Material Chemical Mitigation Through Zoning and Landscaping Towards Understanding Sustainability Within the Site

By Davis, Edward

A well designed building must include good mitigation measures to remediate against chemical spread from building materials beyond property lines. Zoning, natural landscaping and gradient can demonstrate sustainable practices with construction materials and drainage that can be made easily to explain. Beginning with the precipitation cycle when water strikes and drains off buildings entering into the environment going beyond the property as an overland flow to distant surface waters or by infiltrating and percolating below to aquifers and wells. Materials, i.e.: wood, have undergone improvements with treatments and finishes with more environmentally friendly chemicals towards making them safe to use within the environment. For example where Micronized Copper Azole, MCA has replaced the discontinued Chromated Copper Arsenate, CCA. Zoning regulations surrounding landscape and gradient are tools that can be used to mitigate chemical spread. Soil particles become the "free ride" where chemicals attach only to be carried away by surface runoff to points far and wide. Aesthetics lead towards minimizing chemical spread through plant phytoremediation (root systems that absorb chemicals) along with slight contour/gradient manipulation to contain. Chemical spread mitigation promotes sustainability by addressing a potential menace if left unchecked. In this article, these conditions and concerns begin to piece together an easy to follow discussion giving light towards understanding a complex topic that begins at the individual house or building regardless of size. This may also remind experienced Design Professionals of their stewardship roles within the environment.

Biography

Edward T. Davis is an Assistant Professor in the Department of Engineering Technology at Queensborough Community College where he teaches courses in Architecture, Construction, and Technology. He has received a BS in Architectural Technology and MS in Energy Management from New York Institute of Technology in Old Westbury, NY in addition to being a New York State Registered Architect. Resides in Farmingdale, NY and Front Royal, VA. Outside of pursuing educational interests he will be found collecting postcards related to US scenery and out running and training for his next 26.2 mile marathon event.