and Debris Elimination:

To minimise production of dust and debris:

- Use specialised equipment, such as swarfless cutters to mitigate debris
- Maintain cutting equipment to keep blades sharp
- Use gentle conveying systems, e.g., limiting air pressure and speed
- Use appropriately sized granulators with adequate flow
- Ensure machines are set up and well suited for specific materials and processes

Dust, Debris, and Powder Management:

To manage the containment of dust, debris, and powders:

- Ensure that high-risk operations such as regrinding are conducted inside and away from doors. Use of barriers at factory exits can further mitigate material leakage.
- Use dust suppression equipment like filters and vacuums in areas prone to dust and powder spills.
- Use systems such as air blowers to remove debris material from finished products.
- Ensure storage silos, tanks, and containers are in good condition to prevent leaks or damage.

Minimum Requirements	Ideal
• Machinery is appropriate and well maintained. • High-risk operations are conducted inside and away from doors. • Dust, debris, and powders are removed from finished products.	• Automated processes are used where possible. • Advanced technologies are used to mitigate dust and swarf. • Barriers are in place at factory exits.

3.3.5 | General Handling

By implementing the following general handling practices, all sites can reduce risks, improve resource recovery, and align with best practices for sustainable management.

Staff Training: Train staff in good material handling and clean-up practices, including the environmental and business impacts of spills. Use posters and celebrate success to reinforce good practices.

Immediate Response: Contain, clean-up, and properly dispose of all spills immediately, regardless of size. Promptly repair damaged bags, containers, and equipment.

Cleaning and Maintenance: Create regular cleaning and maintenance schedules for equipment and work areas to reduce operational, health and safety, and environmental risks.

A specific cleaning and maintenance schedule for stormwater catch pits should be in place and records maintained.

Reuse, Recycling, and Waste: Recover loose pellets for reuse, resale, or recycling wherever possible. No small, loose material (such as swarf) should be placed into recycling bins unless confirmed with recycler. Ensure all bins are sealed. Bins and skips are high risk of spills on site. Where possible, locate them away from stormwater catchpits.

Safe Disposal: Where disposal is required, ensure loose pellets are contained in sealed bags before being placed into recycling or waste bins. Ensure bins are sealed. Bins should be stored and emptied in enclosed areas away from stormwater drains.

Minimum Requirements	Ideal
• Signage is used to remind staff about the risk of spills. • Spills are cleaned promptly, and staff clean-ups are regularly scheduled. • All waste loose material is bagged before being placed in bins or recycling (check with recycler first). • Bins are located away from stormwater drains.	• Staff are regularly trained in material handling and spill prevention. • Spills are cleaned immediately. • Contracted sweepers/cleaners are regularly scheduled. • Recycling and waste bins are sealed and lidded. • Recycling and waste bins are emptied in enclosed areas. • Data on spill amounts is recorded.

Did you know?

Stormwater filters so not work effectively if they are poorly fitted, the wrong size, damaged, or full! Regular maintenance helps to ensure they do the job properly!

3.4 | Physical Site Management

Physical site management is essential for preventing and mitigating the risk of spills. Key recommendations include:

Stormwater Mapping: Keep a copy of relevant stormwater plans and a site map showing stormwater drains available. Identify areas at high risk of material leakage, such as loading/unloading zones, storage areas, and material transfer points.

Catch Pits and Filters: Install filter devices in catch pits to capture spilled materials before they enter stormwater systems. Use fine-mesh filters or grates that can contain plastic pellets, flakes, and powders. It is important that these are checked and emptied regularly.

Visible Reminders: Clearly mark drains on the ground for easy identification by employees and contractors. Use signage to remind of best practice and participation in the OCS NZ programme.

Bunding and Physical Barriers: Install bunding or berms around high-risk areas to contain spills and prevent material from escaping the factory or site. Use containment barriers at doors, such as gates, slot drains, or speed humps to contain materials inside. Use windbreaks, fencing, or walls to prevent lightweight materials from being blown off-site.

Designated Handling Areas: Clearly mark and contain areas for material loading, unloading, and storage to minimise the spread of spills. Ensure these areas are equipped with proper spill containment measures, such as trays or portable barriers.

Surface Considerations: Where possible, ensure high-traffic or high-risk areas are paved to facilitate spill clean-up. Where possible, ensure surfaces are sloped towards containment zones to prevent material from spreading uncontrollably.

Site Maintenance and Inspections: Conduct regular site inspections to identify and address any weaknesses in spill prevention measures. Ensure all containment and drainage systems are well-maintained and fully operational.

Minimum Requirements	Ideal
• A site plan highlighting all drains and catch pits are kept with the spill response plan. • Appropriate filters are in place in all at-risk catch pits. • A filter cleaning and maintenance procedure is in place and evidenced. • Site boundaries are protected to prevent spilled material from escaping site (e.g., through use of bunding, cloth, etc.)	• A copy of full drainage plans, including connections to council network, is kept with the spill response plan. • A record if kept estimating the amount of material recovered each time it is emptied. • Barriers such as gates or speed humps are in place at factory doors. • Hoarding or geotextiles are used as a barrier along fence lines.

Pre-Audit Checklist

To support your journey towards certification, work through this checklist prior to our auditors coming to your site. Use the information in the OCS NZ guide to support in identifying appropriate actions to take on your specific site.

OCS NZ Requirements	☑ Evidence the OCS NZ auditor may request
A spill plan is in place.	○ Visual check of the spill plan ○ Visual check of site/stormwater map showing drains and catch pits ○ Contracted sweepers/cleaners are regularly scheduled ○ Interview with staff to assess awareness of the plan
Suitable spill clean-up equipment is available	○ Visual check of equipment on site ○ Visual check of signage ○ Interview with staff to assess awareness of and use of equipment
Staff are informed of safe material handling procedures	○ Interviews with management to confirm how material handling guidance has been delivered ○ Visual check of signage/posters ○ A copy of training records and materials ○ Interview with staff to assess awareness of records
Regular maintenance and cleaning schedules are followed	○ Visual check of state of site ○ Visual check of maintenance and cleaning schedule and records ○ Interview with staff to check awareness of schedules
Plastic pellets, flakes, and powders are stored safely and securely	○ Visual check of material storage ○ Interview with management to confirm procedures ○ Interview with staff to confirm awareness of procedures
Stormwater plans and/ or a map of site drains is readily available	○ Visual check of site/stormwater map showing drains ○ Interview with management to confirm understanding of high-risk areas
All stormwater drains in 'at-risk' areas have suitable filters in place	○ Visual check of filters in stormwater drains to ensure they: ○ Fit properly ○ Have appropriately sized filters
A stormwater filter maintenance schedule is followed and recorded	○ Visual check of state of filters ○ Visual check of maintenance and cleaning schedule and records ○ Interview with staff to check awareness of schedules
There are measures to prevent spilled plastic from moving off-site	○ Visual check of site to check for bunding, gating, bumps, netting, etc. ○ Interview with management to confirm processes to avoid material from moving off site.