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FROM EDITOR

Dear Readers

Last month we celebrated the success of IBB Polonia London VC who won the title of the National Volleyball Champion. Their National Cup and Championship defence and an excellent result in CEV Challenge proved how hardworking and engaged the team is. We are proudly supporting IBB Polonia London VC and encourage our readers to become active fans. What's more, IBB sponsors IBB Polonia London FC. The club is achieving fantastic results, and their popularity is growing amongst little football players. Read more about our sponsorship activities and IBB clubs every month in our sports section.

Right now General Election is the main topic. Home Builders Federation and The Institution of Civil Engineers published their proposals for all political parties on important issues for the UK construction industry. The building sector is the vital contributor to the economy. Current issues of skills shortages or housing crisis should be a priority for the Government. Read about HBF and ICE manifestos to make more informed decision on the voting day.

Moreover, June edition seeks to cover the topics of innovative construction like BIM, The Cloud, Offsite solutions, Drones or IBB Estimator tool. Digitalisation of the building industry is happening. It cuts costs, speeds up processes, allows for better collaboration, eases the procurement process, etc. The advantages are countless. If you do not understand it, soon you will be left behind. Worth reading.

In case you missed the IBB Estimator guide included in our 2016 editions, the first



chapter on the account registration is here. For more information visit ibbestimator.uk

Technology section covers soundproofing. Inside the comprehensive guide on acoustic metal frame system with examples of stud walls and suspended ceilings solutions. Follow our detailed guidance for the best acoustic solution for your house or flat. Cost calculations might be handy for your projects too. Just as a remainder in case of any questions contact our experts in IBB depots for professional advice.

The health and safety standards have to be met by all construction businesses. Lack of adequate procedures might result in accidents and high costs. According to the HSE, falls from height are the main reason for work-related fatalities in the UK. Noncompliance with the Health and Safety requirements might be extremely costly. Read about RIDDOR law and start to record and report if necessary.

Magdalena Rosól
Editor

We are the winner ...



2016's Most Innovative Business Leaders



Most Trusted Building Merchant 2016



2016's Most Innovative Business



Finest in Business Awards 2016



Most Cost Effective Building Merchant UK 2015

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The Future of the Built Environment (6-7 June, Olympia London)

VISION 2017

One of the most sought after architect industry expos

Vision 2017 is the construction industry event focused on innovative products, materials and technologies. It will be held in Olympia London on 6th and 7th June. The programme and exhibition are CPD certified and centred around three main themes - Materials Innovations, Technological Insight and Architectural & Design Evolution.

VISION 2017 brings together over 80 major brands and innovative start-ups.

VISION 2017 attracts architects, contractors, designers, engineers, house builders, property developers, clients, surveyors, retailers and all involved in the building sector.

VISION 2017 offers Meetings Programme

which enables visitors to pre-arrange and book meetings with exhibitors. **VISION 2017** is CPD certified event.

VISION 2017 is over 70 hours of free seminars. During the event, the RIBA will be hosting presentations and debates targeting housing and sustainability. BRE will target the main issues facing the construction industry today, and New

London Architecture will be presenting the annual PechaKucha. Moreover, the London Festival of Architecture will be bringing their 2017 Festival theme 'Memory' to Vision.

VISION 2017 is free to attend and you can register for ticket at visionlondon.com

Source: www.visionlondon.com



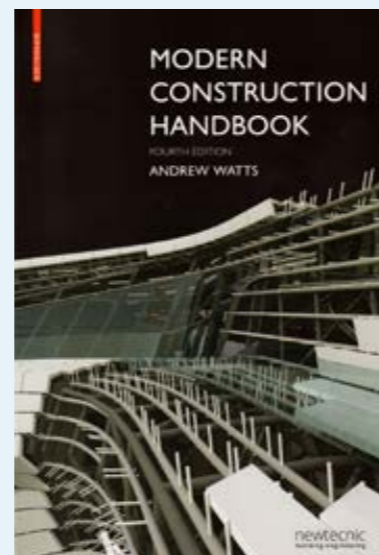
BOOK REVIEW

Modern Construction Handbook

by Andrew Watts 24 May 2016 edition

Highly recommended reference book containing case studies of innovative construction projects with detailed explanation of technical details, energy efficiency solutions and complex construction issues. All presented projects are designed by the well-known and respected architectural practices

like Zaha Hadid, BIG, Jean Nouvel, Gensler, Lab Architecture Studio, RMJM Architecture, Nordic Office of Architecture, etc. Rich in illustrations, photographs, 3D graphics, diagrams etc. Ideal reading for those who are looking for new approaches to building construction.



Construction Skills Academy by Mayor of London

Mayor of London, Sadiq Khan, plans to establish later this year a Construction Skills Academy in London as part of his Skills for Londoners programme to answer the skills shortages within the sector. It will help to close the gap between the demand for new housing in the capital and the need for more skilled construction workers. It will be set up in collaboration with industry experts.

Sadiq has also established a Skills for Londoners Taskforce comprising business leaders and employers, skills and education experts and London government representatives. The taskforce will develop a city-wide strategic approach so that Londoners and

businesses can access the skills they need for future success.

The Skills for Londoners Capital Fund will provide £114M in funding to deliver improved equipment and facilities at further education colleges and other education and training providers.

London has a strong, dynamic, global economy, but the region's employment rate has lagged behind the national average for three decades. More than 280,000 Londoners are unemployed, with particularly high rates of youth unemployment. London also has a growing problem of in-work poverty, associated with low-skilled, low-paid work. Ensuring an effective and responsive skills system is critical to tackling these issues.

Khan believes that an effective skills system is also critical to meeting the needs of London's businesses. Employers repeatedly report skills shortage vacancies and skills gaps in their workforce, impacting on growth and productivity. Given the uncertainty

surrounding the terms of Britain's exit from the EU, ensuring a more responsive skills system - as well as continued access to global talent - is more important than ever.

Khan said: "While London is a great place to learn, there is no doubt that not enough Londoners are getting the skills they need to live up to their potential. This also impacts businesses, hampering their growth and forcing them to look further afield for talent.

"Now that we are leaving the European Union, it is more important than ever that we make sure more Londoners gain access to the skills they and our economy truly need.

"Through Skills for Londoners, we will address these problems head-on, giving Londoners the chance to train in the skills that will boost our economy and creating a pipeline of local talent and expertise for our businesses to tap into."

To read more about Skills for Londoners, visit www.london.gov.uk/skills



Reduce costs and avoid disputes with **PROGRESSCLAIM.COM**

*Manage all contracts.
Anywhere. Anytime*

New software is available in the UK construction sector allowing for quick and easy payment claims processing for builders and contractors. The building process is complex, risky and dependent on a variety of factors so issues concerning time extensions, defects, additional costs are very common.

Builders, contractors and clients often have to deal with payment disputes. Payment disputes stop production and prolong process realisation. Cash flow problems are the main cause of business failure in the industry. Payment claim administration is time-consuming and expensive, and projects end up with the higher cost.

Progressclaim.com is the specially designated software for construction industry launched in 2011 in Australia. It connects contractors to a standard platform allowing for quicker administration of payment claims via mobile devices, laptops, tablets, etc. This payment solution enables subcontractors to be paid within two days instead months.

The platform challenges the industry norm that currently sees the subcontractor supply and pays for their labour and materials to complete work as quoted, then lodge a progress claim with the general contractor for payment that can often take between 60 and 100 days to be received.

Lincoln Easton, founder and CEO of progressclaim.com realised the mobile phones and the cloud could be handy in making the process less time-consuming. He took the spreadsheet that is commonly used in the construction industry, usually passed

around through the post or email, and made it available on the cloud, so that it could be accessible to all parties involved. The Progressclaim.com software was released at the beginning of this year, after being trialled by Mirvac, a leading real estate group, and Built, a construction company with sites all across Australia. After using Progressclaim.com at a number of these sites, Built is now operating the software at all of its building sites. CFO Emma Shipley said, "We're already using Progressclaim.com and have noticed in some projects a 40% saving in time." Despite Easton's early plans for the software pointing more towards use in the small to medium-sized businesses that make up the majority of the construction industry, since its release, large government developers and companies overseas have also registered their interest.

This powerful tool for the general contractor can be easily used for all projects. It reduces contract risks and increases profits. It is easily accessible on mobile devices and can be easily integrated with the leading software.

Progressclaim.com is compliant with construction act so it is reducing exposure to risk. Better risk control, time savings and more efficient project management.

Progressclaim.com allows for automated payment reminders every month or as set up. Also, it allows for the creation of individual applications for payment which are prepared online and backed up allowing for project documentation.

As a collaboration tool, the general contractor is the administrator of the system and sets up the contracts. The other parties are then invited to join by email. Each month automated reminder emails are sent to submit applications for payment, which are prepared online, in seconds, by simply updating completions. Conforming documentation is then produced instantaneously and delivered by email, and seamless integration with leading construction software packages provides a complete end-to-end solution.

Builders, developers, subcontractors and consultants can work simultaneously on the same, trusted and neutral platform for contract billing and approval benefiting from:

- automated payment applications
- improved payment documentation
- Construction Act risk compliance
- improved collaboration on the neutral platform
- transparency

Source: progressclaim.com

Working at height

Biggest hazard on building sites



Building Safety Group, the UK leading construction safety group providing Health, Safety and Environmental advice carried out the survey about construction site hazards. According to BSG, working at height remains the most significant danger on building sites in the UK.

The report was based on the findings of over 2,000 site inspections carried out last year, with working at height accounting for 19% of all incidents recorded. The total number of incidents in 2016 logged by safety officers was 24,634, with the second biggest breach of regulations coming in the shape of dust/fumes at 5%.

The results follow a similar pattern to latest figures on the construction industry published by the Health and Safety Executive (HSE), which placed falls from a height as the most common cause of fatalities in the workplace, despite a drop in the overall numbers.

