Construction Resources and Waste Roadmap 2008

May 2008

construction resources & waste platform

The Coffee Perfect building, Osnabrück, Germany. Courtesy of A. Ost

Eurocodes

How to use them and how to realize their potential for your business

Owen Brooker, Technical Director, Modulus

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Eurocodes are standards – not design guides

To the user of a BS, the Eurocodes have a very technical feel to them. This is because they are written to give the basic design requirements; setting out the rules which should be adopted. In many ways the former BSs go a step further and provide design guidance, design aids and are in fact far more like design manuals. Many Europeans would expect the information found in BSs to be found in textbooks or design manuals. This approach means that it is often necessary to have a Eurocode and some guidance, such as the relevant Published Documents, open at the same time.

Uncertainty of member resistances

Another challenge is knowing what sizes are appropriate at the start of the design process and here an experienced engineer needs to know if their existing 'rules of thumb' are still appropriate. In practice, whichever code of practice is used the end result should be a design which gives more or less the same sizes. The Eurocodes represent an evolution, rather than a revolution and therefore some reduction in member sizes might be an outcome, but any reduction of more than 10–20% should be a warning sign. An experienced engineer will still be able to use their rules of thumb and over time may modify them.

Overcoming the challenges

The first step in overcoming these challenges is to acknowledge that the Eurocodes are now British Standards, and are increasingly being adopted around the world and not just in Europe. The next step is to actually make a start in using them; unfortunately there is no short cut. It is only through use that they will become familiar and easier to use. This is the hardest part because initially there is a large investment of time for little reward. However, as will be explained later there are benefits that can be achieved from using the Eurocodes and once they have been adopted, usage becomes easier. A brief summary of some of the most significant implications for many of the Eurocodes is given in Table 3.

Salivary Complaints

10

Introduction

Saliva is essential to oral health, and patients who lack salivary flow suffer from lack of oral lubrication and defences, resulting in dysfunction and infections. Drugs are the most common cause of a reduction in salivary flow, but there is a range of less common causes. Salivation may be stimulated by using chewing gums, diabetic sweets or cholinergic drugs that stimulate salivation (sialogogues), such as pilocarpine. Salivary substitutes may help symptomatically. Care is needed to prevent caries, candidosis and sialadenitis. Causes of salivary gland swelling include inflammatory lesions (mumps, ascending sialadenitis, recurrent parotitis, human immunodeficiency virus (HIV) parotitis, Sjögren's syndrome, sarcoidosis), neoplasms, duct obstruction and sialosis.

DRY MOUTH (Xerostomia)

Patients who lack salivary flow suffer from lack of oral lubrication, affecting many functions, and may develop oral and salivary gland infections as a consequence of the reduced defences.

Aetiology

Dry mouth is a common salivary complaint, although objective evidence of xerostomia may be lacking. There is a range of causes of a reduction in salivary flow (**Table 10.1**), but drugs are the most common cause. Extreme xerostomia may be seen, for example, in patients taking lithium for manic depression. The cause for which the drug is being taken may also be important. For example, patients with anxiety states or depressive conditions may complain of a dry mouth even in the absence of drug therapy or evidence of reduced salivary secretion.

Patients who have received head and neck irradiation for neoplastic conditions often develop a dry mouth, especially when both parotid glands fall within the field of irradiation.

Diseases affecting the salivary glands, such as Sjögren's syndrome, sarcoidosis, HIV disease, hepatitis C virus (HCV) infection and graft-versus-host disease, may also cause a dry mouth.

Clinical Features

A number of features are characteristic of xerostomia:

Table 10.1 Causes of dry mouth.

IATROGENIC

Drugs

- Anticholinergic drugs, such as tricyclics, phenothiazines and antihistamines
- Sympathomimetic drugs, such as some antihypertensive agents
- Cytotoxic drugs
- Anti-HIV drugs

Irradiation

- External beam irradiation to neoplasms in the head and neck region
- Iodine-131 for treatment of thyroid disease

Graft-versus-host disease

DISEASE AFFECTING SALIVARY GLANDS

- Sjögren's syndrome
- HIV salivary gland disease
- Sarcoidosis
- Cystic fibrosis
- Salivary gland aplasia
- HCV infection

DEHYDRATION

- Severe diabetes
- Others

PSYCHOGENIC

termed 'sicca syndrome' (**Table 10.4**). The most common type of Sjögren's syndrome, however, is secondary Sjögren's syndrome (SS-2), which comprises dry eyes and dry mouth and a connective tissue or autoimmune disease, such as:

- rheumatoid arthritis
- systemic lupus erythematosus
- systemic sclerosis
- mixed connective tissue disease
- primary biliary cirrhosis.

Complications

- Candidosis, which is common, may cause soreness and redness of the oral mucosa.
- Dental caries, which tend to be severe and difficult to control.
- Salivary gland enlargement as part of the disease (**Fig. 10.5**).
- Ascending (suppurative) sialadenitis may result from bacterial infection ascending the salivary duct.
- Pseudolymphoma, which is a massive swelling of the salivary glands, associated with enlargement of the regional lymph nodes.
- True lymphoma (non-Hodgkin's, termed 'mucosa-associated lymphoid tissue' tumour (MALToma)) may result if the B-cell lymphoproliferation becomes malignant.

Table 10.4 Features of primary Sjögren's syndrome compared with those of secondary Sjögren's syndrome.

