

BITS AND PIECES

UNITED KINGDOM DO-IT-YOURSELFER — I am a roofer from Norfolk in the UK. I have a passion for slate roofing and traditional roofing techniques. I have a small barn at home and wanted to do something unusual in slate on it. After searching for inspiration on the internet I stumbled across "Slate Roof Central" and in particular the "how to" section. I

had never come across staggered butt slating before. I decided to have a go and to also round the tails of the slates first. I also used a copy of the diamond design shown in one of your pictures. I just thought you may be interested to know you inspired somebody so far away! I have included a couple of pics. The purple slates are reclaimed Penrhyn, also called heather blue, and the green diamond is made from reclaimed West

Morlands slates. The lengths are 16", 18", and 20". The roof is batted in at 6.5" and the West Morlands are all 16"x 8". Jim Pratt, UK



RUSSIA IS DOUBLE WORLD ROOFING CHAMPION — Russians used the home advantage to win the gold medals in the Pitched Roof and Waterproofing competitions at the World Championship for Young Roofers at the International Federation of Roofing Trades Congress in St. Petersburg, Russia, in September, 2009. The Russian roofers also received the IFD Presidents Prize in the Waterproofing category. Hungary won the Metal Roof competition followed by Latvia and France, and received the president's prize in this category as well. Hungary was second in the Pitched Roof category. The German team also won two awards. Twenty-four teams from thirteen countries participated in the World Roofing Championships, including Belgium, Switzerland, Germany, France, Great Britain, Hungary, Croatia, Latvia, Netherlands, Poland, Russia, Slovenia, and Slovakia. The winners were: Pitched Roof: 1. Russia, 2. Hungary, 3. Switzerland; Waterproofing: 1. Russia, 2. Poland, 3. Germany; Metal Roofing: 1. Hungary, 2. Latvia, 3. France; Optional Exercise: IFD President's Prize — Pitched Roof: Germany, Waterproofing: Russia, Metal Roofing: Hungary. The next IFD Congress took place November 16th to 20th, 2010, in Belfast, Northern Ireland and was attended by six Board members of the Slate Roofing Contractors Association of North America, Inc., plus seven additional American guests. See slateroofers.org.

FEMA RECOMMENDS SLATE FOR FIRE PROTECTION — Persistent drought conditions may well drive significant wildfire risk for some states, and recent near-record dry spells are boosting fire risks. FEMA Acting Regional Administrator Dennis Hunsinger encourages residents living on wooded lots and

wildland/urban interface areas to stay informed on local conditions and take steps now — clearing brush and creating defensible perimeters around their homes. "Wildfires are unpredictable, and can start and spread with incredible speed, so it's important to go into this year's wildfire season with a solid plan," said Hunsinger. FEMA recommends that residents take specific actions long before an evacuation is necessary, including: **Construct roofs and exterior walls from non-combustible or fire resistant material such as slate.** For more information on protecting your family and your home from wildfires, go to www.fema.gov, or www.ready.gov.

FIREFIGHTERS FREE ABERDEEN MAN STRANDED ON ROOF

— *Handyman's foot trapped under ladder.* Firefighters had to rescue a man after he was left stranded on a roof in Aberdeen, Scotland. The man, who refused to be named, became trapped on a roof while trying to fix a loose slate. Emergency crews were called to the house on Thomson Street, in Aberdeen's Rosemount area. Fire crews had to free the man's foot which had become caught under the rung of a ladder. Homeowner Douglas Knowles, 74, said the amateur handyman was an old friend who was doing him a favour. He said his pal had promised to replace a loose slate, adding: "He was up on the roof and the ladder jammed."