On the last five years, 97 construction workers were killed, accounting for 45% of all fatal injuries. Falls from height were also the number

one cause of non-fatal accident related injury, responsible for 33% all non-fatal injuries, including 11% of the injuries resulting in the absence of more than seven days.

The report also revealed that the three main causes of falls from height injuries and fatalities are fragile roof lights, scaffolding and ladders – all of which are easily preventable.

Building Safety Group's Technical Manager, Chris Chapman, commented: "Working at Height is clearly the most dangerous activity carried out in the construction sector. Everyone can do more to ensure that work is properly planned, supervised and conducted by qualified workers who have the required skills for the task at hand.

"To significantly reduce the dangers of working at height, construction companies should always try to complete as much work as possible from the ground, ensure safe access and egress and importantly, make certain that any equipment used is suitable, stable and strong enough for the job."

Working at height is not only the biggest risk for contractors but also for employers. Last month Martinisation (London) Limited had been found guilty of manslaughter following the death of two workers. Tomasz Procko, 22, and Karol Syman-ski, 29, were killed in November 2014 during the renovation project for a multi-million pound flat in

London. A jury found Martinisation (London) Limited guilty of health and safety breaches and two charges of corporate manslaughter. Workers were killed as railings being used for support gave way as they attempted to haul a large sofa up over a balcony.

The project in Cadogan Square - located between Harrods and Sloane Square - was behind schedule and £400,000 over budget when the fatal accident happened, prosecutor Adrian Darbishire QC said.

Prosecutor Adrian Darbishire QC told jurors how the incident occurred: "As they hauled the sofa up about 20 feet to the level of the balcony, the workers were hauling against, and leaning over, the balustrade.

"The 130-year-old Victorian cast iron balustrade gave way and two of the men fell to their deaths on the pavement below. A third was saved only by being grabbed by his colleagues as he began to fall.

"The fact that the men were hauling the sofa up in the dangerous way that they were was the result of a long and unhappy history of neglect of health and safety at the company which employed them." Mr Darbishire described the tragedy as an "entirely foreseeable and preventable one."



Think construction toolkit

Last month, the Chartered Institute of Building (CIOB), the world's largest and most influential professional body for construction management and leadership, launched the 'Think Construction' toolkit, developed in partnership with teachers and young people to help structure careers advice sessions. CIOB aims to change the negative image of construction sector that is preventing young people to proceed with their careers in construction industry. CIOB is also targeting schools and colleges through My Kinda Future and Craft Your Future, the industry's first Minecraft lessons.

The toolkit contains films, presentations, case studies, games and other content to describe the many managerial career opportunities on offer across the sector that are open to those both with and without a degree. CIOB is also working with Inspiring the Future to provide a match-making service which facilitates introductions between

schools and CIOB members and their firms.

Jacqueline Balian, Commercial Director at the Chartered Institute of Building said:

"We are very conscious many pupils and schools are only aware of the trade level jobs in construction and that is hampering the sector's recruitment scope. We aim to show the full range

of management positions and help our members attract the new people they need.

"Now that they have clear targets in terms of careers advice, schools are looking for people to talk to pupils about careers and CIOB Members can volunteer to do that. We are particularly keen to get our Novus Members involved where they can talk in schools about their job and what it's like to work in construction. We are asking Members to give us just one hour of their time to inspire young people into the sector."

She added: "We think this will also help our members develop their presentation skills and the pack gives them all the content they need to do a really engaging presentation including video clips, games, information and presentation templates." To access the toolkit visit www.ciob.org/campaigns/think-construction

Source: CIOB



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RIDDOR

Reporting Rules

Construction sector accounts for approximately 6% of the UK workforce. Each year almost 4% of construction workers suffer from the work-related disease, and 3% sustain a work-related injury. Recording and reporting of work accidents are essential to manage and improve the health and safety in the workplace. RIDDOR is a law.

RIDDOR is the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. Reporting certain accidents is a legal requirement. Employers, the self-employed and people in control of work premises have a duty to report certain serious workplace accidents, occupational diseases and specified dangerous occurrences.

Here is the summary of reportable incidents:

The death of any person

All deaths to workers and non-workers, with the exception of suicides, must be reported if they arise from a work-related accident, including an act of physical violence to a worker.

Specified injuries to workers

The list of 'specified injuries' in RIDDOR 2013 replaces the previous list of 'major injuries' in RIDDOR 1995. Specified injuries are (regulation 4):

- fractures, other than to fingers, thumbs and toes;
- amputations;
- any injury likely to lead to permanent loss of sight or reduction in sight;
- any crush injury to the head or torso causing damage to the brain or internal organs;
- serious burns (including scalding) which covers more than 10% of the body causes significant damage to the eyes, respiratory system or other vital organs;
- any scalping requiring hospital treatment;
- any loss of consciousness caused by head injury or asphyxia; and
- any other injury arising from working in an enclosed space which: leads to hypothermia or heat-induced illness requires resuscitation or admittance to hospital for more than 24 hours.

Over-seven-day incapacitation of a worker

Accidents must be reported where they result in an employee or self-employed person being away from work, or unable to perform their normal work duties, for more than seven consecutive days as the result of their injury. This seven day

period does not include the day of the accident but does include weekends and rest days. The report must be made within 15 days of the event.

Over-three-day incapacitation

Accidents must be recorded, but not reported where they result in a worker being incapacitated for more than three consecutive days. If you are an employer, who must keep an accident book under the Social Security (Claims and Payments) Regulations 1979, that record will be enough.

Non-fatal accidents to non-workers (e.g., members of the public)

Accidents to members of the public or others who are not at work must be reported if they result in an injury and the person is taken directly from the scene of the accident to hospital for treatment to that injury. Examinations and diagnostic tests do not constitute 'treatment' in such circumstances.

There is no need to report incidents where people are taken to hospital purely as a precaution when no injury is apparent. If the accident occurred at a hospital, the report only needs to be made if the injury is a 'specified injury' (see above).

Occupational diseases

Employers and self-employed people must report diagnoses of certain occupational diseases, where these are likely to have been caused or made worse by their work: These diseases include (regulations 8 and 9):



- carpal tunnel syndrome;
- severe cramp of the hand or forearm;
- occupational dermatitis;
- hand-arm vibration syndrome;
- occupational asthma;
- tendonitis or tenosynovitis of the hand or forearm;
- any occupational cancer; and
- any disease attributed to an occupational exposure to a biological agent.

Dangerous occurrences

Dangerous occurrences are certain, specified near-miss events. Not all such events require reporting. There are 27 categories of dangerous occurrences that are relevant to most workplaces, for example:

- the collapse, overturning or failure of load-bearing parts of lifts and lifting equipment;
- plant or equipment coming into contact with overhead power lines; and
- the accidental release of any substance which could cause injury to any person.

Gas incidents

Distributors, fillers, importers & suppliers of flammable gas must report incidents where someone has died, lost consciousness, or been taken to hospital for treatment to an injury arising in con-

nection with that gas. Such incidents should be reported using the online form.

Registered gas engineers (under the Gas Safe Register,) must provide details of any gas appliances or fittings that they consider to be dangerous, to such an extent that people could die, lose consciousness or require hospital treatment. The danger could be due to the design, construction, installation, modification or servicing of that appliance or fitting, which could cause:

- an accidental leakage of gas;
- incomplete combustion of gas or; and
- inadequate removal of products of the combustion of gas.

Unsafe gas appliances and fittings should be reported using the online form.

Few examples of incidents related to construction works that have to be reported:

- The collapse of the scaffold that is over 5 meters high
- The self-employed sub-contractor is incapacitated for over seven days due to the accident on site- these should be reported by the foreman or principal contractor, but if the self-employed sub-contractor was in control of the building

site then they should report themselves

- During the construction work, the structure for concrete pouring collapses, but there are no injuries- all failures of falsework have to be reported

How to record and report?

Firstly, it is required to keep records of any RIDDOR incidents. If you are an employer, you should keep an accident book and record all accidents in it ready to show to HSE, local authority or ORR inspectors. The records must include details regarding the incident or disease, personal data of workers involved, time and place of the accident and the date and method of reporting. Records must be kept for a minimum period of three years.

The responsible person, for instance, the principal contractor should submit records via RIDDOR online reporting system on hse.gov.uk. Online form should be sent and printed for record. Fatalities and major injuries can be reported by phone. You can contact the Incident Contact Centre on 0845 300 9923. A report must be received within 10 days of the incident or 15 days for accidents resulting in the over seven-day incapacitation of a worker.

(Source: HSE)

NEC4 engineering and construction contract

The next generation of NEC Contracts will be available from this month. The NEC Contract Board's Matthew Garratt (Commercial Director with Costain) revealed that NEC4 would be launched at the NEC Users' Group Annual Seminar 2017 at the County Hall in London on 22nd June 2017.

NEC4 is the updated and refreshed version of the NEC3 contract. It has been designed based on the innovation and 20 years of users feedback to support technology, innovation and digitalization of the construction industry and enhanced collaboration. Moreover, it will reflect procurement with provisions for BIM or project management developments, emerging best practice with improvements in flexibility, clarity and the ease of administration with reduced administrative costs. The NEC4 contract will be designed for international use.

NEC3 contracts were used for iconic projects, like for instance the London 2012 Olympics, Cross-rail, Christchurch International Airport and the Halley VI British Antarctic Survey research station. The use of NEC3 and its ongoing training provision across all disciplines will continue to be fully supported alongside the introduction of NEC4 training, events and support services.

NEC4 will introduce two new contracts: NEC4 Design, Build and Operate Contract (DBO) and the consultative NEC Alliance Contract (ALC).

NEC4 Design, Build and Operate Contract (DBO) allows the procurement for whole project phases, combining responsibility for design, construction, operation and maintenance from a single supplier. It can include a range of different services to be provided before, during and after engineering and building works are completed.

