# Sustainable Development A Chronology

# Brian Murphy BSc Dip Arch (Hons & Dist) (Part-time NLP)

## Specification Consultant (16 years)

## ASWS

## Architectural Specification Writing Services.

# Part 1

## The increased requirements in Building, Health and Safety and other Regulations covering ‘Green’ materials and products in design.

# Part 1 Regulations and ‘Green’ materials

## You could be forgiven for thinking the title of the paper suggest that there is legislation out there encouraging the use of ‘Green’ materials

## I do not think this is quite the case

## but what there is, is legislation that:

## controls, in some cases discourages and sometimes bans the use of

## shall we say ‘Violet’ material,

# Part 1 Regulations and ‘Green’ materials

## As a consequence we are having to consider other materials

## which are ‘less Violet’

## and in some cases ‘Green’ materials.

## ‘Violet’ Materials

## ‘Violet’ chosen as it is at the opposite end of the spectrum from ‘Green’

## meaning:

## ‘any material that is unfriendly to humans or the environment

## or whose performance diminishes in use or over time’

## Regulations V vested interest

## What we now need is Legislation that drives us towards ‘Green’ options

## rather than just more of the ‘Violet’ materials we use already

## I wonder if the next round of Building Regulations will help?

## will vested interest resist change or prevent it from happening.

# Obstacles

## Regrettable there is also legislation out there

## and policemen that patrol its zone of influence,

## that will continue to maintain technical barriers (despite European Treaties)

## making their use less easy than their familiar but ‘Violet’ counterparts

# Chronology of ‘Green’ agenda, legislation & awareness

## There are a number of different threads running through this chronology:

## International Forum

## Publications, Guidance and Methods

## Ethical Financial Activity

## Legislation

## Green Movements

## Product Quality

## Legislation & ‘Green’ awareness

## International Forum establish the targets for all of us to achieve

## Guidance and methods shows us how

## Ethical Finance shows us all by example

## Legislation is implemented by governments when the populous fails to respond

## Green movements start when governments fail to act in a responsible manner

# 1832 Quakers Founded Friends Provident

## Financial provisions created by a community

## for the benefit of the community

## More about them in 1984

## 1955 Building Regulations and Health

## BRS Report BR 289

## 1955 Building Regulations and Safety

## BRS Report BR 290

## 1956 The First Clean Air Act

## To control Smog (Smoke and Fog)

## Meant some fires and boilers could not be used in certain areas if they generated smoke

## Fuel industry generated a range of smokeless fuels

## and Smokeless fuel burners

## open fires are used less and less

## 1957 The Treaty of Rome

## The beginnings of the Common Market

## Established rule that no member state could create or maintain technical barriers against goods or services from other member states

## 1958 Campaign for Nuclear Disarmament

## CND Aldermarston March publicly questioned both the sanity and the morality of nuclear weaponry

## 1959 M1 UK’s first Motorway

## re-routed to save a forest,

## 1961 Public Health Act

## Sets the way for a new system of national Building Regulations

## to replace Local By-laws

## 1961 Amnesty International Founded

## Founded to oppose political imprisonment, torture and executions

## 1961 Construction (General Provisions) Regulations

## SI 1961/1580

## 1962 Silent Spring

## Book by Rachel Carson

## galvanises US public outrage over use of pesticides.

## USA

## 1965 Unsafe at any speed

## Book by Ralph Nader

## exposes Detroit’s disregard for auto-safety

## kick starts the US Consumer Movement.

## Detroit USA

## 1965 Building Regulations

## A big change from what had gone before

## Much more stringent than Local By-laws and now nation-wide except London

## Introduced ‘Deemed to Satisfy Provisions’

## Set the standard for future legislation for the Construction Industry

## 7 amendments follow, up to 1971

## 1965 Nuclear Installations Act

## Imposes a duty of care on licensee’s to ensure that certain matters do not cause injury to any person or damage any property of any person.

## 1966 The Agrément Board Established

## set up by government

## hot on the heels of the Building Regulations 1965

## 1966 Agrément Board

## Offers manufacturers opportunity to have 3rd party independent assessment and test of products

## which do not meet ‘Deemed to Satisfy provisions’ of the Building Regulations, current British Standards or Code of Practice

## but achieve a useful purpose and need some form of verification.

## 1966 Agrément Certificates

## They became a useful promotional aid and helps get Building Regulation approvals

## Equivalent bodies exist throughout Europe

## But there is reluctance to accept another country’s Certificates

## 1967 Torrey Canyon Oil Slick

## Serious ecological damage done by oil slick off Cornish coast

## from the wrecked oil tanker

## 1968 Construction (Working Places) Regulations

## SI 1966/94

## 1969 Performance parameters & performance specification in architectural design.

## BRS CP 23/69:

## 1969 Performance specifications for building components.

## BRS CP 37/69:

## 1970 Power to the people

## USA: First concerted shareholder action campaign on an ethical issue

## launched against General Motors.

## 1970’s First Oil Crisis

## OPEC (Organisation of Petroleum Exporting Countries) predominantly Middle East countries, producing most of the worlds crude oil,

## create a cartel to fix the price of a barrel of oil significantly higher than previously

## USA, UK and many other countries who were reliant on outside sources for fuel suffered greatly at rising costs

## 1970’s First Oil Crisis

## Although USA is a major producer of Crude oil it still purchases much of its oil elsewhere since it is a prolific consumer of fuel

## It became viable for the UK to extract North Sea Oil and Gas

## 1970’s First Oil Crisis

## The Chinese centuries earlier invented the wok to reduce their demand for fuel since they had no natural resources of fuel and so little tree coverage to burn.

## Unlike in the West we use vast amounts of energy to heat water to heat food to then throw away the hot water and eat the food.

## 1970’s First Oil Crisis

## Initially the Chinese suffered like everybody else, after a while they decided to become less dependant on fuel rather than pay the extra cost.

## They set about looking at every aspect of their lives and sought to improve their efficiency and to reduce their demands by asking the whole population and all the work forces to put suggestions forward.

