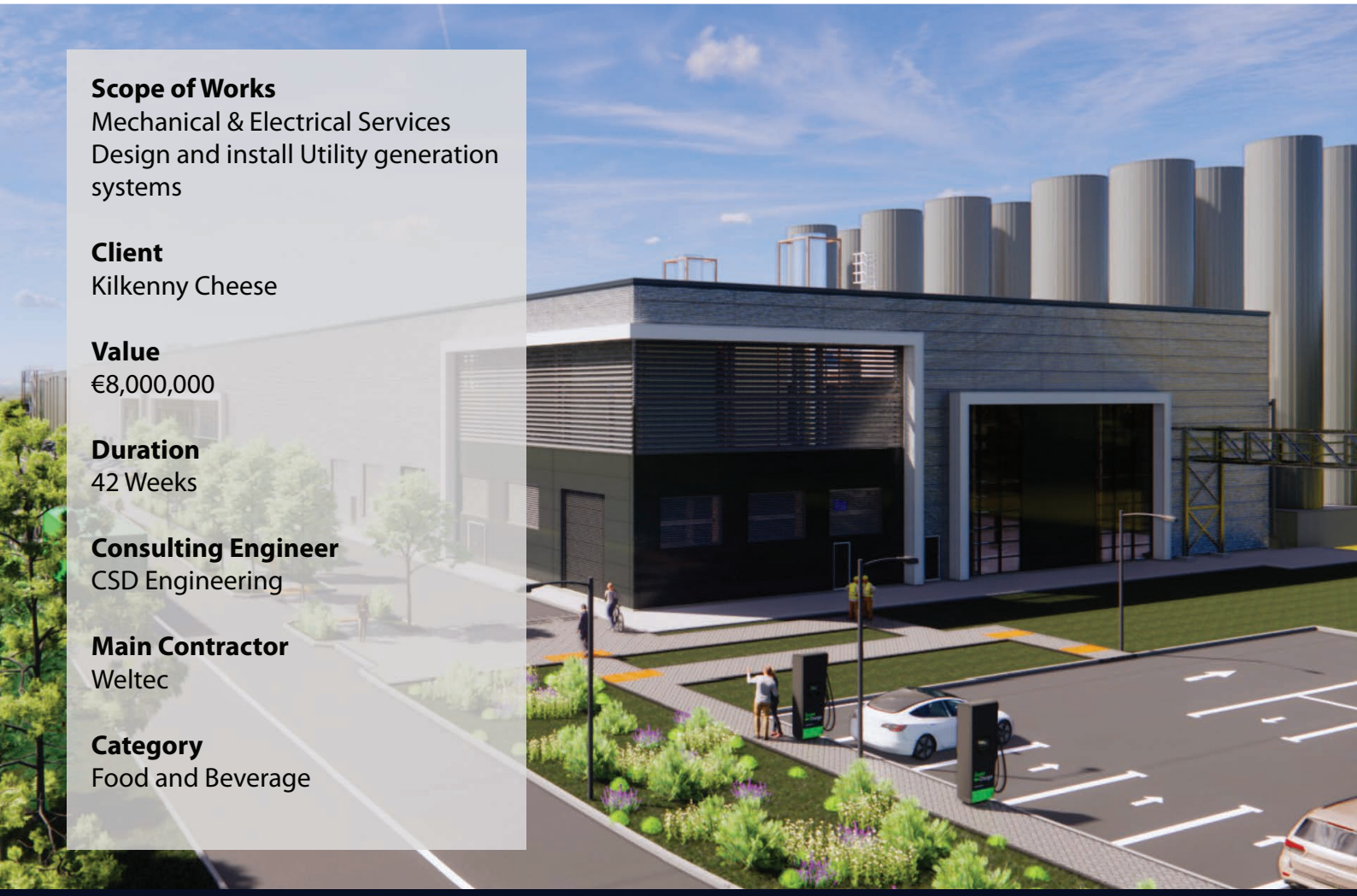
WELTEC ENGINEERING

Kilkenny Cheese Project Orange
Off-site Manufacturing Solutions



**Scope of Works**
Mechanical & Electrical Services
Design and install Utility generation systems

**Client**
Kilkenny Cheese

**Value**
€8,000,000

**Duration**
42 Weeks

**Consulting Engineer**
CSD Engineering

**Main Contractor**
Weltec

**Category**
Food and Beverage

# Kilkenny Cheese M & E Utilities Installation Design & Build

Kilkenney Cheese Ltd, Belview, Slieverue, Co. Kilkenny

## PROJECT INFO

Kilkenny Cheese, Project Orange: Mechanical & Electrical Services, Design and install Utility generation systems
This was a challenging site to work on and a very tight programme. To tackle those constraints we adopted a design-led approach with heavy reliance on our off-site manufacturing facilities. This required a great deal of collaboration with the Kilkenny Cheese engineering and design team. The process saw the entire project designed, coordinated, and 3D modeled using plant 3D with a large amount of pipework and skids being fabricated off-site. This led to shorter timeframes for manufacture and for on-site installation, with high levels of quality management, reduced health and safety risks, and reduced wastage.

## SCOPE

M&E
Design and install of 5 No. 1.8MW Natural Gas Fired Boilers, 160m3/hr Water Softening Skid, 3 No. 75kW Air Compressors, 1.6MWe CHP Self contained unit and associated LV/MV Transformers and equipment. All utilities brought to main distribution locations for distribution around the plant.

Kilkenny Cheese is a joint venture established in 2019 between Tirlán and family-owned international dairy business, Royal A-ware, to deliver a best-in-class sustainable continental cheese manufacturing facility. Weltec Engineering was tasked with designing and installing the Utility generation systems

## THE CHALLENGE

This was a tight & busy site with a large amount of civil works to be carried out. The client was looking for engineering solutions to try and speed up the project programme, and this informed our decision to fabricate as much as possible offsite.

## THE SOLUTION

This was a Design & Build Contract for Weltec. There was a collaborative approach adopted throughout the design process with the Kilkenny Cheese Project Team in relation to the detailed design of the LTHW/Natural Gas/CHP/Compressed Air/Water Softening/BMS Systems/modular skids and headers. The design was developed through numerous workshops from the initial concept to include

1. Identification of Stakeholder Requirements
2. Implementation of Site Standards/Specifications
3. KPIs
4. Maintainability
5. Payback
6. Vendor Selection
7. Detailed Technical submittals
8. Technical Reviews
9. HAZOPs
10. Procurement
11. FATs
12. SATs

This process saw the entire project designed, coordinated, and 3D modelled using plant 3D at an early stage. This led to a large amount of pipework being fabricated off-site. Approximately 65% of the pipework on the project was fabricated off-site allowing for shorter timeframes for on-site installation, high levels of quality management, reduced health and safety risks, and reduced wastage on site.

## THE BENEFITS

- Accuracy of ISO drawings generated from the 3D model ensured consistent results throughout the manufacturing process.
- Increased speed of pipework manufacturing through the fully equipped Off-site Manufacturing Workshop
- A quick cost-effective installation (prefabricated pipework was easier to install for reduced install/labour costs).
- Reduced health and safety risks in controlled off-site workshop environment.
- The collaborative approach ensured better change management keeping tight programme timelines running to target.
- Reduced waste