- Connective tissue disease: absent
- Oral involvement: more severe
- Recurrent sialadenitis: more common
- Eye involvement: more common
- Lymphoma: more common

Figure 10.5 Salivary gland swelling.

Diagnosis and Management

The diagnosis of Sjögren's syndrome is made mainly from the history and clinical examination, but investigations may also be needed, and thus specialist referral warranted. A similar clinical picture may be seen in HIV or HCV disease, or sarcoidosis.

Investigations may include:

- Autoantibody profile (for rheumatoid and antinuclear factors, and anti-Ro and anti-La antibodies). Anti-Ro in particular is found and, if other antinuclear antibodies are present (such as RF), the patient may have secondary Sjögren's syndrome.
- Haematological investigation to exclude anaemia.
- Erythrocyte sedimentation rate or plasma viscosity (raised).
- Biopsy of labial salivary glands.
- Salivary gland studies (**Table 10.5**).

It is desirable to control the underlying autoimmune disease, although currently this approach

Table 10.5 Sjögren's syndrome: typical salivary studies.

Investigation	Findings
Salivary flow rate (sialometry)	Reduced
Labial salivary gland biopsy	Focal lymphocytic infiltrate (may help to predict lymphomas)
Scintiscanning (scintigraphy)	Reduced uptake of technetium
Sialography	Sialectasis

CHAPTER 12

INFECTIOUS DISEASES

Management

Any patient strongly suspected of having meningitis should be seen in hospital as soon as possible, even if there is a possible alternative explanation for the patient's condition, e.g. otitis media.

The vast majority of pyrexial patients will be found on history and examination to have no features of meningitis, and most will have an obvious alternative diagnosis. Treat as appropriate. Take the opportunity to advise the patient or the parents of the features of meningitis.

Close family and school contacts should receive rifampicin 5 mg/kg 12-hourly for 2 days.

For suspected meningitis give benzylpenicillin i.m./i.v. 600 mg under 2 years of age, 1.2 g over 2 years) immediately, before arranging urgent hospital admission. If allergic to penicillin, give cefotaxime i.m/i.v. 50 mg/kg under 12 years of age, 1 g over 12 years.

Administration

The hospital should notify the Environmental Health Department.

Meningitis is a notifiable disease.

SCARLET FEVER

Scarlet fever has become less common over the last 50 years. It is caused by a β-haemolytic *Streptococcus*, group A.

The incubation period is 2–4 days.

Diagnosis

History Ask about: • sore throat • rash • flushed appearance • headache • vomiting.

Examination Look for: • tonsillitis with flecks of pus • tender cervical lymphadenitis • a furred tongue initially, which becomes red and smooth later • a bright pink skin rash with tiny red spots (punctate erythema), which spares the circumoral region • skin peeling, especially on the hands and toes, after a few days.

Q:

Complementary and Alternative Medicine

Q: *The macrobiotic diet. My father has metastatic colon cancer. I have been researching different types of therapy, including nutritional therapy. Is the macrobiotic diet safe and has there been a scientific study into it?*

The macrobiotic diet is a very restrictive vegetarian diet. As with any diet that limits food choices there is the potential for nutrient deficiencies. Consequently, if you follow the diet you should consult a registered dietitian to make sure you are getting all the nutrients you need (protein, vitamins, and minerals). If deficiencies exist, adjustments can be made to the diet to ensure it is nutritionally complete. Macrobitics is not limited to just foods; it is also a philosophical and lifestyle program that includes exercise and meditation. Thus, going to a macrobiotic school or instructor is generally suggested.

Making dietary and lifestyle changes is difficult enough for a person who is well, but can be a hardship for a sick person such as your father. Also, a plant-based diet may be hard for a person with a gastrointestinal cancer to tolerate. If your father wishes to try the diet you may be able to adjust the regimen to his needs. However, if he is not committed to the diet these issues would only provide more stress and upset.

So far no studies have shown that the macrobiotic diet can cure cancer. However, the National Institutes of Health is studying the diet. Certainly plant-based diets have been shown to have a role in preventing cancer (as well as other chronic diseases) and a person who works at maintaining their nutrition status after a cancer diagnosis may be better able to deal with cancer treatments and generally feel better. ■

Katrina VB Claghorn, MS, RD

> “a plant-based diet may be hard for a person with a gastrointestinal cancer to tolerate

3. How much waste is generated, reused and recycled?

Although there are numerous data sources that can be used to determine the amount of construction resources used, wasted, and managed through different recovery routes, these data vary hugely in terms of scope, frequency, reliability and accessibility.

Ideally, data would be available to provide national baselines on waste generation, so that targets could be set for waste reduction and measure improvements in future years.

Unfortunately, only a limited dataset exists and this is of little help when determining priorities for resource efficiency, other than primary aggregate replacement. In particular, there is little breakdown of current data, which also excludes most of the materials that would be classed as 'active' i.e. attracting a higher rate of landfill tax. Fundamental knowledge gaps are illustrated in Table 2.

Waste management and efficient use of materials are issues facing all sectors of industry in England. The relative impact of construction sector waste, when set against overall waste arisings in England, is shown in Figure 2.

As Figure 2 shows, construction and demolition account for the single largest waste stream, with additional construction-related waste included in the 'industrial' (construction product manufacture), and 'mining & quarrying' (primary aggregates/raw material production) sectors.

When producing this roadmap, attempts were made to refine the waste stream further into:

- construction
- refurbishment
- demolition waste.

