1. Large glazing panels set in scene the copper pot stills, which are the largest in Europe.

Client - Irish Distillers Ltd. / Pernod Ricard
Architects - Wain Morehead Architects Ltd
Engineers - PM Group
Planning Consultant - McCutcheon Mulcahy
Façade Specialist - Billings Design Associates
Fire Consultant - Cantwell Keogh & Associates
Landscape Consultant - Forestbird Design
Insurance - FM Global
Main Contractor - PM Group
Ground Works - PJ Hegarty
Envelope - Alucraft
Structural Steel - Cronin Buckley

Project size - 960m²
Value - €3.6m
Duration - 11 months
Location - Midleton, Co. Cork

Photography - Gabrielle Morehead IPPA

GARDEN STILLHOUSE, MIDLETON DISTILLERY

Report by Wain Morehead Architects Ltd
The **Garden Stillhouse** is located in an area known as 'the garden', within the Midleton Distillery Complex, Co. Cork. The building appears to be seamlessly integrated, appreciating views to the original distillery buildings and retaining existing demesne walls, hedgerows, trees and open caverns exposing watercourses on the site.

Time was of the essence as this building played a key role in the major expansion and energy reduction programme embarked upon at the home of Jameson. Construction commenced April 2012 with the first base spirit product produced in March 2013. Practical completion was achieved in August 2013. Apart from integrating process requirements, the new Stillhouse was to be a signature building complementing the 18th century and later buildings already found in the distillery grounds. By understanding and pre-empting the developing process design requirements at an early stage, the concept developed to be flexible and to facilitate the evolution of the process design.

Components and materials in an Atex and Seveso site must meet onerous health and safety standards. As alcohol vapour is heavier than air, its effective displacement had to be addressed at an early design stage which had a significant impact on the building form. The insurers, FM Global, had an active role in authorising the use of approved construction methods, issuing project specific guidelines and performance targets. The unique pot stills are naturally the focal point of the process and are appropriately visible from the garden areas, aided by the canted façade of low iron white glass with a minimal colour cast. The double-glazed curtain wall system achieves a highly efficient U-value of 1.6W/m²K, reducing the risk of condensation which would interrupt the transparent envelope exposing the process. The cooler surface of this north-facing glass wall also contributes localised rapid cooling and inversion of warm air within to aid with alcohol vapour dispersion.

The building envelope also has a very high level of thermal performance with U-values of 0.16Wm²K for the walls and 0.15Wm²K for the roof and floor elements. A 'Solarwall' cladding system provides preheated air to assist with the heating of the space during times of building shutdown. Vapour control and the omission of thermal bridges and condensation risk was carried out using specialist simulation tools and Passivhaus design principles. Resilience and longevity were of paramount importance in this critical part of the continual distillation process with limited shut-down periods for annual maintenance.

The upper floor houses the awe-inspiring copper pot stills, the largest stills in Europe and true to the original pattern. Entering the main hall is almost like entering the vast engine room of an ocean steam liner; this is a living, breathing building, but with the calmness and reverence instilled in an art gallery or cathedral.

With a building footprint of 960m², the lower ground floor houses a significant amount of supporting plant discretely integrated and with intriguing order defying the complexities involved. The grated flooring at pot still floor level allows external air to permeate from the lower ground floor to the upper levels venting through the apex of the skylights overhead. A central suspended gantry

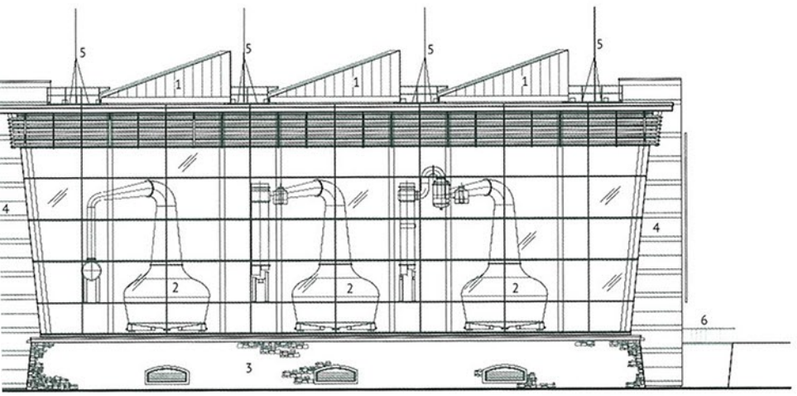
"THE UPPER FLOOR HOUSES THE AWE-INSPIRING COPPER POT STILLS, THE LARGEST STILLS IN EUROPE AND TRUE TO THE ORIGINAL PATTERN."

permits convenient maintenance access and for the observer, excellent views of the stills.