The NEC4 Alliance Contract (ALC) will be pub-

lished initially in a consultation form. It was created to support Clients who wish to take a step forward by fully integrating the delivery team for large complex projects. ALC contract is designated to be used for large collaborative projects with some participants to deliver the project or programme of works.

Rekha Thawrani, NEC Contracts General Manager, commented: "The UK built environment sector stands on the precipice of a truly digital and collaboration revolution. An evolution built on the collaboration, feedback and endorsement of you, our users, NEC4 embraces the outstanding collective working practices already transforming the industry, to make them accessible, practical and affordable for all."

"Uptake of NEC products and services has grown exponentially across the globe over the last 20 years, and we pride ourselves on the fact that our innovative

portfolio will always react to and be shaped by the needs, experiences and feedback of our users.

"As part of our commitment to all our customers, we continue to constantly review ways to enhance and update our products. We believe NEC4's diverse range of definitive end-to-end project management contracts will empower users to deliver projects on time, on budget and to the highest standards now and in the future to the benefit of both industry and society."

NEC4 will help you to deliver the project on time, on budget and to the highest standards. It promotes fairness in the construction sector, helps prevent litigation and supports flexibility.

For more information about NEC4 visit www.neccontract.com

Source: The Institution of Civil Engineers



Drones in building inspections

West Sussex Council is trying drones during the bridges inspections across the county. Inspections are required every two years for the public safety. In collaboration with Balfour Beatty Living Places council carries out trials. Drones technology could cut costs of inspections and savings of approximately 8,000 where achieved on inspections at Swan Bridge in Pulborough and Adur Ferry Bridge in Shoreham-By-Sea.

Traditional methods are costly due to traffic management, while drones does not require additional workforce and reduce health and safety risks and costs. Drones record footages allowing for better inspection the condition of bridge. Cameras records drones work reviewing safety parameters in the real-time.

Protective floats are fitted onto the drones to allow them to land safely on water if necessary

and onboard GPS systems prevent encroachment into no fly zones such a airport space without prior consent.

Steve Phillips, Contract Director for Balfour Beatty Living Places, said: "Using drones in our high-ways inspection work allows us to safely assess the work required while dramatically reducing any potential hazards faced by our workforce who would traditionally carry out work such as bridge inspec-

tions at height. It's a great example of how modern technology can be successfully used by industry."

West Sussex County Council's Infrastructure Manager, Kieran Dodds, said: "The use of drones enables us to obtain the necessary information to determine our highway structures are safe for use, while reducing the risk to our inspectors who conventionally would have to use access equipment when working at height."



General election and construction industry

The Home Builders Federation (HBF), the representative body of the home building industry in England and Wales, offered proposals in 'Blueprint 2017: A plan to deliver even more new homes' for new government on how housebuilding can provide a social and economic boost.

The government should focus on the policies to allow builders to expand and to support smaller firms and new entrants into the industry. In the past three years the supply in house building by over 50% and the Government should aim to expand the output even further.

HBF's proposals include:

- Promoting policies that enable more builders to build - in particular SMEs - such that they can play their part in increasing output further

- Providing certainty about the future of the Help to Buy scheme which has been absolutely key in the increases in supply to date
- Delivering further improvements to the planning system. The time consuming and bureaucratic nature of system remains a constraint on increasing supply. Delays and costs deter new entrants and prevent construction work starting
- Developing policies that encourage more specialist homes to be built to meet the needs of our ageing population
- Encouraging better collaboration between infrastructure planners and house building. Builders pay millions each year towards improved infrastructure and more effective coordination would deliver considerable benefits for communities while accelerating delivery.

'Blueprint 2017: A plan to deliver even more new homes' sets out in detail what the new Government needs to do in each of these areas to increase supply to the level the country needs.

Stewart Baseley, executive chairman of the Home Builders Federation said; "Housing supply has increased significantly over the past three years, but if we are to raise our sights still further and better match supply to demand, Government needs to play its part.

"House builders already have a strong desire to continue boosting supply, as evidenced by the huge investments being made by the country's largest builders in the land and workforce needed to deliver additional homes. Ensuring a policy environment that promotes development will allow this investment to be sustained.

"Over decades building homes has become increasingly costly and risky as developers have been bogged down in red tape and inevitable delays. That has driven out small firms and prevented new entrants from contributing. Encouraging greater entrepreneurialism in the sector could help boost housing supply by tens of thousands a year

"The social implications of our housing shortage are becoming ever more apparent with today's young people struggling to own a home, high rental payments preventing them from saving for a mortgage deposit and ever more people in sub-standard



or temporary accommodation and on local authority waiting lists. Building homes helps address social issues, whilst creating jobs both directly and in the supply chain and delivering investment in existing communities. "Delivering more desperately needed high quality homes will both help strengthen our society and give our economy a boost in the uncertain years ahead."

The Institution of Civil Engineers (ICE) also published the election manifesto, including five key areas for all political parties to consider following the 2017 general election. These areas are skills, investment, innovation, productivity and Brexit negotiations.

The infrastructure is in the heart of the manifesto as the main drive of economic growth with the capacity to create jobs and significantly improves quality of life. ICE states that:

- The UK needs a long-term strategic approach to infrastructure provision that can cope with future uncertainties.
- Brexit negotiations consolidate the UK's status as an attractive location for infrastructure investment: Ensuring that the

Brexit negotiation process does not disrupt the healthy pipeline of projects and established models will mean that investors, financiers and developers will continue to have a positive view of the UK.

- The UK avoids a self-inflicted skills crisis: Guaranteeing the status of EU nationals working in the UK.
- The UK is allowed to become a global leader in infrastructure innovation and technology: Ensuring that infrastructure remains a priority in any Industrial Strategy, with a programme to exploit the UK's existing advantages in innovation and technology.
- Productivity and regional growth are driven through the nation's infrastructure: There is a direct connection between the efficiency and effectiveness of our infrastructure and productivity within communities across the UK. All parties should commit to delivering a Modern Industrial Strategy so that infrastructure services increase productivity.

ICE Director General Nick Baveystock said: "Effective, efficient and innovative infrastructure is at the heart of a thriving, successful and modern economy. The transport energy and housing that we all depend on would simply not function without it. That is why we are asking all parties now running for election to focus their efforts so we continue to deliver world-leading projects, on time and on budget, that change people lives for the better.

"If enacted the five areas in our election manifesto would provide the stable foundations for the UK's infrastructure sector to implement the National Needs Assessment and avoid serious pitfalls in a politically uncertain world.

"When infrastructure projects flourish, the entire economy benefits. We know that £1 of infrastructure construction raises economic activity by £2.84. The sector also helps boost employment. Every 1,000 direct jobs created by the delivery of new infrastructure boosts wider employment by over 3,000 jobs."

Source: HBF; ICE



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Estimating is the key to winning the profitable project

Estimating Mistakes

Reducing the risk in estimating

The importance of the accurate project costs estimations is unquestionable. Risks connected with undervalued projects might bring severe consequences for business financial stability. The careful step-by-step approach has to be applied to deliver an accurate estimate.

Many factors might go wrong during the cost estimation process, and the responsibility of the bad estimates falls onto the contractor. Project cost estimate is the time consuming and demanding process, but if done properly it enhances the chances of winning the profitable tender. There is a risk that

estimation can contain errors or omissions, that the works schedule will be wrongly assessed or that mistakes will come out during the construction process.

What to do to avoid mistakes in estimations?

Estimating starts with the proper understanding of building plans. Any estimator needs to know how to reads plans and specification. Moreover, drawings have to be prepared accurately by an architect.

Invest in estimating software - doing calculations by hand is out of date, inefficient and more time-consuming. IBB Estimator offers the quality.

Enhance transparency by adequate composition - the transparent structure of the estimation's positions allows for quick checks and better understanding. Clearly and logically structured quotation is easy to follow. It gives the quick access to quote items and prices.