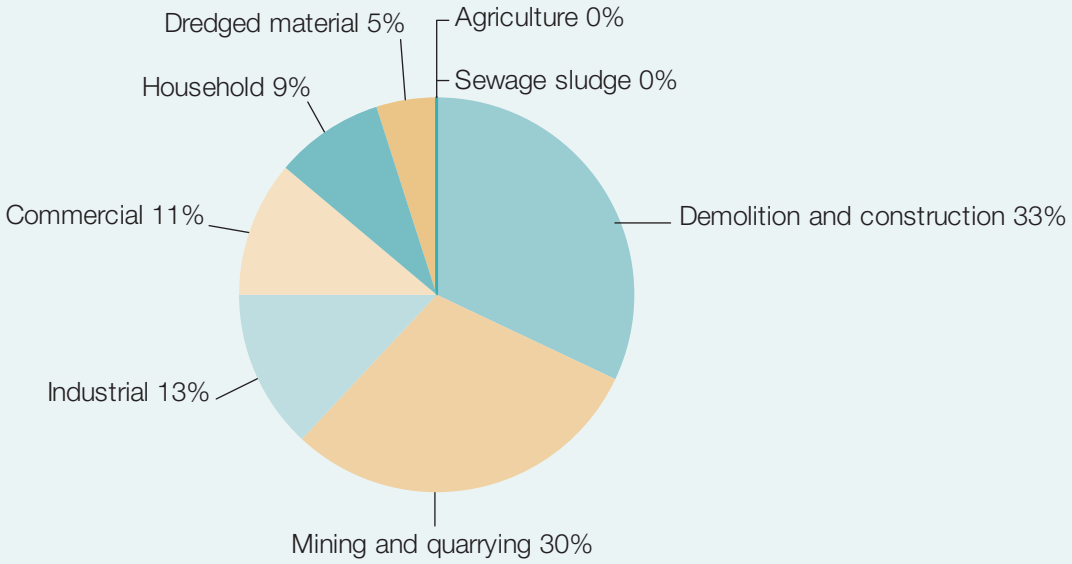
The Construction Waste Compendium (Annex 1) reviews most of the disparate sources of data using a consistent format. The key findings are summarised in this Section, with the following provisos:

- It was possible to extrapolate waste benchmark data for new housing construction waste. However, attempting the same for housing refurbishment waste was not possible because of a lack of data

Waste generating activity	Inert waste: aggregate potential (Mtonnes)	Active waste: non-aggregate potential (Mtonnes)	Overall amount (Mtonnes)	Total
Construction	Currently unknown	Currently unknown	Currently unknown	Currently unknown
Demolition	Currently unknown	Currently unknown	Currently unknown	Currently unknown
Refurbishment	Currently unknown	Currently unknown	Currently unknown	Currently unknown
Excavation	Currently unknown	Currently unknown	Currently unknown	Currently unknown
Total	89.63 million ± 9%*	Currently unknown	Currently unknown	Currently unknown

*National estimates of construction, demolition and excavation waste (CDEW) recycled by crushers and/or screens, used/disposed of at landfills, and spread on Paragraph 9A(1) and 19A(2) registered exempt sites in England in 2005 (million tonnes). Source: *CDEW Survey of Arisings and Use of Alternatives to Primary Aggregates in England 2005* (CLG, 2007).

Table 2 Knowledge gaps



* Total waste arising estimated to be around 272 million tonnes per annum. Source: combined data from a number of sources (2004–2007) in the Waste Strategy for England 2007 (Defra, 2007).

Figure 2 Estimated waste arisings in England by sector

on levels of activity. Other refurbishment activities were not considered due to a lack of data.

- Using data from the NFDC (NFDC, 2002) and BigREc Survey (Salvo, 1998) produced an overall waste arising from demolition of around 26 million tonnes per year. However, when compared to the CDEW Survey (CLG, 2007) there is a gap of over 60 million tonnes which is unaccounted for.

Construction products

Knowing the amount and types of resources being used by the construction sector is a fundamental starting point. AMA Research was commissioned to draw together relevant data and this is summarised in Table 3 (overleaf) and discussed in Annex 2.

The only complete dataset is for 'value'. This, of course, is of use when identifying key construction products (Figure 3).

Headline figures

Based on this research, the headline figures for construction products are:

Headline figures: construction products 2005[3]

Total mass = 376 million tonnes

Total recycled/secondary mass = 80 million tonnes (or 21%)

Total value = £28 billion

Previous data was collected in 1998 (Biffaward & Viridis, 2002) using much of the same primary data source (Prodcom reports) but not the same methodology. Here the headline figures were:

Headline figures: construction products 1998[3]

Total mass = 363 million tonnes

Total recycled/secondary mass = 65 million tonnes (or 18%)

Total reclaimed mass = 3 million tonnes

[3]Note: data gaps mean these headline figures are less than actual figures (see Annex 2).

Integrated transport and the 10 Year Plan

Understanding the issues

What is integrated transport?

It depends
who you are,
where you are,
what you want it to be,
what you want it to do!

If you're the public, rightly or wrongly you probably think it means one or more of the following, the choice depending on what sort of journey you've just had:

- A seamless journey using different means of transport, which will readily take you (and whoever you want to go with) wherever you want to go, whenever you want to go (and of course get you back – even late at night and at weekends) with minimum hassle.
- A means by which:
  - public transport will be more attractive and convenient
  - congestion will be reduced so that it's no longer a problem
  - trains will run on time, be reliable, clean, comfortable and safe
  - much freight will be shifted from road to rail
  - we – not you of course – will give up our cars in favour of public transport, cycling or walking
  - all the country's transport problems will be solved.