## 1970’s First Oil Crisis

## Unlike the West who would have taken the top ten ideas and implemented them

## the Chinese set about implementing them all

## pay back periods and unprofitable did not come into the question

## Australia Power Utilities insulated buildings for free so they would not have to build any more power station

## 1970’s Second Oil Crisis

## When the second oil crisis occurred,

## this time generated by the OPEC counties being concerned about the way their resources were being squandered by the West

## the USA, UK and many other countries dependant on outside fuel sources

## stood back in horror, and paid even more for their crude oil.

## 1970’s Second Oil Crisis

## The Chinese just stood back and said “Crisis, What crisis?”.

## They were almost autonomous of the world oil market and probably will remain so despite a growing population

## OPEC’s achieved their goal with the Chinese and Australia, not so the West

## Now the USA goes to War to defend its oil sources.

## Comparative figures

## USA consumes 5 times the international average of energy per capita

## UK consumes 2 times the international average of energy per capita

## There is a lesson to be learned

## On their own individuals feel incapable of making any difference

## Together they can move mountains

## only Goverments can orchestrate and galvanize all of the people at the same time

## Governments must act and act swiftly

## One bit at a time

## We can all do our bit for the environment, no matter how small,

## Everything we do now will have a long term effect because its likely to be there for a long time.

## Lots of little interventions will lead to a great deal,

## the more you do, the more you might influence others around you.

## We did not learn then

## For a decade or so Energy Consciousness was high on the agenda

## The AJ published extensively on the subject

## As a technician and student I read about it and saw it happening extensively in Europe but I never experienced it in the UK

## We did not learn then

## Some practices set out to do something

## Some have specialised in it

## For many it was a fashion-thing

## Most never touched it

## Were they still reeling from the 1965 Building Regulations?

## If they were, their in for a shock in the future

## Will we learn this time?

## I think we will

## because legislation will eventually force us to

## or we can take the initiative and address the issues ourselves now

## we are here today

## which is a step in the right direction

## 1971 5th amendment to 1965 Building Regulations

## Following Ronan Point Towerblock collapses after a gas explosion

## Part D revised to take account of accidental overloading by local explosion in buildings over 5 storey

## 1971 Greenpeace founded

## 2 Canadians unhappy about US nuclear testing

## rode rubber boats into the US Nuclear testing areas

## to disrupt and prevent activity

## and draw public attention to what was still happening

## 1971 Pax World Fund

## The first ethical fund

## is launched in the USA

## 1972 Agrément Board New Director

## Tom Lant succeeds first Director, Tom Parker

## 1972 Building Regulations

## Metric version of the Building Regulations

## brings together all the past 7 amendments and 1965 Regulations

## 1972 Small is Beautiful

## E F Schumacher publishes

## ‘Small is beautiful’

## the classic text of green economic thought

## 1973 Agrément Board Test unit set up

## Technical Development Manager appointed

## to promote Agrément idea

## 1973 Stewardship Unit Trust

## Attempts begin to win

## Department of Trade approval of the

## Stewardship Unit Trust

## Supporting positive activities

## In seeking to identify activities which make a positive contribution to society

## Stewardship pays particular attention to the following:

## Supplying the basic necessities of life

## Providing high quality products and services which are a long term benefit to the community

## Supporting positive activities

## Conservation of energy & natural resources

## Environmental improvements and pollution control

## Good relations with customers and suppliers

## Good employment practices

## Training and education

## Strong community involvement

## A good equal opportunities record

## Openness about company activity

## Seeking to avoid negative activities

## In identifying activities which harm the world or its inhabitants

## Stewardship are particularly concerned with the following:

## Environmental Damage and Pollution

## Unnecessary exploitation of animals

## Trade with or operations in oppressive regimes

## Seeking to avoid negative activities

## Exploitation of Third World countries

## Manufacture and sale of weapons

## Nuclear Power

## Tobacco and alcohol production

## Gambling

## Pornography

## Offensive or misleading advertising

## 1973 Social Audit

## Public Interest Research Centre

## publishes first Social Audit

## 1973 CITES

## Convention on International Trade of Endangered Species

## Appendix I & II.

## Restricts use of Hardwoods

## 1973 BS 4949 Glossary of terms relating to Building Performance

## 1974 Powdered Milk & 3rd World

## Campaigners target the marketing of powdered baby milk

## in the Third World by multinationals

## 1974 Control of Pollution Act

## to control pollution of surface water

## 1974 Health & Safety at Work Act

## designed to protect the employee from environmental hazards in the workplace

## This act continues to enable the enactment of European Directives.

## Examples:

## VDT Operator Directive

## Manual Handling Directive

## SI 1974/

## 1975 Everyday details

## AJ Series

## 1975 AJ Specification series

## 100975>

## 1975 AB First Certificates

## Roads and Bridges Certificates published

## 1977 Agrement Board moves to Garston

## 1978 Seal Culls

## Greenpeace’s Rainbow Warrior

## stops seal cull

## by fishermen competing for fish stocks

## 1978 What has become of Performance Specification

## AJ Study 9: 150278

## 1979 Three Mile Island

## USA’s worst ever nuclear accident

## 1979 DoT approves Stewardship

## Department of Trade

## gives approval in principle for

## The Stewardship Unit Trust

## to be launched

## 1980 Recommendations for performance standards in building:

## BS 6019

## Contents and Presentation

## 1981 Agrement Board doing well

## Annual total of Certificates issued passes 100

## 1981 Government White Paper

## Maggie Thatcher gave UK industry 11 years advance notice of need for quality and competitiveness as we go into the European Market,