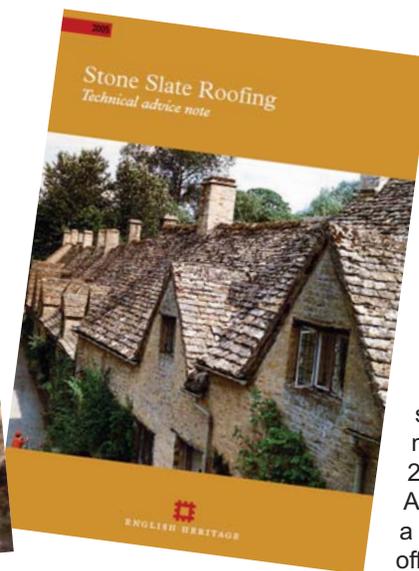
19-YEAR-OLD COLLEGE STUDENT DIES AFTER FALL OFF SLATE ROOF

— Providence, Rhode Island: A friend watched as Providence College sophomore John D. Langley slipped down a slick dormitory roof to his death on the pavement four stories below. Langley's father, John E. Langley Jr., of Walpole, Mass., has since been trying to piece together the circumstances surrounding the 19-year-old's demise through a wrongful-death suit filed in Providence County Superior Court. Langley's estate accuses the school of failing to take safety precautions to prevent the younger Langley, and other students, from climbing onto the slate roof at their peril. Around 3 a.m. Dec. 13, 2002, Langley and a friend climbed through a broken window onto the roof of St. Joseph's Hall to look at the city lights, the police said. Langley edged out onto the peak and quickly slid down the wet slate. A security officer responding to the friend's screams found Langley gravely injured on the paved driveway below. The sociology major underwent surgery for internal bleeding and a broken pelvis at Rhode Island Hospital, but was pronounced dead.

In the days immediately after, the college investigated Langley's fall. McGinn and Gail Dyer, the school's lawyers, interviewed witnesses, including students, parents, college officials and employees. The court learned that resident adviser Edmund St. John in November 2002 discovered students were getting into the attic, despite locks, and that St. John and locksmith Martin Toupin observed that the attic door had been tampered with about 12 hours before Langley's fall. St. John had, in fact, seen beer cans, cigarette butts, and graffiti in the attic that read "We got into the attic in '02" and "John was here." Langley lived on the fourth floor where the attic stairs are located. Court records show that he left campus hours earlier to drink at local bars and that he and a suitemate then headed to the rooftop of

St. Joseph's Hall to smoke. At 2:30 a.m., the two friends broke into the attic and walked on planks to reach the ladder leading to the cupola. They climbed through broken Plexiglas to access the roof. Langley slipped as he made his way across the icy slick slate roof and fell to the pavement below.

STONE SLATE ROOFING — 3.59 Mb download, 24 pages, English Heritage Publications, Authors: Terry Hughes, Chris Wood, Susan McDonald



February 2007 Alfred McAlpine's shares dropped by a fifth after it reported auditors had uncovered "a systematic misrepresentation of production volumes and sales for a number of years." Alfred McAlpine Slate was sold to Lagan, a Northern Ireland-based construction group, for £31 million in December 2007. Shortly afterwards, Alfred McAlpine agreed to a £572 million takeover offer from Carillion, the UK infrastructure and business services group.

http://www.helm.org.uk/upload/pdf/Stone_Slate.pdf?1261852308

PROTESTERS DEMAND SLATE ROOF, SPEND NIGHT ON CRANE — UK: Police have warned three people for trespass after they spent a night on a 100' crane protesting the design of a new water treatment plant. The three, including a 67-year-old man, began the protest at Glyntawe in the Brecon Beacons national park on Sunday, unveiling a giant banner containing the word "Disgrace." They claim the plant is "a monstrosity... like one of Hitler's bunkers." The three men — Jeremy Watts, Ashford Price and Steve Rose — were later arrested and given a caution for aggravated trespass. An action group has been formed in Glyntawe called "We Want Out." It is calling for the building, which campaigners say is 40 ft. high and 80 ft. long, to have a Welsh slate roof and stone cladding on its walls. Dwr Cymru Welsh Water plans to cover the building in multi-coloured tin sheets, which the group says is unacceptable for a national park. One of the scheme's opponents, 77-year-old retired farmer Elizabeth Tyler, said: "We all need clean fresh water but this building is a disgrace to the park."

