

SPECIFIERS' DESIGN FORUM

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Specifiers' Design Forum: Mini Course

Lesson One: Why Specification is a Major Contributory Design Instrument – by Howard de Mont

It was Alan Forsyth who coined the phrase “Specification is part of the design process”.

I believe it to be true, that what you write is what you expect to get.

Over the last decade, I've written specifications for projects with a cumulative value of £2,000M. In my experience, if you want your concept to become a reality, then the specification becomes the major contributory design factor.

I believe that, while the design vision can be an expression of the design philosophy, it will be a material of some kind that expresses that philosophy in reality.

The design of the projects for which I've written specifications, including the Bullring in Birmingham, Bluewater in Kent and Kuala Lumpur International Airport (KLIA), have all been more influenced by their materials than their dimensions.

At KLIA the hyperbolic paraboloid roof of the main terminal building is clad in titanium to keep out tropical rain but it is also capable of forming the geometric shape curved in two directions over all. The sloping structural glass façade, while looking at the jungle, must also maintain internal temperature. This is achieved by using double-glazing with solar reflective inner film combined with a dotted frit to reduce solar gain.

Enzo Ferrari designed cars, but if he had not had the technical know-how he could not have achieved his original vision.

With buildings you can be a designer, but this must be combined with the technical ability to "build your vision". This is because a building's spacial enclosure is defined by its materials as well as its dimensions.

I believe that architects, engineers and designers alike need to develop their knowledge of specification, otherwise the gap that exists between the design vision and final project will never be closed.

Howard de Mont, AA Dipl, RIBA
Founder of the Specifiers' Design Forum and
Specification Facilitator at Benoy Architects

Lesson Two: Five Myths About Green Specification – by Brian Murphy

Dear NAME,

It's an unfortunate reality that green specification has a number of false and misleading myths surrounding it within the UK industry.

Today we will examine the top five industry myths concerning green specification and the reality of each one.

MYTH ONE: LACK OF INFORMATION

There is little or no useful information to distinguish environmentally sustainable construction materials and products from conventional materials, so we cannot make any progress.

REALITY: INFORMATION OVERLOAD?

Whilst it's true that most of the regularly used compendium and websites do little to distinguish sustainable and conventional materials, there are many websites with databases of energy-saving services and appliances, renewable energy sources, water-saving equipment, reclaimed, recycled content, low allergy, natural construction products.

There are many websites with databases a few are listed here:

Recycled Construction Products:

www.ecoconstruction.org

www.recycledproducts.org.uk

Recycled Plastic Products:

www.recoup.org

Architectural Salvage:

www.salvo.co.uk

Reclaimed Construction Products:

www.reclaimed-supplies.com

Energy Saving Products:

www.est.org.uk/myhome/efficientproducts/recommended

Water Saving Products:

www.eca-water.gov.uk/default.asp

www.h2obuildingservices.co.uk/?action=products

www.challiswatercontrols.co.uk/products/watersaving/watersaving_0904.html

Low allergy products:

http://www.allergyuk.org/prod_soalist.html

<http://www.healthy-house.co.uk/index.php>

Sustainable Construction Products:

www.newbuilder.co.uk/greenpro

Green Builders merchants:

www.constructionresources.com

www.greenshop.co.uk

www.greenbuildingstore.co.uk

www.mikewye.co.uk

There are also some excellent books: The Whole House Book, Green Building Handbook, The ecology of Building materials, The handbook of Sustainable Building, to name a few.

NGS GreenSpec aims to become the Encyclopaedia of Sustainable Construction it aims to include product pages, specification clauses, design guidance and much more for all of the above websites and 6000 construction products, materials, their manufacturers and supply chains.

www.greenspec.co.uk

MYTH TWO: EU PROCUREMENT RULES PREVENTS SUSTAINABLE CONSTRUCTION IN THE UK

Government Funded projects and EU Procurement Rules prevent specification of environmentally or socially sustainable construction products.

REALITY: EU PROCUREMENT RULES INVITE

EU Procurement Rules have been revised to permit Environmental and Social requirements to be included in tender documents.

NGS GreenSpec includes clauses which include, transport issues encouraging local procurement to support local business and employment and minimise potential transport pollution and congestion.

MYTH THREE: SUBSTITUTION REIGNS

Government Funded projects and EU Procurement Rules prevent the naming of the product you want to use in a specification and we have no control over the substitution that habitually goes on by contractors.