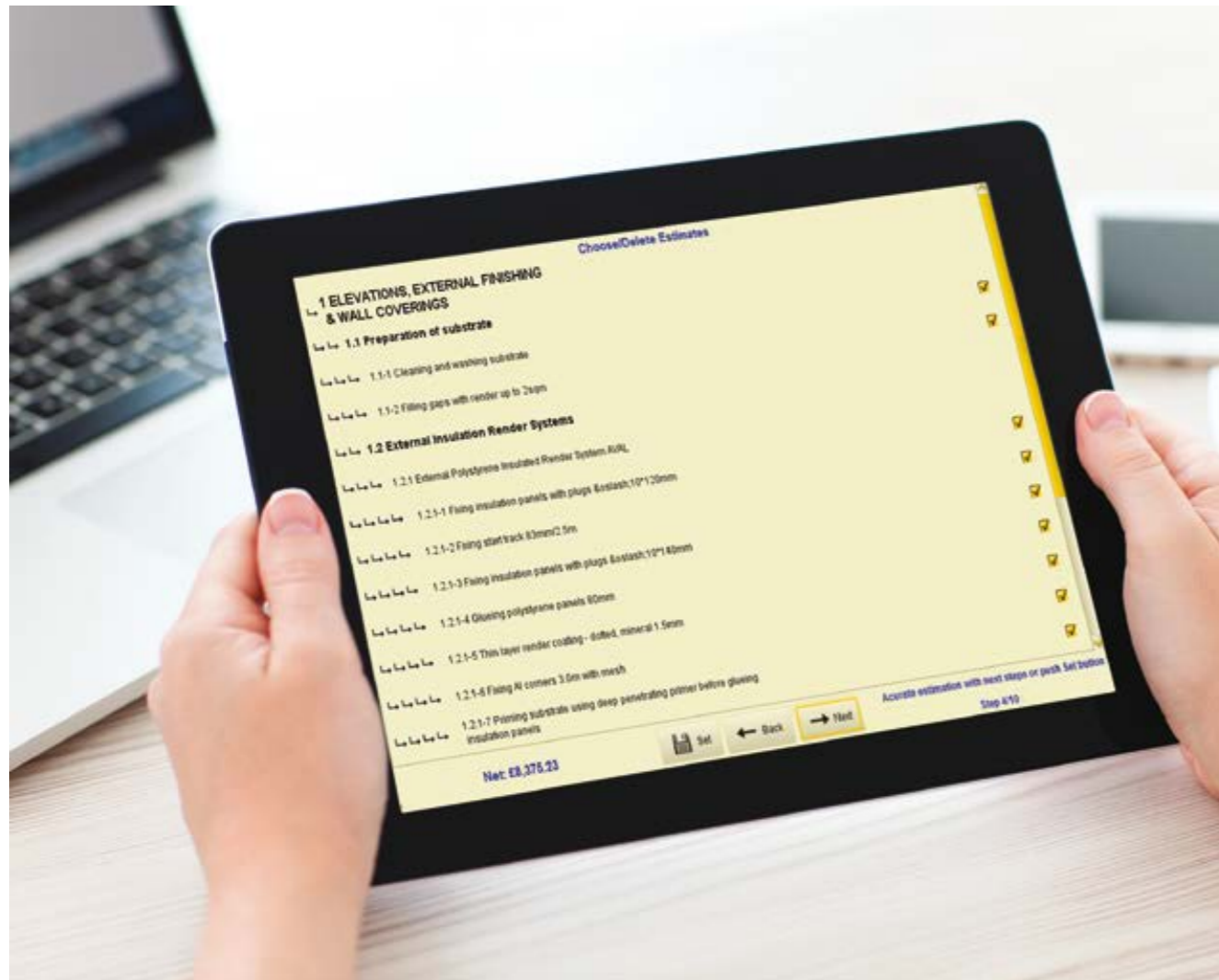
The best solution for the adequate structure of cost estimation is to use the software options-check IBB Estimator or to include cost position in a way you manage them on site.

It is practical to use the same sets of templates or drafts for all your projects and keep your data backed up so you can use it again and again as a basis for next projects. Moreover, it allows your workforce to follow the works schedule more efficiently if they are used to your documents.

IBB Estimator provides you with the properly structured templates where you can select or deselect the features that will be visible/included in your final document.

IBB Estimator keeps your data secure for next cost analysis, so you will not have to search for prices again and again.

IBB Estimator allows you to input your data or choose positions already computed.



Estimating in Excel might be risky as it is easy to accidentally alter the formula, delete cells or make other errors.

IBB Estimator contains ready-made options fully compatible with the prices on the market, or you can change them accordingly. The system allows you for checks, amendments or additions more securely. IBB Estimator can do all the estimating work for you, or you can be in the full control of the final document. You choose the extent to which you would like to improve, alter, add or delete positions in your estimate.

Store your data so you can be sure that you will be able to deliver the project within the quoted amounts. The regularly updated database gives you the certainty that the prices are in line

with materials costs and labour rates.

Always allow time and cost for the more complicated position of your estimation. Under-estimation may lead to problems with financial liquidity and delays.

Allow proper labour rates and workload to avoid losses. If work time extends beyond the estimated, it can affect other estimating positions and have an adverse impact on the project profitability.

Taking into account the digitalisation of the construction industry, BIM and collaborative working systems, computerised estimation is a must. If you are not working with IBB Estimator yet, it's the highest time to change it.

www.ibbestimator.uk

How to create an account?

1. Download IBB estimator app from App Store or Google PLAY – it's FREE.



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2. Go to "My account". You will see subscription status: Free, PayAsYouGo7days - with the date of expire or PRO - with the date of expire.



3. Click "Options" and choose Login/Register link with options:

- **Log in** - for existing users; you can use login used during registration on our website www.IBBconstruction.co.uk
 - **Register** - for new users and businesses
 - **Without registering** - if you want to test
 - **Forgot password/login** - to recover/reset password
- Please remember to read and accept **"Terms & Conditions"**



4. After registration and successful login you can go to "My account" to "Edit" section and at any time change your details.

5. If you are trade user we suggest to go back to "Option" button and next to "Builders Database" section to add company activities:

- choose your activities by clicking proper checkboxes
- upload your company Logo
- **to be visible for others, you will also need to accept displaying your business using ON - OFF slider**
- **this will allow other users of the application to find You in "Builders database"**
- at any time you can push slider back into OFF position

6. "My account" icon - will allow you also to:

- change your data or password,
- control commercial subscription if you will decide to upgrade
- archive your previously done estimation

7. To save your time we recognize your device and after your first login - we keep you permanently logged in but you can log off anytime in "My account" section.

Hopefully it will help
We are waiting for your reviews

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The Cloud in Construction

Nowadays, digitalisation of the construction sector is highly advanced. Cloud-based technologies are now mainstream. New research from Sage indicates that over half (59%) of the construction businesses it surveyed in 2016 said they already used cloud-based software or planned to do so. Only four years previously, 45% of respondents to a similar survey had said they weren't even familiar with the concept of the cloud.

Amongst reasons that Cloud is more and more popular are costs cuts and increased collaboration of all parties involved in the construction process. Cloud saves construction businesses money. In Sage's research, companies were most likely to point to the ability to access information anytime and from any location as the main reason they had moved to a cloud approach. Cloud offer more than that. Leading construction companies have been using cloud tools for a variety of reasons. Below are three examples of leading construction companies moving towards a cloud-based approach to IT

Skanska focuses on competition

Peter Bjork, vice president of information systems strategies, says that Skanska has now

moved to a "cloud first" strategy. Cloud technologies are helping the organisation to:

- compete more strongly when bidding for work
- attract new talent
- improve employee safety.

The cloud-based business intelligence software allows the company to manage key information about its business and ongoing projects, including the cost and availability of components, energy efficiency and pollution production, and the total cost of ownership for contractors throughout the bidding process. Again, the analytics software helps Skanska to incorporate more energy-efficient building materials during the construction process. This helps to generate costs savings in construction.

Moreover, Cloud allows for more efficient collaboration. Skanska highlights the importance of the close relationship with the client and constant dialogue to understand goals and influence the design process.

Skanska is also using cloud-based analytics to power its growth. It is able to incorporate a very broad range of indicators, both internal and external, into the research it does before expanding into new territories or market segments.

Costain pushes BIM advances

Costain is a leading player in Clouds for Coordination (C4C), a project to develop Building Information Modelling processes to support "level 3" BIM. This requires extensive collaboration between all parties in planning, construction,

design and other disciplines, with a single, shared project model held in a central repository. All parties have access to the model and can modify it as required.

BIM represents a huge opportunity for construction companies as they seek to overcome traditional challenges, including stringent budgets, tight deadlines and conflicts between suppliers, contractors and other parties. By enhancing collaboration with engineers, designers and others right from the beginning of any project, BIM strips out any scope for uncertainty and unpredictability and increases the potential for cost savings in construction. These benefits then continue as the building becomes operational. However, level 3 BIM requires all parties to share data via cloud-based technologies – and to develop protocols around who owns the data and who is liable for any errors in the model. Costain design and BIM manager David Owens says the C4C project has made substantial advances towards overcoming such challenges.

Balfour Beatty boosts communication

Global infrastructure company Balfour Beatty launched a five-year IT rationalisation project in 2012, standardising its end-user computing and hosting environments. The company has rolled out a completely new communications platform to allow 14,000 staff across 900 sites to talk to one another more easily, and continues to add new functionality to this system. So far, the company's cloud computing adoption has been based on private solutions, though it has increas-

ingly begun looking at public cloud options. Balfour Beatty's ambitions include greater use of big data and analytics tools, including predictive technologies, with employee safety one example of where it sees potential applications.

Above all, Balfour Beatty stresses the need for a change of mindset – a move away from a closed IT function to an environment of partnerships, with IT providers offering skills and capabilities that

businesses can tap into as and when they need them. This requires a cloud-based approach, with an "ecosystem of capability" involving every part of the business as well as partners and the extended supply chain.

The construction industry is starting to explore the benefits of cloud-based solutions after seeing how effective BIM has been in dramatically improving collaboration and reducing costs. BIM (Building Information Modelling) has been particularly successful in bringing together technology and teams to reduce waste, automate processes and improve collaboration in the design and build of new buildings. Now some are starting to see how the use of cloud services in construction can help find similar efficiencies in the production phase of projects.

How can Cloud help your business?

1. Cloud-based technologies support mobile working. Workers from different companies or on different sites can share and communicate information securely using mobile devices.
2. Construction cloud services benefit building projects with improved visibility of project progress and costs as information is brought together in one central location.
3. Cloud reduces the number of time-consuming processes like for instance paper-based applications for payment, reducing the number of errors, queries and amount of administration involved.
4. Cloud can be accessed from any location at any time on laptop, tablet or smartphone with an internet connection.
5. Standardised and automated processes that are clear and accessible to all parties can help to build strong collaborative relationships with suppliers.

Interoperability in BIM

We hear everywhere that construction industry is going digital. Building Information Modelling (BIM) is the standard for public projects, but more and more SMEs are implementing it for residential projects too. BIM is more than technology; it is a collaborative way of working. Failing to adopt BIM might result in smaller chances to win the successful projects.

The construction of the building is a complicated process as it involves work of many professionals- from architects, designers, structural engineers, surveyors, cost estimators to contractors. The cooperation between all of them is essential to eliminate errors and control risks. Each work influences the project cycle and its result. The information flows during the construction project and can be accessed and amended as required

by all parties involved. Interoperability allows for that information to be transferred and opened between various software. Level 3 BIM requires all parties to share data via cloud-based solutions and to have policies on who owns the data or who is liable for any errors. Successful project delivery is all about efficient collaboration.