And what about the M1, M6 and the M25 and all those other blocked up motorways, and me getting from here to there?

That comes under the heading '**inter-urban**'. Here it's split between rail and roads.

For rail:

A bigger, better and faster *railway*:

- higher standards of safety, service and comfort
- reduced crowding
- the Channel Tunnel rail link plus upgrading of the East and West Coast lines
- improved protection and warning systems
- a 50% increase in passengers
- an 80% growth in rail freight
- cross rail links.

That target for a 50% increase in rail passengers over the 10 year period of the Government's transport strategy is, however, pretty meaningless on two counts:

- It fails to relate it to any qualitative terms – not comfort, reliability, seating availability, cleanliness, frequency or speed. The majority of passengers – certainly commuting passengers – want improvements in quality, not more people being squashed into already overcrowded, grubby carriages with uncertain departure and arrival times.

18 February 2002. Stephen Byers published Rail Performance Indicators …

- punctuality and reliability
- safety
- quality – the average age of the rolling stock.

Byers said: 'This set of indicators focuses on the issues that matter most to passengers: punctuality, reliability, safety and quality …'.

But what a way to measure quality! The age of the rolling stock! Really! Is that it? And there are no targets for improvement whilst the base benchmarks are so low that it will be practically impossible not to show some improvement over time!

Investment in the London Underground

£16 billion to be spent upgrading the Underground … but that's over 15 years – roughly £1 billion per year.

There were 970 million passenger journeys made in 2000–2001, so the planned investment is about £1 per journey. (Meanwhile it's losing 29p on every journey made.)

Editing *matters*

The magazine for editors and proofreaders Nov/Dec 2007

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In this issue: the latter-day equivalent of 'Dear Diary'? Not according to **Louise Bolotin**; when and for what do you need permission? **Sylvia Sullivan** advises; **Chris Shaw** blows the cobwebs out of the workings of the information exchange; **Rod Cuff** discovers the true meaning of a skyscraper; plus news, reviews and all the other regular features.

£3.50

Alexandra Boyd, actress, interior designer and eco-consultant.

How green is your home office?

Alexandra Boyd

In my work as an eco-interior designer and green lifestyle consultant, I often find that clients understand that there is a need to do something about global warming but think that one person changing this or that is not enough to change the world. The fact is, the planet's natural resources are not going to last forever, and some of the more vital ones are becoming scarce and therefore more expensive. We all need to start being smart about how we use those resources. If everyone made a few small changes to his or her everyday life, the cumulative effect would be enormous. So, here are a few suggestions.

If you are a freelance working from home, you already have a lower carbon footprint than your neighbour who commutes to the city every day. Working from home, there are many ways to save energy – and this is your domain, so you have control. Heating, water and electricity aren't going to get cheaper anytime soon, so, if for no other reason than to lower your bills, it's worthwhile making some of these changes.

Suppose you finish your coffee and toast (Fairtrade and organic, of course!) and walk upstairs to the third bedroom in your house, which you use as your office. You turn on the computer because you did not leave it in sleep or standby mode – which would have been a waste of energy – and set to work.

First of all, is your workspace bright enough? When I design workspaces, this is one of my first considerations. Do you have to switch on a light to work? Change the bulb to a low-energy compact fluorescent one, of course – but also think about ways you might be able to gain more natural light in the room. Studies have shown that people are happier and more productive when they work in natural light. If the light is bad because of a heavy window treatment, consider removing the curtains and replacing them with a discreet roller blind to stop solar gain if the sun streams in during summer, making the room too hot, and to help with insulation and draughts in the winter. My favourite solution to low light, especially in workspaces such as offices and kitchens, is a skylight. Skylights allow more light into a room for a longer part of the day, and so, not only are you working in a more pleasantly lit space, but you switch the electric light on later in the evening, thereby saving energy.

You may edit on screen, so you save paper there. If you print your work, the paper you use should be the recycled kind. But do you recycle that paper before you recycle it again? Make a pile of old pages, turn them over and use them to print out other not so important documents. Also, a good rule of ▶ 5

Blogging – more than a diary

Blogs have been one of the hottest trends on the internet in recent years, and, while that trendiness may have peaked, they are evolving and becoming a very useful professional tool, writes Louise Bolotin.

To the uninitiated, a blog is an online diary, written in chronological order (as in a traditional diary) but with entries appearing in reverse order (ie the newest ones appear at the top of the web page and older entries fall off the page into an archive). The name comes from combining and shortening the term 'web log'.

The earliest blogs appeared in the mid-1990s, chronicling the private lives of pioneering online diarists. Community blogging sites such as Live Journal and Blogger.com cater for such bloggers. Live Journal is popular among online diarists because it offers control over one's privacy. You can set your blog to be fully public, accessible only to a predetermined list of friends or somewhere between the two. Blogger.com doesn't provide privacy control, but, being owned by Google, it offers its bloggers the added bonus of net searchability.

Live Journal remains limited in appeal, with most blogs on there being strictly personal diaries of little interest to the wider world. By contrast, Blogger.com has become the home of niche bloggers who have something of interest to say to the general public and write on specialist topics or about their work. Many blogs that started out as private niche blogs on Blogger.com have become worldwide hits and turned into blooks. At least two of these revolved around the world of work – Belle de Jour's blog about her life as a high-class prostitute was published as *The Intimate Adventures of a London Call Girl*, and has now been made into a TV drama series, while Tom Reynolds' blog Random Acts of Reality, about his work as a paramedic, was published as *Blood, Sweat and Tea*. What they both have in common is the anonymity of the author, as do countless other blogs that lift the lid on what goes on in many workplaces.

