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IBB Polish Building Wholesale

# IBB BUILDER MAGAZINE

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## INSIDE THIS ISSUE



# TENDER PROCESS FOR CONSTRUCTION PROJECTS

IBB Builder Magazine

IBB Polish Building Wholesale
MAGAZINE

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The response from January issue of IBB Builder was very positive. We are glad that many of you came on board to read online on your laptops, mobiles and tablets. We believe quick access to our publication makes it very useful. So readers- thanks a lot for engagement and feel free to check out this month contents.

In the first issue, we concentrated on IBB with introduction to IBB Polonia VC or interview with IBB founder Jacek Ambrozy. This time around, we focus on contracts opportunities in the public sector. Small businesses are encouraged to grab deals offered by local councils. We approach the procurement in the Building Regulations section where you will find valuable advices with regards to the tender process for public contracts. Moreover, the Council Procurement Manager Mr. Howard Hughes in brief interview gives tips on how to do business with the council.

What's more, this month IBB Builder addresses the tanking system technology, describes WYKAMOL products, compares other different solutions and presents the professionally prepared estimation. The guide to IBB Estimator is continued what might be very helpful in the preparation of tender documents. Also, Considerate Constructors Scheme is recommended to all who wants to improve construction standards. All those interested in Builder Education section will encounter the description of demolition stage in the construction project.

Of course, we focus on sport too. To broaden your interest in tennis, we have prepared for you next chapters of The Parent's Thoughts. As the New Year began, the new season started for IBB Polish VC- check updates on their last successful performances.

Finally, this issue takes a step towards all businesses connected with the construction industry. We offer excellent advertisement opportunities and recommend cooperation in introducing to all engaged in building sector new solutions, products or companies and their services.

In the meantime, we hope you enjoy reading IBB Builder as much as we enjoy writing it. Please get in touch with your comments and ideas.

***Magdalena Rosół***
***Editor***

# Home office site checks

**The Home Office is warning the construction businesses not to provide the work opportunities for illegal workers. It undervalues the UK national workers or those with the right to work in the UK, lower the industry standards and provide a risk for customers due to unchecked qualifications.**

Illegal workers in the construction industry are targeted by both the Home Office and the Considerate Construction Scheme. Immigration enforcement officers will be visiting construction sites and examining companies who are employing illegal workers.

So-called 'Right to Work' checks will enable to find employers that are using illegal labour what might result in a maximum fine of £20,000 for every illegal worker. Moreover, the government will introduce new measures to ease the prosecution process for employers and to enable prison sentences or company closures. Illegal workers will be committing a criminal offence and may have earnings seized and face the risk deportation.

Contractors are advised to check the potential worker documents and have records of such checks. There are cases where illegal migrants use fraudulent papers, certification, etc. The Considerate Construction Scheme will check if the contractor fulfilled requirements to carry out the Home Office's Right to Work check.

The Home Office, HMRC and the Health and Safety Executive launched in October last year Operation Magnify- the programme of site visits aimed at reducing the illegal employment. It targeted the construction businesses that are employing or exploiting illegal workers. The Considerate Constructors Scheme from 2016 is including the illegal workers checks in his agenda.

**Employers have to:**

- See the potential worker's original documents.
- Check that documents are valid in the presence of the job applicant.
- Make and keep copies of documents and record the date of the 'Right to Work' check.
- If you need help contact the Home Office or use the Employer Checking Service.

# MEET THE BUYER EVENTS

Meetings of buyers and suppliers from construction industry are an excellent way to build business relationships. There are various events during the year where such networking is available. It is the unique chance to interact with representatives of the major construction industry companies, what allows finding mutually beneficial opportunities. If you would like the opportunity of growing your business with one of the best construction companies, attend networking events.


First of all, building shows are perfect to familiarize with innovations and products but also are used as platforms to meet professionals from the industry. Many shows provide networking facilities where buyers, developers, contractors, architects and suppliers can engage. During various construction shows, there are arrangements for face to face meetings, which enable to build the valuable business relationships. Interested firms are encouraged to check the discussion panel slots availability at chosen construction events, for instance, London Build 2016 will feature Meet the Buyer on 26th and 27th October 2016, which will be ideal for accessing local major developers and contractors.

Another interesting option for firms looking to progress into public sector or getting on to the larger project's ladder is Constructionline, who hosts many so-called 'Meet the Buyer' events each year across the UK. It is an opportunity for small firms to find out about the available tenders or the procurement process. During such events, there is a possibility to register the interest in projects or present the business to potential buyers. Buyers enhance contractors and subcontractors portfolio or find new suppliers. Meet the Buyer events provide the valuable introduction for small firms to meet with some major buyers in the construction industry and make it easier for them to find reliable construction companies or new and innovative suppliers. Various construction specialists are participating in such events to expand their base of subcontractors. Moreover, Meet the Buyer events are organised too by the construction buyers, who seeks new suppliers for their new projects. Firms are encouraged to look for companies open days and meet the buyer events in council newsletters, websites and local papers.

Meet the Buyer events are perfect opportunity to speak on a one-to-one basis and most are free to attend. Potential suppliers can present their businesses but before talking to buyers it is important to understand the purchasing process- IBB Builder recommends the Building Regulations article (page 12-13). Briefly, during the one-to-one meeting with the buyer firm can find out how their procurement process looks like, where contracts are advertised, how to get on the approved contractor list and what to do to be considered for their project.

## BOOK REVIEW

# Building Information Modelling For Dummies

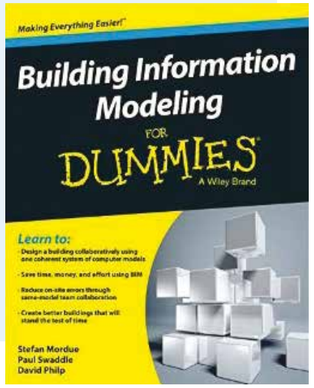
**by Stefan Mordue, Paul Swaddle, David Philip | Paperback Edition – 15th October 2015**

Written by the team of experts in the field of BIM this easily readable guide is perfect to get involved in collaborative Building Information Modelling. It is easy to follow introduction and guidance on BIM which will become a mandatory practice in building industry in the UK and recently has been attracting more attention.

Inside readers will find:

- How does BIM make a change in the construction industry?
- What are potential returns from BIM implementation?
- What errors and costs can be avoided using BIM?
- What data is used in BIM?
- How does BIM work on each stage of the construction process from planning and construction to management?

With more developed computer technologies and easier access to the databases, it is possible to apply the collaborative working in the form of the digital model in the construction industry. To make the most of the BIM technology construction businesses have to be well-informed and engage. IBB Builder recommends this position for everyone that is in transition to BIM or simply would like to broaden the general knowledge about BIM standards.



CONSTRUCTION NEWS

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**New research released in October 2015 by the Federation of Master Builders (FMB) shows that there is a consumers anxiety over building services businesses what gives construction sector more than 6 billion GBP a year loss.**

## Getting Access to

# Levy and Grant system

The concerns are mainly about issues such as lack of qualifications, poor quality of work, work not completed or cost higher than estimated. FMB urges consumers to seek contractors through reputable industry bodies and to check their qualifications.

The pressure is mainly on small construction firms who are advised to take the opportunity in various training programmes or to apply for certification by trade associations. Every construction business or employer in Great Britain should register with the Construction Industry Training Board (CITB) to access the advice, funding and training programmes. The registered business will be required to complete the annual Levy Return to claim grants for employees and net CIS subcontractors. CITB-registered employers with the annual wage bill of £80,000 or more need to pay a levy. Levy funds collected are used to support employers who train their workforce. The employer with the wage bill lower than £80,000 pay no levy but if registered can claim around £2500 for training. While an employer who is paying the wage bill between £80,000 and £100,000 might pay approximately £270 levy and get over £7,000 grant. The levy and grant system is the possibility to improve skills of employees and improve business performance. Grants on offer support the broad selection of CITB apprenticeships and management or supervisory qualifications.

The criteria that must be met to receive grants for courses 2015/2016 are straightforward. Firstly the completed CITB registration, followed by the levy return submission till the 31st December 2015. If applicable the levy has to be fully paid or direct debit arranged. Grants are available for training that directly relates to the employer's construction business and the present or future work in the construction industry.

There is no obligation but taking advantage of registration with CITB gives every construction business access not only to the levy and grant system but also to various cards schemes recognised by industry, training supports or advice. The Government intends to introduce a compulsory apprenticeship levy on all UK companies in 2017 what will have impact on construction industry levy system supported by CITB. However, there is no reason why CITB levy cannot be continued and there are plans to simplify the levy and grant process, reduce bureaucracy and improve the level of support offered to small building firms.

# Tender process

## for construction projects

**The private construction sector seems to be easier for SMEs contractors, who are the major contributors to local economies, but in recent years, benefits offered by smaller building businesses are more appreciated also in public sector projects.**

The tender process for a public contract may seem complex and time demanding, with no guarantees but there are various smaller works opportunities worth a trial.

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### Invitation to tender, response and negotiation

Nowadays, collaborative working and online platforms are the main means of the tendering process. Tender is the submission of an offer by the potential supplier in response to an invitation to tender. The objective of the tender is to find the most appropriate bidder. There are various forms of applications available, for instance:

- Open tendering- a replay to the contract tender advert
- Selective tendering- tenders by invitations only
- Public procurement

Public procurement procedures vary and the contract notice specify which will be used:

1. Open procedure- used by local councils. Tender documents have to be returned by the due date, and assessment is based on the specified criteria.
2. Restricted procedure- in the first stage potential suppliers are requested to fill in the questionnaire, in the second phase the response for the invitation to tender is submitted by the contractor.
3. Competitive dialogue procedure- after the selection process, the buyer may negotiate with potential suppliers and invite some of them to offer a quote.
4. Negotiated procedure- the buyer negotiates with the potential suppliers.

The first evaluation point in the tender process is the assessment of pre-qualifications questionnaires (PQQs) that often follows the invitation to tender. It allows to shortlist the most appropriate contractors for the specific tender and avoid the time-consuming tender preparation by potentially unsuitable contractors. PQQs set out questions to establish contractor's experience, financial position, resources, etc. Often the scoring system is applied to choose the most appropriate companies only.

