



## Falmouth School Design & Technology Building

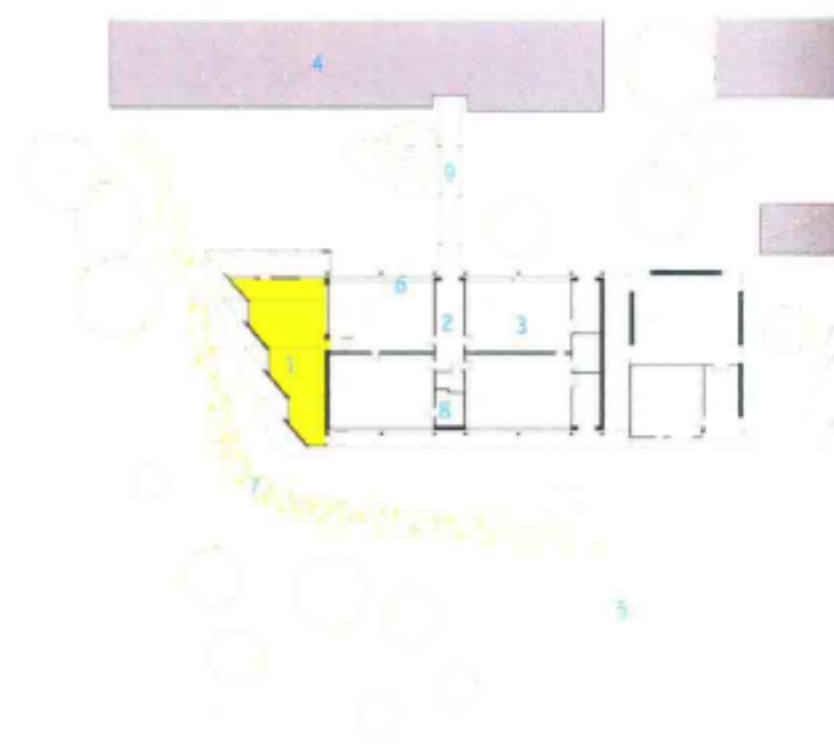
Designed by Urban Salon, the project came out of the Sorrell Foundation's 'joined up design for school programme where pupils are given control and responsibility as clients. The 95-square-metre extension is a solid prefabricated cross-laminated timber construction with the timber exposed to the interior and standing seam pre-weathered zinc to the exterior. The timber structure was chosen for its environmental performance and was designed with half lap joints and has no visible fixings in the building. The ceiling within the extension rises from 3.2 metres to 5.2 metres, allowing even north light to flood the space, and creates the distinctive saw-tooth form of the building. The only steel structural elements are T-sections that support the ridge of the roof panels from the timber beams below. Specialist contractor KLH manufactured the timber structure off site. This modular construction method meant that the structure was assembled on site within two weeks.

The existing Design & Technology studio was upgraded as part of the scheme. The refurbishment rather than wholesale removal of the existing workshops had the added benefit of less waste and lower embodied energy in building materials required. Coupled with the use of the prefabricated elements, this led to less construction time and less disruption to students and their education. The existing block now has a new roof, wood-fibre insulation, double glazing to prevent heat loss in winter and solar shading to the south of the building to prevent summer overheating.

### 法尔茅斯学院设计和技术楼

95平方米的扩建结构采用了预制交叉胶合板结构，内部是木板，外部是立缝抗风化锌板。木结构具有优秀的环保性能，半叠拼接技术让建筑内部看不到一个固定螺栓。扩建结构的天花板高3.2米至5.2米，不符合自然规律，为建筑创造了独特的锯齿形结构。唯一的钢铁结构元素是支撑屋顶的T字断面。承包商KLH在工厂里制造了这些木结构。这种模块化施工让整体现场组装可以在两个星期之内完成。

原有的设计和技术工作室同样进行了升级。对原有建筑的翻新比重建减少了废物的产生和能源的消耗。与预制式元素相结合，减少了大量的施工时间，避免了对学生和教学活动的影响。设计师为原有建筑添加了一个新屋顶。木纤维隔热板和双层隔热玻璃有效避免了冬季的热流失；南面的遮阳板隔绝了夏季多余的热量。



1. design studio extension
2. original design technology block a
3. original design technology block b
4. main school buildings
5. pedestrian entrance
6. polycarbonate canopy above
7. new pathway with markings
8. new disabled toilet
9. existing covered walkway

1. 设计工作室扩建结构
2. 原有技术楼a
3. 原有技术楼b
4. 学校主楼
5. 行人入口
6. 树脂穹顶
7. 新建的带标记的路
8. 新建的无障碍洗手间
9. 原有的正道





Photo: Gareth Gardner

Architect: Urbansalon Architects

Educational

Completion Date: 2008