NBS issued recently the NBS National BIM Report 2017, and amongst its key findings, we read that 41% of respondents use Autodesk Revit, just 14% AutoCAD. Indeed, Autodesk dominates the UK market with 66% using an Autodesk product, which said Graphisoft, Nemetschek and Bentley have a significant user base. 35% manage specification references digitally using a free plug-in from NBS.

Long BIM implementation cycles and investment in software are costly for smaller firms. Interoperability is important so such companies can invest in cheaper solutions knowing that they will be compatible with others. Interoperability is the ability of computer systems or software to exchange and open files and data. It allows for more efficient, more collaborative and more successful project delivery. Technology is the powerful tool in the construction business. Optimal results can be achieved with the advanced software and cloud-

based storage. It allows for faster project delivery, lower communication costs, reduced errors, greater reliability and transparency of data. However, the number of data exchanged is increasing. Such complexity requires a single format. Within building industry, there are two well-established data standards: Green Building XML (gbXML) and Industry Foundation Classes (IFC).

What is IFC? IFC is the data format that is neutral and non-proprietary. It is a standard that allows to describe, share and exchange construction information. This open standard is supported by numbers of various software worldwide. The data format that is widely used in the sector enables for better outputs as others may be using the same tool or convert files quickly to another format. The exchange of digital data is easier and quicker. Also, taking into account how quickly the technology in the industry is progressing opting for a standard format gives more certainty that it could be accessed in the future. What is openBIM? It involves open and documented data format for easy data exchange and the ability to import data into the tool(s) of your choice.

SOURCE: NBS



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33 countries to which we deliver windows

240 transport vehicles

5500 customers and business partners

73 mil m²
production area

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- Wide range of products - uPVC joinery, timber, ALU and complementary accessories
- Fast delivery - own logistics, as few in the industry, we supply products in 7 days
- High quality of products - certifications and approvals include ISO and CE
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- Own logistics - a modern transport fleet fulfilling EURO 6 standard, additionally equipped with forklift trucks
- Experienced panel of experts - ready to support and help at every stage of implementation, they speak more than nine languages
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Currently, the sign of its fast development is its sales network which includes partners in Poland as well as foreign customers. Products are exported, among others, to France, Belgium, Holland, Germany, Austria, Switzerland, Italy, Luxembourg, the Czech Republic, Slovakia, Slovenia, Serbia and Greece.

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Offsite Construction



The offsite solution in the housebuilding offers a different approach to the traditional construction methods. Offsite prefabrication allows for more efficient project management and reduced project delivery times. Modular structures of buildings are built offsite in the factory what allows for better waste management, standard control and reduced site constraints.

The combination of modular construction with on-site construction work is a common approach for large buildings with repetitive structural elements.

Offsite construction method can be used in projects with tight deadlines, on restricted site conditions or in projects that might be impacted by the adverse weather conditions or with repetitive structure's elements. Builders can increase the profitability of the project by choosing the appropriate construction method.

Evaluate the opportunities for offsite techniques in the construction project by analysing significant factors, drivers and constraints adequate for that particular project, for example:

- Cost certainty at an early stage
- Construction costs
- Costs of the construction process including design, procurement, construction, etc.
- More certain completion date
- Reduced time of design phase
- Reduced time of works on site
- Reduced overall time of the project realisation

- Quality of finish
- Procurement rules
- Site Restrictions- transport, materials handling, size, external parties, etc.
- Labour costs- availability and cost
- Level of quality and performance ability

What is the systematic approach to construction?

A systematic approach is the combination of traditional methods of building with offsite solutions. This approach optimises the building process and can be applied to whole buildings or elements only. The systematic approach offers advantages in terms of efficiency, cost and sustainability.

It allows for the quicker design process, less time on site and faster project commencement with more predictable completion dates. This is effective for buildings with repetitive structures like for instance

dormitories, barracks, hotels, offices. Modular elements are produced in a factory while constructions works on site allow for non-repetitive elements like stairways, electricity, lifts, etc.

When combining the two types of construction, the permanent modular portion consists of repeatable modules that are similar in design and layout. This is an effective method of construction to use for dormitories, barracks, hotel rooms, classrooms and offices, for example, because the rooms are very repeatable and they can be built in a factory one after the other with a lot of quality control. Site construction, on the other hand, allows for large open areas such as lobbies, gathering areas and common spaces. Within site built areas are elevators, mechanical rooms, electrical rooms, communication rooms, and stairways. These are spaces that are singular to the building and do not

lend themselves as well to modular construction. By using the most suitable construction type for each application, builders can increase the economy of each type.

Advantages of systematic approach include:

- Quicker design process
- Faster realisation and earlier occupation
- Predictable completion dates - e.g. not weather dependent
- Easier to meet restricted availability of site - e.g. school holidays
- Cost certainty at an early stage
- Reduced abortive work and defects
- Reduced prelims and site overheads
- Better quality resulting in reduced maintenance costs
- Reduced construction time enabling earlier occupation

Offsite technologies

Offsite technologies widely used in the business include precast concrete, steel frame, timber, volumetric modular, PODs, MEP and modular, fitting components.

Precast concrete units including structural frame, columns, panels, beams, flat slabs, etc. can be manufactured at factory and pre-finished including services, windows, doors, etc. These units can also be finished externally to match the designed building external finish. Precast concrete gives guaranteed finish and may be used with in-situ concrete or structural steel as part of the building frame and is often used to build foundations.

The steel frame is particularly widely used in the range of buildings types including hybrid constructions. Structural panels are assembled from steel sections, and light steel framing is ideal for low and medium rise buildings. It can also be used in the range

of applications like roofing or walling. The alternative to steel or concrete is glulam. Glulam consists of glued layers of parallel timber laminates. It is widely used in the construction of supermarkets and swimming pools.

Another example of offsite technologies is structural insulated panels (SIPS) that are timber based with two layers - one of OSB or cement board and the second core of polyurethane PU or expanded polystyrene EPS. SIPS are commonly used in the variety of applications because they offer the high level of insulation. Timber studs, beams, walls and floors panels can be used for the timber frame of the building prefabricated offsite. Ready made panels can include windows, openings, service routes. Such panels are often called timber cassettes and are finished with OSB and plasterboard. Walls, floors and roofing can be constructed with the cross-laminated timber- CLT panels. CLT panels are timber boards glued together, prefabricated offsite to accurate dimensions.

Prefabricated modular units can be assembled or linked together on site to complete the building structure. All interior finishes and building services are pre-installed while the external façade, claddings and roofs are usually installed onsite. Bathrooms, shower rooms, kitchens, utility cupboards, wet rooms can be mounted as pods during the building assembly on site. Prefabricated panels have all services like plumbing or electricity installed in the ceiling, walls, under the floor or in service risers. These are ready for connection onsite. All fasteners, fixtures, adhesives, seals, etc. are used to finish the assembly of panels. Volumetric modular units are used for commercial offices, public buildings, hotels, airports, sports stadiums, hospitals, universities and schools.

Skills required for offsite construction

Offsite construction techniques like offsite prefabrication and pre-assembly techniques has increased in recent years, however still accounts for only 10% of industry output. The report "Faster, Smarter, More Efficient Skills for Offsite Construction" by Construction Industry Training Board (CITB) has shown that the offsite construction could change the construction industry and provide a solution to the UK housing shortage. According to the report 42% of construction industry employers with over 100 staff expect to use offsite methods in five years' time. The offsite-specific construction materials and products, 100% said they expected the use of pre-cast concrete panels to increase; 91% anticipated the use of precast concrete frame to rise.

The industry expert Mark Farmer's recommended in the government-backed review of UK construction and reveals that nearly 50% of construction industry clients

expect the use of offsite construction to increase over the next five years.

Offsite processes save time and money and can improve quality through pre-fabrication of components - from panels to fully fitted rooms.

Mark Farmer said about the report: "This report comes at a crucial time for the construction industry. The urgency for modernisation has never been greater, set against an insidious backdrop of an ageing workforce and increasing concerns about the impact of Brexit. "Any strategic shift towards pre-manufacturing and offsite construction creates an immediate require-



ment to define our future skills needs through collaboration between industry, educators, training providers and government.

"This is crucial to ensuring we can transition to a higher productivity, digitally enabled industry which inherently attracts more of the young talent we so desperately need. It should also set out clear opportunities for the existing construction workforce and indeed workers from other industries to reskill through a new family of career pathways.

"I welcome this report from the CITB and hope it adds to the current growing momentum for industry change."

Steve Radley, Director of Policy at CITB, said: "There is massive potential for offsite construction. The Government recently announced an additional £1.4bn of funding for affordable homes, with an increase in offsite construction set as an objective, representing a clear opportunity for growth in this area. That's why CITB has set out a clear strategy within this report to show how we're going to work closely with industry over the next five years to push the offsite agenda forward.

"The greatest potential currently lies within the housing and commercial sectors, where mass customisation can create the buildings we need more quickly and to higher standards. There are also opportunities to bring the benefits of offsite to large-scale infrastructure projects - some high profile examples include HS2 and Hinkley Point, which are already using offsite techniques."

The report outlines six key skills areas related to offsite construction: digital design, estimating, offsite manufacturing, logistics, site management and onsite assembly.

Steve Radley added: "Successful offsite management hinges on the effective integration of both onsite and offsite functions - and this requires a comprehensive understanding of both aspects. Our next steps will focus on the delivery of the required employer training, knowledge and soft skills, tailored specifically to the six key areas identified in the report. This will also include a review of the available training and qualifications to make sure we address any gaps and issues. "We will also work with other stakeholders - such as in design and manufacturing - to apply existing training in a construction context. We will step up our promotion of the career opportunities offsite can offer, emphasising digital skills, to attract a wider pool of people into these key roles."

