

# Green Roof

## Horbury School, Wakefield



### Background

Designed by NPS North East property consultants, and built by Miller Construction the building is steel-frame with metal stud and plasterboard internal walls, with heavyweight concrete floors and roofs to help to reduce overheating. This provides good levels of acoustic separation and reduces fabric heat losses to 10% lower than Building Regulations requirements.

### Challenge

The new school project was phased over a three-year programme, with demolition and rebuilding on the 11,500m<sup>2</sup> site continuing while the 1000 pupil school remained open. The brief for the new school was to design a college based on the Building Schools for the Future layouts, and this included the requirement of a "very good" sustainability rating, as measured through the BRE's Environmental Assessment Method (BREEAM).

### Solution

Icopal's Monarfloor Tranquilt system is capable of exceeding the requirements of the Part E & Building Bulletin 93 regulations in terms of impact and airborne sound insulation. It was installed under the floor screed on the ground and first floors including beneath the canteen and meeting areas of the central atrium to limit noise transmission.

In addition on phase one, Icopal's extensive sedum roof system incorporating the Total Torch and Rootbar capsheet system, was installed by Watershed Roofing on the roofs of the science and art and design technology classrooms.

On the other roof areas, Watershed Roofing installed Icopal's Sure-Weld TPO which is a fully recyclable advanced Thermoplastic Polyolefin single-ply membrane that is free of PVC and specially formulated for long-term exposure without the use of either polymeric or liquid plasticisers

The three types of building membrane from Icopal have helped the new £22 million school in Wakefield achieve its 'very good' BREEAM rating. The project had a tight programme which was hindered by bad weather but the Icopal products performed very well and the end result is excellent. The school was officially re-opened in July 2009 by Ed Balls MP, the Secretary of State for Children, Schools and Families.

<b>Project:</b> <i>Horbury School</i>
<b>Area:</b> <i>1500 m<sup>2</sup></i>
<b>Completion Date:</b> <i>Feb 2009</i>
<b>System:</b> <i>Sure-Weld TPO + Extensive Sedum Roof Monarfloor Tranquilt</i>
<b>Client:</b> <i>Wakefield Metropolitan District Council</i>
<b>Specifier:</b> <i>NPS Group</i>
<b>Main Contractor:</b> <i>Miller Construction Ltd, Normanton</i>
<b>Contractor:</b> <i>Watershed (Roofing) Ltd, Bradford</i>