



WORKING WITH HISTORIC BUILDINGS

- Approach and Overview;
- Conservation and/or Restoration (but not just new build!),
- Integrating the New with the Old;
- Sustainability.

Trevor J. Francis, Principal, Building Surveying Wales

Trevor J. Francis, MSc. Facilities Management, MCIQB, MRICS, MCABE, P.G. Diploma in Architectural Conservation. CIOB Certified Conservation Specialist (Building Surveying Professional). RICS Regulated Valuer. Principal: Trevor J. Francis. Chartered Building Surveyor and Historic Building Consultants. (www.buildingsurveyingwales.com)

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Trevor Francis, Programme Team Leader – Building Surveying, School of Architecture, Built and Natural Environment(s). University of Wales Trinity Saint David.

CONSERVATION OF OUR BUILT HERITAGE.

WHY ?

- DEFINING THE HISTORY AND CULTURE OF CIVILISED NATIONS.
- A VEHICLE FROM THE PAST THAT CAN HELP ADVISE THE FUTURE.
- NEW USES FOR OLD BUILDINGS,
- RETAINING CAPITAL ASSET VALUE WHILST MITIGATING OBSOLESCENCE (IN ITS VARIOUS GUISES).
- SUSTAINABLE REUSE AND REGENERATION OF THE BUILDING, THE BROADER SITE OR CITY.
- EMBODIED CARBON.
- TRADITIONAL SKILLS AND MATERIALS THAT WE WOULD STRUGGLE TO REPLICATE TODAY.



CONSERVATION AND/OR RESTORATION

(BUT NOT JUST NEW BUILD ADDITIONS!),.

IT MUST BE MORE THAN JUST LISTING. WE HAVE TO MOTIVATE VIA EDUCATION, TRAINING AND PEOPLE THAT REALLY WANT IT TO HAPPEN, OTHERWISE WE WILL LOSE THE UNIQUE ASSETS THAT WE POSSESS.

A PERSONAL PLEA, LET'S DO MORE THAN THE SIMPLE GLASS BOX EXTENSION!

BACKGROUND:

17TH AND 18TH CENTURY GRAND TOURS. VIOLET LE DUC, JOHN RUSKIN, WILLIAM MORRIS, THE SPAB, THE NATIONAL TRUST. THE BATTLE OF THE STYLES. ARTS AND CRAFTS. BETJEMAN. THE POST 1970'S BACKLASH AGAINST BRUTALISM AND MODERNISM. IRONIC THAT WE NOW LIST THEM AND SOME ARE CLEARLY JUSTIFIED.

ICOMOS AND ITS CHARTERS (ATHENS, VENICE, BURRA ETC). UNESCO.

BS 7913:

SIGNIFICANCE, JUSTIFICATION, HERITAGE IMPACT STATEMENTS, CONSERVATION PLANS.

If only the conservation of the built heritage was this simple!

CARE AND REPAIR CYMRU'S HOUSE.



CONSERVATION, REPAIR AND MAINTENANCE.

ICOMOS'S BURRA CHARTER IN ARTICLE 12: CONSERVATION PROCESSES STATES:

'CONSERVATION MAY, ACCORDING TO CIRCUMSTANCE, INCLUDE THE PROCESSES OF: RETENTION OR REINTRODUCTION OF A USE; RETENTION OF ASSOCIATIONS AND MEANINGS; MAINTENANCE, PRESERVATION, RESTORATION, RECONSTRUCTION, ADAPTATION AND INTERPRETATION; AND WILL COMMONLY INCLUDE A COMBINATION OF MORE THAN ONE OF THESE'.

REF: THE BURRA CHARTER: [HTTP://WWW.KERRYCOCO.IE/BASKET/BURRA.HTM](http://www.kerrycoco.ie/basket/burra.htm)

BS 7913: GUIDE TO THE CONSERVATION OF HISTORIC BUILDINGS (2014). ADDRESSES THE VALUES CONTRIBUTING TO SIGNIFICANCE:

HERITAGE HAS CULTURAL, SOCIAL, ECONOMIC AND ENVIRONMENTAL VALUES. THE ATTRIBUTES THAT COMBINE TO DEFINE THE SIGNIFICANCE OF A HISTORIC BUILDING CAN RELATE TO ITS PHYSICAL PROPERTIES OR TO ITS CONTEXT.