The evaluation of the following is often considered:

- History – references, financial accounts, tax returns
- Current position- contracts, debt position, labour, subcontractors
- Legal position- claims in progress, insurances, ownership of properties
- Capability- BIM, qualifications, labour competency, examination of past projects
- Health and Safety policy
- Equal opportunities policy
- Others

PAS 91 questionnaire is set to be mandatory for the government projects from 2016, and it includes the checklist to enable the assessment of BIM competency. PAS 91 is available on online platforms and may be used as the real-time company review available for all potential buyers. PAS 91 consists of core modules like supplier identity, financial information, business standing and health and safety. There are optional modules which include BIM, equal opportunity and diversity, environmental and quality management. In consistency with government commitments known as "Small Business: GREAT Ambition" both the PQQs and PAS 91 are not required for low-value public contracts to help SMEs scale up.



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Invitations to tender might be issued for a full contract or selected works only, for instance:

- Demolition works or enabling works
- The main contractor works
- Other works
- Materials or equipment supply

An invitation to tender often consists of:

- The invitation to tender letter
- The form of tender
- Preliminaries
- The form of contract
- Pricing document
- Design drawings and specification
- BIM requirements

The response to the invitation to tender should include the price for the quoted project along with all other requirements specified in the tender documentation. There is often the possibility of interview or questions to the buyer or project administrator to clarify any issues related to tender. After tender submission deadline the assessment to identify the most suitable supplier is taking place.

Evaluation criteria may vary but in overall the approach is to choose the provider that offers the best value for money and meets buyer's needs. Into consideration is taken the quoted price, experience, references, understanding of requirements and compliance with tender specification, proposed solutions, etc. Tenders are given a score according to information provided in an invitation to tender documents to allow buyer identifies the most relevant quote. In summary, any SMEs taking part in a competitive bidding process need to meet some criteria to be successful- competitive pricing, financial stability, past projects references, the proper method of statement for contract delivery, equivalent insurances, labour qualification and experience, health and safety policies, sustainability policy, etc.

Negotiation is another step of the tender process usually run by the contract administrator who clarifies or negotiate the price, offered solutions, products choices, etc. During this stage conditions of the contract and works schedule can be discussed. Agreements are signed by both parties what form part of the contract documents.

### How to find the public tenders opportunities?

All new public tender opportunities are advertised on the local council pages or through procurement portals. The most common is the Government Contracts Finder. Contract notices are also published in newspapers and trade magazines or on portal Constructionline.

***IBB Builder presents the chosen open public tender opportunity offered by London Borough of Barking and Dagenham.***

The source of information is the Government Contracts Finder. The Council is looking to appoint a number of contractors to a Low Value Construction Projects Framework Agreement. Contractors are welcomed to provide quotations for two lots. Lot 1 will be for Works Contracts with a value of £50,000 to £250,000 and Lot 2 will be for Works Contracts with a value of £250,001 to £500,000. It should be emphasised that no contract value awarded through the framework will exceed £500,000. Interested parties should be aware that the Council is not looking to appoint individual trades contractors. The Framework Agreement would suit general building contractors and similar.

## TENDER

**Location of contract:**
**London**

NEW CONTRACT AVAILABLE

**Value of contract:**
**£20,000,000**

**Contract duration:**
**4 years**

**Contract start date:**
**3rd May 2016**

**Contract end date:**
**4th May 2020**

**Works Description:**
**General building works**

**Application Deadline:**
**4th March 2016 by 5pm**

As a part of qualification process contractors will be obliged to provide information about:

- Economic and financial capacity - financial accounts
- Technical capacity- references list, professional qualifications, references from various bodies
- Information about reserved contracts

This contract opportunity is considered to be suitable for small or medium enterprises (SMEs).

**IBB Builder recommends IBB ESTIMATOR application or its online version to prepare the professional quote, adaptable for tender documents.**

### To express an interest

If you wish to apply for this contract, please follow steps below:

Apply directly to the buyer:
**Contact name:** Mr Stephen Howells
**Address:** Town Hall, 1 Town Square, Barking, IG11 7LU, UK
**Telephone:** +442082272757
**Email:** stephen.howells@lbbd.gov.uk
**Deadline:** 4th March 2016
**Contract Reference:** LVCP-2016-0002

Full notice available at https://www.delta-esourcing.com/tenders/UK-UK-Barking:-Construction-work./G465G628T7

*(source: The Government Contracts Finder)*

# Doing business with The Council


**Local councils' buying power generates a significant amount of work in the construction industry. Procurement plays a vital role in selecting the most efficient suppliers and the best value for money quotes.**

Supplier diversity and the engagement of small businesses in the large construction projects is encouraged by the UK legislation and many organisations go that way. Main reasons for 'SME's friendly' procurement are:

- Familiarity with local area
- Local knowledge
- Proximity of labourers to site
- Flexibility
- More competition and better value for money
- Better range of solutions
- Access to wider range of suppliers

Small companies find the process involved in tendering for public sector contracts difficult. Two main problems are a lack of access to information about tenders and difficulties in demonstrating compliance at the first stage of the procurement process.

The most common barriers that suppliers come up with while engaging the small businesses are:

- SMEs are often put off by complex tendering process
- Perceived as the higher risk option
- Lack of SMEs capacity, tracks records
- Perceived lack of advanced business procedures
- Lower level of insurance
- Lack of financial records and history
- Perceived as a higher risk
- Perceived lack of knowledge about procurement procedures

Overcoming barriers to local procurement allows small businesses to embrace opportunities of high-value contracts. Councils follow procedures to ensure the competitive process and to assess tenders. To help our readers understand the tender process, IBB Builder asked few questions to Watford Council Corporate Procurement.

***What does the council buy?***

The Council buys a very wide range of Works, Supplies and Services.

***How often are there opportunities for construction companies?***

A number of suitable opportunities are advertised every year.

***Where the tender opportunities can be found?***

Opportunities are advertised via the Council's e-procurement portal, the Government's Contracts Finder website and where appropriate in the OJEU.

***Do you run any supplier events or networking?***

Yes, most recently a Watford Business Expo event last November.

***How does the council evaluate tenders?***

Against the criteria and weightings published with the tender documents.

***Can a SMEs contractor or new company compete for council opportunity?***

Yes and they are actively encouraged to do so.

***What rules and regulations should a contractor be aware of when tendering with the council?***

Public Contracts Regulations 2015 and the Council's own Contract Procedure Rules.

***What are the key tender documents?***

The most important are the Specification and the Terms & Conditions although there will be others in the tender pack.

***Here are TIPS how to increase chances to win public sector contracts:***

- Actively identify opportunities- by proper research of government and local councils websites, newspapers and online platforms
- Build a history – keep all records and references, both of financial standing of company as well as previous contracts history
- Invest in website- present your business
- Ensure compliance- with regulations, insurances, certification, equal opportunities and health and safety policy
- Invest in tools- online estimator, BIM, membership on procurement related websites
- Take part in networking- attend Meet the Buyer events

*Appreciation and sincere thanks for assistance provided to Mr Howard Hughes B.Sc.(Hons), C.Eng., C.WEM., M.I.C.E., F.C.I.W.E.M. Corporate Procurement Manager, Democracy & Governance,Watford Borough Council*

## Procurex South Live 2016

***20th April, Olympia London***

It is an excellent event for all interested in the public procurement. Procurex provides both buyers and suppliers with knowledge and training about innovations or latest changes in legislations, plus gives networking and collaboration opportunities. The event offers visitors the chance to understand the process of procurement and presents various opportunities available.

Visitors can benefit from:

- Training opportunities at the Procurex Learning Academy with four learning zones
- Collaboration potential at Buyer Engagement Village where buyers and suppliers can network during one-to-one appointments
- Guidance on future opportunities
- Research on innovations, new products and services

During the Procurex visitors will be able to explore contracts at the Procurement Advice Hub or meet buyers within the Buyer Engagement Village. Procurement specialists will be offering help and knowledge to increase any business chances to win the public contract. There will be an opportunity to learn how to make your business compliant or how to pass PQQ stage of a tender process successfully. On the Supplier Learning Zone agenda there are subjects as for instance, ' Key Changes to the Procurement Procedures' or 'Tenderer's Common Mistakes'.

Attend Procurex South Live 2016 and give your company more chances of winning contracts in the public sector. Other Procurex events will be held this year in Scotland, Wales, Ireland and North England. (Source: www.procurexlive.co.uk)

# Will You be a Considerate Constructor?

**If one of your next business goals is to improve the image of your company and raise construction standards, register with the Considerate Constructors Scheme. The scheme offers valuable rewards of being part of a nationally recognised and respected organisation.**





Considerate Constructors Scheme is the independent non-profit organisation set up in 1997 with which construction sites, companies and suppliers can voluntary register and improve the image of the construction industry in the UK. It aims to raise standards by monitoring building sites. Registered organisations agree to obey the Code of Considerate Practice which outlines the requirements of the scheme:

## Site Appearance

Is site well organised, clean and tidy? What is the external presentation of the site? What is the appearance of the workforce? What is the appearance of storage? Etc.

## Impact on the Community

Are all those affected by the building project informed? Is the site contributing to the local community? Is the site displaying the boards and relevant information? Etc.

## Protection of the environment

Is waste avoided, how is it stored and recycled? How sustainable is the waste management plan? Is the environment protected? Etc.

## Highest level of Health and Safety

Are there safety procedures in place and what are all measures to avoid risks? How is safety to public and third parties managed? Etc.

## Working environment

Are there welfare facilities provided? Is workforce treated with respect? Is training promoted? Etc.

The Code of Considerate Practice is directed to all registered sites, companies and suppliers regardless of size, type or location. There are three options of registration with the scheme:

- Site registration – for individual sites or projects only (duration for six weeks or longer)
- Company registration- cover all projects company undertakes
- Supplier registration- for any company that supplies goods and services to the building industry

All registered businesses or sites are assessed based on the Scheme checklist that supports the Code of Considerate Practice. It helps to establish what level of performance each site presents. The site monitoring process is straightforward with usually two assessment visits during the project lifespan. Dates of visits are agreed initially and during the inspection, the Monitor assesses how the site is performing by the Scheme checklist. The report with the score is given to the site manager.