Solar gain from the skylights enables temperatures during the shutdown period to be maintained, resulting in an uninsulated discrete sprinkler / deluge system whilst permitting easy leak detection and maintenance. The architectural envelope and airtight construction incorporates integral stack effect ventilation, moving a significant 20,200m³/h of air without any additional mechanical support. Internal linings were kept flush to reduce dust accumulation and aid effective flow. Three further stills are due to be installed which will increase capacity from 33 million litres of pure alcohol per year to 64 million litres. The efficiencies realised in the distillation process in the plant permits the retention of the original boilers to serve the entire facility. The structure itself can facilitate additional expansion through the gable ends with minimal disruption.

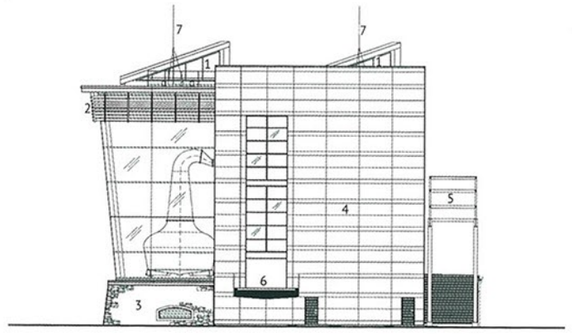
The entrance portal is appropriately accessed from the old distillery cottage gardens via a suspended walkway which plays on the observer's natural caution to remain on the solid element rather than the mesh despite the handrail provisions, conditioning the visitor for the pot still hall experience.

For any further details or tear sheet on this or any of our other projects please feel free to contact us at **wma@wma.ie**



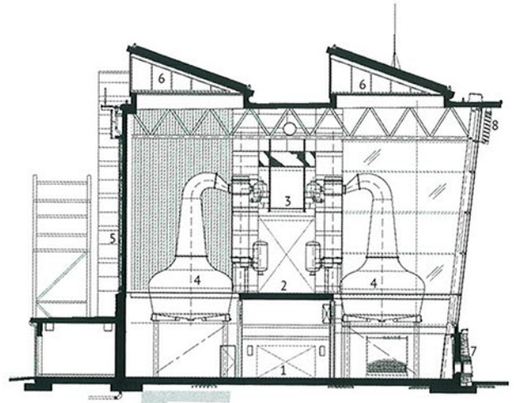
NORTH ELEVATION

1 > Removable skylight
2 > Pot still
3 > Masonry base
4 > Stair tower
5 > Lightning conductor
6 > Access bridge



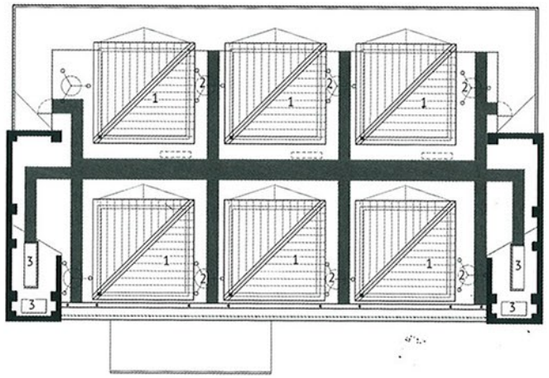
WEST ELEVATION

1 > Removable skylight
2 > Brise soleil
3 > Masonry base
4 > Rainscreen cladding
5 > Pipe rack
6 > Access bridge
7 > Lightning conductor



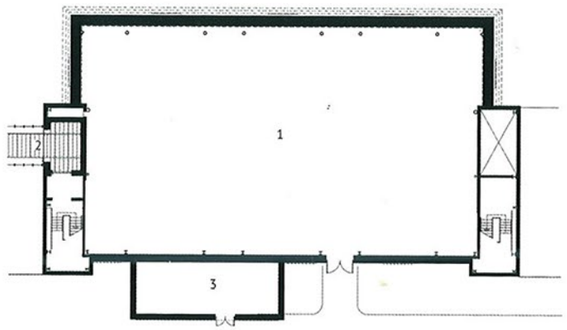
SECTION

1 > Plant
2 > Concrete Walkway
3 > Hanging Gantry
4 > Pot Still
5 > Solar Wall
6 > Removable Skylight
7 > Masonry base
8 > Brise Soleil



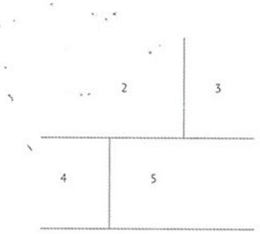
ROOF LEVEL

1 > Removable Skylight
2 > Lightning conductor
3 > AOV



ENTRANCE LEVEL

1 > Plant
2 > Access bridge
3 > Electrical room



2. The building rhythm reflects the triple distillation process.
3. Bridge access to entrance portal.
4. View of the pot stills developing a pre polish patina which takes a year.
5. The 10m high pot still main hall has a central concrete walkway or 'street' flanked by the transparent ventilated flooring housing the stills.