



Chemifloc Group Sustainability Plan 2020 - 2025

CHEMIFLOC GROUP

Protecting Your Health and Environment

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Purpose

Chemifloc is committed to adopting and promoting sustainability across all our business operations and are firmly dedicated to conducting our operations in a socially responsible manner ensuring we provide a safe and sustainable environment for customers, employees, society, and stakeholders and this is highlighted through the company values shown in Figure 1. This sustainability plan as set out in this document commits the Chemifloc Group to:

- Adopt where possible more sustainable business practices.
 - Protect the environment and comply with relevant Environmental Legislation.
 - Detail the implementation and review of Objectives and Targets and report progress annually at a Group level and monthly at Divisional level.
 - Have in place management plans that drive continuous improvement to deliver our objectives and targets.
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Scope

This policy applies to all activities within the Chemifloc Group.

Goals

Chemifloc has established the following goals that are categorised as follows:

- **Resource Conservation:** using resources such as water, energy, and raw materials efficiently and ethically
- **Low Emissions:** reducing our carbon footprint by reducing our carbon dioxide emissions, which contribute to global warming.
- **Innovation:** accelerate and develop environmental sustainability initiatives to help in achieving sustainability goals.
- **Lean manufacturing:** create a systematic method for waste minimisation within the manufacturing processes without sacrificing productivity.
- **ISO 50001:** Develop and implement an energy management system to ensure that energy is used efficiently throughout the organisation and strive for continual improvement.
- **Biodiversity:** Develop and implement a biodiversity strategy to positively impact biodiversity.
- **Human Resources Development:** Investment into employees to ensure a strong and effective workforce.

SUSTAINABILITY OBJECTIVES AND TARGETS (2020 – 2025)



The following objectives and targets set out the Chemifloc Group goals to achieve a more sustainable conscious production process.

1) REDUCING OUR CARBON FOOTPRINT

- To commit to sign up to The Low Carbon Pledge* to record our carbon footprint, reduce our emissions, report on our progress, and continually review our carbon reduction targets.
- Record our entire Carbon Footprint, both direct (Scope 1 & 2) and indirect (Scope 3) carbon emissions.
- Reduce carbon emissions that we are directly responsible for (Scope 1 & 2), as well as play our part in reducing emissions across our supply chain (Scope 3).
- Report publicly our progress internally, as well as collectively through the annual BITCI Low Carbon Report.
- Regularly review our carbon reduction targets (SBTs) to align to the latest Climate Science.

*<https://www.bitc.ie/the-leaders-group-on-sustainability/low-carbon-pledge/>

2) THE CIRCULAR ECONOMY

To reduce pressure on natural resources such as raw materials and promote a circular economy Chemifloc are committed to providing sustainable products and where possible, raw materials are sourced locally and are by products of other chemical industries supporting the circular economy.



Aluminium-Based Coagulants

Chemifloc produce aluminium-based coagulants by using an increased quota of a by-product, Aluminium Hydrate, from a local Alumina refinery

3) TRANSPORT

Chemifloc commit to implement energy usage efficiencies by identifying improvements in Logistics. Below are examples of how we do and how we can further achieve this.

EVs and a Fuel-Efficient Fleet

Chemifloc have invested in electric vehicles (EV) for company use and have installed EV charging points on site. Chemifloc are currently replacing diesel forklifts with electric forklifts. Chemifloc has invested in new technology Volvo Turbo Compound artic units. The D13K500, TURBO-TC is a low emission engine in terms of both exhaust gases and noise emissions and it meets the Euro 6 exhaust emissions requirements.

Features and Benefits of the D13K500, TURBO-TC

- Maximum torque within a broad rev range.
- Excellent fuel-efficient.
- Low-emission variant, Euro 6.
- Extremely high engine braking effect with VEB+ and EPG (option).
- Rear-mounted power take-off with high power output (option).

Load size optimisation

Chemifloc has implemented a programme of maximising the load sizes carried by our road tankers and rigid trucks so that the fuel used to deliver the product is minimised whilst also decrease exhaust emissions.



4) ENERGY EFFICIENT PROCESS DESIGNS

Chemifloc are committed to continually improving energy efficiency by creating innovated energy efficient design processes.

Caustic Cooling project in Foynes, Co. Limerick.

This project is a great example of how an energy audit can give you an opportunity to look at the energy usage across different processes. Chemifloc's caustic cooling project provided the opportunity to spot clever ways of saving energy. After completing an energy audit, the project looked at the good principles of chemistry and engineering to combine two processes so that they complimented each other. As a result, instead of requiring energy input, both processes became energy neutral. The project was supported by the SEAI EXEED scheme. Other energy projects are also scheduled for Chemifloc Shannon and Foynes including a major project with >€1M capital spend to replace an existing raw material currently used with one with a much lower carbon footprint.

Decarbonisation of our Chemical processes

We are currently implementing process changes to the production of our coagulants. Examples of these changes are:

- Replacing hydrogen peroxide usage with more efficient use of oxygen
- Re-use of our heat generation by using production generated hot water to other processes that require heat.

5) CONTINUAL PROCESS IMPROVEMENT

To implement lean manufacturing processes which will improve efficiency, reduce waste without compromising quality.



Yellow Belt Project to Improve the Acid Load Bay CB29

This project looked at process improvements in the acid load bay CB29 to prevent environment contamination, reduce waste and promote safe work practices. As a result of the project, the bund epoxy liner was repaired to eliminate potential groundwater contamination and a preventative maintenance program was implemented.

6) MANAGEMENT SYSTEMS

Retain the ISO 14001 Environmental Management System as well as reduce energy usage and continually improving energy performance with the aim of achieving and attaining ISO 50001 energy management standard.

Energy Audit Shannon Plant 2019

An energy audit was carried out at the Shannon site in 2019. This audit was completed by an external body and done in accordance with the SEAI Energy Audit Handbook and IS 399 Energy Efficient Design Management. Opportunities for improvement were identified and Chemifloc are committed to implementing these improvements. An example of an improvement was the replacement of all non-LED internal and external lighting with LED lighting.

7) POLLINATOR PLAN (2021-2025)

To commit and agree to the support the All-Ireland Pollinator Plan and to carry out at least ONE pollinator-friendly action within the first year of signing up, and plan to carry out TWO additional actions within the following five years.



Pollinator friendly planting

A biodiversity committee will be formed within Chemifloc to ensure pollinator-friendly actions are accomplished. The first project this committee will undertake will be to identify areas around the Chemifloc site suitable for pollinator friendly planting and working together to create a sustainable ecosystem.

8) SUSTAINABLE HUMAN RESOURCE MANAGEMENT

To commit to sustainable human resource practices such as promoting employee well-being and inclusiveness, providing training, and upskilling and improving the overall culture to increase efficiency and productivity.

Implementation of LMS

Chemifloc have invested in an online Learning Management System (LMS) which will allow employees to access a wide range of training from one location. This training will not only cover compulsory topics but will give employees access to information on health and well-being and other such topics. The LMS will allow for performance management to be easily reviewed which will help in promoting continual development of the people within Chemifloc. There are also environmental benefits of an online LMS in that it will eliminate paper-based learning systems.

EVALUATION AND AUDIT



Adherence to this Plan will be continually monitored by Directors and Managers on an annual basis and through monthly SHEQ committee meetings.



FIGURE 1: CHEMIFLOC GROUP COMPANY VALUES