Sites are awarded the certification:

- If the score is 5 or more points - a Certificate of Compliance is awarded.
- If the score is 7 or more points- a Certificate of Performance Beyond Compliance is awarded.
- If the site does not comply with the Considerate Constructors Scheme the non-compliance procedure and finally the disciplinary process will apply.

Why is it recommended to become a considerate constructor?

- The CCscheme is well recognised in the UK construction industry by local authorities, the Government, contractors and all construction related businesses.
- The CCscheme certification is a valuable reference for future projects.
- It boosts company image and encourage new clients.
- It is an accreditation during any procurement process.
- Sites and companies registered with the CCscheme are recognised as serious about considerate construction and the highest standards, as well as, environmentally responsible and respectful of others.
- A National Site Award is awarded for the best performing registered company/site what improves the company reputation.
- All sites and companies registered display CCscheme posters or banners and stickers with the contact details.
- The registered company is listed on the CCscheme website what can potentially allow a new business opportunity.

Site registration pack and all Scheme brochures may be downloaded from the Scheme's website ***www.ccscheme.org.uk***

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# ibb ESTIMATOR

Mobile Building Calculator

## SCAN ME

ANDROID APP ON Google play

Available on the iPhone App Store

Read about IBB Polonia London VC team

## *Download the App!*

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CUT HERE AND SAVE

ibb MOBILE BUILDING CALCULATOR ESTIMATOR

# mobile app

**Nowadays it is very difficult to live without a tool like a mobile phone. Sometime ago we decided to exist also in mobile phone space.**

# PART 2

Step by Step GUIDE

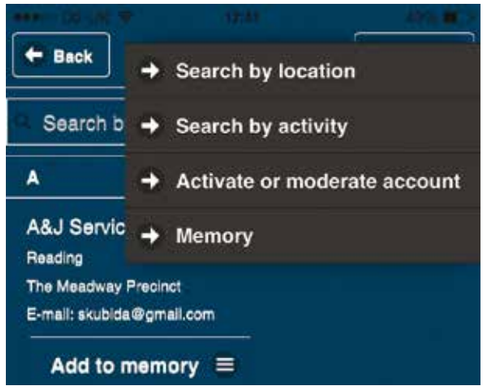
# Builders database

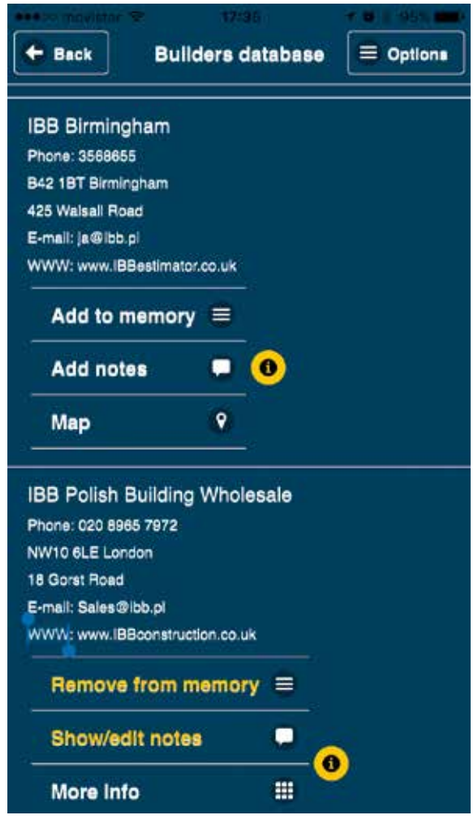

IBB Builders database allows every register IBB ESTIMATOR account holder to view and select businesses for their projects. Search is available in Builders Database section or during the production of the estimation.

After successful log in into IBB ESTIMATOR APP there will be 6 different icons visible on screen. Click **BUILDERS DATABASE** icon to be taken to IBB database of construction related businesses.

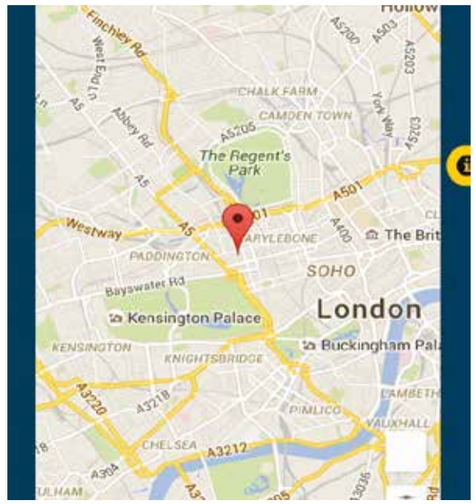
To search by phrase or by post code, fill in the **SEARCH** icon.


To filter database by location or by activity, press icon **OPTIONS**.





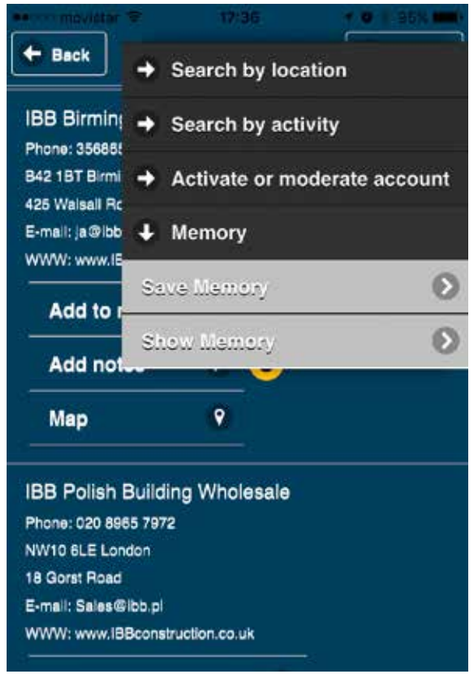

After you save choosen company in App memory you can add notes or check the location of the companies.

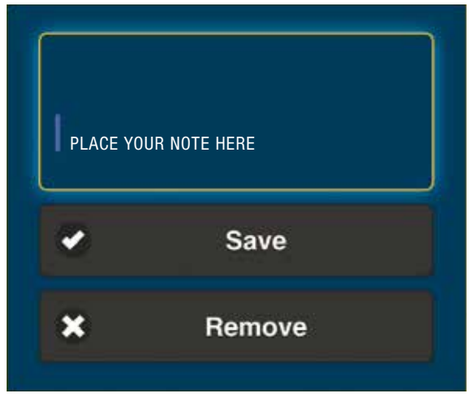


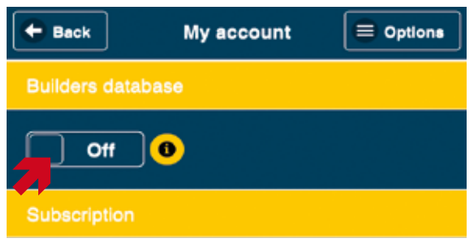

To **ADD your business** details to Builders Database **LOG IN** and in **MY ACCOUNT** section move slider from **OFF** to **ON**.

You are able to add the selected choice to your memory by clicking **ADD TO MEMORY**.

It allows you to shortlist and easily access businesses you are interested in.




CUT HERE AND SAVE

CUT HERE AND SAVE

# website version step by step

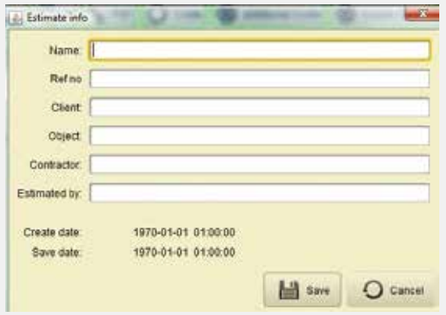
## How to use ESTIMATE LIBRARIES

To achieve the best estimate for each individual project/job you need to choose from one of four libraries:

- **IBB Estimates** - based on standard building practices, prices and experience. It is an IBB proposal estimate. The quote production is a step-by-step process, which although more time consuming allows the most accurate estimation of works.
- **Block estimates** - it is the simplified dictionary for panel estimates. This method is suitable for creating detailed calculations quickly for selected estimation category.
- **Factor estimates** - it is based on detailed questions, indicators and data inputs. Estimate is produced quickly and very accurately.
- **Your own estimates** - the software allows you to create a database of your own estimates so you have access to your previous works at anytime. This database allows you to build up a personalised cost estimate for individual items but also allows access to IBB data.

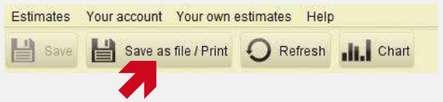
1. Log in to your account at ***www.ibbconstruction.co.uk***
2. Click on icon ESTIMATES and then click NEW


3. Step 1 in the left panel enables to personalise the estimate by adding title – click icon ADD TITLE




4. Step 2 in the left panel enables to choose one option from the ESTIMATE LIBRARIES
5. Step 3 in central panel enables to view an estimate and/or amend any details
6. You are able to filter what particular data should be included in an estimate by selecting options in the filter section and clicking icon REFRESH. Use icon REFRESH every time you amend details to update your estimate.

7. You can save your estimate as a PDF file or print in by clicking icon SAVE as file/print. After saving the file will be automatically backed up every 5 minutes after.




## IBB ESTIMATES

This panel consists of estimates divided into sections and sub-sections and allows the most precise calculation by selecting, amending or adding various details relevant to particular project.

Main categories are:

- Preparatory works
- Demolition
- Ground works
- Formwork
- Reinforcement
- In Situ Concrete
- Foundations, Concrete construction
- Waterproofing
- External walls
- Ceiling constructions
- Steel works
- Roof Structure
- Stairs
- Chimney
- Roof coverings
- Internal walls
- Windows
- Doors
- Drainage
- Water supply system
  - Rainwater system
- Electrical system
  - Heating
  - Underfloor heating
- Gas supply
  - Security
  - Audio-video
  - Ventilation
  - Air conditioning
  - Screed
- Thermal insulation
- Acoustic insulation
- Internal plasters, fillers
  - Carpentry
- Ceilings
  - Metalwork
  - Glasswork
- Tiling
- Finishing & Internal Paining
- Floors
- Kitchen units and appliances
- Pluming- second fix
- Electric- second fix
- Elevations, External finishing & wall coverings
- Landscaping
- Fence
  - Miscellaneous

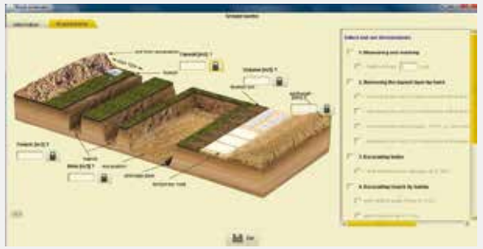
Click on sections you want to include in your estimates and choose from subsections. The chosen option will be visible in middle panel. In step 3 you can amend all details appropriately and add them to your estimate by clicking button ADD. You will see all added sections and subsections in both middle panel or in step 1 in the left panel.