REALITY: SUBSTITUTION STOPS HERE

With 'generic specifications' (i.e. not naming,) there is a risk that the contractor will chance his luck with a product that is not equivalent to the specification.

To address this problem, National Green Specification offers a framework within which substitution is managed more rigorously. This is achieved by providing robust clauses specific to the product which states the characteristics which drove the choice in the first place, thus making them easily accessible and making comparison of equivalency relatively simple.

National Green Specification also makes it the responsibility of the Contractor to prove equivalency in adequate time for review and subsequent purchase in time for the programme.

MYTH FOUR: DESIGNERS CANNOT REDUCE WASTE IN CONSTRUCTION:

Designers cannot influence the 90m tonnes of waste the Construction Industry creates every year.

REALITY: DESIGNERS AND SPECIFIERS CAN DO IT TOO:

Designers can design to minimise off-cuts and specify waste minimisation and management in new build, alterations, demolition, site clearance and excavation.

Designers can also require that the entire demand and supply chain is engaged in waste minimisation, management of waste materials and packaging throughout all aspects of the design project and construction contract.

National Green Specification's GreenSpec has the specifications, appendix and guidance documents, including the DTI Site Waste Management Plan checklists to be used at all-party waste brainstorming sessions.

MYTH FIVE: THE 'GREEN GUIDE TO SPECIFICATION' DESCRIBES GREEN MATERIALS:

This is a guide to help find green materials and to specify them

REALITY: THE GUIDE INCLUDES VERY LITTLE THAT WOULD BE DESCRIBED AS GREEN:

The guide includes information and data about environmental profiling of normal building methods of construction using conventional building materials and products. It sets out to create a level playing field on which the performance of all materials can be judged.

The majority of the content is about identifying the greenest of the 'violet' (non green) materials we use in the industry today.

Its core data is created by analysing a product sector's environmental impacts and creating a generic figure for that sector's products. So rubber floors can be compared with PVC and Linoleum on an apples for apples basis.

Manufacturers wanting to get product specific data can have an environmental profile carried out to see how they compare with their competitors. So a generically graded C materials (on an A - C sliding scale A being the best) can be upgraded to an A if they compare favourably with their competitors.

The A - C scale is a sliding scale depending on the range of materials profiled reliant upon the state of the sector in its quest for low environmental impact, assuming this is happening.

The almost complete absence of new, low impact, natural and alternative materials from the guide means that the A - C scale is skewed towards conventional material's profiles.

Complimentary Environmental Assessment Methods like EcoHomes and Envest2 software are reliant upon the Green Guide to identify Green Materials and buildings being assessed only score highly when its component products have been assessed and predominantly score an A.

Until many new, alternative, low impact and natural products are assessed and included then the Green Guide is not comprehensive; the A - C scale will remain skewed. Until the A - C scale is all embracing and slides accordingly, the guide remains partially sighted to the market as a whole and presents a barrier to those products that are probably low impact but have not been assessed, getting

into specifications; the Green Guide creates an un-level playing field for 'Green' materials, which could otherwise have a beneficial effect on the environmental impact of the industry.

The Green Guide's interpretation of an assembly of parts as a specification means if you are looking for specification clauses then you will be disappointed. National Green Specification provides product pages and specification clauses for low environmental impact 'green' products and if they have had their environmental impact assessed and receive an A rating then this will be identified.

Brian Murphy BSc Dip{Hons+Dist}
Founder of Green Spec

Lesson Three: How Specification Can Prevent Projects Going Over Budget – by Howard de Mont

Projects in the public domain that have exceeded budgets include:

Channel tunnel	£4.5Bil- £10Bil
The Dome	£395M –£578M
Scottish Parliament	£ 155M+
Air Traffic Control facility	£ 350M – £ 623M.

In my opinion, if specification were considered throughout the RIBA Plan of Work, this figure would be reduced.

This is because in its current form, the RIBA Design Process only focuses on design intent, not the materials in the supporting design.

Architectural design is a double-edged process. It's the discovery of a solution, both in terms of detailed architectural drawings and the specification of materials.

Specification enables cost consultants and contractors to know what they are providing, pricing and delivering.

Specification defines what a building will be made of and subsequently its cost, forecast or contract sum. This is because a project's cost relates to the materials, quality and quantity, rather than a concept, which is what a client pays for. In other words, the clearer the information, the better the forecast.

Unfortunately, many tender invitations consist only of drawings or a quantity surveyor's opinion of cost rather than a detailed specification, which can remove any element of doubt of cost or cost risk items.