The media and business

Press coverage by technology journalists on the blog phenomenon led to more people blogging. There are currently estimated to be more than 200 million blogs worldwide, with roughly 120,000 being created each day. Blogging has changed the way that we use the internet, as people now expect to interact on the web rather than passively consume. It has also changed the functionality of many web tools. For example, Google has changed its search algorithms to favour websites that carry regularly updated content, such as blogs.

The media has actively embraced blogging in various forms. The *Guardian* was one of the first UK newspapers to put specialist staff blogs on its website. Its 'Comment is free' section offers freelance journalists a paid slot to blog their opinions on the latest news. Reader comments are actively encouraged, just as on amateur blogs. Most other national newspapers now run similar features. The BBC website also uses staff blogs to explain editorial decisions or deal with other relevant issues for licence-payers.

Citizen journalism is a spin-off from the blogosphere. Some citizen journalism appears on media websites – how often have you surfed the latest breaking story on BBC Online to see, at the bottom, 'Are you there? Can you tell us what is happening?' More often, a paper's own staff bloggers will mention blogs that are commenting on the news as it unfolds. Citizen journalism offers instant eyewitness accounts of developing stories. The Virginia Tech school shootings in spring 2007 were first reported by students blogging as they hid in classrooms from the gunman.

Business blogging is on the rise. Many major companies now publish blogs by high-ranking staff, although these are often ghostwritten by professional writers for money. Blogging is a very useful tool for

Glossary

blogfeed – a means of distributing (eg using an RSS feed) new and changed blog content to a wide number of people.

blogger – one who blogs.

bloggerati – the blogging elite.

bloggies – the most well-known blog awards.

blogosphere – the blogging community. Occasionally called blogspace.

blogroll – a list of other blogs (admired or related) on a blog.

blook – a blog that has been published as a book.

citizen journalism – amateur reportage of news by bloggers.

vlog – a video blog.

Web 2.0 – the second-generation internet, which is interactive rather than passive.

WYSIWYG – 'what you see is what you get', said of user-friendly blog editors that allow a blog to be edited directly on screen without requiring users to see or edit the underlying code.

sfep

Editing Matters

the magazine of the society for editors and proofreaders

upholding editorial excellence

Sep/Oct 2015

Time off for good behaviour

A revised career break option that reflects the new membership grades will be proposed at this year's AGM. How would it work?

Working full-time is hard enough without the added worry of young children or elderly parents to be nurtured and taken care of. Sometimes, for all manner of reasons, we just need a break from our everyday routines.

Many companies offer their employees a career break – and a similar feature was provided by the SfEP, offering members a chance to have some time off while 'stepping down' to a lower level of membership.

When members were being consulted about the new membership grades last year, some expressed concern that the notion of a career break did not seem to feature. A question was asked about this at the last annual general meeting, and a commitment was made by the SfEP council to present a career break proposal at this year's AGM for approval by the membership.

A link to the proposal on the SfEP website was circulated in July so that members could have a chance to read it and consider anything they might want to query at the AGM.

Restricted to PMs and APMs

The career break would be applicable only to Professional Members (PMs) and Advanced Professional Members (APMs); previously, it applied only to Ordinary and Advanced Members – so, no change there. It is aimed at PMs and APMs who feel that they need to suspend their professional editorial career for a certain length of time so that they could, for example, look after young children or elderly relatives, undertake further education or move abroad: whatever would involve taking time off. The break would last for a maximum of three years.

> "Sometimes we just need a break from our everyday routines"

No minimum period of membership would be necessary before a member could take advantage of a career break, and, apart from in exceptional circumstances, it could only be taken once. It would not be mandatory for someone taking advantage of this option to reveal why they wanted to do so, although the Society would ask when an application is made, but only for statistical reasons. Again, the requesting member would not need to supply that information. All that would be required is that the member taking the career break not work or look for work as a copy-editor or proofreader during the break.

Lower subscription

The member taking the break would become an Entry-Level Member (ELM) in order to retain their contact with the SfEP, and would enjoy the benefits applicable to that grade. They would pay the ELM subscription rate, currently £100, and would not be allowed to advertise themselves as a PM or APM during their break. At the end of the agreed period they would return to their original membership grade (PM or APM).

Starting or finishing a career break could only be done at subscription renewal time in March. No retrospective applications would be considered, nor any refunds given. If there were a complaint against a member while on a career break, it would be investigated in the normal way – should the complaint be upheld, the member might have to do further training, mentoring or a test before being allowed to regain their previous membership grade. □

Or see another side of the coin?

The words on the previous page show a perfectly rational point of view. Why should we demean ourselves by accepting low rates of pay when we have well-honed skills that we have taken time and care to build up? But, as other SfEP members point out, there is another way to look at this whole issue and to ask: is it so bad to accept a lower rate, especially at a particular stage of our career?

Theresa Hurst, a Professional Member of the SfEP, started her freelance career by copy-editing articles for a technical journal published by a well-known academic publisher. 'The publisher paid a measly rate per thousand words of £6.30', she says. 'At first I thought my "take-home" pay might improve as I became faster, but in fact this didn't really happen as I was editing non-native English for the most part, which required a considerable amount of work. I stuck with the work, as it gave me some income and experience while doing the PTC's "Basic proofreading" course, and the experience went a long way to helping me upgrade to ordinary membership. Soon after upgrading and obtaining an SfEP Directory entry, I was approached by a couple of other clients, and I was able to drop the first client.'