## BLOCK ESTIMATES

This panel consists of various detailed estimates divided into several categories and subcategories. It allows quick calculation of:

- Preparatory works
- Ground works
- Reinforcement
- Foundations, concrete constructions
- Waterproofing
- External works
- Ceiling construction
  - Internal walls
  - Windows
  - Electrical systems
- Screed
  - Thermal insulations
- Internal plasters, fillers
- Ceilings
- Elevations, external finishes & wall coverings

Choose the relevant estimate option from the left panel in STEP 2 to start your block estimate. For instance if you choose GROUND WORKS estimate, you will be able to select and set the appropriate for your project dimensions into the calculator. Check and if all details are correct click the icon SET to produce the estimation.

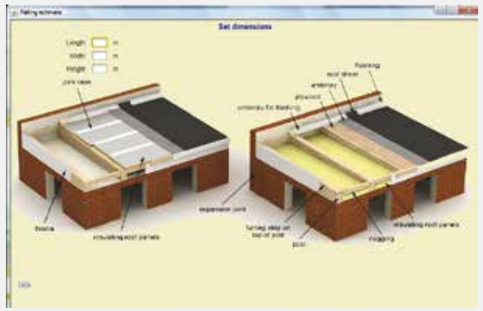


## FACTOR ESTIMATES

This panel consist of estimates divided into groups and produces the estimate in the shortest time

- External render AVAL SYSTEM
- EXTENSION- single storey, flat roof
- Semi-detached- two storey new build house

Choose the relevant estimate option from the left panel in STEP 2 to start your factor estimate. For instance if you choose EXTENSION-SINGLE STOREY estimate, you will be able to set dimensions and choose various sections or subsections of your estimate adequate to your project. Follow instructions, check and if all details are correct click the icon SET to produce the estimation. Factor estimates can be moderated after saving.



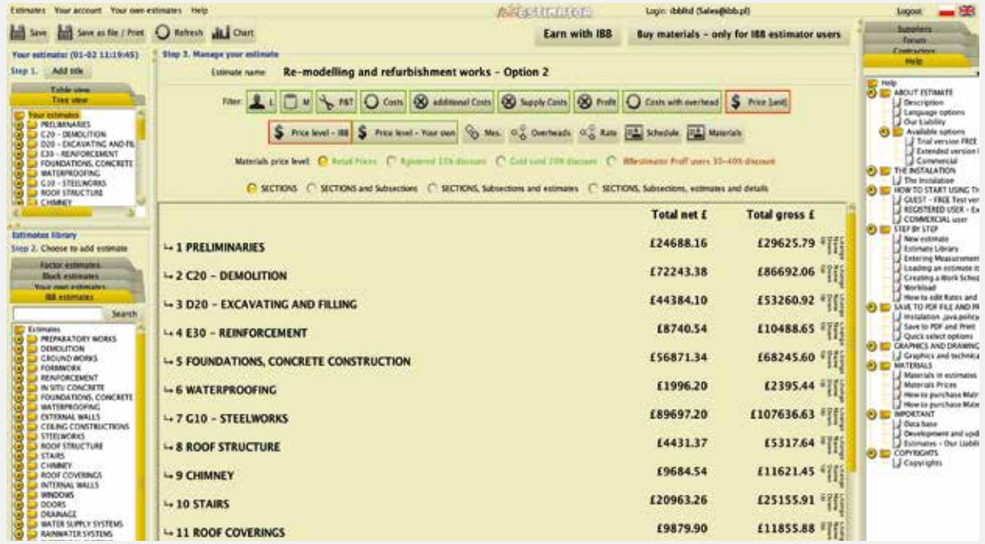

## MY OWN ESTIMATES

This option allows you to add your own estimates based on IBB database or your own input data. Choose MY OWN ESTIMATES option in STEP 2 in the left panel and create own project personalised quotation.

This option allows you to:

- create your own estimates
- use and change data in IBB estimates and save as your own

MY OWN ESTIMATES is a very developed section and will be described in detail in the next article.

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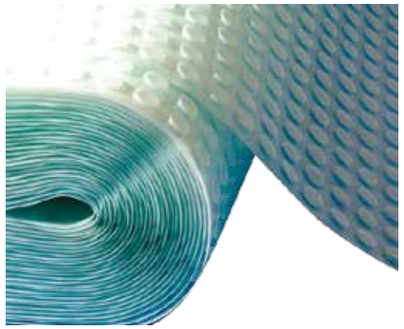
# Waterproof membranes

**for above and below ground waterproofing applications**

**The Wykamol Group has been involved in waterproofing applications for over 40 years and was a founder member of the British Wood Preserving and Damp Proofing Association. When it comes to waterproofing applications, the Wykamol Group has a huge range of products, from cement-based tanking powders to specialist epoxy coatings. In recent times however and since the changes to BS8102, cavity drain membranes have fast become the choice for most contractors in the UK marketplace.**



# CM8

## Waterproofing membrane

**For use on walls, floors, vaults and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes.**

***Wykamol CM*** membranes are suitable for use in type 'C' (drained protection) structural concrete constructions in accordance with BS 8102:1990, clause 3.2.4.

***Wykamol CM8*** is a medium capacity drainage membrane (4 litres/m2) for floors and walls both above andbelow ground level. When used on basement floors it is recommended that perimeter drainage channels are provided to optimise the flow of ground water towards the sump location (see separate data sheet 'Wykamol Drainage Solutions').

***Wykamol CM8*** is used in a dry lining application. Various systems can be used in the head of the fixing plug, from timber battens to steel dry lining systems.

***This membrane is easy*** to roll out against wall and floor structures and can be fixed in horizontal lengths or in vertical strips.

***This is our most popular membrane*** in basement waterproofing due to its universal ease of use.

***FIXING***

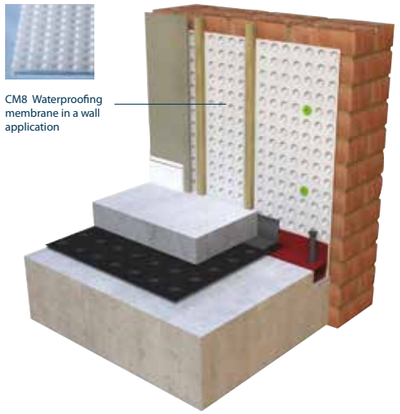
Wykamol CM8 Membrane is installed with studs against the underlying structure. Fixing to walls is carried out with Wykamol Brick Plug in the centre of the stud. Take care when drilling holes to avoid excessive masonry dust falling in to the cavity.

**Available sizes:**

2x20mtr
2.4x20mtr

**Associated products:**

Brick Plugs, Double tape, Rope,
Corner detail



CM8 Waterproofing membrane in a wall application

**Key benefits**

- Can create a dry habitable living space in areas previously suffering from damp/wet conditions.
- Little to no damage to existing structure.
- Quick to install- minimal preparation needed to wall surfaces, avoiding mess and saving time and money.
- Easy to bend and cut with scissors to form around windows, doors, services etc.
- No delays to decoration as there is no drying process.
- Waterproof, salt resistant, root resistant and contaminant resistant
- Low and high temperature tolerance.

**Technical Data**

**Raw material:**
HDPE

**Sheet thickness:**
nominal 0.50mm

**Stud height:**
approx. 6.5mm

**Construction height:**
approx. 7mm

**Unit weight:**
0.45 kg/m2

**Deformation under long term loading: max.**
20% (at 50 kN/m$^2$)

**Compressive strength:**
150 kN/m

**Working temperature:**
-10° to +60°C

**Softening temperature:**
+160°C

**Linear coefficient of thermal expansion:**
0.18 mm/m.°C

**Water vapour resistance:**
280 m equivalent air layer

**Air gap volume:**
4.0 l/m$^2$

**Drainage capacity:**
approx. 3.8 l/sm

**No. of studs:**
approx. 1640 per m$^2$

**Life expectancy:**
at least 50 years for defined applications

**Colour:**
natural



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# CM20

## High Capacity Waterproofing membrane

**For use on walls, floors, vaults and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes.**

***Wykamol CM*** membranes are suitable for use in type 'C' (drained protection) structural concrete constructions in accordance with BS 8102:1990, clause 3.2.4.

***Wykamol CM20 is the highest drainage capacity membrane*** in the CM range giving a void volume of 14 litres/m2. Suitable for use on floors and walls in very wet situations or where the large stud height is desired to maximize insulation values. When used on floors CM20 can normally be installed without the need for perimeter drainage channels and, when overlaid with concrete, the large diameter studs will give high point load resistance capabilities (180 kN/m2) to support load-bearing walls built off the slab.

***FIXING***

Starting at one side of the room, unroll the membrane with the studs down and cut to fit the room as one would fitting a carpet. The next membrane width is rolled out so that the flanged edge overlaps onto the edge of the previous roll of membrane. Clean both edges. Wykamol tape is then applied to the high flat area between the first two studs at the edge of the previous roll of membrane with the backing paper still intact. Check the two widths for alignment, with the flange covering the backing paper. Starting from the end of the joint, remove the backing paper and press down on the joint, sealing the two sections together.

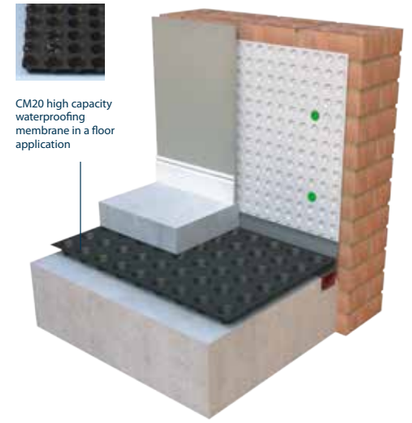
**Available sizes:**

CM20 – 2.0 x 20m
Including flat overlapping edge (flange) without studs, working area approx. 40 m$^2$.