THERE ARE MANY DIFFERENT WAYS IN WHICH HERITAGE VALUES CAN BE ASSESSED. SOME HERITAGE BODIES OF THE UNITED KINGDOM HAVE SUGGESTED THAT THESE FALL INTO THE FOLLOWING GROUPS:

- a) AESTHETIC VALUE, DERIVED FROM WAYS IN WHICH PEOPLE DRAW SENSORY AND INTELLECTUAL STIMULATION FROM A PLACE;
- b) COMMUNAL VALUE, DERIVED FROM THE MEANINGS OF A PLACE FOR PEOPLE WHO
- c) EVIDENTIAL VALUE, DERIVED FROM THE POTENTIAL OF A PLACE TO YIELD EVIDENCE ABOUT THE PAST (E.G. ARCHAEOLOGY); AND
- d) HISTORICAL VALUE, DERIVED FROM THE ABILITY OF A PLACE TO DEMONSTRATE OR ILLUSTRATE AN ASPECT OF THE PAST OR ASSOCIATION WITH A HISTORIC FIGURE OR EVENT.

AN ALTERNATIVE APPROACH MIGHT BE TO THINK OF A HISTORIC BUILDING'S SIGNIFICANCE AS: COMPRISING INDIVIDUAL HERITAGE VALUES FROM A LIST THAT MIGHT INCLUDE:

- 1) ARCHITECTURAL, TECHNOLOGICAL OR BUILT FABRIC VALUE; 2) TOWNSCAPE CHARACTERISTICS; 3) SPATIAL CHARACTERISTICS; 4) ARCHAEOLOGICAL VALUE;
- 5) ARTISTIC VALUE; 6) ECONOMIC VALUE; 7) EDUCATIONAL VALUE; 8) RECREATIONAL VALUE; 9) SOCIAL OR COMMUNAL VALUE; 10) CULTURAL VALUE; 11) RELIGIOUS VALUE; 12) SPIRITUAL VALUE; 13) ECOLOGICAL VALUE; 14) ENVIRONMENTAL VALUE; 15) COMMEMORATIVE VALUE; 16) INSPIRATIONAL; 17) IDENTITY OR BELONGING; 18) NATIONAL PRIDE; 19) SYMBOLIC OR ICONIC VALUE; 20) ASSOCIATIONAL VALUE; 21) PANORAMIC VALUE; 22) SCENIC; 23) AESTHETIC VALUE; 24) MATERIAL VALUE; AND 25) TECHNOLOGICAL VALUE.

CONSERVATION, IS IT JUST A TERM FOR 'CONSIDERED' CARE, REPAIR AND MAINTENANCE? THE INDUSTRY'S CINDERELLA.

NICE CAR!

BUT IT NEEDS LOTS OF LOVING CARE AND ATTENTION, PLUS A FEW BOB!