We need to examine the way design information flows through architectural organisations, as often specification writers are only brought in after costings and the programme have been finalised.

Howard de Mont, AA Dipl, RIBA
Founder of the Specifiers' Design Forum and
Specification Facilitator at Benoy Architects

Lesson Four: How to Specify Sustainability – by Brian Murphy

A specification is a verbal description of a design team's interpretation of a client's brief into a building design that is to be recreated on site. With different procurement methods prevalent in today's market, including Build and Design and PFI/PPP and with the ever increasing desire to get on site as soon as possible and to meet increasingly tighter programmes, there is a growing need to specify by performance. This allows the Main Contractor to engage the expertise of specialist sub-constructors and their design teams and to transfer the design responsibilities to those other parties.

In these situations creating specifications can include transferring requirements all the way back from the Client's brief into a Performance Specification or Employer's Requirements that set objectives or targets to be achieved during construction and in the final building. It may also include writing prescriptive specifications of materials and products to be used in the building, if it is prudent to cross reference to the requirements of the Performance clauses to which they relate.

In an industry where Specification substitution is habitual and widespread, specifications need to be robust and policed by robust Contract Administrators to ensure the brief is met by the construction. Equivalency is the key word here: substitutes have at least equal characteristics to the specified product or material, to ensure the Client expectations and design team's interpretation are delivered.

Examples of environmental characteristics may include some of the following extreme targets: Low Whole life Cost in preference to Low initial cost, Zero or low waste, zero ozone depletion potential, no need for heating or cooling, zero or low carbon technologies in use, 100% renewable energy in use, autonomy from utility supplies and disposals, 100% FSC certified timber with chain of custody to the site, Low allergy materials, Zero PVC, etc.

When the inevitable substitution rounds begin they need to be managed carefully by competent evaluators, who are willing to see beyond the offer of a discount and require the constructor to provide evidence of equivalency comparing the characteristics in the specification clauses with the alternative manufacturer's literature, or 3rd party test or accreditation evidence. Dedicated specifications describing all of the standards, performance characteristics, 3rd party accreditations and environmental criteria are essential to the success of the defence of the client's brief but only as important as the robust defence of them by the contract administrator.

Brian Murphy BSc Dip{Hons+Dist}
Founder of Green Spec

Lesson Five: Why the London Olympics must avoid the Greek experience –
by Howard de Mont

The organisers of the 2012 London Olympics must not follow Greece's lead by not effectively addressing key issues at the right time.

Unless effective planning over material supply is taken into account and an integrated specification strategy is introduced, London may face a desperate race to the finishing line in 2012.

The Greek capital Athens resembled a large building site fewer than six months before the games were due to commence. The Greek authorities were slow out of the blocks after being awarded the Games in 1997; they only made it by the skin of their teeth.

Without a co-ordinated industry approach, with specification being considered throughout the design cycle rather than half way through the project, delays and misunderstandings will occur.

A detailed specification should guide any tendered project towards the designer's expectations of performance and/or quality and eliminate many issues related to design compliance.

It also acts as the yardstick against which work is examined for compliance in the monthly valuations, and at the end determines Practical Completion if the works are in accordance with the specification.

In other words, the specification is not only a design instrument but also a compliance-measuring device.

Consequently, on-site work will have been correctly priced, programmed and procured, for a satisfactory completion on time and on budget. If a tenderer has been informed in detail, he can submit satisfactory tenders.

We are pleased to hear the London Olympics procurement strategy includes specifications, at competition design, procurement and legacy stages thus we are pleased to see specification is part of the design process

Mini Course: Post Script

The Specifiers' Design Forum's free design mini-course is officially over.

We hope that you found the course useful and that it helped you better understand specification's crucial role in the design process. If you did, we promise that you'll derive far more benefit by attending the Specifiers' Design Forum's annual conference in May.

Picking up where the mini course left off, the conference, which is valid CPD, will take place at Jury's Hotel London WC1B 3NN. The conference will explore the crucial role specification plays in issues related to design, project management and sustainability.

We'd like to take this opportunity to introduce you to some of the conference speakers, all of whom are leading industry figures in their fields.

Michael Foster, AA Dipl, MA, RIBA, MCSD, Architecte DAA (France)
Partner of The Tooley & Foster Partnership

Michael Foster is one of the UK's leading key opinion formers in the architectural industry. He has taught at many design schools, including The Royal College of Art and The Architectural Association and has been external examiner at a number of leading schools of architecture. He is editor of the book 'Principles of Architecture: Style, Structure and Design'.