MCALPINE MANAGERS JAILED FOR ACCOUNTS FRAUD — Times Newspapers (UK), September 18, 2009: Three former senior managers of Alfred McAlpine Slate, the Welsh business that quarried the slate used for the roof of Buckingham Palace, were jailed for their roles in an accounting fraud. Christopher Law, former managing director and the architect of the scam, was jailed for two and a half years. Geraint Roberts, former operations director, was jailed for 16 months and Paul Harvey, former sales director, was jailed for 10 months. All three pleaded guilty to fraudulent trading charges earlier this year in a prosecution brought by the Serious Fraud Office (SFO) and North Wales Police. The trio falsified sales figures and accounts for three years, convincing Alfred McAlpine that the subsidiary, which operates a quarry near Bangor, was performing strongly. According to the SFO, the managers employed forged invoices and delivery notes to boost sales figures and at one point submitted accounts claiming the unit had sold and delivered more slate than it had actually quarried. The fraud, which was worth at least £10 million, was discovered after Alfred McAlpine sent an internal audit team to examine the books in January 2007. In

SLATE ROOF REPAIR BILLS THROUGH THE ROOF — The Mercury (Australia), 11/2009: A repair bill of almost \$8,000.00 has hit taxpayers for damage caused by protesters climbing on the roof of State Parliament. House of Assembly Speaker Michael Polley has hit the roof over the bill for broken slate tiles on the historic 1830s building. Protestors have held two demonstrations this year that have involved activists scaling the roof of Parliament House and hanging banners protesting against logging in old-growth forests. After the bills for the repair of the roof arrived, Mr Polley issued a stern warning on Friday that future similar costs would not be tolerated. "People have to realise that this is an historic building, one of the oldest buildings of its kind still occupied in Australia, and it has to be repaired to ensure its heritage value is maintained." A Hobart slate roof repairer said installing the \$3 tiles was "a fine art" and when professionals worked on slate roofs they placed hook ladders across to distribute weight. He said to walk on slate any other way was "crazy."

SLATE COVERED ELEVATOR SHAFT — Slate tile was used to cover an elevator tower added to an existing school in San Francisco's Chinatown. The work (right) was done by Giampolini Group, San Francisco.



AIRPLANES SUCK ROOF SLATES — June, 2010: Local residents in east Belfast report that a plane flew very low over houses in Oval Court off Mersey St., sucking up more than 20 heavy slate roof tiles from two bungalows. This is the second such incident in just nine months in east Belfast. It raises serious questions about the safety of the current flight trajectories of aircraft flying into and out of the City Airport, and the current scale of operations at the airport.

Continued on next page...

MORE BITS AND PIECES

HOMEOWNER FINDS LEAK IN ROOF



*"Nestled in the heart of Ireland and forgotten for very many years, yes, the Neanderthals were busy here too. This is a tough job for me with my limited experience of slate roofing (zero, that is!). I would just like to thank you for your books, websites, videos and most of all, for your honesty (oh, how rare this is in my part of the world). I have bought (and read) a copy of your excellent book **The Slate Roof Bible**. Although I may never slate a roof, it still ranks as one of the best purchases I have ever made."* James from Ireland

NAKED WOMAN PLUNGES THROUGH SLATE ROOF — Aberdeen, Scotland, July, 2010: A naked couple who climbed to the top of a building caused horror after one of them plunged through the roof. Emergency crews rushed to the scene after reports that a woman fell through the roof of the city centre building in Aberdeen. The couple was "rolling around on the roof," totally naked, moments before the woman fell through the slates of the four-story building. The woman, believed to be in her 30s, was led out by paramedics with mud and cuts on her face, and taken to Aberdeen Royal Infirmary in an ambulance. A man, thought to be in his 20s, was led out by police thirty minutes later and driven away in the back of a police car. Both were fully dressed when they were taken from the scene.