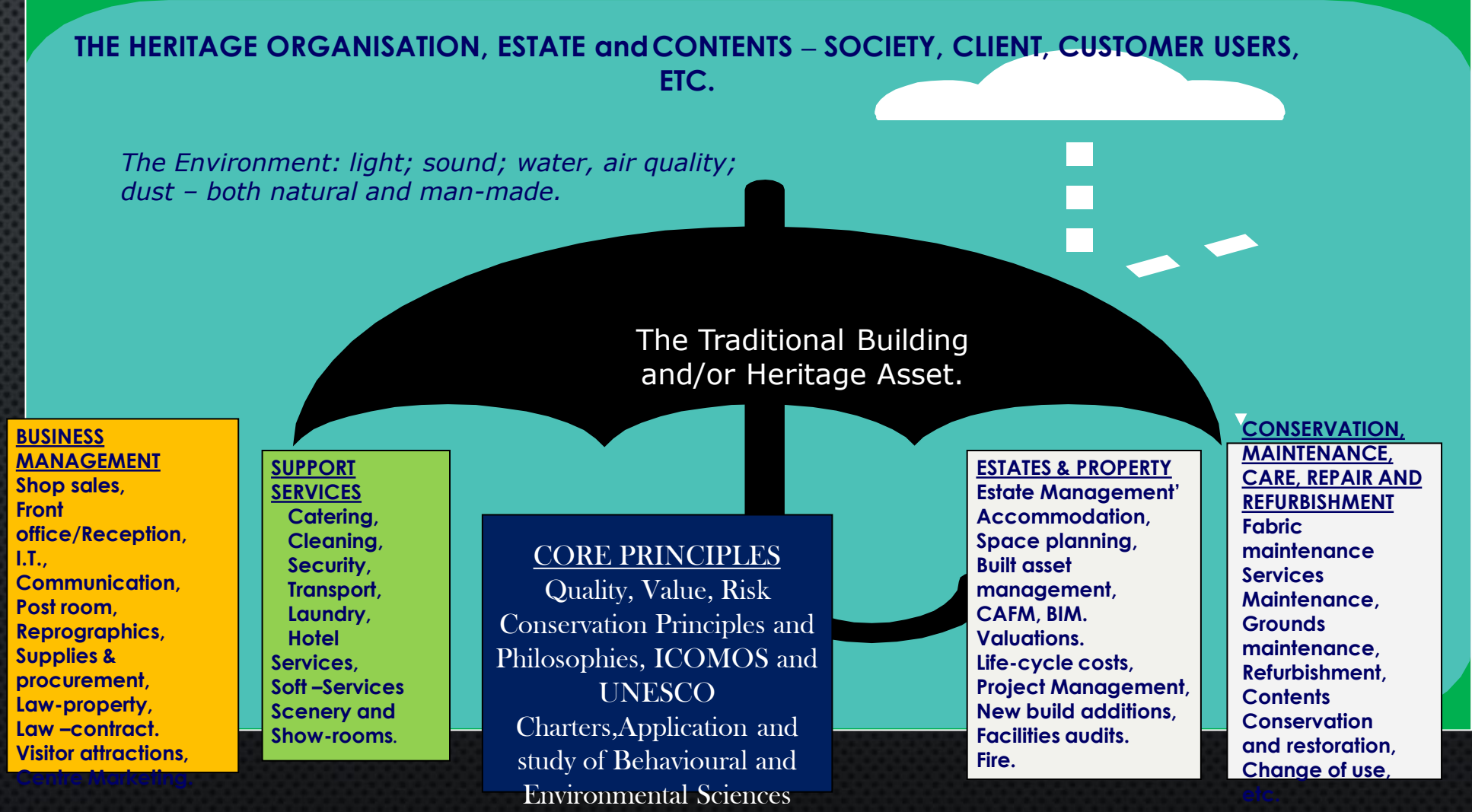


MY CAR!

JUST MIGHT BE SOMETHING IN THIS CARE, REPAIR, MAINTAIN AND SURVEY GAME, AFTER ALL.



Heritage ‘Property and Facilities Management’ - a continuous, pro-active, holistical approach, to assets and their associated support services - for the benefit of a core business, client / customer and / or building user (and in the case of a heritage facility - the building, its contents and society at large (this includes representing the legacy for the benefit of future generations).’ For some cultural sites the contents far exceed the significance of the structure.



The Property and Facilities Umbrella



IT'S CRAFT BASED BUT ALSO DRIVEN BY A COMPLEX PLETHORA OF ENVIRONMENTAL LEGISLATION

SECONDARY REGULATIONS INCLUDE:

- BUILDING REGULATIONS.
- CONSERVATION OF HABITATS AND SPECIES REGULATIONS.
- CONTAMINATED LAND (ENGLAND) REGULATIONS.
- CONTROL OF ASBESTOS REGULATIONS.
- CONTROL OF NOISE (CODES OF PRACTICE FOR CONSTRUCTION AND OPEN SITES) (ENGLAND) ORDER.
- CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS.
- CONTROLLED WASTE REGULATIONS ENERGY EFFICIENCY (REFRIGERATORS AND FREEZERS) REGULATIONS.
- ENERGY PERFORMANCE OF BUILDINGS (CERTIFICATES AND INSPECTIONS) (ENGLAND AND WALES) REGULATIONS.
- ENERGY RELATED PRODUCTS REGULATIONS.
- ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS.
- ENVIRONMENTAL PROTECTION (CONTROLS ON OZONE-DEPLETING SUBSTANCES) REGULATIONS.
- LEAD AT WORK.