## giving us a head start on the road to QA and product quality.

## 1981 Government White Paper

## The Design side of the Construction industry hardly noticed it was going on

## and did little to support the changes that took place.

## 18 Years later the DETR has to remind us

## to comply with Building Regulations Regulation 7.

## 1981 Quality control on building sites

## BRE IP 28/81

## 1982 AB becomes the BBA

## William Courtney appointed Chairman,

## the Agrement Board becomes

## the British Board of Agrement and

## current logo is adopted

## 1982 Traditional Housing:

## A BRE study of quality

## BRE IP18/82

## 1982 Material control to avoid waste.

## BRE Digest No. 259 March ‘82

## Way ahead of its time

## No one is interested

## Next updated in 2000

## 1983 BBA Publications

## Monthly information package published

## Includes a newletter covering:

## Work in the European arena

## information on Agrement organisations

## changes in certificate status

## catalogue of current certificates

## ‘in the courts’

## companies missusing BBA certificates in advertising

## 1983 Detailing and specification

## AJ series 010683>

## 1983 EIRIS Founded

## The Ethical Investment Research Services

## founded to research companies’ ethical behavior

## 1984 BBA Hotline set up

## 0800 \*\*\*\*\*

## It is now easy to check details of agrement certificates currency over the phone

## It is now easy to inform BBA is you think somebody is missusing the BBA logo

## 1984 Ethical Finance

## 1984 after 6 years of campaigning DoT approved in principle the Stewardship Unit Trust

## After a further 5 years it is launched.

## They set out only to invest in businesses and countries who have similar ethical goals

## 1984 ‘Acid-Rain’

## Friends of the Earth launch campaign on ‘Acid-rain’

## Substantial damage is done to Scandinavian forests caused by acid in rain

## Combustion products from UK power stations

## are carried by prevailing winds across the North Sea and dropped in rainwater

## 1984 ‘Greenhouse effect’

## Scientific Community warn of ‘Greenhouse effect’.

## CO2 from burning of fossil fuels collects in the atmosphere and act like greenhouse or conservatory

## Many people accept it

## Governments resist believing it

## Deforestation

## Deforestation by lumber companies for the building industry and other uses

## Forest clearing by fire by farmers

## and acid-rain damage to forests

## The planets vegetation can not convert Carbon Dioxide CO2 to Oxygen O2 fast enough to maintain a balance

## 1985 Building Regulations

## Radical new approach

## Minimal Regulations termed in Performance Requirements

## Introduces ‘Approved Documents’ replacing ‘Deemed to Satisfy Provisions’

## Part D deals with Toxic Substances

## Separate volumes will allow simplified amendment of parts

## 1985 Building Regulations accepts BBA

## DoE announces BBA Certificates to have

## enhanced status under new Building Regulations

## 1985 Live Aid

## raises money for the Ethiopian Famine following Band Aid’s Christmas Single.

## the people pay where Governments fail.

## Red Nose day continues to the end of this Century and probably beyond

## 1985 Ionising Radiations Regulations

## imposes duties on employers to minimise the risk of exposure to Radon,

## a naturally occurring radio active gas,

## which can seep from rocky ground into buildings,

## protective measures are generally adopted in many developments where employees are not the only ones at risk.

## 1985 Ionising Radiations Regulations

## The use of aluminium in damp proof membranes is a solution

## BBA Agrément Certified products exist.

## depending upon the level of gas release, passive or active ventilation below the membrane to the building exterior is also in use.