President of The Architectural Association 1989-91, a Trustee of the Geffrye Museum 1990-97 and Secretary of the Standing Conference of Heads of Schools of Architecture 1996-03, Michael has a wide knowledge of commercial and educational, high quality residential and Listed Building projects in particular.

Mike Foster will be the conference Chairman.

Alan Jones, BSc (Hons)
SKM Anthony Hunts

Alan Jones has a broad experience of using different materials and structures including in-situ and pre-cast concrete, timber frame and structural steel, with a particular interest in glass, reinforced plastics and fabric structures. He has lectured extensively and written papers for the Institution of Structural Engineers.

His experience in concrete resulted in the commission of a number of exciting projects where the material was used as an important part of the environmental control system. This is illustrated by the Jubilee Library, Brighton, which received awards in 2005 from The Concrete Society and the British Construction Industry Awards where it took the Building Award and the Prime Minister's Better Public Building Award. Other recent work has included major Millennium Commission projects, most notably the Eden Project.

Since 1995 Alan has been responsible for the civil and structural design of the infrastructure and all the buildings on site including: Two Biomes; Link Restaurant; Visitors' Centre; the Eden Institute Building; Staff Facilities Building; the Core (education building) and various canopies/walkways.

Seminar: Alan will be discussing how he's used specification as a design instrument on some of the UK's most visually interesting structures including the Jubilee Library, the Eden Project, the Rolling Bridge at Paddington and the Waterloo International Terminal.

Howard de Mont, AA Dipl, RIBA

Founder of the Specifiers' Design Forum and Specification Facilitator at Benoy

Howard holds an Architectural Association Diploma and over the last twenty years has written specifications for projects with a cumulative value in excess of £2,000 million.

His portfolio includes: Bluewater shopping centre, the Bullring in Birmingham, Kuala Lumpur International Airport, the BA World Cargo and BA HQ at Heathrow Airport.

Within the industry, Howard is regarded as one of the protagonists on the role specification plays in the design process and is regularly approached to give professional lectures across the UK.

Seminar: Howard will be discussing how the RIBA Plan of Work could be updated to reflect a more modern and integrated approach to the design process.

Peter Caplehorn RIBA

Technical Director, Scott Brownrigg architects

Peter is the Technical Director and heads Scott Brownrigg Technical Services with additional responsibility for Scott Brownrigg Safety Management. With over 20 years experience at Scott Brownrigg he has become increasingly involved with technical innovation and compliance.

His involvement in conceptual and detailed design has always focussed upon 'buildability'. His management of many projects, notably airport, office and the refurbishment of large facilities, has led to building close relationships with clients and occupiers faced with potentially disruptive programmes.

Seminar: Peter will be discussing how specification can control the qualities of a project through description data and processes.

Brian Murphy BSc Dip Arch(Hons + Dist)

Founder of National Green Specification

An architect by training and specification consultant by choice for the past 20+ years, his portfolio includes various large-scale projects across the UK, including the New British Library.

For the past four years, Brian has developed his knowledge of environmentally sound design and construction, conveying his learnings through the National Green Specification. He has developed a DTI, WRAP, Envirowise and GO-East funded interest in waste prevention, minimisation management,

reclaim, reuse or recycling of products, materials and packaging and offers over 300+ Environmentally Sustainable Construction seminars as CPD topics.

Seminar: Brian will be examining the 'perceived' barriers to sustainable design and specification.

Dominic Meyrick

MSc Bachelor of Arts {Honours in Design for industry}

Lighting Principal/Associate Partner of Hoare Lea

Dominic Meyrick has a Master's Degree in lighting design (Bartlett School of Architecture). He is currently the Lighting Principal of Hoare Lea Lighting – a specialist, independent lighting consultancy with an extensive portfolio of projects, among them London's Apollo Victoria Theatre (which won a Lighting Design Heritage Category Award), the London School of Hygiene and Tropical Medicine, North Hertfordshire College and Manchester Airport. Work currently in progress is the Cube in Birmingham.

Seminar: Dominic will discuss the need for product specification at an early stage in the design process in order to ensure the visual impression both the designer and user require.

Andrew Stanway

Property Developer and Psychologist

Seminar: Andrew Stanway, a psychologist, will examine what influences a client's motivation, unconscious drives and aspirations when specifying high-end residential developments.

Yours sincerely,

Howard de Mont, AA Dipl, RIBA

Founder of the Specifiers' Design Forum and

Specification Facilitator at Benoy Architects