- NOTIFICATION OF COOLING TOWERS AND EVAPORATIVE CONDENSERS REGULATIONS.
- PACKAGING (ESSENTIAL REQUIREMENTS) REGULATIONS.
- SITE WASTE MANAGEMENT PLAN REGULATIONS.
- TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) (ENGLAND AND WALES) REGULATIONS.
- WASTE (ENGLAND AND WALES) REGULATIONS.
- WASTE MANAGEMENT LICENSING REGULATIONS.
- WASTE MANAGEMENT (ENGLAND AND WALES) REGULATIONS.
- VOLATILE ORGANIC COMPOUNDS IN PAINTS, VARNISHES AND VEHICLE REFINISHING PRODUCTS REGULATIONS.
- SEPTIC TANKS AND OTHER OFF-GRID SEWAGE SYSTEMS.

WHAT DOES THIS MEAN FOR BUILDING CONSERVATION?

NEGATIVES: PLANNING, TIME, RESTRICTIONS AND FINANCE.

POSITIVES: PROTECTING THE NATURAL ENVIRONMENT. OFTEN 18 – 24 MONTHS LATER, WE CAN START BUILDING.
IT HAS TO BE A MULTI-DISCIPLINARY APPROACH.



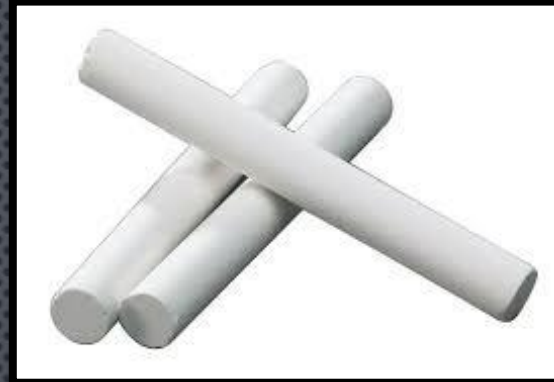
- BATS,
- BIRDS,
- SQUIRRELS, BEES, WASPS, HORNETS,
- INVERTEBRATES,
- TREES,
- INVASIVE SPECIES,
- LICHENS (BOTH IN AND EXTERNAL TO THE BUILDING),

- DORMICE,
- VOLES,
- SQUIRRELS,
- BARN OWLS,
- BADGERS,
- RODENTS
- WOOD ROTTING FUNGI AND INSECT INFESTATIONS, INCLUDING MOTHS.



CONTEXT:

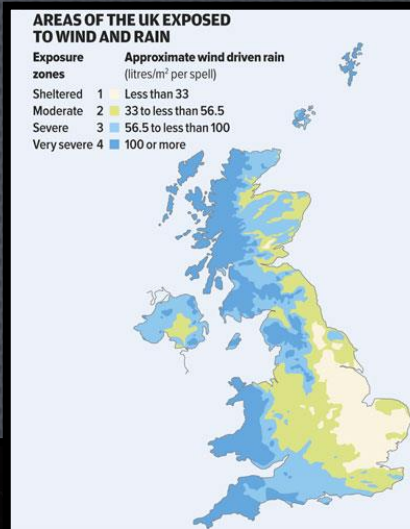
- 2013-14 WAS THE WETTEST WINTER IN UK, THIS SINCE FORMAL RECORD KEEPING FIRST COMMENCED, IN 1762.
- SURPASSED IN 2015-16 IN WALES AND SCOTLAND WHEN THE RECORD WAS AGAIN BEATEN. 2019/20 IS NOT MUCH BETTER AND WE STILL HAVE TIME TO GO.
- DECEMBER 2015 WAS THE WETTEST MONTH EVER RECORDED UNTIL FEBRUARY 2020!.
- LAST TEN YEARS HAVE SEEN SOME OF THE WARMEST AND MOST HUMID WINTERS OF ALL TIME AND FOLLOWED A NUMBER OF EXCEPTIONALLY COLD WINTERS. THE SUMMERS WERE NOT MUCH DIFFERENT!
- 2017-18 HAS NOT BEEN VERY BRIGHT EITHER.
- CLIMATE CHANGE IS A REALITY! WHAT ARE THE CHALLENGES FOR OUR SOLID WALLED BUILDING STOCK? THIS INCLUDES ALL THOSE CAVITIES IN 1930 - 1990's BUILDINGS, THAT WERE ERRONEOUSLY FILLED, OFTEN WITH PUBLIC FUNDS, ENDORSEMENTS AND A NEED TO MEET LEGISLATIVE STANDARDS. IRONICALLY, THE INSTALLERS THAT HAVE SURVIVED ARE NOW CHARGING MORE TO REMOVE THAN THEY WERE PAID TO FIT. I HOPE THEY TAKE MORE CARE.
- BREATHABILITY OR VAPOUR OPEN?
- CHALK ANYONE?