**Associated products:**

Corner strip, Double tape, Rope





CM20 high capacity waterproofing membrane in a floor application

**Key benefits**

- Fast to install and lay
- Internal load bearing walls can be built on the membrane once screed is added
- High water movement capacity
- Various floor finishes can be used on top of the membrane
- Can be used with various drainage systems
- Resistant to all salts and contaminates
- Can be used with all insulation floor systems

**Technical Data**

**Material:**
recycled HDPE

**Colour:**
black

**Area weight:**
approx. 1,000 g/m

**Thickness:**
approx. 0.9 mm

**Available widths:**
2m and 2.5m

**Roll length:**
20m

**Dimple height:**
20mm

**Number of dimples:**
approx. 400 per m

**Void volume between dimples:**
approx. 14 l/m

**Drainage capacity:**
approx. 10 l/s m
approx. 600 l/min m
approx. 36.000 l/h m

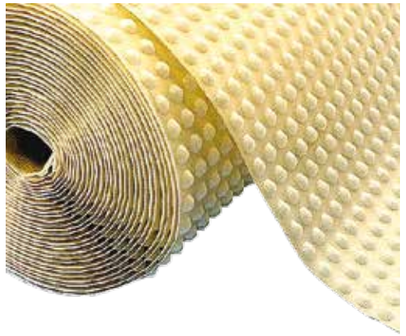
**Compressive strength:**
approx. 240 kN/m
(24 t/m )

**Tensile strength:**
approx. 14.5 kN/m
(ENISO 10319)

**Elongation at maximum strength:**
approx. 68 %

**Service temperature range:**
-40 °C to +80 °C

**Physiological properties:**
non-polluting for drinking water



# KONTRACT MESH

## plaster membrane

**Kontract Mesh is suitable for use in accordance with BS 8102:1990 to provide Type 'C' drained protection to structures below ground giving a Grade 3 or 4 dry environment suitable for domestic or commercial use.**

***Kontract Mesh*** is a high density polyethylene membrane, incorporating 8 mm studs which allows the isolation of wet walls above and below ground.

***It incorporates a tough HDPE*** mesh lathing welded to the front face to allow the direct application of various plaster finishes or adhesive 'dabs' and plasterboard.

***Note:*** in basements where the walls are particularly wet (running water) we recommend the use of Kontract 8 on walls and floors (see separate data sheet).

***FIXING***

Kontract Mesh is fixed to the wall by drilling through the membrane studs to a depth of 50 or 70mm using a 8 mm drill bit, and gently hammering home the Plaster Plugs with seals to form a waterproof seal between the fixing and the membrane surface.

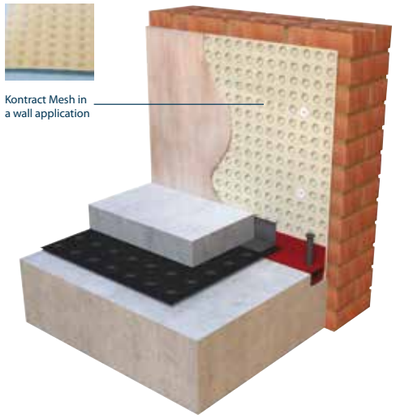
Alternatively, Plaster Plugs with Wykamol Rope around the shaft can be used. Intervals between plug fixings should be no greater than 250mm to ensure a tight fix to the wall. Near lap joints and where the surface is uneven, the centres should be less than 250mm. When fixing the membrane it is essential to keep the sheet tight to the wall surface (no 'bulges') at all times.

**Available sizes:**

2m x 20m = 40m² (translucent/white)
2m x 10m = 20m² (translucent/white)

**Associated products:**

Plaster plugs, Double tape, Rope, Corner Strip




**Key benefits**

- Stud height 8 mm, drainage volume 5.5 litres/m²
- Sheet thickness 600 _m, density 0.7 kg/m²
- Excellent low and high temperature stability
- 150 kN/m² load bearing capacity
- High durability and water resistance

**Technical Data**

**Colour:** white

**Weight:** (kg) 28.00kg

**Raw material:** high density polyethylene

**Thickness:** 0.60mm

**Stud height:** 8.00mm

**Compressive strength:** N/A

**Wall and soffit membraneonly**

**Thermal resistance:** 0.078m K/W

**Vapour permeability:** 0.046g/m x hr x mmHg

**Thermal conductivity:** 0.461 W/m K

**Air volume between studs:** 5.51 1/m /s

**Drainage capacity:** 4.61 1/m /s



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# CM FLOOR

## drainage waterproofing membrane

**For use on walls, floors, vaults and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes.**

***Wykamol CM Floor*** is a low profile membrane (3 mm studs), specially designed for fast-track sealing of damp concrete at ground floor level. There is no need for the extensive surface preparation normally required with liquid DPM systems (epoxies etc.) and no curing times before floor finishes can be applied. It may also be used on basement floors where the low stud height is critical to maintain ceiling clearance and special measures can be taken to ensure the floor drains freely via drainage channels both around and across the floor.

***FIXING***

Begin at one side of the room, against the wall membrane with the studs facing down onto the floor. Allowing for the membrane flange overlap, cut the membrane to the desired length or width of the floor. Repeat this exercise until all the lengths/widths required to cover the floor area have been cut. Roll out the next length/sheet of membrane and position the flange over the studs of the first sheet laid. Thoroughly clean the flange and the studs where the seal is to be made, as previously described for wall application.

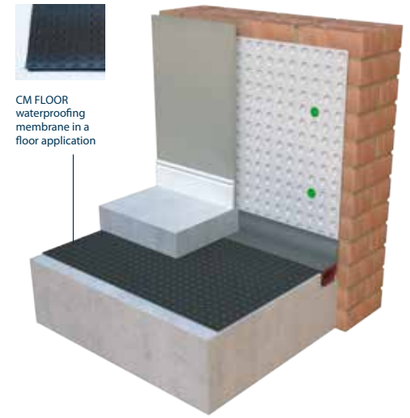
***Apply*** sealing tape to the stud area below which the flange will cover, and press home onto the area between the studs.

**Available sizes:**

2m x 20m
including flat overlapping edge (flange) without studs, working area approx. 40m².

**Associated products:**

Corner strip, Double tape




**Key benefits**

- Stud height 3mm, drainage volume 1.56 litres/m²
- Excellent low and high temperature stability
- 300 kN/m2 load bearing capacity
- High durability and water resistance

**Technical Data**

**Resin:** HDPE

**Colour:** black

**Area weight:** 500 g/m DIN EN 12127

**Thickness:** approx. 0.45mm

**Dimple height:** 3mm

**Dimple spacing:** 2,500 pcs/m

**Air gap (between dimples):** 3.6 l/m

**Compressive strength:** 320 kN/m EN ISO 25619-2

**Service temperature range:** -40 to +80 °C

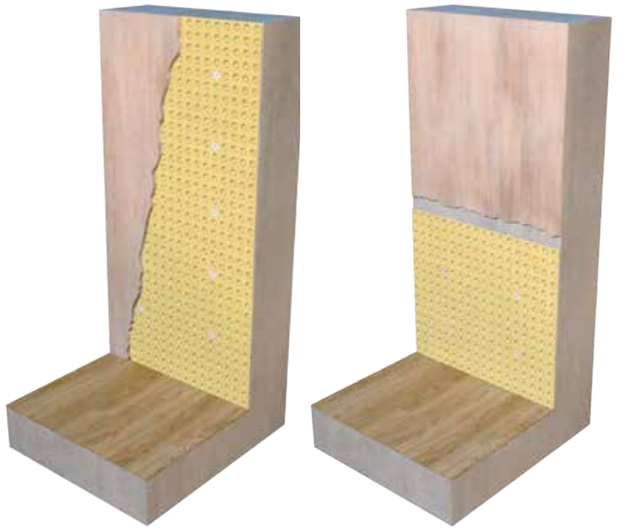
**Storage:** protect from UV radiation

**Physiological properties:** resistant to a wide range of chemicals, resistant to fungus and bacteria attack, impervious to root penetration, inert to drinking water, rot proof.

# YELLOW MESH

## Slimline waterproofing membrane

**Slimline Mesh is a high density polyethylene membrane incorporating 3mm studs which allows the isolation of wet walls above and below ground. It incorporates a tough HDPE mesh lathing welded to the front face to allow the direct application of various plaster finishes or adhesive 'dabs' and plasterboard.**



***Slimline Mesh*** is an ideal product for above ground damp proofing and dry lining. High strength membrane allows for a direct plaster finish but this is also ideal for a dot and dab plaster board finish. Can be used for wet-rooms and can even be laid on floors due to its high strength.

***FIXING***

Various fixing options can be used with this product. Contact us for more information.

**Available sizes:**

1m x 10m = 10m2
1m x 30m = 30m2
2.0 x 30m = 60m2 (Yellow)

**Associated products:**

Plaster Plugs, Fibre tape, Rope

**Key benefits**

- Can create a dry habitable living space in areas previously suffering from damp/wet conditions. Little to no damage to existing structure.

**Technical Data**

**Core Product:** Resin: HDPE

**Colour:** yellow

**Area weight:**
500 g/m DIN EN 12127

**Dimple height:**
3 mm

**Dimple spacing:**
2,500/m

**Compressive strength:**
320 kN/m
EN ISO 25619-2

**Mesh:**
Resin: PE

**Area weight:**
45 g/m DIN EN 12127

**Tensile strength:** 400 N/5 cm EN ISO 13934-1

**Elongation:**
>10 % EN ISO 13934-1

**Composite:**
Area weight:
550 g/m EN ISO 9864
CE certificate yes EN ISO 13967

**Service temperature range:** -40 to +80 °C

**Storage:**
protect from UV radiation

**Physiological properties:**
resistant to a wide range of chemicals, resistant to fungus and bacteria attack, impervious to root penetration, rot proof.



