Opalia, Paris: Using Steel to Rigidify the Façade and Optimize HVAC Penetrations

Steven Ware
Partner, Architect, ArtBuild
OPALIA, PARIS: USING STEEL TO RIGIDIFY THE FACADE AND OPTIMIZE HAVAC PENETRATIONS

Steven WARE

23/5/2022
An early timber adopter
The team

Public Local Development Company
Occupant
Developer
General contractor
Timber steel subcontractor
Architecte and landscaping
Structural, M&E Engineering
Acoustic engineering
Project management
Building controller and site safety
Environmental consultancy
A challenging site for timber
The protective hand
Double skin facade
Glulam 250 m³ spruce sourced from Finland and machined in France

CLT 5200 m² spruce floors slabs supplied by KLH from Austria

Thickness 21 cm

Facades Stud walls 1200 m² including CLT 2300 m²

Cladding 1500 m² Douglas fir sourced in France

Supplier PIVETEAU

© Council on Tall Buildings and Urban Habitat
Opalia
TIMBER

Glulam
250 m³ spruce sourced from Finland and machined in France

CLT
5200 m² spruce floors slabs supplied by KLH from Austria
Thickness 21 cm

Facades
Stud walls 1200 m² including CLT 2300 m²

Cladding
1500 m² Douglas fir sourced in France, supplier PIVETEAU
STEEL

Curtain wall
300 m² Raico wood/steel composite

Bow windows
2050 m² to the south facade

Terraces
Waterproofed steel and concrete composite floor to support wooden decking and green roofs 1050 m²

Structure
175 tonnes of post and beam
Freestanding egress stairwell
SCHEDULE

4 months

for off site prefabrication of stud wall panels, CLT slabs, and steel structure
Biophilia
REX – post occupancy survey
Birth of the Lab

LAB MUS (bioéconomie)

WOODRISE

LIBRAMONT (PAVILLON DEMOFREST)

FCB

MUSA TOWER

FBC

ENVA (BRIQUE)

MUSA (CLT CINTRÉ)

ÉCONOMIE CIRCULAIRE
Timber DNA

<table>
<thead>
<tr>
<th>Project</th>
<th>Area</th>
<th>Year</th>
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<tbody>
<tr>
<td>TRYO, Nantes (FR)</td>
<td>4 000m²</td>
<td>2018</td>
</tr>
<tr>
<td>ODYSSEE, Guyancourt (FR)</td>
<td>12 000m²</td>
<td>2020</td>
</tr>
<tr>
<td>ENVA, Maisons Alfort (FR)</td>
<td>4 000m²</td>
<td>2021</td>
</tr>
<tr>
<td>WOODEN, Leudelange (LX)</td>
<td>14 000m²</td>
<td>2022</td>
</tr>
<tr>
<td>SWITCH, Brussels (BE)</td>
<td>4 000m²</td>
<td>2024</td>
</tr>
<tr>
<td>CITE ADMINISTRATIVE, Amiens (FR)</td>
<td>20 000m²</td>
<td>2023</td>
</tr>
<tr>
<td>Laval (FR)</td>
<td>4 000m²</td>
<td>2023</td>
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<tr>
<td>Rennes (FR)</td>
<td>4 000m²</td>
<td>2023</td>
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<tr>
<td>Harmonie, La Garenne Colombes (FR)</td>
<td>92 000m²</td>
<td>2023</td>
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<td>Symphonie, La Garenne Colombes (FR)</td>
<td>46 000m²</td>
<td>2024</td>
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<tr>
<td>CFC Casablanca (MAR)</td>
<td>30 000m²</td>
<td>2024</td>
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THANK YOU

ARTBUILD