Luke Finley, an Intermediate Member, became a full-time freelance just a year ago. He already had some experience working for the public and voluntary sectors but also wanted 'the experience of "proper" editing and proofreading within the publishing industry itself'.

'So far,' he says, 'the publishers who have responded to my approaches – either directly or through project management companies – have tended to be the lower-paying ones. I've had others who said they'd consider taking me on once I had more experience, so I figured I'd have to accept the poorly paid work in the short term. I've taken around eight jobs in the last year at the kind of rates that tend to raise eyebrows on the SfEP forum, half of them proofreading and half copy-editing, and largely thanks to this not-ideal work, I'm now able to go to those others and demonstrate the experience they were looking for.

'I think the low-paid jobs were worth it in the end, because they've fast-tracked me to the stage where I can approach the better-paid work with confidence in my own abilities and a reasonably impressive portfolio of work in a range of disciplines.'

For **Guy Manners**, an Entry-Level Member, accepting a lower-paid job led to a double opportunity. 'When I was still a freelance in 2010,' he says, 'I took on a job offered by my former employer (albeit seven years after I'd left). The job was well below my preferred rates, but I took it on for two reasons. First, it involved a trip back to West Africa, which is always desirable in my book. Second, I reckoned that the time I spent with the client (also a good friend) would give me some leverage to negotiate a "long-term" contract, and that's exactly what I did. This client became my mainstay up to the point when I became an employee again (not with the same company) two and a half years later.'

In the early stages of her career, **Lisa Robertson**, an Entry-Level Member, says that she knows 'that there are publishers, organisations and individuals who are just looking for a cheap option, and that this undermines the professionalism of many colleagues and the high quality of their work. However, it seems to me that as long as there's choice, it shouldn't be frowned upon to undertake low-paid or voluntary work.'

Jill Cucchi, another Entry-Level Member, offers her experience from the other side of the fence. Living in France with a young family and having previously had a career in archaeology, she started doing some copy-editing for a friend of her husband, and didn't know what to charge. 'Somehow I arrived at the figure of 10 euros per hour. I decided this was an OK amount as I was pretty slow – checking every comma/semi-colon/capital/spelling/etc – and I only took on non-urgent work.' She is now taking on more work and charging 25 euros an hour, and will probably increase this rate after she has done a copy-editing course and gained more experience.

'I think charging a low rate has helped me elbow myself into the marketplace,' she adds. 'In order to gain experience, I think you need to market yourself lower than the average, sometimes much, much lower and sometimes for free. In my case, and maybe I've just been very fortunate, I've had only positive experiences of doing this.' □

BV Advance

Issue No. 1 September 2010

The newsletter for subscribers to
Advancing Best Value in the Built Environment

Welcome

Welcome to the first issue of *BV Advance* – the newsletter for all subscribers to the Best Value Guide.

BV Advance aims to:

- Back-up information provided on The Guide's Web site (http://www.icenet.org.uk/bestvalue)
- Keep you up to date with:
  - Emerging best practice on many fronts
  - Changes in legislation
  - Suggestions for improving The Guide
  - Amendments/corrections to The Guide
  - Case studies
  - Conferences/seminars/training opportunities
  - Benchmarking opportunities
- Provide a:
  - Focus for debate on related issues
  - Further means for subscribers to network and share ideas

We will publish this newsletter four times a year, in February, May, August and November.

To be effective it will need your input as well as the editor's, so please send us your ideas, articles and requests. If something needs improving, changing or including – tell us. You can make contact:

- **Primarily** via The Guide's Web site (http://www.icenet.uk/bestvalue – click on 'Forum' and just follow the instructions)
- Through the ICE Secretariat, Elinor Goodchild at the Institution of Civil Engineers (see last page for contact details)
- Through myself, the editor (David Green, e-mail DavFGreen@aol.com)

Don't hold back – as a subscriber you can help:

- Make the Guide better – easier to use, even more relevant
- Identify and make happen a whole raft of add-ons and new initiatives which you and others would find helpful

We now have approaching 300 subscribers from both the public and private sectors,
and expect to be up to 400 by the year's end. That's a big network. Make use of it. Don't fall behind in Best Value in the Built Environment. Advance, and help others to advance, by contributing and becoming involved in this Subscribers' Club, and get the most out of The Guide and your subscription by proactively participating.

David Green, Editor

> We are looking for volunteers to form a small but representative **Editorial Panel** to steer the development of The Guide and take a lead in several new and related initiatives. If you'd like to be part of it, or have something to offer, let me know – rapidly. (Further details are given later in this newsletter.)