Lime is a fabulous material but we need to say what lime, what mix, how is it prepared, gauged, applied, tooled and carbonated.



IT'S WET IN THE WEST.



SO WHAT IS THE ANSWER? CAN WE LEARN FROM THE PAST OR PRESENT?

MANAGING THE HERITAGE ASSET AND THE MAKING OF INTERVENTIONS HAS TO BE INFORMED.



WESSEX BRIEFING 2020

Sources of Information::

- Learning from the past. Supported by sound knowledge of philosophies and principles; as well as construction technology, building design, whole life- performance, building pathology and ongoing research.
- Learning and partaking of advice from everyone; before undertaking any interventions, other than minor maintenance repairs and servicing, and then with care.
- Architectural drawings; Old books; Libraries, County Record Offices, Archaeological Trusts; Antiquarian Societies; List Descriptions; Historic England; Historic Scotland; Cadw; RCAHM (W); ICOMOS; SPAB; etc.
- Old Pattern Books such as: Batty Langley's reprints, Nicholson, The New Practical Builder (1832);
- Relatively new sources: English Heritage's Practical Building Construction Series etc.
- Donhead and its demise. Google is allowing us to access documents that years ago were locked away in global archives and inaccessible.



BEFORE WE REPAIR, WE NEED TO KNOW THE HISTORY, SIGNIFICANCE AND HOW THE LAYERED LATE 13TH CENTURY WALL WAS BUILT AND ADDED TO IN THIS GRADE I LISTED STRUCTURE.



A 3D laser scanned model is generating some interesting findings but not the diagnosis.

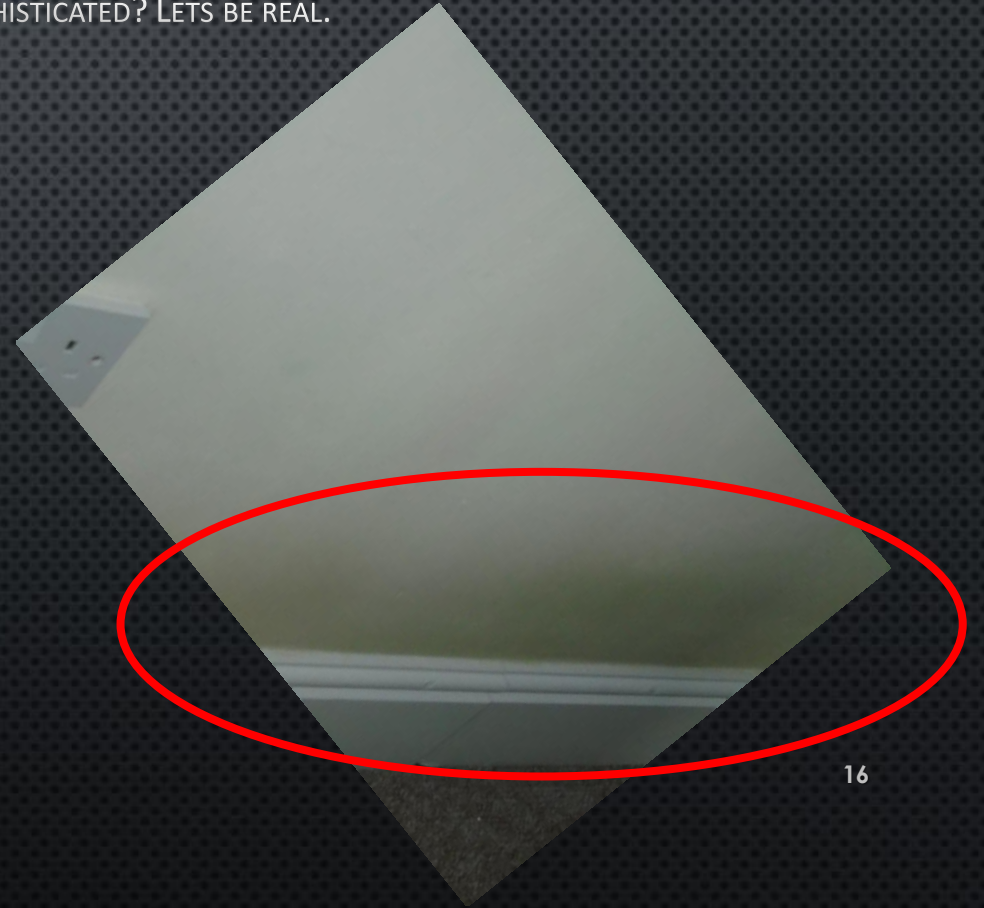
ELEMENTAL DAMPNESS - PHASE ONE INVESTIGATION, PRE-1900, INDUSTRIAL WORKERS HOUSING.