## Wimlas Certified Products exist.

## 1985 Performance Specification

## AJ series 170485>

## 1985 Using experience and publications in building design

## BRE IP13/85

## 1985 Meeting building designer's needs for trade information

## BRE IP14/85

## 1985 Housing defect prevention unit

## BRE Defect Action Sheet 63 Aug '85

## 1986 BBA New format Certificates launched

## BBA Board of Management set up

## 1986 European Community Regulations

## EEC 3626/86.

## 1986 Chernobyl

## Russian Nuclear reactor explosion and fire

## sends nuclear reactive material fallout

## all over Europe via prevailing winds

## UK has grazing fields polluted

## The consequences are long term

## 1986 Element Design Guide

## AJ 020786>

## 1987 Achieving quality on building sites.

## NEDO

## 1987 Montreal Protocol

## an agreement on limiting use of Ozone Depleting Chemicals signed.

## Ozone O3 helps to protect us from the UV in Sunlight

## ODC’s are to be phased out

## Too little to late?

## too long to deadline

## 1987 Montreal Protocol

## But USA seeks to swap credits with the underdeveloped countries

## so it can continue to waste more than its fair share of fuel and resources

## and destroy more ozone than anybody else.

## Ozone Depleting Chemicals

## Chlorine and Bromine are big problems

## CFCs, HCFCs and HFAs used as a blowing agent in foamed plastics contain chlorine.

## In insulation and joint filler boards and sealant backing rods

## and in refrigerant systems

## Ozone Depleting Chemicals

## Chlorine and Bromine are a big problem

## CFCs (Chloroflourocarbons) used as a blowing agent in foamed plastics contain chlorine.

## Used in insulation and joint filler boards and sealant backing rods

## and in refrigerant systems

## Ozone Depleting Chemicals

## Blowing agents percolate out of the plastics and into the atmosphere

## diminishing the performance of the board

## Refrigerants may be released from systems

## They are then free to attack Ozone in the Earth’s protection layer.

## Ozone Depleting Chemicals

## HCFCs (HydroChloroFluoroCarbons or Hydrogenated CFC) have a lower ODP (Ozone Depletion Potential)

## so are being dealt with less urgently,

## but as less CFCs are around then the % of HCFCs increase and there effect over a long period is increased.

## Ozone Depleting Chemicals

## We can do our bit not to specify not permit the use of CFCs and HCFCs

## HFAs (HydroFluoroAlkane) should also be avoided since they are a wider group containing HFCs and HCFCs

## be persistent with manufacturers to determine what their boards contain

## Ozone Depleting Chemicals

## Halons (Halogenated Hydrocarbon) fire fighting agent

## contain Bromine have a very high ODP

## used in fire extinguishing systems

## These need to be phased out.

## Catalysts

## Some act as catalysts (not part of the reaction but encourage others to react)

## so have a greater potential to destroy even more Ozone.

## 1987 Co-ordinated Project Information (CPI)

## Out line of principles

## Drawing Manual

## Specification Manual

## Common Arrangement of Work sections (CAWS)

## Quantity Surveying Manual/ SMM7

## CCPI Committee for Co-ordinated Project Information.

## 1987 CPI

## result of 10 years work

## 1987 World Commission on Environment and Development

## Introduction of the idea of sustainable development, it states:

## “the needs of the present are [to be] met

## without compromising the ability

## of future generations to meet their own needs.”

## 1987 Control of Asbestos at Work Regulations

## designed to prevent occupational exposure to asbestos,

## it was used in a variety of forms until 1980’s

## but still persists in some applications where a suitable alternative is still sought.

## Many more Acts and Regs. follow

## 1988 BBA New Director

## Peter Hewlett succeeds Tom Lant as Director

## 1988 Substances for use at work: the provision of information

## HS(G)27:1988: 2nd. edition

## 1988 LA invest in Stewardship

## First UK Local Authority Pension Fund invests ethically with Stewardship

## 1989 BBA new EU role on ETAs

## BBA is designated to issue European Technical Approvals

## 1989 COSHH in construction - a BEC guide

## BEC S/89 1989.

## 1989 Exxon Valdez

## 11 million gallons of oil spilt

## off the Alaskan Coast

## in a sheltered natural harbour

## 1989 Electricity At Work Regulations

## SI 1989/653

## 1989 The London Hazards Centre:

## Toxic Treatments.

## 1989 CFCs and the Building Industry.

## BRE Information Paper 23/89

## 1989 Building Design and Use: response to climate change

## Neil Milbank

## AJ 020889.

## 1989 The Control of Substances Hazardous to Health in the construction industry

## HSE 1989

## 1989 Lausanne Conference

## 103 countries votes for ban on Ivory trading,

## 1989 Construction Products Directive 89/106/EEC

## To be implementation by ‘1992’ the beginning of the ‘Single Market’.

## Essential Requirements

## EC Mark

## ETA European Technical Approvals

## National Agrément Certificates,

## BSI Kitemark

## 1989 General Criteria for suppliers' declaration of conformity

## BS 7541 = EN 45014

## Enable some control over what is actually delivered to site

## helps control specification substitution

## The Director of the manufacturer signs to say:

## it is what it claims to be

## and meets the specification

## 1989 Water Act

## A code of practice for water conservation, access and recreation

## 1989 Amendments to Building Regulations

## SI 1989/1119

## A concerted effort to tackle energy issues amendments to Approved Documents:

## F Ventilation

## J Heat Producing Appliances

## L Conservation of fuel and power

## 1989 BS 5589 Code of Practice for Preservation of Timber

## 1989 BS 5268 Structural Use of Timber

## Part 5: Code of Practice for the preservative treatment of structural timber

## Durability of species

## 1989 AECB Association of Environment Conscious Builders

## Association of like minded individuals and companies

## promote ‘Green’ methods and materials in building

## later renamed AEC...Building to include design disciplines and others

## 1990 Building for a Future

## Magazine published by AECB

## First edition

## still published 2003

## 1990 BBA Still growing

## 2000th Certificate issued

## 1990 Environmental Protection Act

## Section 33 controls the disposal of controlled waste (E.g.. Commercial waste from building sites) except in accordance with a waste management licence.

## It also controls the keeping and disposing of controlled waste in a manner likely to cause pollution of the environment or harm to human health.

## 1990 Environmental Protection Act

## Section 34 imposes a duty of care on those that produce, transport, handle or dispose of controlled waste, and includes prevention of contravention by others, prevention of escape of waste, the use of authorised waste disposers, and introduction of paperwork to enable audit trails.

## 1990 Environmental Protection Act

## Part 1 introduces IPC “Integrated Pollution Control” for industrial processes which have a significant potential for pollution.

## The Secretary of State has the power to make regulations prescribing processes for which an authorisation is required.

## but it only controls ‘significant potential’

## are there hundreds of little people doing a lot of harm?

## 1990 The Control of Substances Hazardous to Health (Amendment) Regulations

## SI 1990/2026

## 1990 Man made mineral fibres

## HSE EH46:1990

## 1990 Rosehaugh Guide (Buildings and Health).

## C Curwell, C March and R Venables. Editors

## RIBA Publications

## 1990 Review of Rosehaugh Guide

## Pages 45-48 AJ 121290

## 1990 Environmental Protection Act

## 1990 A Real Wood Guide.

## Forests Forever:

## Statistical information on sources and UK uses.

## 1991 BBA Monthly Datafile scheme

## replaces the Publications Monthly

## 1991 SA Apartheid ends

## Last of South Africa’s apartheid laws abolished

## thanks to the efforts of many including

## Nelson Mandela and

## F W de Klerk

## 1991 BRE Digest 358

## and many others, 02 91

## 1991 Green Architecture

## Vale &Vale

## Thames and Hudson

## 1991 Greening the Practice

## AJ 271191

## 1991 BS 7373:Guide to the preparation of specifications

## 1991 Building Regulations

## SI 1991/2768

## Acknowledges:

## CPD Construction Products Directive

## Construction Products Regulations

## Regulation 7 Materials and Workmanship

## ‘proper materials’

## 1991 Building Regulations

## Older parts still current

## Approved Documents:

## D Toxic Substances (1985)

## F Ventilation (1990)

## J Heat Producing Appliances (1990)

## L Conservation of fuel and power (1990)

## 1991 Construction Products Regulations

## In time for ‘1992’ the beginning of the Single Market.

## Implements the Construction Products Directive (89/106/EEC)

## Reinforced by Building Regulations Approved Documents 7 Materials & Workmanship

## Scottish Technical Standards Regulation 11

## Jersey Bye-lay 7

## 1991 Construction Products Regulations

## Essential Requirements

## EC Mark

## ETA European Technical Approvals

## National Agrément Certificates,

## BSI Kitemark

## 1991 EC Urban Waste Water Treatment Directive

## stops member states dumping sludge at sea by 1998.

## Plenty of time to dump all the things you won’t know how to deal with later.

## 1991 EC Directive on Hazardous Waste 91/689/EEC

## requires monitoring of special waste from its creation to destruction

## and the Environment Agency to be informed every time it is moved.

## 1991 The Water Resources Act Section 85.

## controls the causing or knowingly permitting of any poisonous, noxious or polluting matter or any solid entering controlled water (lakes, ponds, rivers, estuaries, ground-water, and certain coastal waters)

## 1991 BRE Launches BREEAM

## the 1st Method of assessing the environmental features of building and scoring them.

## Initially for New offices,

## subsequent issues over the following 4 years address similar issues on:

## Existing Offices, new supermarkets and Superstores, new Industrial Units, new Housing

## 1991 BREEAM

## Only a voluntary scheme

## Approx. 30% of office developments are adopting the assessment

## and use it as an aid to promote the buildings

## and achieving high occupancy rates

## Tel: 01923 664462

## BREEAM@BRE.CO.UK

## www.bre.co.uk

## 1991 How green is your office?

## Environmental Quality.

## Review of BREEAM

## AJ 130391

## 1991 BREEAM 2/91 New Superstores and Supermarkets

## 1991 Environmental Protection Regulations

## 1992 Conference on Performance Specification

## IofAAS York on 09 06 92

## May 1992 Benoy Environmental

## Teresa Martinez

## Head of Environment Unit

## Benoy Environmental

## Set up to offer independent consultancy to Benoy Architectural and other practices

## 1992 Management of Health and Safety at work Regulations

## SI 1992/

## 1992 Management of Health and Safety at work (Amendment) Regulations

## SI 1992/2865:

## 1992 Personal Protective Equipment at Work Regulations (PPE)

## SI 1992/2966

## 1992 Workplace (Health, Safety And Welfare) Regulations

## SI 1992/3004:

## 1992 Personal Protective Equipment (EC Directive) Regulations

## SI 1992/3139

## 1992 Manual Handling Operations Regulations- guidance on Regulations 1992

## HSE L23

## Limit of 20kg (40lbs) for one man operation

## thereafter more men or lifting equipment

## influences methods of building blockwork walls

## and density of blocks manufactured

## 1992 Management of health and safety at work:

## Interpretation and Guide to the Management of Health and Safety at Work Regulations 1992.

## HSE L21

## 1992 HCFCs: Hidden CFCs.

## Publication

## Greenpeace International

## 1992 Woodmark

## the Soil Association Certificate of Responsible Forestry.

## Soil Association:

## 1992 Green specification

## AJ 150492

## 1992 Rio Earth Summit

## placed sustainable development at the top of the international agenda.

## nations signed up to new environment agenda for the next century: Agenda 21

## Agenda 21

## Agenda 21 relies on local action,

## each council is to prepare its own strategy its Local Agenda 21 to achieve sustainable development

## Agenda 21

## It acknowledges environmental problems and solutions are linked to social and economic problems.

## It emphasises the importance of involving people, especially disadvantaged groups in seeking solutions

## 1992 BS 7750 Environmental Management Systems

## the first standard of its kind in Europe to assess and monitor companies environmental performance

## helps to ensure companies comply with environmental legislation and regulations

## helps to ensure products or services are produced, packaged delivered and disposed of in an environmentally friendly way.

