CYGNUM®
Building Offsite

Leaders in Offsite Construction

Experience & Expertise

Cygnum is one of Ireland's leading offsite building companies. We have over 21 years experience in the design and manufacture of timber frame structures including volume house building, hotels, apartment blocks, care homes and schools. To date we have delivered over 25,000 homes.

Our depth of knowledge in the industry is unrivalled. For instance, in 2013, we became the first Irish company, and one of only two in the UK and Ireland to have a Passivhaus system certified by Germany's Passivhaus Institute.

Cygnum operates from a purpose built, state of the art production facility. We have installed the latest CNC equipment enabling us to achieve superior levels of efficiency, productivity and accuracy.

Our award-winning in-house design team and our experienced installation crew's make sure the delivery of our timber frame houses is done with precision, speed and accuracy.

With Cygnum you gain:

- **Over 21 years experience in offsite construction**
- **A multi award winning Company**
- **An expert in-house design and engineering team**
- **Third party certified U values, PSI values and structural calculations**
- **A CIRI registered ITFMA and CIF member**
- **A Gold rated STA manufacturer**

Scale and Capacity

Cygnum operates from a purpose-built state of the art 80,000 square foot manufacturing facility. Our fully automated CNC equipment gives us the capacity to deliver over 3000 units per annum.

With this technology and automation, we can guarantee that all our panels are produced to the highest standards ensuring construction on site is seamless.

With many years of experience and research we have developed our systems to allow us to factory finish key elements of the build process to reduce labour on site.

We guarantee our delivery programs because we:

- **Have a capacity to manufacture over 60 houses per week**
- **Operate from an 80,000 square foot custom designed manufacturing plant**
- **Use state of the art CNC material preparation equipment and automated production lines**

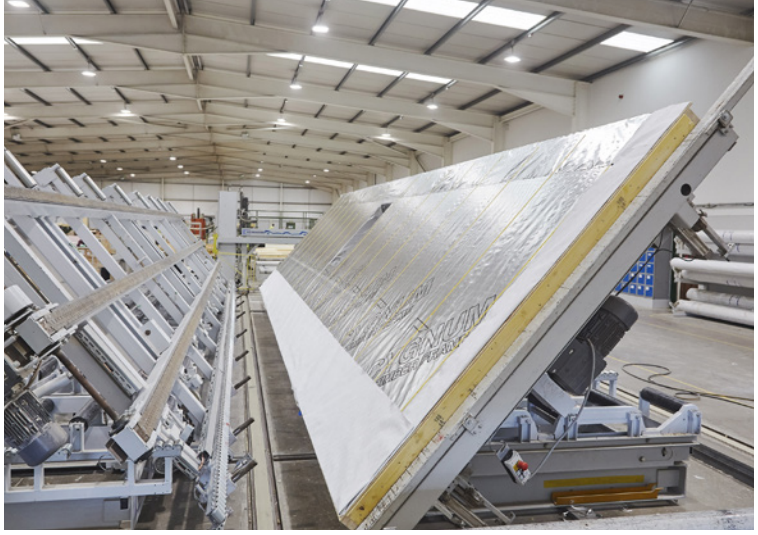
Offsite Precision

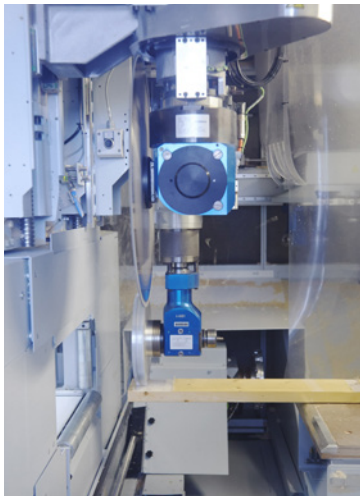
Our Weinmann beam processor and our Homag Sheeting processor give us CNC precision, accuracy and efficiency unrivalled by our competitors.

We have the capacity to:

- **Cut compound angles**
- **'Birds mouth' rafters**
- **Notch studs and plates**
- **Cut and router insulation, plasterboard, flooring and wall sheeting**
- **Drill for electrical and plumbing services**
- **Router for ducting**

... with millimetre accuracy





Reflect® Wall System

	CYGNUM® REFLECT 140	CYGNUM® REFLECT 200
U-value	0.18	0.15
Insulation	Factory fitted	Factory fitted
Air tightness	Factory fitted	Factory fitted
Service battens	Factory fitted	Factory fitted
Air tightness testing	Included	Included

NZEB
Nearly Zero Energy Building

Supply and Install

Our build system includes the supply and installation of several key elements in one package.

External walls: arrive to site with insulation, airtightness barrier, service cavity battens and service penetrations pre-formed in the factory. Our external wall systems have U values ranging from 0.15W/m²K to as low as 0.12W/m²K and thermal bridge Psi values as low as 0.04W/m-k.

Floors: are delivered with 18mm structural sheeting board factory fitted and service penetrations pre-formed. We can offer three options, solid timber joists, I joists and open web joists. Our panels can be manufactured up 12metres long reducing the build time on site.

Certified Party Wall: are factory finished from floor level to ridge with plasterboard, acoustic insulation and airtightness membrane.

Roof: supplied in either trusses, sloped roof panels, flat roof panels and pre-cut rafters. We supply our roofs with all the required structural elements for standard, hipped and room in roof options.

With Cygnum you get a wind and watertight shell within days of our arrival on site!

Benefits of Offsite with Cygnum

Productivity

Building off-site with Cygnum increases on site productivity. Site trades are replaced by automated efficient factory processes. Houses are wind and watertight within days of arrival on site allowing remaining trades commence without being impacted by weather.

Quality

Cygnum's product is manufactured in factory-controlled conditions with millimetre accurate CNC equipment. Our installation crews are highly trained, and our houses are inspected and signed off with our digital checking system. We provide structural and ancillary certificates as required by BCAR and the building regulations giving our clients peace of mind.

Programme

Off-site allows our clients work to plan their building program with confidence months in advance of commencing on site. Cygnum deliver to agreed schedules unaffected by weather, labour shortages and other site issues. Certainty of installation dates enable our clients to schedule follow on trades months before they are required.

Performance

Cygnum's certified U values and thermal bridge models give our clients the comfort of knowing that our products offer the highest performance. Our performance data can used in BER calculations to ensure that all elements of the build including heating systems are cost effective.

Cost Certainty

Value engineering at design stage with our experienced design team helps to mitigate buildability issues upfront. Early engagement with us drives out risk allocations, providing clarity, confidence and ultimately project certainty.

Cygnum Process

Design Approval → Structural Engineering → Production Drawings → Manufacture and delivery → Installation → Digital sign-off and handover

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PASSIVE HOUSE
CIRI 2018/2019
CONSULTANT CERTIFIED PASSIVE HOUSE CONSULTANT
CERTIFIED COMPONENT
STA ASSUREGOLD
NSAI
TRADA member
CONSTRUCTION INDUSTRY FEDERATION
IRISH TIMBER FRAME MANUFACTURERS ASSOCIATION