*To read the full report and CITB recommendations for the delivery of offsite training visit:
<https://www.citb.co.uk/research/research-reports/offsite-construction-report>*

The Guide to



Acoustic Metal Frame System

There is no single best choice for the house soundproofing. On the UK construction market, there are various effective acoustic solutions both for residential and commercial projects. The regulation covering the soundproofing sector is included in:

- Approved Document E (Part E)
- Section 5
- BB93
- BS 8233:1999
- Planning Policy Guidance 24

We can distinguish between sound absorp-

tion solutions and sound transmission solutions. Absorption solutions for walls and ceilings are acoustic wall panels, partitions, insulation, ceiling baffles and suspended sound absorption materials, spray on acoustic plaster, isolating devices, etc. Transmission solutions consist of resilient batens, acoustic cradles, acoustic overlay boards, and a comprehensive range of resilient layers like pre-cast concrete floors, cast in-situ concrete floors and beam and block floors. Sound get to the room from various directions and sources.

First of all, it is essential to understand sound

transmission class (STC) ratings when choosing construction materials. STC rates the materials according to their soundproofing properties. It is recommended to aim for STC rates 30-40. The range of soundproofing solutions consists of acoustic panels, partitions, insulation, cavity closers, spray-applied plastering systems or isolating devices. The structure-borne noise can be reduced with isolating strips, DPC cavity closers and clips. Insulation, plasterboard, soundproof paints or soundproofing doors and windows will block the sound transmission between internal stud walls.

Table 0.1b Rooms for residential purposes – performance standards for separating walls, separating floors, and stairs that have a separating function

	Airborne sound insulation sound insulation $D_{nT,w} + C_w$ dB (Minimum values)	Impact sound insulation $L'_{nT,w}$ dB (Maximum values)
Purpose built rooms for residential purposes		
Walls	43	-
Floors and stairs	45	62
Rooms for residential purposes formed by material change of use		
Walls	43	-
Floors and stairs	43	64

Table source: Approved Document E 2010)

Here we will focus on the sound insulation of walls and ceilings with the soundproofing metal frame system. With the metal stud wall and metal grid ceiling, we can achieve the excellent noise reduction. Noise reduction is achieved by redirecting sound waves or lower the sound waves via the objects intervening the path of sound.

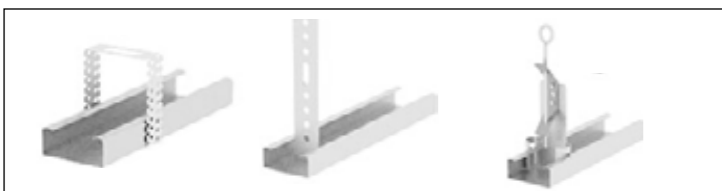
Metal stud wall

Measure and mark the guidelines on the floor, walls and ceiling where to install the wall channels (profile C) and ceilings and floor tracks (profiles U). Mark the opening of the doorway and where to install the vertical channels (profile C). Use the snips to cut the profiles where required. Screw the

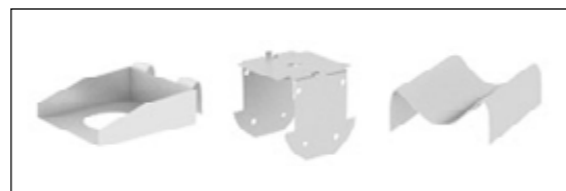
floor tracks with TEX screws no more than 600mm apart. It is recommended to use an acoustic tape for insulation. Fix the wall channels and secure them with screws placed no more than 600mm apart. Fit the ceiling tracks again with screws 600mm apart. To create the doorway insert the timber into the floor track for extra support and position the channel for the door head with drywall KSGM or KSGD screws. Insert the vertical channels into the tracks- you can properly fix them with TEX screws. Fix noggins if you require extra support. Attach plasterboards to both sides of the wall.

Dry-lining a soundproofed wall means attaching the acoustic plasterboard to a wall, which results in a smooth surface ready to decorate.

Insert insulation before fixing plasterboard what will add the soundproofing qualities. It's quicker and easier to get a perfect finish this way than with wet plaster. Using acoustic plasterboard is essential. It usually comes in blue colour, with higher density core to provide the sound blocking features. It complies fully with BS EN520 and is categorised as Types A, D. When used with resilient bars in soundproofing metal frame system it will prevent the passage of sound vibrations. To find out how to dry line check April 2016 issue of IBB Builder here: https://issuu.com/ibbbuilder/docs/ibb_builder_single_pages Fix the acoustic plasterboard to the studs or profiles with nails or screws.



hanger ES hanger WKK hanger WSO



connectors

Metal frame ceiling

Built with metal profiles, channels, connectors and brackets. For the ceiling grid construction most frequently are used metal profiles CD60 mounted in one- or two- level cross. Suspended ceiling hangers are ES brackets, hangers WSO with wire or joist hangers WKK. The ceiling can be lowered with ES brackets for profiles CD60 which are used to lower the ceiling from 75mm to 225mm. ES brackets are attached to joists or battens. To lower the ceiling from 10cm up to 2000mm-3000mm use the ceiling revolving hanger WSO and suspension wire. To create sloped ceiling use joist hangers WKK. Attach wire to joists or battens and connect with WSO hanger. In the case of ceilings with fire protection hangers, WSO nonius or ES should be used, while for the acoustic ceilings the acoustic hangers. Metal frame ceiling is constructed with the metal channels attached to the existing joists. Using spirit level or laser, mark guide lines on walls for the new ceiling. Follow steps for the required ceiling type:

Single metal grid ceiling system - Install wall metal edge channels (perimeter profile UD27 or UD30), then fix brackets to the joints at intervals of 400mm for 2400 x 1200mm plasterboards. Attached channels to the brackets (main profile CD60) and then apply plasterboard with metal screws.

Bracket high can be altered to level the ceiling appropriately.



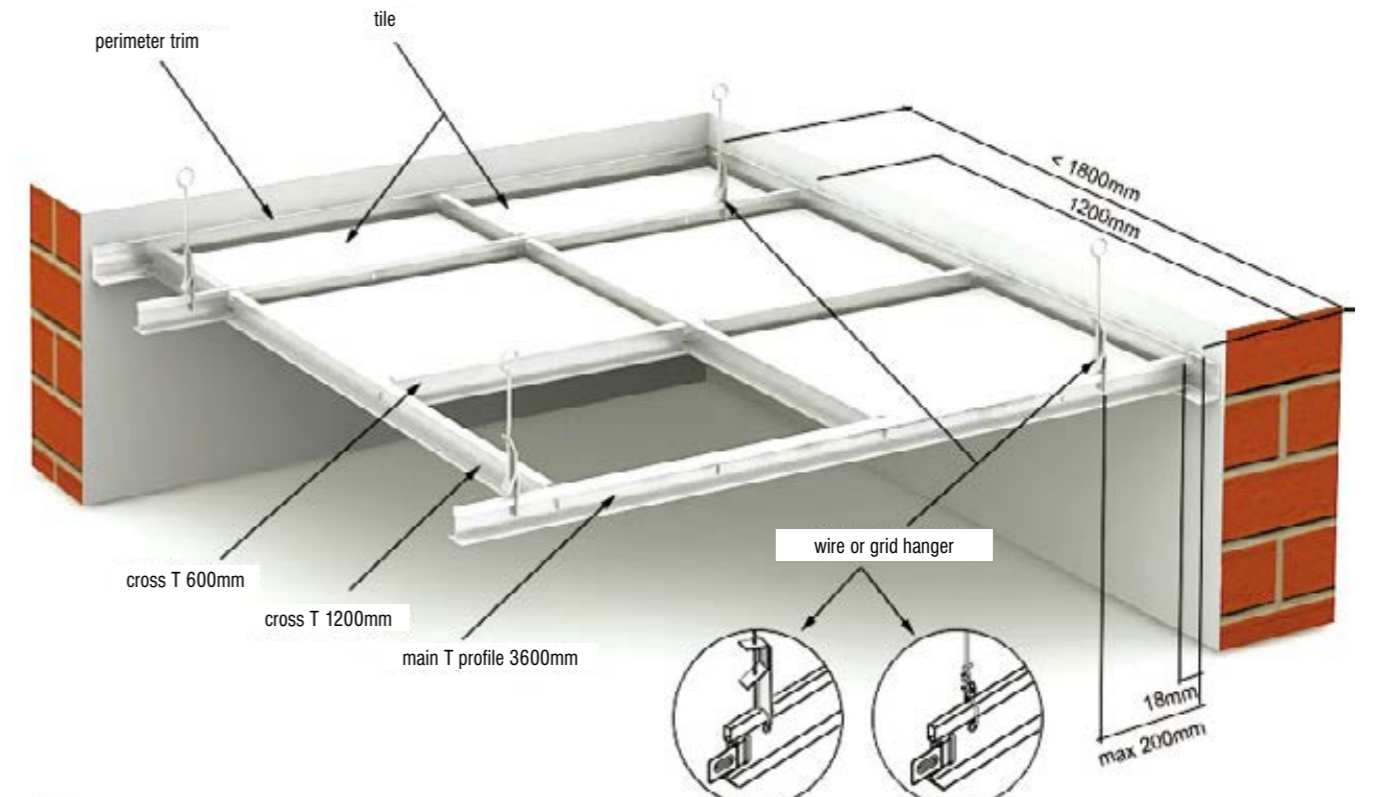
Single metal cross grid ceiling system - Install wall metal edge channels (perimeter profile UD27 or UD30), then fix brackets to the joints at intervals of 400mm for 2400 x 1200mm plasterboards. Install channels (profile CD60) on brackets every 1.2-1.5meter and add additional metal channels (profile CD60) every 400mm on the cross brackets. Install plasterboard and dry lined. Bracket high can be altered to level the ceiling appropriately.