LET' HEAR IT FOR THE DAMP!



THE TIDE COMES IN, BUT ITS AT LEAST 100 FEET ABOVE SEA LEVEL AND ALREADY HAVING HAD AN INJECTED DPC, CEMENT RENDER AND WATERPROOFING IT MUST BE A TSUNAMI! WHAT INSTRUMENT OR TECHNIQUE DO WE USE TO TEST: RESISTANCE METER; CAPACITANCE, CARBIDE (SPEEDY); GRAVIMETRIC, THERMAL IMAGING CAMERA, HYGROMETER OR MORE SOPHISTICATED? LETS BE REAL.



ELEMENTAL DAMPNESS - PHASE ONE INVESTIGATION, PRE-1900, INDUSTRIAL WORKERS HOUSING.



NO SUCH THING AS RISING DAMP. WELL SOMETHING IS HAPPENING.



PAINT PEELING AS IF THE TIDE HAS COME IN, YET WE ARE 100 METRES ABOVE SEA LEVEL.



IMAGES OF VENICE ABOVE MIGHT BE EXTREME, BUT THE OTHERS OF SOUTH WALES ARE EVIDENCE THAT RISING DAMP IS NOT THE MYTH THAT IS BEING ARGUED.



Sand-stone column,
St Mary's, Clydach, Swansea.

MANY, I SUGGEST WILL BE IN THIS STATE WITHIN THE NEXT
10-15 YEARS AND RISK BEING IRREDEEMABLE



How green is my valley?
So green that the building is growing
inside and out.
Behind the panelling and over the
recently fitted carpets. The parapet was
leaning and could fall at any time.