## 1992 BS 7750 Environmental Management Systems

## But just like BS 5750 which achieves consistency in manufacture through management and controls

## but permits consistent production of inferior product

## This does not seek to remove environmental impact

## just to manage it, document it and keep it within legal limits.

## 31/12/1992 Europe Arrives ‘The Single Market’

## but status quo prevails

## You can carry on specifying by BS until EN’s arrive to replace them

## Many European Directives follow

## which in turn will be implemented by Regulations or Acts in each member state.

## 1992 Technical Barriers

## You should no longer expect to see technical barriers placed by the Regulatory Policemen.

## You should not create your own Technical Barriers in excluding materials from Europe.

## 1992 the "new approach" to technical harmonisation and standards

## DTI Standards:

## 1992 Construction Products.

## DTI Standards:

## 1993 Housing Design Handbook: Energy and internal Layout

## BR 235

## BRE Publisher

## 1993 Simply build green

## A technical guide to the ecological houses at Findhorn Foundation

## Findhorn Foundation

## John L Talbot

## 1993 Clean Air Act

## controls atmospheric pollution from fires and furnaces.

## controlling the quality of the Services Installation we install.

## 1993 Stewardship accepts SA

## In the light of positive changes in the politics of South Africa

## the Stewardship Committee of References

## reverses its opposition to company activity in the country

## 1993 CE Marking of Construction Products

## Directive 93/68/EEC

## Rationalises the EC Marking procedures previously described in numerous EC Directives

## 1993 Noise and Statutory Nuisance Act

## LA powers increased enabling them to take action against noise in the street, from equipment, machinery, loud-speakers, faulty alarms.

## Consideration needed in the building fabric and services installations in building.

## 1993 Ecolabelling of Building materials and Building Products

## BRE Information Paper 11/93

## 1993 BREEAM 1/93 New Offices

## Scheme updated

## 1993 BREEAM 4/93 Existing Offices

## 1993 BREEAM 5/93 New Industrial Units

## 1993 The Green Construction Handbook

## J T Design & Build & Arup

## 1993 The Green Construction handbook

## AJ Review 070793 and 210793.

## 1993 Chemicals (Hazard Information and Packaging) Regulations

## (CHIP).

## SI 1993/ :

## Useful in CDM Risk assessments

## 1993 Personal Protective Equipment

## (EC Directive) (Amendments) Regulations

## SI 1993/3074:

## 1994 BBA Certificate 3000 issued

## with colour photo on the front cover

## in house DTP set up to speed up issue of certificates

## 1994 Personal Protective Equipment

## (EC Directive) (Amendments) Regulations

## SI 1994/2326:

## 1994 Southern Ocean Sanctuary

## Sanctuary declared to protect wildlife around Antarctica.

## July 1994 Best Practice in the Specification of Offices

## BCO British Council for Offices

## Sets out to initiate a debate about office design and thus improve the design process

## Addresses Design, floor plans, structure, indoor climate control, Services, Fire protection, security, materials and finishes, management manuals and training.

## 1994 Construction (Design & Management) Regulations

## (CDM) SI 1994/3140:

## Required consideration during the design stage and when choosing materials and methods of construction to avoid difficult or dangerous activities for building workforce and employees,