Double metal cross grid ceiling system - Same as the single metal cross grid system but on double

metal channels (profile CD60). To achieve stronger ceiling construction use cross side connectors between main channels (profiles CD60). Such ceiling system is used for higher loading, for double plasterboards.

Resilient metal grid ceiling system - Resilient bars are designed to upgrade ceilings to Building Regulations Approved Document Part E acoustic standards, which will virtually eliminate the possibility of movement problems. Resilient metal grid improves the acoustic performance of the suspended ceiling. Resilient bars are installed directly onto the joists. Plasterboard is then fixed directly to the resilient bar, so there is no connection between plasterboard and the joists. This allows the resilient bars to vibrate and absorbs sound. This metal bar can provide the sound reduction of 10dB. Install resilient bars every 400mm directly to ceiling joists, the first gap from the wall should have no more than 200mm.



Attach plasterboards to resilient bars with screws. Acoustic hangers provide the option of resilient suspension. They do a similar job as resilient bars by stopping the direct connection of plasterboard which is fitted to the metal grid. Acoustic hangers allow for deeper depth between the suspended ceiling and the ceiling structure what allows the increased sound insulation. They reduce the airborne noise which gets to adjoining rooms or from the floor above.

Acoustic tape - a self adhesive acoustic sealing tape is used to decouple studs from surrounding surfaces. Available in thicknesses 30mm, 50mm, 75mm and 100mm. By inserting the acoustic tape in between the stud wall and the floor or surrounding walls and ceiling, the system is much more isolated. Tape reduces the vibration and flanking noise. The acoustic tape can not replace the resilient bar but efficiently increase the walls performance against low frequency vibrations and loud noise.

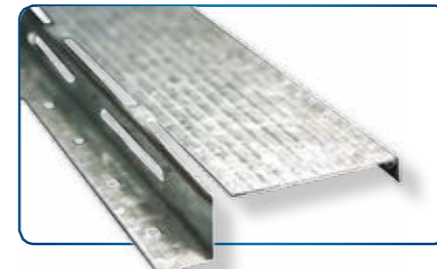
Acoustic insulation - helps achieve Part E Regulations. It is a sound absorbing infill for the reduction of airborne sound between joists, stud partitions, suspended ceiling or with resilient bar for soundproofing ceilings & walls. The first choice material for stud walls & ceilings insulation is the acoustic mineral wool. It gives the proper sound insulation if used as a part of the soundproofing system. The better alterna-

Solution	Ceiling height loss	Performance	Impact Improvement	Airborne sound
Acoustic hangers	85-91mm (ceiling retained)	Good Airborne (4db better than resilient bars)	Preferred over resilient bars when impact sound is high	Approx 18db improvement
Resilient bars	29-35 (ceiling removed)	Medium airborne	Good	Approx 16db improvement

Acoustic hanger



Resilient bar

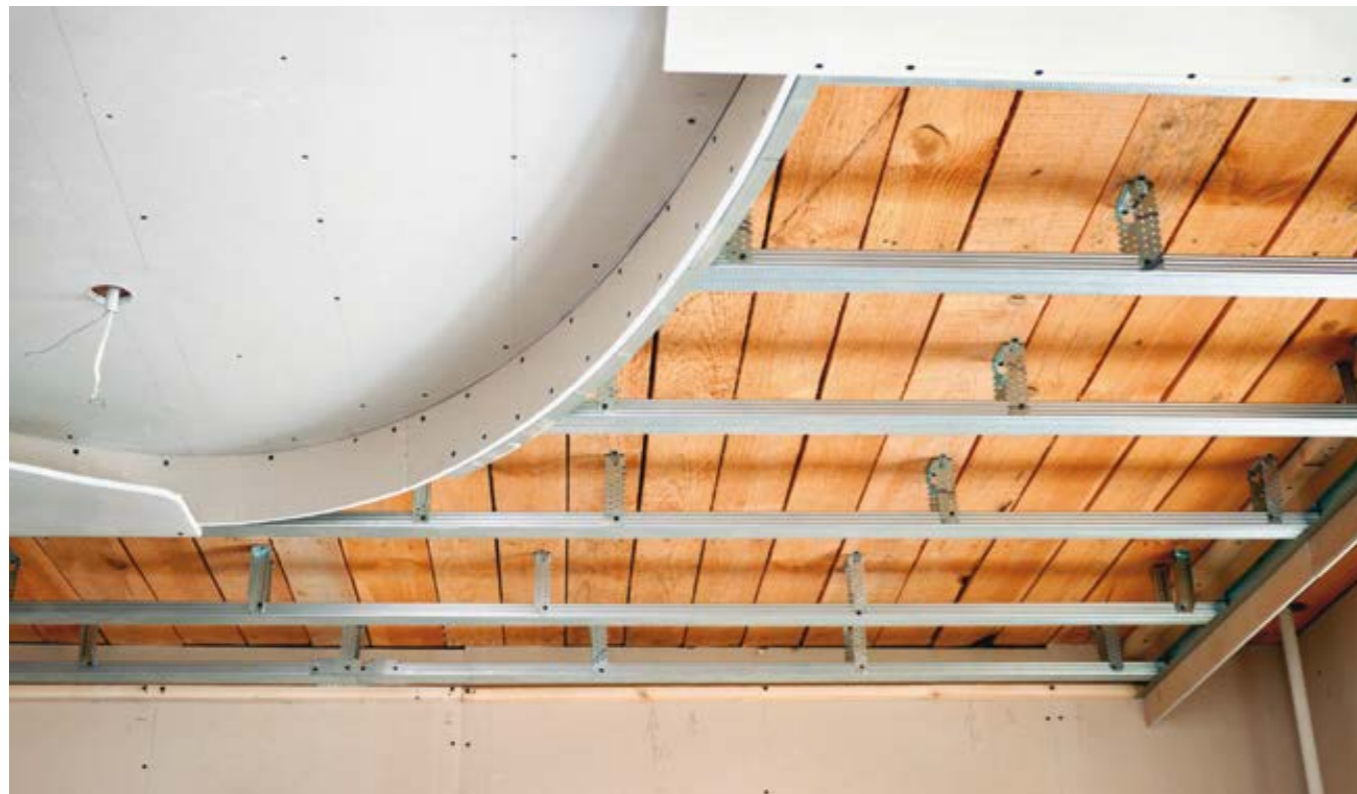


tive to mineral wool is the sound blocker quilt (both blocks and absorbs sound) or acoustic thermal fleece (more eco-friendly option). The insulation has to be installed into joists of floors and stud partitions.

Mineral wool - Rockwool RWA45 acoustic mineral wool designed to gives the excellent sound absorption when installed into floors, walls and ceilings. It absorbs airborne sound and when used as a part of the system meets the Part E regulation requirements.

Additionally, it will give thermal and fire insulation.

Acoustic roll - Knauf insulation acoustic rolls have been specially developed to utilise the sound absorption properties of glass mineral wool. Acoustic performance of the Knauf rolls is the added benefit of the primary purpose of the thermal insulation. Acoustic roll reduces airborne sound transmission, reduce impact sound transmissions and sound reverberation in the specialist environment.



Acoustic metal frame system

1

Quotation for 1sqm metal-grid acoustic suspended ceiling

MATERIALS

Materials usage for 1sqm metal-grid acoustic suspended ceiling

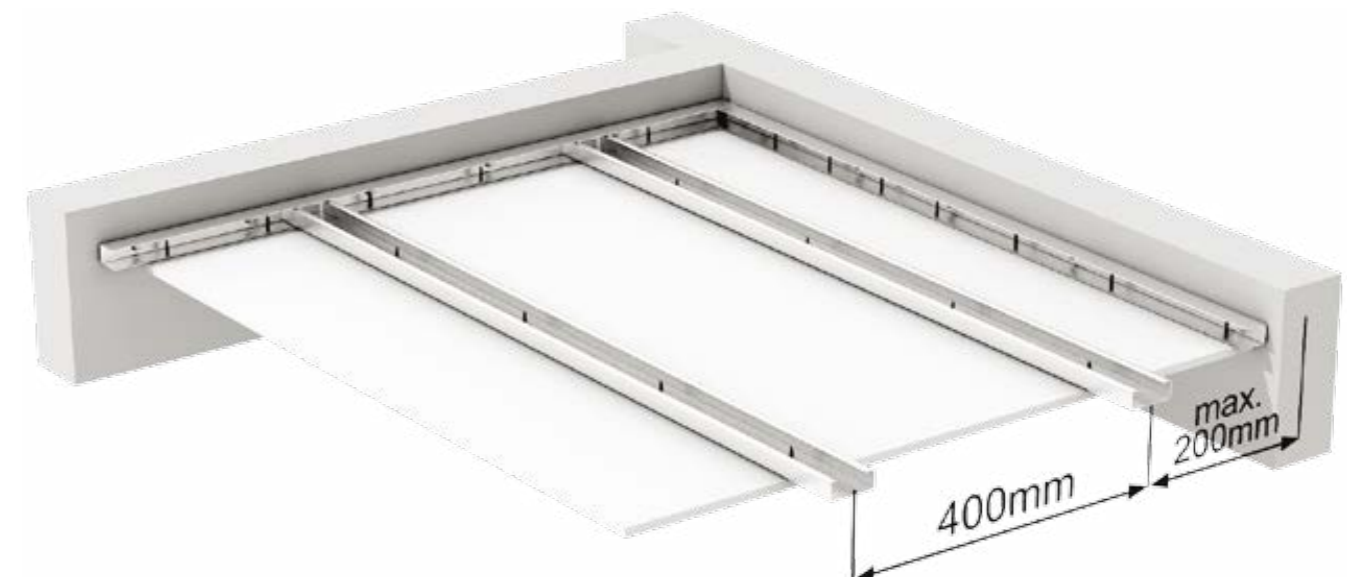
No	Material	Dimensions	Price* excl. VAT pcs/ pack	Usage for 1 sqm	Cost* excl. VAT 1 sqm	Cost* incl. VAT 1 sqm
1	Metal UD perimeter track	UD-28mm/4m	£2.42	0.65 m	£0.40	£0.48
2	Hammer screw SM 6*60	Pack 200 pcs	£7.42	3.00 pcs	£0.12	£0.14
3	Main ceiling channel CD	CD60 -28mm/4m	£3.91	2.65m	£2.60	£3.12
4	Adjusting rotate hanger WSO		£0.33	6.12pcs	£2.02	£2.42
5	Wire for WSO hanger PM	250mm	£0.21	6.12pcs	£1.29	£1.55
6	Acoustic Hanger with Anchor		£2.98	6.12pcs	£18.24	£21.88
7	Connector for joining main channels CD-60		£0.29	0.62 pcs	£0.18	£0.22
8	Self-drilling screws TEX 3.9*9.5mm	Box - 1000pcs	£8.25	13.00pcs	£0.13	£0.16
					£24.98	£29.98