WESSEX BRIEFING 2020

- ROT – WET OR DRY. TIME TO DISPEL THE NONSENSE PERPETUATED WITHIN THE BUILDING AND REMEDIAL INDUSTRIES. LETS TALK TO THE MYCOLOGISTS. FIBROPORIA VAILLANTII 21% W.M.C. EQUIVALENT ACCORDING TO CZECH AND GERMAN RESEARCH PAPERS.
- AIR QUALITY, MOULD AND CONDENSATION;
- FAULTY DRAINS AND WATER MAINS.
- DRAUGHT STRIPPING; GASKETS; HEATING SYSTEMS; MHVR; POSITIVE INPUT VENTILATION; DEHUMIDIFIERS;
- SHOWERS, FANS, COLD BRIDGES, AIR MOVEMENT AND ORIENTATION.
- VAPOUR PRESSURE, NOT JUST RH%. TIME TO START LOOKING AT THAT PSYCHROMETRIC CHART AGAIN.
- AIRTIGHT BUILDINGS?
- WHAT THERMAL INSULATION CAN AND SHOULD WE SPECIFY?
- THE BREATHABILITY OF BUILDING PRODUCTS.
- *'If a MANUFACTURER OR SUPPLIER MAKES CLAIMS REGARDING THE 'BREATHABILITY' OF A PARTICULAR PRODUCT IT IS REASONABLE TO REQUEST THAT THEY PROVIDE DETAILS TO VALIDATE THIS PERFORMANCE. AS A MINIMUM THIS COULD BE REQUESTED IN THE FORM OF AN MNS/G MEASURE OF VAPOUR RESISTANCE. (THIS VALUE IS RELATIVELY EASILY OBTAINED EITHER VIA MATERIALS TESTING OR CAN BE CONVERTED FROM OTHER MEASURES OF VAPOUR PERMEABILITY. ITS SUITABILITY CAN BE ASSESSED USING THE SCALE PROVIDED IN THE PRECEDING PARAGRAPH). IN THE CASE OF MULTI-LAYERED MATERIALS THE VAPOUR RESISTANCE OF ALL LAYERS TOGETHER INCLUDING ADHESIVES MUST BE PROVIDED TO GIVE AN ACCURATE INDICATION OF ITS 'BREATHABILITY'. THE ABILITY, OR INABILITY, OF THE SELLER TO PROVIDE THIS INFORMATION MAY WELL INDICATE THE SERIOUSNESS OF THEIR CLAIMS REGARDING BREATHABILITY. IN THE ABSENCE OF THIS BASIC INFORMATION YOU MAY WISH TO CONSIDER WHETHER THE USE OF THE PARTICULAR MATERIAL OR SYSTEM IN QUESTION IS PRUDENT IN AN OLDER BUILDING.'* [HTTPS://WWW.SPAB.ORG.UK/ADVICE/BREATHABILITY-AND-OLD-BUILDINGS.](https://www.spab.org.uk/advice/breathability-and-old-buildings)
- RICS, PCA, SPAB, BRE AND UCL ARE NOW STARTING TO GENERATE SOME POTENTIALLY SOLID ADVICE FOR PRACTITIONERS THAT SHOULD AID DAMPNES INVESTIGATIONS AND DISPEL SOME OF MISLEADING ADVICE PROMULGATED OVER THE PAST FORTY YEARS.

A SIMPLE GRADE II CHAPEL. THERE ARE AN ESTIMATED 8000 SIMILAR IN WALES (MOST NOT STATUTORILY PROTECTED) WITH MANY MORE SPREAD ACROSS THE BREADTH OF THE UK. BASTIONS OF NON-CONFORMITY, BUT SOCIAL STABILITY AND COMMUNITY VALUES; WHAT WILL BECOME OF THEM? AND HOW QUICKLY WILL THEY DISAPPEAR OR NEED VIABLE, NEW, LONG TERM USES?



BRYN SION CHAPEL, TRECYNON, ABERDARE



The central roundel and built-up dropper details are loose and need to be carefully taken down, the centre made safe and dropper repaired and reinstated.



Loose plaster over the preaching area where the Set Fawr previously existed

LIME WORKS..... I AGREE FULLY! BUT,,,,,'ER,,,, HELP! WHAT IS ALL THE USE OF THE TERM 'BREATHABILITY' ABOUT. CAN WE NOT CALL IT VAPOUR DIFFUSION OR VAPOUR PERMEABILITY AND STOP PRETENDING IT IS A PANACEA FOR EVERYTHING?

THE WHOLE DEBATE AND 'LIME CYCLE' APPEARS TO HAVE GONE FULL CIRCLE OVER THE PAST THIRTY FIVE YEARS, AS WE ATTEMPT TO REDISCOVER WHAT OUR GRAND-PARENTS ALREADY NEW. THIS COULD BE REALLY EXPENSIVE ON PI CLAIMS IF WE CONTINUE TO GET IT WRONG.

LIME-WASH – HOW MANY COATS AND HOW FREQUENTLY? HOW MANY PEOPLE HAVE LOOKED AT OLD LIME-WASH APPLIED ON VERNACULAR BUILDINGS. IT HAS OFTEN BUILT UP TO BE APPROXIMATELY 20 MM THICK ON OLD COTTAGES, BARNs AND TY BACH'S. IT MIGHT HAVE BEEN DIFFERENT WHEN APPLIED BY PROFESSIONAL DECORATORS (PAINTERS, PLASTERERS AND GLAZIERS) ON POLITE UPPER-CLASS STUCCOED RENDER BUT NOT ON A COW SHED.