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# GEOTEX EXTERNAL

## waterproofing membrane

**Wykamol Geotex is a twin-layered cavity drain membrane designed to manage ground water to the land drain, relieving pressure from the structure. In below-ground waterproofing applications, the primary function of Wykamol Geotex is to divert water away from the structure. It can also act as a barrier against ground gases, like Radon and methane.**

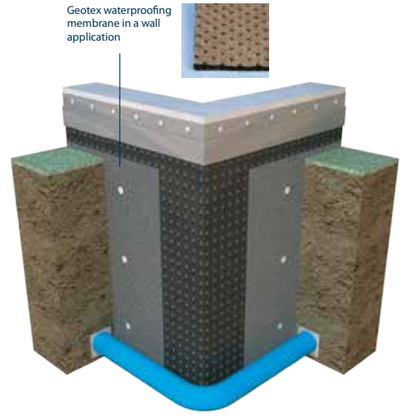
**Available sizes:**

2m x 20m
including flat overlapping edge (flange) without studs, working area approx. 40m$^2$.

**Associated products:**

Corner strip, Double tape

Wykamol Geotex is typically used to isolate and protect the structure from the surrounding soil and relieve hydrostatic pressure by promoting the flow of ground water away from the face of the structure. Wykamol Geotex provides excellent protection from root penetration, and can also increase the structure's thermal insulation. Typical installations include external tanking, retaining walls, podium decks, and green roof applications. Fixing Geotex can be applied vertically or horizontally as required. Ensure overlap joints between sheets of 450 mm vertical and 150 mm horizontal (the geotextile can be pulled back to allow studs to overlap). When fixing horizontally, place the lower sheet first. Use Wykamol Tape to seal joints at overlaps. Note: taped joints are not designed to be waterproof against standing water; therefore it is important to ensure all overlaps are flat and even, and water in the drainage layer flows freely to the base of the wall. Ensure the membrane extends to, or just below the level of, the Aquadrain pipe, and the pipe is fully encapsulated in a granular infill and placed below footings/ internal floor level.




**Key benefits**

- Suitable for use with all construction types.
- Drains off water before reaching the waterproof coating.
- Combined drainage and protection board.
- Easy handling, rapid installation.
- Rugged, durable construction with thermal insulation benefits.
- Filtration layer prevents silting-up.
- High drainage capacity.
- Allows back-filling with excavated earth.
- Withstands stress and movement in the background.

**Technical Data**

**Material:**
layer 1 - HDPE
layer 2 - PP

**Weight:**
900 g/m2 (22.5kg per roll)

**Studs:**
height 8mm,
spacing 1860 m$^2$

**Drainage:**
4.6 Lt/sec/m, 276 Lt/min/m, 16,600 Lt/hour/m

**Permeability:**
Geotextile transmission rate: 100 Lt/m$^2$/sec

**Strength Compressive**:
250 kN/m$^2$
(25 tonnes/m$^2$)

**Temperature service range:**
-40°C to +80°C

**Safety**
Geotex and associated materials are not classified as hazardous according to current labelling regulations but please note that care is required when working below ground in confined spaces and when using drills/hammers etc. in these circumstances.

# Installation system

## PLUGS

**CM Plaster Plugs**
These Plaster Plugs can be used with our mesh membrane systems, they are available in 70mm and 50mm lengths and have a serrated head which can take plaster or dot and dab. They can also be used to secure membranes to walls in systems where a free standing frame is to be used.

**CM Plaster Plugs with Seals**
These Plaster Plugs can be used with our mesh membrane systems. They are available in 70mm lengths and have the advantage of a seal already attached. They have a serrated head which can take plaster or dot and dab. They can also be used to secure membranes to walls in systems where a free standing frame is to be used.

**Surefix Brick Plugs**
Wykamol Surefix are 10mm fixings to use with membrane systems. They have a reinforced head for easy use and take a size 10 screw into the head of the plug, for battens or metal framing systems. At 60mm long, these plugs will fit into all substrates.

**Surefix Brick Plugs with Seals**
Wykamol Surefix plugs are 10mm fixings to use with membrane systems, with the advantage of a rubber seal already attached. They have a reinforced head for easy use and take a size 10 screw into the head of the plug, for battens or metal framing systems. At 60mm long, these plugs will fit into all substrates.

**Cob Plugs**
These plugs are ideal to use where substrates will not take a normal fixing. They are ideal for cob construction as well as all other masonry types. They have a pin which is driven down the head of the plug to give a secure anchor for membrane systems.

## JOINTING

**Tape**
A high quality butyl double sided tape, 28mm wide. This tape is used in the installation of Wykamol cavity drain membranes and is used to tape 2 sheets of membrane together on walls or floors. Easy to use and very high quality HP600 grade bitumum makes this a long term solution for all membrane work.

**Rope**
A 10mm bead of butyl rope. This rope is used to either wrap around the head of plugs in membrane installation, or to form a jointing waterproof seal on walls and floor membrane systems. This is a high quality rope and is covered by our BBA Certificate.

**Corner**
Our biggest selling tape, this 150mm wide tape has many uses, but is mostly used to seal membrane from walls to floors and the channel system. Tacky on one side only, this can also be used to overtape external joints and can also be used on floor oversealing.

**Overseal**
This is a 75mm overseal tape used to overseal membrane systems, it can be used on walls and floors and forms an overseal detail to form a vapour barrier and waterproof seal on external taped joints. Covered by our BBA Certificate.

**Fibre Tape**
Wykamol Fibre Tape is used to join plaster membranes together. The unique fibre backing allows for direct plaster or dot-and-dab situations. The fibre also stops any cracking of plaster on these joints.

## CHANNELLING

**Waterguard**
Wykamol Waterguard is a PVC drainage conduit designed for the control of water ingress in below ground situations. Wykamol Waterguard is fitted around the perimeter of the floor at the vulnerable wall/floor junction.

**Floor Drain**
Floor Drain is a flangeless channel similar to Waterguard, for controlling water movement to a sump chamber or drain. It has the benefits of no upstand which is ideal where stepped foundation footings would cause a problem. The channel can also be used to drain across a floor centrally.

**Waterguard Drainage outlet**
The drainage outlet can be used to get water from the channels to the sump chamber or existing drain. The angle bend on the underside of the channel takes water through a 32mm connection.

**Universal Channel outlet**
Newly designed channel outlet to remove water from the channel to the sump. This has the benefit of a 100mm outlet for high water movement or for easier installation into the sump chamber. It also comes with a jetting eye which can be cut down to suit floor finishes. Can be used with floor drain and waterguard channels.

**Flexi Jetting Eye**
The flexible jetting eye has been designed to allow cleaning of the channel system and also as an inspection port. The unique flexible upstand jetting point can be easily bent to allow the channel to be used in a wall port system. It and also has the benefit of allowing slabs to be laid whilst still being easily accessible afterwards.

**Waterguard Drain End Left or Right**
The drain end connector can be used to take water away through an external wall to lower level drainage, ideal for houses built into a hill side where lower drainage is possible. This comes with either a left return or right return depending on where it is to be sited.



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# Wykamol Installation guide

## CM8 & KONTRACT 8 - wall aplication

### PREPARATION

Wykamol wall membrane can be installed over a wide range of substrates in varying situations - walls, floors, ceilings, soffits, etc. However, before the System is installed, the area must be assessed to determine what preparation is required:

a) All timber fixtures and other organic material must be removed to prevent risk of fungal or bacterial growth behind the System, e.g. skirting boards, timber plates, old wallpaper etc. Structural repairs or works to remove items likely to puncture the membrane must be carried out. If evidence of rot or mould exists, this should be treated. (Wykamol Microtech Biocide, Wykabor 10 or Mould Clear Concentrate)

b) If the walls are uneven or areas have deteriorated, any large depressions should be levelled and made good to ensure a solid fixing.

c) When assessing floor applications, consideration should be given to the type of finish that is required. The floor must be cleared of oil, loose material and any sharp edges should be levelled out. Any holes or severe depressions should be filled. When a timber floor is preferred, then more consideration should be given to achieve a flat substrate prior to laying the membrane. This will relieve any undue movement when fitting a final floor finish.

d) The design of the drainage system should be agreed, implemented and tested before covering by the membrane. The exception to this is where the Aqua Channel is sat above the slab or raft. Flood tests should be made to check the slab or raft is flat and level prior to the installation of the Aqua Channel, but the system can only be fully tested once the floor membrane and some form of resistance to water pressure is placed above the membrane such as temporary boards with bags of ballast or sand placed above, or the finished floor covering.

e) When fixing the system to flat soffits you must ensure that there is a fall to create proper drainage and prevent ponding. Any sagging of the membrane should not be great enough for ponding to take place.

### TOOLS

**Minimum Required:**

- Good quality 110V SDS hammer drill
- Mallet or club hammer
- Stanley Knife with spare blades
- Cutting shears
- Tape measure
- Long spirit level
- 8mm & 10mm SDS drill bits
- Clean rags
- Trestle staging or scaffold for working at height

**Recommended**

- Extra lighting
- Hot Air Gun

### WALL APPLICATION

The Wykamol wall membrane is fixed with the studs against the wall to create an air/depressurisation gap. The membrane can be fixed either vertically or horizontally. When making this decision, you will need to take into account the size of the area to be lined, and the height of the walls relative to the width of the membrane. Horizontal fixing requires fewer cuts and jointing but the full roll is very heavy at first. Vertical fixing has very much lighter strips to fix, but requires that each of these is taped back together again. You may find that vertical fixing is easier, but requires more Corner Detail Tape for jointing.

The membrane is fixed to the wall using a Brick Plug fixing. The Brick Plug should have a waterproof seal applied to the collar using a soft rubber sealing washer or Wykamol Rope fitted to the plug for sealing to the wall membrane.

Place the wall membrane in position as level as you can judge by eye. Using a 10mm drill bit, drill through the centre of a stud near the top and edge to a depth greater than the fixing. The fixing is then hammered into the pre-drilled hole until the plug sits flush in the stud. The rubber washer re-seals the hole. Level the membrane using the spirit level or laser level if used, and fix another plug about 2m along at the top of the sheet.

The membrane will now be hanging level to the wall. If you are fixing horizontally, continue fixing every 2m until you have reached the end of the roll or you have covered all of the wall(s) to be treated. It is very important to regularly check the level. If the membrane is not level, you may well find that the membrane is kinked and looks unsightly, it will also dive down when fitted around corners.