## Designs should now be safe,

## safety measures should be the last resort.

## E.g. Parapets on roofs not safety lines,

## 1994 CDM

## Requires risk assessments to be carried out throughout the whole procurement process including:

## design,

## manufacture,

## construction,

## maintenance, refurbishment, change of use

## demolition

## recycling

## 1994 CDM

## Must take into account:

## material excavator/miner, - manufacturer,

## supplier, - stockist,

## fabricator, - contractor,

## installer, - applicator,

## 1994 CDM

## Must take into account:

## building occupants, maintenance staff,

## refurbishers, demolition contractor and recycle contractors.

## 1994 Control of Substances Hazardous to Health

## (COSHH) SI 1994/3246:

## Requires employers to identify hazards,

## carry our risk assessments,

## and provide the appropriate measures to reduce the risks to human health

## 1994 COSHH

## Designers now need to think harder about the materials we specify.

## Architect’s responsibility to consider human friendly alternatives.

## We have stopped using Asbestos because of legislation,

## Ceramic Fibre products have all but disappeared from the market

## 1994 COSHH

## Manufacturer’s required to release product data sheets

## describing the materials the ingredients,

## risks in their use,

## precautions to be adopted,

## safe methods of disposal etc.

## 1994 Environmental Handbook for Building and Civil Engineering Projects.

## Vol. 1 - Design and Specification.

## Overview in checklist format with references to good practice.

## CIRIA

## 1994 Energy and Global Warming

## Impacts of not-in-kind and next generation CFC and HCFC alternatives.

## US Dept of Energy:

## 1994 Building Regulations (amendment) Regulations

## SI 1994/1850

## 1994 Managing Construction for health and safety

## Construction (Design and Management) Regulations

## HSE L54 1994

## 1994 Embodied Energy and Carbon Dioxide Emissions for Building materials.

## BRE PD 109/94

## 1994 Amendment to Building Regulations

## SI 1994/1850

## Amendment to:

## L1 Conservation of Fuel

## Regulation 14

## Energy rating for new dwellings

## 1994 Latham Report ‘Constructing the Team’

## Called for:

## 30% reduction in real costs over a 6 year period

## move towards TQM Total Quality Management

## right first-time, every-time (Zero Defects)

## not much about ‘Green’ here but the above are steps in the right direction

## 1994 PPG 9 Planning Policy Guidance: Nature Conservation

## Sets out Government Objectives for nature conservation

## describes the role of Planning Authorities

## advises on nature conservation issues

## states development control criteria

## Jan 1994 Benoy Corporate Environmental Policy

## Launched to promote the activity of its Environment Consultancy

## Written in terms that suggest dependence on economical viability

## Benoy can get away with doing nothing.

## The person who ran the department is no longer with the practice

## We are not aware of any efforts on this issue.

## 1995 BBA Director becomes President of EOTA

## Peter Hewlett elected President of the EOTA

## European Organisation for Technical Approvals

## 1995 Control of substances hazardous to health

## General Approved Code of Practice,

## HSE 2nd. edition 1995.

## 1995 Brent Spar Oil Rig

## After mounting international pressure

## and loss of sales at the petrol pumps

## Shell Oil decides not to dump the now redundant Brent Spar Oil Rig at sea

## instead deciding to dismantle and recycle much of the materials

## 1995 BREEAM 3/95 New Housing

## The Environmental Standard Award

## 1995 Environmental Standard: Homes for a Greener World

## BR 278

## 1995 Environmental Impact Assessment:

## a Comparative Review.

## Spon.

## 1995 Building Regulations (amendment) Regulations

## SI 1995/1356

## 1995 Environmental Policy and Information

## for RIBA members

## 1995 Environment Act

## Chapter 25

## 1995 Ethical investment:

## Stewardship breaks £500m barrier

## only 6 years after its launch

## 1995 The Environment come home

## Herberger Centre for Design Excellence

## David K Pijawka & Kim Shetter

## April 1996 Handbook of sustainable building

## An environmental preference method for selection of materials in use in construction and refurbishment

## David Anink et al

## James & James

## 1996 Taking back our stolen Future

## Hormone disruption & PVC plastic

## Greenpeace

## April 1996

## 1996 Environmental Design:

## An intorduction for Architects & Engineers

## R Thomas Editor

## E & F N Spon

## 1996 BBA New Chairman

## Tony Jackson appointed Chairman

## 1996 BS EN ISO 14000 Series

## Combined Quality Management system and Environmental Management System launched

## Replaces BS 7750

## Still fails to significantly reduce Environmental Impact

## 1996 Road Protesters

## Road protesters disrupt Britain’s road building programme and bring their concerns to the public attention

## 1996 Lung Cancer

## First legal challenges by lung cancer victims

## against tobacco companies in USA

## 1996 The Special Waste Regulations

## implements EC Directive 91/689/EEC

## 5 more years worth of sludge discharged whilst it was in the making

## still plenty of time to dump some more before end of 1998.

## 1996 Construction Resources established

## sets out to research a Green approach, the availability of product which are:

## “high quality products that combine

## the highest possible levels of comfort and performance

## in the buildings that people live and work in

## with the lowest possible impact on the environment”.

## 1996 Construction (Health, Safety and Welfare) Regulations

## SI 1996/1592:

## 1996 Personal Protective Equipment (EC Directive) (Amendments) Regulations

## SI 1996/3039: 1996

## 1996 Specifying for Greener Building

## Stephen Curwell.

## AJ 110196

## 1996 Building for Sustainability

## Barrie Evens

## AJ 180196

## 1996 Making London Sustainable

## Herbert Girardet

## AJ 290296

## 1997 Energy in Inverness

## RIAS Convention

## AJ 150597

## 1997 Water as a planning constraint

## Brian Waters

## AJ 290597

## 1997 Material Gains

## reviews Good Practice in the selection of construction materials.

## Addresses blacklisting

## AJ 290597

## 1997 Ethical Finance Threshold

## Over $1 trillion now invested in ethically screened or activist funds in the USA

## 1997 A material difference

## Sustainable Engineering:

## Materials and Methods:

## Brian Sims

## Building Services Journal: 000797

## 1997 Futures: Time to make a difference

## Mike Evamy

## Design Week 040797

## 1997 Missing the Green

## Andy Cook

## Building: Technical: Environment: 180797

## 1997 The Future is Green

## Jonathon Porritt (FotE)

## Design: Summer 97

## Dec 1997 Kyoto Climate Summit

## 13 years after the scientific community warns about the ‘Greenhouse effect’

## Summit agrees targets for reducing ‘Greenhouse gas’ (GHG) emissions by 5.2%

## The goal is to reduce our CO2 requirements by the year 2010 by 20% off the 1990 levels

## Legally binding on the developed world

## Dec 1997 Kyoto Climate Summit

## two contentious elements of the protocol were not detailed

## they will be developed at Conference of the Parties (COP)

## Emissions trading and Clean Development Mechanism (CDM)

## See COP4 Nov 1998

## 1997 BBA Certificates and CDM

## Certificates now include information for

## Construction Design and Management Regulations purposes

## 1998 Brownfield Site Movement

## The Government announces plans to relax restrictions on the London Greenbelt and other Greenfield sites to free up land to make room for the many thousands of houses needed for the growing population

## In reaction a group of eminent members of the Construction Industry promote the use of all derelict land before wasting the Greenbelt and other sites

## 1998 Design guide for naturally ventilated daylit offices

## BRE

## 1998 Sir John Egan Report ‘Rethinking Construction’

## Client-led task force critical of Construction Industry calls for

## “a radical change in the way we build”

## not much in this for the drive to ‘Green’ solutions

## a little on reduction in waste in materials

## but aims to cut costs will discourage the use of ‘Green’ materials.

## 1998 Sir John Egan Report ‘Rethinking Construction’

## Client-led task force critical of Construction Industry calls for:

## “a radical change in the way we build”

## Year-on-year target:

## 10% cut in construction costs and time

## 10% profit and increase in turnover

## 10% improvement in productivity

## 1998 Sir John Egan Report ‘Rethinking Construction’

## Worker conditions to change

## 20% reduction in injuries

## improved working conditions

## 1998 Sir John Egan Report ‘Rethinking Construction’

## Construction should change:

## integration of design and construction

## increased standardisation

## Use of lean construction techniques

## end to competitive tendering

## phase out formal contracts

## 1998 Sir John Egan Report ‘Rethinking Construction’

## Ideas for implementation

## £500m of demonstration projects

## Nick Raynsford to chair steering committee to take reforms forward

## New Forum for best practice in housing

## 1998 Sir John Egan Report ‘Rethinking Construction’

## Roger Humber CEO of House Builder’s Federation says:

## Planning system needs a shake up to allow sustainable development and integrated transport systems.

## Egan failed to address sustainability

## Egan fails to address small projects which are the bulk of the £58bn-a-year industry

## 1998 Construction Best Practice Programme

## Following the Egan Report Rethinking Construction

## Identifies, publicises and supports the use of improved business and management practices for the Construction Industry

## Funded by DETR and is steered jointly by Government and the CIB Construction Industry Board

## 1998 Euro-Agrément agreed by UEAtc

## This will allow any materials producer to seek an Agrément Certificate for their product in their own country

## At the same time have the product assessed for any other pre-agreed European state where it wishes to promote the product.

