Wernick® BUILDINGS

Life Cycle Assessment Summary
Cradle-to-Gate Assessment (A1–A5)

PMflex®

Sustainability is embedded within the PMflex building system. This Life Cycle Assessment demonstrates how offsite modular construction can reduce waste, improve efficiency and support lower environmental impact through controlled factory manufacture.

ABOUT PMFLEX

A clear bid strategy positions Wernick Buildings as a trusted partner capable of delivering on projects.

KEY BENEFITS:

- **Faster programme delivery**
- **Reduced site disruption**
- **High-quality factory-controlled manufacture**
- **Designed for relocation and reuse**
- **Flexible modular configuration**

LCA SUMMARY

Assessment Scope

The Life Cycle Assessment evaluates embodied carbon emissions across stages:

A1 - A5
- Raw material extraction
- Material transport
- Manufacturing processes
- Transport to site
- Construction and installation

VERIFIED RESULTS

Embodied Carbon Results

Gable Unit
- 12.2 tCO_2e
- Cradle-to-gate (A1–A5)

Inter Unit
- 11.1 tCO_2e
- Cradle-to-gate (A1–A5)

LCA METHODOLOGY

The assessment was completed using

- One Click LCA® verified software
- EN 15978 standards
- ISO 14040/44 standards

Assessment completed by:
Carbon.Climate.Certified

KEY FINDINGS:

- **93% of embodied carbon emissions occur during the A1-A3 product stage**
- **Steel components represent the largest carbon contributor**
- **Offsite manufacture improves material efficiency and quality control**
- **Reduced on-site activity lowers disruption and site impacts**
- **Modular systems support future reuse and circular economy principles**

Sustainability benefits of modular construction

90% less waste
MMC can reduce waste by up to 90% in certain applications

Reduced construction times
Parallel offsite manufacture and site works

Lower site disruption
Fewer deliveries, less noise and reduced congestion

Designed for reuse
Modules can be relocated, refurbished and repurposed

Wernick sustainability commitment

- **118kWp solar installation**
- **Voltage optimisation technology**
- **LED lighting upgrades**
- **24% of factory energy supplied by solar**

Disclaimer: Only the shell and core of one end and middle modules of the structure were considered for the LCA, and other fittings and installations were excluded. The scope of the project was restricted only to the production and construction stages (A1-A5) at the Wernick Buildings factory in Kenfig. The LCA remains valid for a 5 year period.