* all products available at IBB; prices before discounts

LABOUR

Labour – 1sqm metal-grid acoustic suspended ceiling

No	Description	Labour per sqm	Company rate* excl. VAT	Cost excl. VAT	Cost incl. VAT
1	Labour	1.44 lh/sqm	£27	£38.88	£46.66
					£46.66



Quotation for 1sqm metal-grid acoustic stud wall

- priming before plastering for better adhesion
- applying coat of MultiFinish
- reinforcing with fibreglass mesh
- fibreglass mesh should be totally embedded in plaster coat
- skimming

MATERIALS

Materials usage for 1sqm metal-grid acoustic suspended ceiling

No	Material	Dimensions	Price* excl. VAT pcs/ pack	Usage for 1 sqm	Cost* excl. VAT 1 sqm	Cost* incl. VAT 1 sqm
1	Acoustic tape under U channel	Roll 70mm/30m	£12.33	0.84m	£0.49	£0.59
2	Metal U channel	U-75mm/4m	£4.13	1 m	£1.03	£1.23
3	Hammer screws SM 6x40mm	Box=200pcs	£5.33	1.50 pcs	£0.12	£0.14
4	Metal C stud	C-75mm/2.6m	£3.29	2.08 m	£2.60	£3.12
5	Resilient bar	3m	£4.16	2.08 m	£2.88	£3.46
6	Self-drilling screws TEX 3.9*9.5mm	Box - 1000pcs	£8.25	13.00 pcs	£0.10	£0.11
7	Insulation Rockwool RWA45	75mm pack=2.88sqm	£25.40	1.05 sqm	£9.26	£11.11
8	Standard plasterboard - fixed both sides	12.5*1200*2400mm	£6.99	2.08 sqm	£5.06	£6.08
9	Drywall metal screws KSGM 3.5x35mm	Box - 1000pcs	£8.25	38 pcs	£0.38	£0.46
10	Selfadhesive joint tape-scrim tape	Roll 90mb	£2.67	1.75 m	£0.10	£0.12
11	Finishing filler - Super Finisz	Bag 20 kg	£12.08	0.5 kg	£0.30	£0.36
12	Primer AVAL KT17	5l can	£11.25	0.14 l	£0.32	£0.38
13	Acrylic paint SuperMatt	10l can	£19.58	0.24 l	£0.48	£0.58
					£23.48	£27.74

* all products available at IBB; prices before discounts

LABOUR

Labour – 1sqm metal-grid acoustic suspended ceiling

No	Description	Labour per sqm	Company rate* excl. VAT	Cost excl. VAT	Cost incl. VAT
1	Labour	3.43 lh/sqm	£27	£92.61	£111.13
					£111.13



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Football News

NEWS 1

Real Madrid the winner of La Liga

Real Madrid won their first La Liga title since 2012. The well deserved win came after Cristiano Ronaldo scored first and Karim Benzema added their second goal in Malaga. They have been the best team in Spain and probably the Europe for the most of the season. Zinedine Zidane, 18 months as a Real boss, is the first manager to lead Madrid to the Spanish league since Jose Mourinho.



NEWS 2

John Terry retires from football after 22-year career

Chelsea captain (36), received a guard of honour from team mates as he left the field in the 26th minute of the game with Sunderland. Terry admitted that the substitution in a minute matching his shirt number was his idea. It was his 717th appearance for Chelsea over 22-year career, during which he has won 15 major trophies like Chelsea Player of the Year, PFA Players' Player of the Year, UEFA Club Defender of the Year and was also named a member of the 2006 FIFA World Cup All-Star Team.



NEWS 3

Arsenal missed out on Champions League football for the first time since 1997

The Gunners will play in the Europa League for the first time, after 20 years in the Champions League. Two key players, Alex Sanchez and Mesut Ozil have only one year left on their current contracts and Arsene Wenger is yet to sign a new deal. It is not known whether either of players will be happy to stay in north London to play outside of Champions League elite. Alexis Sanchez is target for several big clubs after scoring 24 Premier League goals this season.



NEWS 4

Sunderland manager David Moyes has resigned after relegation from the Premier League

Moyes took charge last July, after Sam Allardyce left to become England manager, but could not keep Sunderland in Premier League. They finished bottom of the table this season after winning only six games.



NEWS 5

Chelsea winners of Premier League

The Blues finished season with style after securing record 30th League win of the season against Sunderland (5-1) in west London. The win was also a great way for John Terry to retire after 22 years at Chelsea. He had been given an emotional send off at 26th minute to correspond with his shirt number.



NEWS 6

Europe's Top 8 Leagues

1. Spanish Champions – Real Madrid
2. German Champions – FC Bayern Munich
3. English Champions – Chelsea
4. Italian Champions – Juventus
5. French Champions – AS Monaco
6. Russian Champions – Spartak Moscow
7. Portuguese Champions – S.L. Benfica
8. Ukrainian Champions – FC Shakhtar Donetsk





IBB Polonia London Volleyball Club



The Champions of
England



During the first weekend of May, the time came to finish of the volleyball league in England. On the 6th and 7th May the Finals of the Super 8 division took place at the national Volleyball Centre in Kettering. IBB Polonia London met Sheffield Hallam Volleyball Club in a two match decider. Until now, the season had been very successful, during which time the club had achieved historic victories against the Hungarian and Dutch top teams in the CEV Challenge Cup. As successful defenders of the National Cup, IBB Polonia London were the very firm favourites going into the Saturday match.

The game was a continuation of the good work by Piotr Graban and his charges throughout the season with the Londoners emerging victorious 0-3 (23:25; 18:25; 24:26). The set scores appear tight, but IBB Polonia London were in firm control and cruised through the match. The Sunday match was a tougher prospect, with Sheffield playing their hearts out; it was a game charged with positive emotion throughout. The result went the way of IBB Polonia London, but with Sheffield interrupting the flow by taking a set. The final result was 3-1 (25:23; 25:18; 26:28; 25:19). The double victory

gave the overall title and gold medals to the club from London once again.

The best player of the tournament award went to IBB Polonia London player Mihail Stoev, who received the Golden Ball award for the MVP.

- Mihail deserved the award 100%. He made some huge hits during the games; and also was excellent in defence. He had obviously been targeted by the opposition. The statistics confirm his form on court. - said Team statistician IBB Polonia London, Igor Drej.

The Londoners completed the season very strongly, emerging the top team in the country and

showing some very high level volleyball throughout. They showed that they deserved the titles they have won.

- It is much harder to retain titles than to win them for the first time, because in your mind you are already a Champion and you expect the same performance once again. We honestly deserved this outcome; at the start of the season, my aim was to win everything and we have achieved that. We defended the Super 8 title and the National Cup and well as making it through to the 1/8 final of the CEV Challenge Cup. This proves our level is higher

than the other teams in the UK. - commented Head Coach Piotr Graban.

This is a great season for the Club, amongst whom features World Champion - Krzysztof Ignaczak, who for the first time in his career won a Gold medal in a foreign league.

- This is a dream come true. I was lucky enough to play in England and we are all delighted about the result. Every sporting victory tastes sweet! This medal is definitely special, because I won it overseas in a club with Polish roots. I am happy I could help the guys to win the trophy. The

fans were amazing, they supported us throughout coming all the way to Kettering from London. - said IBB Polonia London libero, Krzysztof Ignaczak

- I am proud of what the team achieved this season. Thank you to everyone who contributed to this success and the development of our club: sponsors, players, coaches, medical professionals and the superb fans. It was a hard year. With many demands successes and emotions and it will go down in history for ever in our annals. - said IBB Polonia London President, Bartek Luszcz. The last National Titles were won in the 2015/16 season.

IBB Polonia Football Club

The last two months for the club were very intensive and very active for the boys. As a club, we competed in 4 tournaments and still 3 to go. In all the tournaments that we have taken part in so far, we have ended in top flight spots.

In May, we have organised a one week camp at Crystal Palace, National Sports Centre. We had access to many facilities such as natural grass pitches, 3g pitches, swimming pools, gym, sports

hall, tennis courts and much, much more. The hospitality was great as well. Our teams have played two friendly games during the camp as we invited teams to come over. We won both games. In the future, we are planning to organise a camp outside the UK; specifically, in Spain.

Our 'Kids Academy' in Hanwell is growing rapidly having 20 or more kids signed with the club and attending the sessions regularly. Shortly, we are

planning to open more locations for IBB Polonia FC and the Kids Academy.

Even though we are a young club which was only established last year; we currently have approximately 100 kids wearing the IBB Polonia badge.

At the end of June, we would like to invite all the people who support our club to the presentation and the end of the season evening.



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Length 4 m

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0.55 x 50mm x 3 m

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