## 1998 Euro-Agrément

## The certificate will have:

## a front cover indicating the initiating and co-operating institutions

## an annex covering national provisions and regulated requirements

## 1998 Euro-Agrément

## Each pre-agreed state will take a minimalist approach

## and accept the overlapping areas already carried out by the initiating Institute

## It will be then be acceptable in those pre-agreed UEAtc member country

## as a pre-agreed confirmation.

## 1998 First ETA awarded in UK

## 9 years after the Construction Products Directive issued

## the European Technical Approval for Hilti GmbH for 2 of it’s anchor products

## Rawlplug are hot on their heels and awarded first ETA to a UK company

## Structural sealant glazing systems were also awarded ETA

## 1998 General Criteria for suppliers' declaration of conformity

## BS EN 45014 (Formerly BS 7514)

## 1998 Hockerton Housing Scheme

## implements its Local Agenda 21

## 11 years after the initial idea suggested and

## 6 years after the Rio Earth Summit

## The first UK public demonstration of a Local Agenda 21 makes the press.

## reviewed in Building Services Journal Feb. 98.

## 1998 Services for Housing

## Implementation of Agenda 21.

## Building Services Journal: 00 02 98

## 1998 The Muck Stops Here

## Environmental Liability

## By Tim Smithers and Nic Seal.

## Estates Gazette 100198

## 1998 From design to dustbin

## Life Cycle Assessment

## Garath Gardner

## Building 030498

## 1998 Life Cycle Assessment

## Technical Notes

## Nigel Howard and Suzy Edwards

## AJ 110698

## 1998 Keener to be Greener

## Ruth Slavid

## AJ 230798

## 1998 Stewardship

## reaches £1bn of ethical assets in 9 years

## doubling in value in 3 years.

## This policy has consistently outperformed FTSE All-share index

## and the UK Equity General Pension Fund Sector.

## (Source: Reuters Hindsight)

## 1998 UK Ethical investment market passes £2bn.

## 1998 Ecological Building Centre

## In the third year since it’s establishment

## Construction Resources launches the new EBC to:

## Promote,

## Exhibit,

## Educate in appropriate application of,

## Train in the use of,

## and sell ‘Green’ materials and services.

## 1998 EBC Ecological Building Centre

## Southwark London

## Lucy Pedler Architect & Product Specialist

## Exhibits include: tools, materials, methods of construction, finishes, furniture

## 1:1 scale 3D cutaways of traditional, modern and alternative construction and acoustic methods

## Nov 1998 Environment & Energy Helpline launched

## Freephone 0800 585794

## Jointly funded by DTI & DETR

## Combines the best of BRE’s

## Energy Efficiency Best Practice Programme

## Environmental Technology Best Practice Programme

## www.etsu.com/etbpp

## www.environment.detr.gov.uk/bpp/helpline.htm

## Nov 1998 COP4

## 4th Conference of the Parties (COP4)

## implementation of the Kyoto Protocol (Dec 1997)

## UN Framework Convention on Climate Change (UNFCCC)

## GHG Emissions Trading or Carbon Trading

## Was added to the Kyoto Protocol at the last minute

## largely to ensure the continuing participation of USA

## which required some “flexibility” in the way it was to achieve its GHG emissions reduction target

## GHG Emissions Trading or Carbon Trading

## Carbon trading allows industrialised countries trying to achieve their legally-binding emissions reductions targets to trade carbon [dioxide] on newly-created international commodities markets

## Countries whose emissions are below their legal reduction limit would be entitled to sell the “unused” portions to countries who are experiencing difficulty or lack commitment to meeting targets.

# GHG Emissions Trading or Carbon Trading

## A well run trading system would keep overall emissions within agreed global level

## whilst allowing countries to pursue more cost-effective means of achieving targets by trading emission reductions

## preferably as a supplement to domestic actions and clean technology programmes

# Clean Development Mechanism (CDM)

## Involve partnership projects to reduce GHG emissions through the use of:

## clean technology,

## environmental best practice

## afforestation and reforestation projects

## developed countries sponsor projects in developing-world host countries

## for a share of the certified GHG emission reductions generated in each project

# Clean Development Mechanism (CDM)

## Now that there is money to be made many countries previously opposed to the Kyoto Protocol

## are beginning to take a positive interest and adopting a positive stance in this new economic imperative

# 1999 Principles of element design

## 3rd edition

## Peter Rich & Yvonne Dean

## Invaluable guide for designers starting from first principles

# 1999 UK Green Foreign Policy

## UK Government Programme

## for the transfer of clean technology to the developing world

## what about getting out act together first?

# BRECSU Design Advice Service launched

## Telephone: 01923 664258 Fax: 664787

## Backed by DETR

## Part of Energy Efficiency Best Practice Programme

## For New build and Refurbishment of minimum 500m2

## WWW.bre.co.uk/brecsu

## brecsu@bre.co.uk

# 1999 Greening Commercial Property BCO Conference

## The issues are being taken seriously by owners, developers, and users of commercial buildings

## British Council for Offices hosted conference

## Reported in AJ 25 Feb 99

## Includes 2 building studies

# 1999 British Board of Agrément

## promote the ETAG and EC Mark

## British Board of Agrément seek UK market input

## work starts on European Technical Approval Guidelines

## 17 ETAG are already in development

## ETAG for partition kits is accepted by the EC

# 1999 ETAG

## ETAG for 9 different building elements required including:

## prefabricated wood-based load-bearing stressed skin panels

## sandwich panels

## connectors for timber trussed rafters, etc.

## vetures (insulated cassette panels)

## fire stopping materials

## civil engineering movement joints

# 1999 DETR Reviews the Building Regulations

## The need to improve energy efficiency and reduce greenhouse gas emissions, leads to a review of Part L

## CO2 being a primary contributor from energy production.

# 1999 DETR Reviews the Building Regulations

## Possible outcome will be:

## substantial increasing fabric insulation standards

## new efficiency requirements of AC, ventilation and lighting systems

## requirement for airtightness testing & services commissioning

# 1999 DETR Reviews the Building Regulations

## Use of whole building CO2 performance indices to show compliance

## embracing maintenance, repair and refurbishment into areas for consideration

## this might help to deal with existing housing stock

# 1999 Building Regulation 7

## 18 years after the 1981 government white paper on quality and competitiveness

## Revised guidance from DETR is issued to ensure ‘proper materials’ are used

## Even the building regulations policemen don’t seem to demand ‘quality products’

# 1999 UK Tax incentive for donations to charity

## Did the Labour Party wait until after Red Nose Day to launch the incentive?

# March 1999 HAPM Conference Forum

## ‘A Recipe for Greenhousing’

## Housing Association Property Mutual

## Publishers of the Component Life Manual

## HAPM want to add a ‘Environmental Ingredient’ to the manual to allow designers to choose materials for their buildings for their ‘Greenness’

