

GREEN POWER

When the Burbank Water and Power Station (BWP) constructed an award-winning electric power plant on its Californian site in 2005, it replaced several existing substations and created an opportunity to transform an ageing industrial site into a regenerative green space. Los Angeles-based AHBE Landscape Architects was commissioned to work on a masterplan, which began with general campus beautification and concluded in 2012 with an innovative EcoCampus. According to Evan Mather, AHBE Principal and leader of the Burbank project, this was “an exploration of sustainability and adaptive reuse – using various technologies to treat stormwater, increase energy efficiency and create spaces for health and wellness”.



2

02 Stormwater management methods were harnessed to reclaim and filtrate run-off which used to be channelled away from the site. “As California deals with historic droughts, recharging our subterranean aquifers is critical,” says Mather. “The geology of Burbank is conducive to groundwater infiltration. The ‘phytoremediation channel’ is an existing utility tunnel centrally located in the Centennial Courtyard. The site is graded toward this element and stormwater piped to it. The channel is filled with soil media and plant material to clean the water of metals and toxins. The bottom of the tunnel is punctured to allow this water to recharge the aquifer.” There is also a ‘green street’ open to the public which showcases more strategies, including permeable pavers and filtration planters.



1

01 The social heart of the site, now known as the Centennial Courtyard, was formerly an electrical yard with two substations and an accumulation of defunct power distribution equipment. “Our initial design was to remove everything from the space and start with a clean slate,” says Evan Mather. “But calmer heads prevailed and we salvaged the structure as an artefact to celebrate the history of BWP.” Existing utility peds now function as small ‘conversation pods’ where employees socialise and the vast framework of the defunct substation acts as a super-trellis, supporting an array of vines. Before work began, employees were scattered throughout the 25-acre campus, explains Mather. “The courtyard is now a place where nature has been created – but more importantly, it is a place where community has been created. It is a place where employees meet and greet. That’s the heart of the courtyard’s success.”

03 A green roof was installed on top of the existing administration building. “This acts as a pre-filter for stormwater,” says Mather. “Overflow water is then channelled into the phytoremediation channel.” The insulating properties of this roof have reduced power consumption for cooling and heating the building and an adjacent employee car park has been shaded with photovoltaic canopies which generate sufficient power for the requirements of the EcoCampus, and a section of the Burbank community. “I learned more about sustainability on this project than in all my previous work,” says Mather. “We had to think outside the box. For example, we had a drinking water well on site, and because we were using recycled water we could not irrigate within 15 metres of the well. The BWP leadership pushed us to develop a solution and we wound up constructing concrete-lined planter boxes... to prevent the recycled water from infiltrating the well.”

Partner companies

- AHBE – ahbe.com • Fuscio Engineering – civil engineering • Sweeney & Associates – irrigation design • Tyler/Gonzalez – architects • Insight Structural Engineers • Kipust Engineering – electrical engineering • KPRS – general contractor



3

Words: Jodie Jones Photos: Heilphoto