As well as the Editorial Panel there will be further opportunities to get involved – particularly on specific issues. Here are the first few (more details herein):

- We've been asked by the Minister for Local Government, Beverley Hughes, to put forward ideas and help develop **tender evaluation techniques** – taking into account price and quality.
- The Audit Commission is keen for us to develop and advise on **performance indicators for the built environment** – acknowledging that the published national ones still leave a lot to be desired.
- The European Commission is redrafting the **European Directives on Public Procurement**, and we have an opportunity through the European Council of Civil Engineers (ECCE) to help make the UK's voice heard.
- Many authorities are seeking to introduce **performance measurement** – for management and contract monitoring as opposed to national PIs, targets, etc. – in many white-collar type services (e.g. transportation/highway management/engineering and architectural design/planning/development control, and would welcome ideas/experience and the

Contents

From silos to sense: a review of how some fundamental service review programmes have been restructured

When authorities started to consider the mechanics of carrying out fundamental service reviews there was a natural leaning towards the straightforward approach:

1 service = 1 review

This led to a simple agenda that could focus clearly on service issues, challenge the relevance of service provision methods, compare with other services elsewhere, create a 'simple' consultation (for officers at least) and give a focus for the competing issues. Unless a complete departmental-size service was chosen (e.g. highways, planning, etc.), all this would lead to is an unmanageable number of service reviews over five years.

In some councils, total thematic groupings were chosen for the service review basis. This has in some cases lead to services being left out, or at least marginalised within the process.

Where the silo option had been adopted, the basic results were:

- many small scope reviews that were too detailed, with the fundamental issues being lost in the plethora of details
- too many reviews, which stretched the available resources
- a focus on individual services mitigated against the linkage of related services, many of which were faced with the same issues
- reviews could not take sufficient (or an integrated) account of any council identified cross-cutting themes
- reviews were throwing up thematic issues and dealing with them on an *ad hoc* basis, rather than a corporate one.

During the middle of 2000 the Best Value Inspectorate made it clear that it would not be able to inspect such a large number of reviews, therefore councils need to find ways of reducing the number of reviews. ○

David Shearer, Technical Services Manager, Kennet District Council

Rethinking the construction client: The National Debate 2001

To coincide with the publication of the Toolkit, the Local Government Task Force is organising a series of debates later this year to help public clients rise to the challenge of meeting the Rethinking Construction targets. The debates will be held in Brighton, Cardiff, London, Cambridge, Glasgow, Derby, Bolton, Birmingham, Bristol, Leeds, Durham and Belfast, and run from 9 October to 22 November. For further information, please contact:

The National Debate
Rethinking Construction
108–110 Judd Street
London WC1H 9PX

Tel.: 020 7837 5702
Fax: 020 7813 3060
Email: laura.shann@rethinkingconstruction.org

Or visit the Rethinking Construction Web site at www.rethinkingconstruction.org. ○

Rethinking Construction: Implementation Toolkit

As part of your subscription to The Guide you should have recently received a copy of the *Rethinking Construction: Implementation Toolkit*, which has been issued by the Local Government Task Force (LGTF) and is designed to help local authorities introduce and implement Rethinking Construction alongside Best Value. The LGTF is sponsored by the DTLR, and the Toolkit (written by David Green under the guidance of the LGTF) comes with impeccable credentials, being endorsed and recommended by:

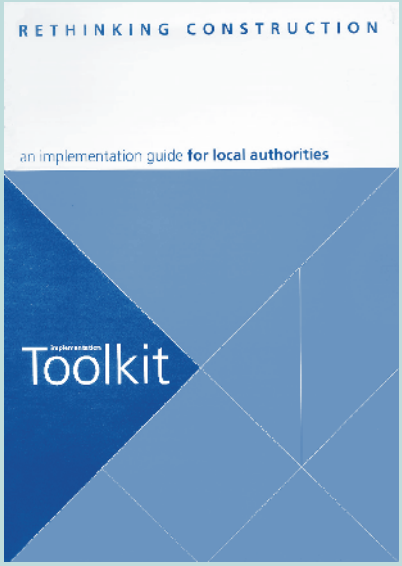
- Audit Commission
- DTLR
- Local Government Association (LGA)
- Construction Best Practice Programme (CBPP)
- Chartered Institute of Public Finance and Accountancy (CIPFA)
- Office for Government Commerce (OGC)
- Improvement and development Agency (IDeA)
- Commission for Architecture and the Built Environment (CABE)

It's superbly designed and produced, and within its 60 odd pages it includes:

- 15 basic tools for use by clients and in-house technical services/consultancy staff **plus**
- 3 special tools for use by financial and legal staff, decision makers and auditors **plus**
- 3 attachments for in-house service providers – both technical services and contractor DLOs

You'll find it complements The Guide and that The Guide complements the Toolkit. Use them both!

If you would like to obtain additional copies of the Toolkit, priced at £19.95 each, then please contact Steven Cross (tel.: 020 7665 2480, fax: 020 7538 4101, email: steven.cross@thomastelford.com). ○



Biometrics Standards Today

Sept 2010
VOLUME 1 ISSUE 1

In this issue

BSI
Business Information

BSI hosts fifth ISO/IEC JTC1/SC37 meeting

SC37 is a synonym for "Biometrics standards production". Set up in 2002, SC37 has met annually to work on biometrics standards, with its working groups meeting every 6 months to progress their development.

Meetings are hosted by standards institutions and generally rotate between the Far East, Europe and the Americas. The last meeting was hosted by BSI in London, 2 to 11 July 2006. The previous one was in Sun City, South Africa, and the next will be in Wellington, New Zealand.

The production of international standards is an important process, designed to produce consensus across all countries on the technologies to standardize and the details of the standards. The availability of international standards enhances the market for biometric products by providing a level playing field between vendors and allowing procurements to proceed on a competitive basis with less tie-in to the successful vendor.