# March 1999 HAPM Conference Forum

## Invited 4 organisations to describe their methods of evaluating the ‘Greenness’ of materials and how they are used by practitioners

## Evaluation included: embodied energy, recyclability, scarcity, socio/economic issues and many other factors

## They included computer databases and evaluation tool-kits to score the buildings

# March 1999 HAPM Conference Forum

## After the presentations there was time to question the speakers further

## The Forum was completed by a non-binding vote

## The audience was invited to vote on their preferred method

## HAPM went away to evaluate them and develop the ‘Environmental Ingredient’

# March 1999 Public & Media opposition to GM Food:

## Public gets to grips with Genetically Modified Food

## Clearer labelling demanded,

## large numbers of Retailers ban most GMF from their shelves until further investigation.

## after the recent Beef fiasco can government investigation and statements be trusted?

# April 1999 Rain Forest destruction

## Nature Magazine reports

## Daniel Nepstad an ecologist at the Woods Hole Research Centre Massachusetts

## Carries out field tests in Brazil to find far greater destruction of forests is occuring

## than can be detected by Landsat Environmental satellite image based deforestation mapping programme

# April 1999 Rain Forest destruction

## Brazillian Government estimates 17,000 square kilometres of forrest was lost in 1998 (the size of East Anglia)

## Napstad puts the figure closer to 60,000 sq km

# April 1999 RIBA CPD Green is the Colour Conference

## A practical guide to sustainable development

## DETR Government Policy

## EBC on Green materials available in the UK

## Regulations and Specification

## 4 Case studies

# BED ZED scheme

# National Trust Policy & Case studies

# April 1999 BS EN ISO 14000 Certificates

## Combined Quality Management system and Environmental Management System.

## Published in 1996

## at end of 1996 1,491 certificates awarded in 45 countries

## at end of 1997 5,017 certificates awarded in 55 countries

## survey results are posted www.iso.ch

# BSI Business Standards April 1999

## 1998 BBA 1st European Technical Approvals

## April 1999 BBA do ETA

## British Board of Agrement has now been designated by Government

## to carry out product conformity certification

## of Metal anchors for use in concrete

## leading to European Technical Approvals

## to meet the Construction Products Directive

## enabling CE marked anchors to be sold

## in signatory countries of the European Economic Area Agreement

# April 1999 CEED launched

## Council for Energy Efficiency Development

## A one-stop-shop for marketing energy efficiency products and services for the building fabric

## Organises CEED conferences & exhibitions

## CEED Members include:

## External Wall Insulation Association,

## National Home Energy Rating

## National Cavity Insulation Association

## Draught Proofing Advisory Association

## National Association of Loft Insulation Contractors

# And what of the Future?

## May 1999 Greening our Heritage

## May 1999

## June 1999 Environmental Technology Show

## ET ‘99 at NEC June 8-10

# CBI Conference: Profiting from the Environment

## Addresses: Pollution Control, waste management, water treatment, efficient use of energy and comprehensive management of environmental responsibilities to BS EN ISO 14001 (EMS)

# June 1999 Environmental Technology Show

## Exhibitor also address:

## Environmental IT, Health & Safety, industrial effluent and contaminated land

## European Eco-Management and Audit Scheme (EMAS) are especially featured

# I acknowledge:

## Friends Provident’s Literature “Stewardship Ethical Investment, Acting on your Principles” for the idea and some of the content of this Chronology.

## and numerous other bibliography

## Also

## Estates Gazette 10 Jan 98 Environmental Liability The Muck Stops Here By Tim Smithers and Nic Seal.

# Performance specification writing for building components.

## DC9:

## MPBW

# ‘Greener Building’: Products and Services Directory

## Keith Hall & Peter Warm

## 3rd edition 1995

## 4th edition 1998

# Good Wood Manual

## Specifying Alternatives to Non-renewable Tropical Hardwoods

## Friends of the Earth

# 1985-90 UK discovers AWO

## Conscious of the concern for unnecessary use of Tropical Hardwoods

## UK market turns to USA temperate hardwoods

## American White Oak stocks are pushed to the limits

# 1985 UK Architects rediscover the brick

## Shortage of quality bricklayers forces up costs

## British Library brickwork package tender above cost plan

# ITTO

## International Tropical Timber Organisation. Guidelines.

# European Construction Documents

## Knight

## European Standards Report

# BSRIA

# EH40:199x:Occupational Exposure Limits.

## (updated annually)

# 1990s Pacific Basin Economic Boom

## Demand for hardwoods rises to unprecedented levels

## 1990s Indonesia Forest Fires Rage

## A area the size of the British Isles is destroyed

## Italy 1 Ireland 0

## Italian tenderer denied contract on Irish drain laying project

## Irish claimed the Italian pipes did not meet Irish standards

## Italy took Ireland to court on basis of infringement of the 1957 Treaty of Rome

## Italy won case

# Iraq invades Kuwait

## UN forces bannish Iraqi troops

## Iraqi troop set the Kuwait Oil Fields alight

## and discharge millions of gallons into the Gulf

# CI/SfB

## Uniclass

## UC/CI

## EPIC

## CAWS

## UCD

## CI/SfB

# French Nuclear Testing in Pacific ocean

# BRECSU Internet site

## www.bre.co.uk/bre/otherprg/eebp/default.html

# CIIG Freelance Group

## Kim Randall Ex ECD

## Talk on Environmental Issues

# Green Building Digest

## ACTAC

## Technical Aid Network

# HAPM Component Life Manual

## Housing Association Property Mutual

## Insurance providers attempting to reduce the risk in insuring Housing Association properties.

## Components evaluated and categorised in bands of life expectancy

## 30 years plus, 25, 20, 15, 10, 5, uninsurable

## with maintenance regimes

## Kitemarked and BBA certified are generally in the highest bands

## E & F Spon Publishers