If you are fixing vertically, hang each subsequent sheet by the two fixings as described above.

The subsequent sheet should overlap by at

Fixing plugs on CM8 wall membrane


Fixing membrane using plastic plugs

least the width of the flange of the new sheet. You may find it easier to interlock the first stud of the new sheet to the last stud of the last sheet as this helps to keep the new sheet level. The vertical joints have to be sealed with Wykamol Tape. It is easier to apply the tape to the inner surface of the flange of the next sheet. Clean the flange and the face of the last sheet with a clean rag. When you have fixed the new sheet level with the correct overlap, pull off the backing paper from the tape and peel down whilst applying pressure to the flange.

Once all the backing paper has been removed, apply more pressure with the palm of your hand to further seal the whole of the joint. A Hot Air Gun should be used to help sealing in cold or damp conditions.

## FIXING CENTRES

Once the Wykamol membrane is hanging off the top fixings the rest of the fixing plugs need to be fixed.

The spacing of these fixings is dependent on the type of wall finish to be used:

- Timber battens 400mm centres vertically and 600mm horizontally. Barrel Vaults require tighter centres.
- Fixed metal track (Gypliner) 600mm centres vertically and 800mm horizontally. Brick or block walls restrained to the retaining wall using ties should have the fixings at centres to provide the correct number of restraints at the correct centres.

Free standing timber and metal frames and free standing block walls do not require specific fixing centres. In these cases use sufficient fixings to ensure the membrane is neat and tidy and reasonably tight to the wall, especially around corners and reveals. When fixing the system to flat soffits you must ensure that enough fixings are used to keep the membrane tight to the soffits with no sagging. All fixings should be in line both horizontally and vertically.

## BATTENS

Battens should be pre-treated and of a minimum dimension of 25mm x 38mm although you may find that 25mm x 50mm offers better fixing at the edge of the plasterboard.

The battens can be fixed into the fixing plugs without piercing the membrane, by using 5mm (size 10) self-tapping screws. The plug will take 30mm of screw, so be sure to purchase the correct length for the thickness of batten.

Over-tightening of over length screws can loosen the plug. Be very careful not to puncture the membrane when drilling and fixing the battens. Battens should be fixed so that all plasterboard edges are supported. Use a timber treated batten or treat with a preservative. (Wykabor Cut End) to protect cut battens.

Once the battens are fitted into position, plasterboard can be fixed to them using clout nails or preferably plasterboard screws. Care should be taken not to exceed the depth of the battens with the screws, and thereby puncture the membrane.

## ALTERNATIVE FIXINGS

Other finishes may be employed depending on the requirements of the specifier.

***a) FREE STANDING FRAME*** This method should be employed if the wall is undulating, as with some stone structures or where space loss is a secondary consideration. The frame would be fixed to the soffit and the floor finish with the supplied 'U' channels. With the increasing requirement of insulation to meet Part 'L' of building code, the use of these frames in becoming more popular, the thickness of insulation required is often in excess of the thickness of the frame, and so no wall thickness is not lost when using this method. Because the frame is free standing and has no relationship with the wall membrane, very few fixings are required and so this wall finish above allows for the fastest and most efficient method of fixing membrane to the wall.

***b) PROPRIETARY FIXING SYSTEMS*** Fixing systems such as Gypliner or Lafarge can be used with Wykamol membrane. It is also possible to use metal profile systems when constructing new internal walls. These can be fixed without bridging the membrane.

***c) INTERNAL BLOCK WALLS*** If preferred the system can provide a water and vapour proof barrier, and then be lined with a block or brick inner skin.

## SERVICES

If there are any services through the wall and floor, the membrane can be cut and trimmed around them and the gap filled and sealed using Wykamol Rope and Corner Detail Tape.

If necessary, a patch of membrane or plain DPC (PVC) is laid over and sealed to the service with Wykamol Rope and around its perimeter with Corner Detail Tape. It should be noted that protrusions through the floor slab/raft should be avoided wherever possible as they create weaknesses that allow unnecessary water ingress. The specified floor finish can now be laid directly over the floor membrane, which must not be punctured by any fixings through the floor. When a timber floor finish is preferred you must allow an expansion gap around the wall edge. Speak to the supplier of the floor finish to confirm the correct size of this expansion gap.

## GENERAL

Occasionally, service pipes and other intrusions will interrupt a continuous application of the membrane. In this instance the membrane should be trimmed neatly around the service and sealed using the Wykamol Rope or Corner Detail Tape, or if necessary a combination of both.



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# CM8 & KONTRACT 8 - floor aplication

## PREPARATION

Please refer to our section on preparation and attend to any preparatory work prior to installation. Always clean both edges of the membrane before making a seal.

## DRAINAGE REQUIREMENT

If CM8 or Kontract 8 is to be used in a full or part earth-retaining situation, the membrane system must be drained. To comply with BS8102, you must assume that the structure will be subjected to water ingress at some time. CM8 and Kontract 8 can also be used on the floor in above ground situations to provide isolation from damp floors either as the primary DPM or above green concrete to accelerate the contract program. The concrete will continue to cure below the dry membrane surface allowing for floor finishes to be laid above the membrane much quicker than normal.

## METHODS OF DRAINAGE FOR CM8 & KONTRACT 8 TO THE FLOOR

The drainage must effectively remove all water from below the membrane and take the water to a point of discharge such as a sump chamber or a form of safe natural drainage. Standing water can block the membrane with silt or lime scale so it is important for water to flow uninterrupted to the drainage point.

***AQUA DRAIN & AQUA CHANNEL*** Aqua Drain & Aqua Channel sits in at the wall/floor junction and collects water from behind the wall membrane and receives water at the wall / floor junction. They are a designed method of removing water as it can interface with sump chambers, stack pipes, gullies, waste pipes etc. Aqua Channel can be serviced by inserting jetting eyes into the system.


Laying out floor membrane

***CENTRAL DRAINAGE*** When a new slab is being laid this presents the opportunity to install a Central Drainage system. A network of 100mm pipe work laid to evacuate water from the slab to a groundwater sump chamber. Please refer to our Technical Drawings guide. A silification treatment should be applied to new slabs. This will lock in free limes present within the slab. (Wykamol Microseal)

## INSTALLATION OF CM8 & KONTRACT 8 TO THE FLOOR

Starting at one side of the room, unroll the membrane with the studs down and cut to fit the room as one would a carpet. The next membrane width is rolled out so that the flanged edge overlaps onto the edge of the previous roll of membrane. Clean both edges. Wykamol Tape is then applied to the edge of previous roll of membrane with the backing paper still intact. Check the two widths for alignment, with the flange covering the backing paper. Starting from the middle of the joint, remove the backing paper and press down on the joint sealing the two sections together. This process is repeated until all areas are covered.


Installation of membrane

Seal the floor membrane to the wall membrane using Corner Detail Tape. Refer to Technical Drawings guide.

Where the floor membrane is required to be jointed to horizontal DPC s through internal and external walls, these joints should be sealed with Wykamol Corner Detail Tape.

Ensure both surfaces are clean and dry before attempting to make these joints. If there are any services up through the floor, the membrane can be cut and trimmed around them, and the gap filled and sealed using the Wykamol range of tapes. If necessary, a patch of membrane or plain DPC (PVC) is laid over and sealed to the service with Wykamol Rope and around its perimeter with Corner Detaill Tape. It should be noted that protrusions through the floor slab should be avoided wherever possible as they create weaknesses that allow unnecessary water ingress.

The specified floor finish can now be laid directly over the floor membrane, which must not be punctured by any fixings through the floor. When a timber floor finish is preferred you must allow an expansion gap around the wall edge. Speak to the supplier of the floor finish to confirm the correct size of this expansion gap.

## KONTRACT 20 - INSTALLATION TO THE FLOOR

Where knowledge of the ground conditions including the water table is unclear and condition of the existing slab uncertain, Kontract 20 should be used as either the main floor membrane or as a lost drainage layer with another floor membrane above acting as the vapour control layer.

It is very rare for water to pass through a solid concrete slab or concrete raft, but where the slab or raft is of questionable quality it is possible for water to pass through cracks in a poorly constructed floor. If the quality of the slab is questionable, Kontract 20 should be used.

In „at risk" sites and head height allowing, it is highly recommended to install Kontract 20. This product has an air gap volume equal to 14Ltrs/m2 and a greater resistance to hydrostatic pressure. Install Kontract 20 as per installation instructions of CM8 and Kontract 8 across the floor.

Where the Kontract 20 is to be used a lost drainage layer, the membrane is not sealed to the Aquachannel.

## SLIMLINE MESH & KONTRACT MESH - INSTALLATION TO THE WALLS

Wykamol mesh membranes are used in both new build and retro fit basements where space is at a premium and or the choice of finish can be render, plaster, or dot and dab plaster board. It is also used to remediate damp walls and offer insulated finishes on cold external walls above ground.

### PREPERATION

Please refer to the instructions as set out for CM8 & KONTRACT 8.

### FIXINGS

Mesh membranes should be fixed to the walls using Wykamol Plaster Plugs. An 8mm drill bit is needed and drill to a depth greater than the length of the plug. In below ground environments plug fixings should be sealed around the collar using preformed waterproof seals or Wykamol Rope subject to how wet the substrate is.

Above ground and on non soil retaining walls Plug fixings do not necessarily need to be sealed.

Fix in a square at 350mm centres, and then fix a plug in the centre of four fixings so it looks like a 5 on a dice. All fixings will then be a maximum of 250mm from each other.

It is essential fixings are no farther apart than this specification to avoid rippling of the membrane and subsequent cracking of the applied finish.

Where a Dot and Dab finish is being applied centres may be reduced to 350mm centres.

### SEALING

Flange to Dimple – Use Wykamol Tape Dimple to Dimple – Use Wykamol Rope Butt to Butt Joint – Use Wykamol Fibre Tape

### DRY LINING

In the remediation of a damp wall mesh membrane can be installed in a dry lining finish. To assist with the drying down of the wall it is recommended to introduce air movement behind the membrane. On the dry side of the membrane the use of a vapour check plaster board product is recommended to guard against the effects of interstitial condensation.