TOP COPPER PROJECTS AWARDED FOR ARCHITECTURAL BRILLIANCE — The North American Copper in Architecture awards program showcases the top U.S. and Canadian projects. The Copper Development Association (CDA), in collaboration with the Canadian Copper & Brass Development Association (CCBDA), had the difficult job of narrowing down the top projects that showcase copper throughout North America. The projects were judged by a panel of architecture and copper industry experts, and the judging was based on overall building design, integration of copper systems, craft of copper installation and excellence in innovation or historic restoration. The projects were divided into two categories: Restoration/Renovation and New Con-

struction. The 2010 award recipients are:

Restoration/Renovation:

Milwaukee City Hall, Milwaukee, WI: Sheet Metal Contractor: Heather & Little Ltd., Markham, ON;

Old City Hall, Toronto, ON: Sheet Metal Contractor: Heather & Little Ltd., Markham, ON;

Historic Coweta County Courthouse, Newnan, GA: Sheet Metal Contractor: Steinrock Roofing & Sheet Metal, Inc., Louisville, KY;

Cathedral of St. John the Baptist, Copper Tower, Charleston, SC: Sheet Metal Contractor: Copper Exclusive, Midvale, UT.

New Construction:

Mark Olsen Project, Holladay, UT: Sheet Metal Contractor: Copper Exclusive, Midvale, UT;

Marcus Nanotechnology Research Center Building, Atlanta, GA: Sheet Metal Contractor: Luvata Buffalo, Inc., Buffalo, NY;

Benning Neighborhood Library, Washington, DC: Sheet Metal Contractor: CHU Contracting, Inc., Chantilly, VA;

Rose Theatre, Brampton, ON: Sheet Metal Contractor: Semple Gooder Roofing Corp., Toronto, ON;

Private Residence, Edwards, CO: Sheet Metal Contractor: Plath Construction, Eagle, CO;

4143 Buena Vista Townhomes, Dallas, TX: Sheet Metal Contractor: Beech Street Metal, Dallas, TX.

FIRE TESTING SLATE — The National Roofing Contractors Association (NRCA) and the National Slate Association (NSA) recently conducted fire testing of slate roof systems. In the International Building Code, 2009 Edition, newly installed slate roof systems on combustible roof decks need to be tested and have a listing of their fire classifications. NRCA retained Underwriters Laboratories (UL) Inc. to conduct fire testing of a representative slate roof system. NSA provided the slate and assembled the test specimens at UL's headquarters in Northbrook, Ill. The slate roof assembly tested consisted of standard thickness slate installed in random widths over a No. 30 felt underlayment (ASTM D226, Type II). The test roof deck consisted of 15/32" APA-rated plywood.

Fire testing was conducted according to UL 790, "Standard Test Methods for Fire Tests of Roof Coverings." The results of the test were that the slate roof assembly achieved a "Class A" designation. A "Class A" rating for the slate roof system should not be surprising because slate doesn't burn. However, previous fire testing of some slate roof systems resulted in Class B or lower designations because of the underlayment used. A UL-certified, ASTM No. 30 underlayment was used in NRCA's testing. A commodity-grade (non-spec.) underlayment was used in the other testing. The NRCA therefore concluded that the type of underlayment is important in determining a slate roof assembly's fire rating. A copy of the UL report from this testing is available to NRCA members from Mark S. Graham (NRCA's associate executive director of technical services) upon written request. NRCA members can e-mail their requests to mgraham@nrca.net; fax them to Mark at (847) 544-0813; or mail them to Mark at NRCA, 10255 W. Higgins Road, Suite 600, Rosemont, IL 60018.