- LIME YES, BUT WHAT LIME?
- WHAT MIX PROPORTIONS? VOLUME OR WEIGHT BATCHED?
- WHO IS COMPETENT TO APPLY IT AND USING WHAT TOOLS?
- HOW DO WE FINISH IT IN DIFFERING REGIONS. (CHRIS WOOD AND COLIN BURNS HAVE PRODUCED EXCELLENT ADVICE OVER THE DECADES IN THEIR 'MAKING THE POINT' VIDEO AND GREEN CHURCH TOWERS RESEARCH).
- WHEN AND WHERE?
- HOW DO WE LOOK AFTER IT AT THE SITE; DOES IT FIT WITH THE MAIN CONTRACTORS PROGRAMME; THE QS'S COST PLAN? WHAT ARE THE WORKING HOURS AND HEALTH AND SAFETY ASPECTS, ARISING? WILL WE HAVE A CLERK OF WORKS ON THE JOB; OR IS TQM THE APPROACH?
- HYDRATED; LIME PUTTY, POZZOLANS; NHL 2, 3.5, 5 OR FEEBLY, MODERATELY OR EMINENTLY; BUXTON; LIME-LITE; ST ASTIER; SINGLETON; ETC.
- HOT MIX ANYONE? MIGHT BE SOMETHING REALLY GOOD IN THIS, BUT WHAT ABOUT THE BLOW HOLES IN THE PLASTER?
- HOW DO WE MIX AND WHAT IS THE RIGHT WATER TO BINDER RATIO.
- OH DEAR, THIS IS COMPLICATED, MIGHT AS WELL GO BACK TO USING CEMENT AND FEB????? THAT'S WHAT IT APPEARS AN AWFUL LOT HAVE BEEN DOING, ONCE MORTAR SAMPLES AND IT IS LABORATORY TESTED, AFTER HAVING FAILED, VERIFY.

OR PERHAPS NOT.

BUT WE NEED TO BE ABLE TO SPECIFY AND CERTIFY KNOWING WHAT IS BEING USED WILL WORK FOR DECADES AND NOT FAIL BEFORE THE DEFECT PERIOD EXPIRES. THE CRAFT TRADES, PROFESSIONALS, CLIENTS AS WELL AS LEGISLATORS HAVE TO COME ON BOARD TO ENSURE WE ARE ALL WORKING TOGETHER.



CONCLUSIONS

- GREAT NATIONS, WITH GREAT BUILDINGS AND GREAT CRAFTSMANSHIP. LETS BE PROUD OF IT AND DO MORE WITH IT.
- A CLEAR ARGUMENT CAN BE MADE FOR THE EFFECTIVE CARE OF TRADITIONAL BUILDINGS. IT IS ESSENTIAL TO MAINTAINING COMMUNITIES WHILST UNDERPINNING URBAN REGENERATION ACTIVITIES. PLACES, SPACES AND THE INFRA-STRUCTURE ENSHRINED, DEFINE THE CULTURE OF A MODERN NATION.
- EFFECTIVE SURVEY REPAIR AND MAINTENANCE IS SURELY THE MOST SUSTAINABLE THING WE CAN POSSIBLY UNDERTAKE. PERHAPS, WE SHOULD CONSIDER SUPPLANTING THE TERMS F.M. OR EVEN 'MAINTENANCE' WITH THAT OF 'SUSTAINABILITY' – IN THE HOPE THE TOPIC WOULD BE TAKEN MORE SERIOUSLY.
- THE CHALLENGE REMAINS – ARE WE READY TO LEAD IN ADDRESSING THE NEEDS OF BOTH OUR TRADITIONAL AND MODERN BUILDING STOCK.
- FOR CLIENTS, EMPLOYERS THE EMPLOYED AND UNEMPLOYED, THE. HERITAGE SECTOR OFFERS SIGNIFICANT, LONG-TERM OPPORTUNITIES AND CHALLENGES. LETS NOT BE AFRAID TO RE-USE OLDER BUILDINGS AND KEEP THE BEST OF THE PAST.

Thank you,