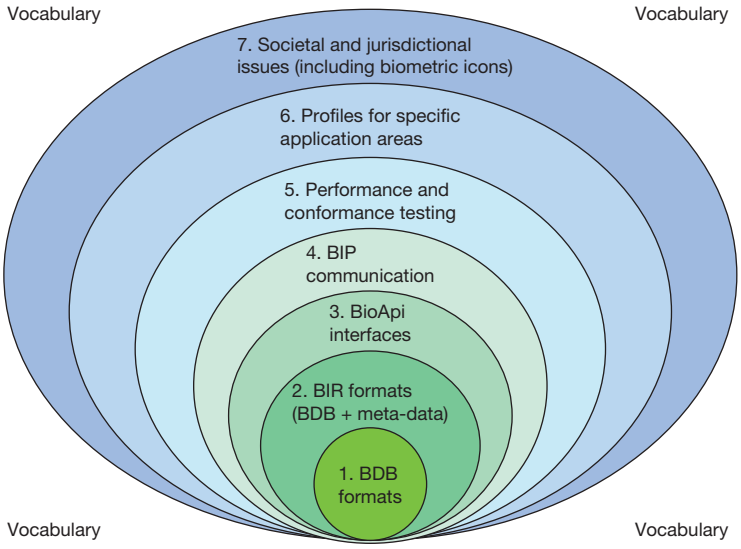
BSI is very active in the promotion of international standards in emerging technologies, including both nanotechnologies and biometrics.

The SC37 meeting in London was attended by 155 delegates from over 20 countries. Meetings frequently extended into the early evening on many days.

Attended by 155 delegates from over 20 countries.

There were two main social events, allowing less formal discussions. The main sponsors for the London meeting were BSI, DTI, IBM and BT.

At the second social event, the Parliamentary Under-Secretary of State for nationality, citizenship and immigration, Joan Ryan (see photograph), and representatives of IBM and BT (introduced by the BSI Marketing Director, Frank Post) provided keynote speeches.



The architecture of SC37 standards; the layers broadly relate to the WG structure

Biometrics and security

When biometrics was a novel and experimental technology, developer and implementer interest was mainly focused on how well it worked and how to get it to work better. However, the imminent deployment of biometric technology on a large scale, particularly by governments with biometric passports, visas and ID cards, has changed priorities and currently there is much interest in factors such as usability, universality and security.

The reason that biometric technology is being incorporated into these programmes is because of the inherent property that biometrics possess: providing a direct rather than an indirect form of authentication (such as that provided by passwords and tokens). This so-called *binding strength* is high for biometrics, which can provide high assurance that the person presenting the credential is the rightful owner. By comparison, passwords and tokens are readily lost, stolen or shared and consequently have low binding strength.

Governments are very mindful of the need to ensure adequate levels of security for the biometric and other elements of these high profile applications, both to safeguard business processes and to provide public confidence in the deployment of systems. The security of most IT components is generally well understood, but biometric technology, being relatively new to this type of application, does not have a similar level of understanding.

What is biometric security?

Understanding what security means for biometric systems and applications, and highlighting differences from the traditional IT security model, is currently exercising minds. Biometric identification and verification is a probabilistic process, meaning that errors will sometimes occur. For applications where such errors have security implications, the probabilistic error rate will be one factor in the security model.

For an access control system an operational false accept error means that an impostor will be granted access to the assets. Conversely, when an application uses biometrics to prevent individuals establishing duplicate enrolments under different names – e.g. multiple passports or ID cards – a false rejection error during the enrolment checking process can result in a failure to detect the duplicate enrolment attempt. These examples illustrate the security relevance of the basic false accept rate (FAR) and false reject rate (FRR) performance figures and how this relevance depends on the function being provided by the biometrics in the business process.

Major government biometrics programmes coming on-stream

Understanding what security means for biometric systems and applications, and highlighting differences from the traditional IT security model, is currently exercising minds..

Of course biometric performance is only one factor in the security model. More skilled, technical, attacks can be mounted against a biometric system to attempt to "spoof" the system by means of an artefact containing a copy of another individual's biometric characteristic, e.g. a silicone or gummy finger, or by mimicking someone's voice in the case of a speaker recognition system. Other, electronically based, attacks may be possible by substituting bogus electronic input in place of signals flowing between the capture device and the rest of the system – a so-called capture/replay attack – or by subverting the database containing the biometric enrolment reference data to plant or manipulate the data in order to effect an illegal enrolment, or to copy protected information. Of these attacks, only spoofing and mimicry are truly specific to biometric systems; the electronic attacks are variations on those already well-known to non-biometric IT systems. Solutions are available: for spoofing, liveness detection is a technical countermeasure that can be employed and supervised operation is an effective procedural countermeasure to many forms of attack. For electronic attacks, solutions include use of cryptography for digital signing and encryption of data to prevent alteration or disclosure.

One important difference between using biometrics and other forms of authentication such as passwords and smart-cards is that biometric data, being intrinsically linked to individual identity, is personal data (as defined in the European Union Data Protection Directive and the UK Data Protection Act (1998)). Complying with the Data Protection Act means that

Contd on p. 5 ...

Fingerprint: genuine or gummy?

BSI Data Protection Guide 2006 – Annual Subscription

This guide will provide you with guidance for the implementation of the Data Protection Act (DPA) itself and will also deal specifically with areas such as email policy, database management, subject access and e-commerce.

BSI order ref. BIP 0012
Price £350 + VAT

Coming Soon – BSI Data Protection Guide online
The full content of the Guide will be available online. Access to the online guidance is included **FREE** as part of your subscription.

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