WOMAN KNOCKED UNCONSCIOUS BY FALLING ROOF SLATE

— *Edinburgh, Scotland*: A woman was knocked unconscious by a falling roof slate as she walked to work. The 30-year-old was taken to the emergency room following the accident which took place as roof repairs were being carried out. She is understood to have escaped serious injury. Work was stopped shortly after the incident but was allowed to restart two days later after a safety investigation. The woman was struck on the head near the Edinburgh Souvenir Centre. The council had contracted the roofing and masonry repair firm, James Breck, to repair the roof of the block which also includes several apartments. Mark Singh, 19, a shop assistant at a nearby store, witnessed the accident. He said: "The woman was unconscious until the ambulance came. It was terrible." Standard procedure dictated that the work site be shut down to allow for an investigation. Work at the site has now resumed and the council was satisfied that there were no problems with the scaffolding or management of the site, and that this appeared to be a one time incident. A Health and Safety Executive spokesman said: "We will be making further inquiries."

RADIUS COPPER GUTTER, COPPERWORX, INC. —

National Infantry Museum, Columbus, Georgia: Peter Laughlin of Copperworx, Inc. installed two levels of built-in radius gutter on the National Infantry Museum.

He started with 3'x10' sheets of 16 ounce copper. Laughlin commented that, "I thought it should have been 20 ounce, but the architect is always right. I feel with the amount of expansion joints (eight) and the joint spacing (approximately 24 feet), it will be OK. He then cut them to the width he needed, with a bottom radius of 40".

Then he took the 36" x 40" blanks to his propane fired pretinning setup (a steel trough 5 feet long, 2" deep & 3" wide). He pretinned the two 40" sides of the blanks 2" deep, using 50:50 tin/lead solder, then took them to the brake & bent the gutter profile into the blanks.

Next, in the shop, he built a replica of the radius out of 3/4" plywood and 2x4s, then dropped four of the gutter sections into the radius jig and riveted them together with #42 copper/brass pop rivets on 2" centers. The rivets are 1/8" wide with a grip range from .063 - .125. Laughlin reported, "I like to use these when I need to solder over them because the rivet doesn't stick up so high and is much easier to solder over."

After that, he soldered the seam with an acetylene fired soldering iron. He would make one pass with real high heat and a ton of solder to get it to sweat together, then make a lower heat pass to put stitching over the seam, using about three or four pounds of solder per joint. All the other work was done on site.

Next, he put a gutter liner consisting of .045 EPDM in the precast concrete trough where the gutter sits. Laughlin stated, "I don't think rosin paper is necessary because the gutter slides freely on the rubber liner." After that, he riveted and soldered endcaps to the sections to create expansion joints. He figured that each section will move a maximum of 1/2" at a 100 degree temperature differential.

After all gutter was installed in the precast trough, he

soldered in 3" custom copper drops to the bottom of the gutter, tying into the piping that runs inside the granite columns. He made the drops 3/8" smaller than the drain pipe to allow for expansion & contraction.

Next he installed all the expansion joint caps and then the fun started — he had to cut a reglet in the precast concrete around the entire rotunda. By the time he was done, he looked like a baker that fell in the flour barrel! He then made the copper counter flashing in straight 10' pieces. Because the rotunda is round, he had to use a hand operated stretcher to curve the counter flashing to the correct radius.

Lastly, he used Bronze Dow Corning 795 sealant to seal the reglet after installing the counter flashings. Then he took the manlift up 80' to get final photos. All and all, this was quite an undertaking. Peter takes pride knowing that he had a part in a project that will be a timeless monument to those who have sacrificed their time and lives for our freedoms.

"If I was to do it again, I think I would get one of the American beauty soldering irons for the field soldering, it was pretty windy at the site and it took a lot of time to make sure the joints got hot and sweated with the gas-fired iron. Aside from that everything went very smoothly. One thing that was a big help to me was a pneumatic rivet gun. This allowed me to hold the back of the gutter with one hand and push the seam together with the nose of the pneumatic riveter, than just pull the trigger to rivet it together. If you have to do a lot of riveting, I would highly recommend getting one. 🛠️"

Peter Laughlin
Owner/Operator
CopperWorx Inc.
copperworx.org