Fixing aqua chennels



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### FINISHES

Wykamol mesh membrane products can be finished by rendering, plastering or applying dot and dab adhesive grout and plaster board. Kontract Mesh can be finished in accordance with normal plastering techniques (BS 5492:1990) using proprietary lightweight plasters e.g. Tilcon „Whitewall , Thistle „Carlite Bonding , or a 1:1:6 cement:lime:sand render. NB Manufacturers recommended drying times may vary according to atmospheric conditions.

### CEMENT BASED RENDERS

For internal cement renders the mix to be six parts clean sharp sand/one part lime or plasticizer/ one part cement. A two-coat application is recommended allowing 7-10 day between coats. Drying time is important because shrinkage cracks may appear. Note: All plasters and renders etc. must be to a minimum total depth of 15mm. The undercoat should be applied with firm pressure to the depth of the studs and cover the mesh and be well scratched by means of a wire scratcher. When the scratch coat has set, the floating coat should be applied to a final overall finish of 15mm and lightly scratched to provide a firm key for the final coat, which should be to a minimum thickness of 3mm.

All plasters and renders should be applied strictly in accordance with the manufacturer's instructions, and good plastering/rendering practice as described in BS5492 and BS5262 Code of Practice.

Do not apply decoration until plaster is thoroughly dry. Note: If plasters other than those specified above are used they will not conform to the Wykamol Company specification and will therefore invalidate any guarantee on the material. If any special renders or plasters are to be considered, technical advice must be sought from the Wykamol technical representative.

For dry lining use a conventional bonding plaster in dabs to a minimum thickness of 8 mm and covering at least 50% of the membrane surface area. After the plastered, dry-lined or rendered surface has dried, the surface can be painted or wallpapered using traditional methods and materials without delay.

### VENTILATION

Ventilation is an important requirement of the design of habitable building space, and is necessary for providing a healthy environment for all of the building occupants. Part F (2006) of the Building Regulations 2000 deals with ventilation within buildings. Requirement F1 states that: “There shall be adequate means of ventilation provided for people in the building”.

Fixing corner tape on floor and wall membranes

Ventilation is required for one or more of the following purposes:

- Provision of outside air for breathing
- Dilution and removal of airborne pollutants, including odours
- Control of excess humidity (arising from water vapour in the indoor air)
- Provision of air for fuel-burning appliances (which is covered under Part J of the Building Regulations).

Ventilation is increasingly more of an issue because of the requirements of Part L of the Building Regulations 2000 to make houses more air-tight so as to prevent heat loss. The two sections of the Building Regulations appear to be almost at odds with each other resulting in the requirement for mechanical ventilation in most cases. Basements present even more of a problem as natural ventilation, even in older properties not subject to Part L, is a real problem where the living space walls may be earth retaining to all elevations. BS8102 – 1990, the code of practice for the protection of structures against water from the ground, mentions the need for ventilation for Grade 4 structures to be used for the storage of hygroscopic materials such as for the archiving of paper documents. Although BS8102 does categorise Grade 3 habitable areas as being ventilated, unfortunately the British Standard pre-dates the current Part F by some sixteen years, and so is not giving advice that is up-to-date. If BS8102 were to be updated today,

it would include specific guidance for the forced mechanical ventilation of Grade 3 habitable areas, controlling humidity to around 50% RH. It is unlikely that works to waterproof a basement will comply with Part F unless mechanical ventilation is included, and so we recommend that mechanical ventilation is included within the design of all Wykamol Waterproofing Systems.

## VENTILATION SYSTEMS FOR BASEMENTS

Part F names 4 methods of ventilation:

- ***System 1:*** Background ventilators and intermittent extract fans.
- ***System 2:*** Passive stack ventilation.
- ***System 3:*** Continuous mechanical extract.
- ***System 4:*** Continuous mechanical supply and extract with heat recovery.

For a dwelling which includes a basement that is connected to the rest of the dwelling above ground by a large permanent opening (e.g. an open stairway), the whole dwelling including the basement should be ventilated and treated as a multi-storey dwelling. If the basement has only a single exposed façade, while the rest of the dwelling above ground has more than one exposed façade, ventilation systems 3 and 4 are preferred. If systems 1 or 2 are to be used, seek expert advice.

For a dwelling which includes a basement that is not connected to the rest of the dwelling above ground by a large permanent opening the basement should be treated separately as a single-storey dwelling above ground. If the basement has no bedrooms, assume it has one bedroom for the purpose of determining ventilation provisions.

For a dwelling which comprises only a basement it should be treated as a single-storey dwelling above ground.

## GENERAL

### OVERLAP JOINTS

On walls, CM8 and Kontract 8 can be fixed either vertically or horizontally. The membrane is overlapped either by the flanged edge or by a minimum of three rows of studs.

### GENERAL

In all cases ensure that membrane overlaps are made so as to provide continuous drainage behind the membrane. Avoid making laps that would allow water to drain onto or to be trapped by the joints.

### REPAIRS TO STUDS

When the wrong stud is drilled in error this can easily be repaired by cleaning out the stud with a clean cloth and plugging it with sealing rope. This can then be covered with a small patch of Corner Detail Tape or plugged with Wykamol Rope. The same repair can be used where a successful fixing has not been achieved due to drilling into unsound joints or structure. Simply make the repair and re-drill another hole.

### WATERPROOFING PLUG FIXINGS

- ***ABOVE GROUND NON SOIL RETAINING WALL:*** No waterproof seal required.
- ***ABOVE GROUND SOIL RETAINING WALL:*** Seal with preformed seal or Rope.
- ***BELOW GROUND BUT DRY SUBSTRATE:*** Use preformed seal.
- ***BELOW GROUND DAMP SUBSTRATE:*** Use Wykamol Rope.

## MATERIAL USAGE

- Order 1 x roll of Wykamol Tape for every roll of membrane.
- If applying battens to Brick plug fixings order enough plugs for 5 every M2 of wall membrane.
- Mesh membrane requires plug fixings equal to 18 per M2 of membrane. Less if dot and dab finish is being applied.
- 1 x roll of Wykamol Rope will seal 100 plug fixings.

*(Source and Photos: WYKAMOL)*

Leveling floor before installing floor membranes



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# Tanking system with Kontract Mesh membrane

## - waterproof barrier bonded to the walls holding water out of structure

### Requirements:

- The tank should include all walls and floor in a continuous system
- Any holes in the tank should be sealed
- Mesh membranes are fixed to the wall using Plaster Plugs & seals max 250mm from each other
- Tough HDPE mesh surface allowing for direct application of various plaster finishes or adhesive dabs for plasterboard
- It may be necessary to install channels and pumping mechanisms to collect and remove water
- Aqua channel can be serviced by inserting jetting eye into the system
- If there are any services up through the floor should be sealed as well
- 30 years Wykamol products guarantee

Quotation for 20sqm basement conversion with tanking system (without finishing)

### Additional conditions:

- All organic materials must be removed to prevent risk of fungal growth
- Existing moulds should be removed
- Any sharp edges, oil or loose materials both on the floor and wall should be removed
- Drainge system should be tested before covering with the floor membrane
- Another test is recommended after laying floor membrane
- Each sheet of membrane is sealed with tape together with overlaping by minimum three rows of studs
- Floor membrane and wall membrane are sealed with 150mm width Corner Tape

### Dimmensions:

- Floor area 20sqm
- Wall surface 40sqm
- Drainage length 18m

### MATERIALS

Materials – tanking system typical 20sqm basement

| No | Material | Code/dim | Picture | Usage | Price* excl.VAT unit | Usage for 20m2 basement | Cost* excl. VAT | Cost* incl. VAT |
|---|---|---|---|---|---|---|---|---|
| 1 | Wall membrane with mesh | Kontract mesh 2*10m |  | 1.20 sqm/sqm | £183.33 | 2.4 roll | £439.99 | £527.99 |
| 2 | Sealing Overtape | 75mm*22.5m |  | 0.05 m/m | £53.92 | 1.0 roll | £53.92 | £64.70 |
| 3 | Standard tape | 28mm*22.5m |  | | £29.67 | 1.0 roll | £29.67 | £35.60 |
| 4 | Plugs to wall membrane | Plaster plugs 8*70mm |  | 18.00 pcs/sqm | £ 0.29 | 720.0 pcs | £208.80 | £250.56 |
| 5 | Floor membrane | Kontract 20 2.07*20m |  | 1.20 sqm/sqm | £332.92/roll | 1.2 roll | £399.50 | £479.40 |
| 6 | Corner tape | 150mm*20m |  | | £74.83 | 1.0 roll | £74.83 | £89.80 |
| 6 | Aqua chennels | 2.2m |  | | £28.17 | 9.0 pcs | £253.53 | £304.24 |
| 7 | Universal channel outlet | |  | 1.00 pcs | £54.50 | 1.0 pcs | £54.50 | £65.40 |
| 8 | Drain end | |  | 1.00 pcs | £34.63 | 1.0 pcs | £34.63 | £41.56 |
| 9 | Jetting eye | |  | 1.00 pcs | £32.32 | 1.0 pcs | £32.32 | £38.78 |
| 10 | Sumpflo kit, single pump | Sumpflo kit |  | 1.00 set | £1,158.33 | 1.0 set | £1,158.33 | £1,390.00 |
| 11 | Sump monitoring unit | |  | 1.00 set | £381.67 | 1.0 set | £381.67 | £458.00 |
| Total | | | | | | | £3,121.69.49 | £3,746.03 |

* all products available at IBB; prices before discounts

Installation details

## MATERIALS

Labour – tanking system typical 20sqm basement

| No | Description | Labour per unit | Q-ty | Labour [lh] |
|---|---|---|---|---|
| 1 | Creating channel in concrete slab for drainage | 0.34 lh/m | 18.0 m | 6.12 |
| 2 | Digging whole for sump chamber | 4.90 lh/m3 | 0.6 m3 | 2.94 |
| 3 | Installing aquachannels | 0.08 lh/m | 18.0 m | 1.44 |
| 4 | Installing sump pump | 6.00 lh/set | 1.0 set | 6.00 |
| 5 | Installing sump alarm | 1.20 lh/set | 1.0 set | 1.20 |
| 6 | Fitting Kontract mesh to the wall with plaster plugs | 0.60 lh/sqm | 40.0 sqm | 24.00 |
| 7 | Fitting additional sealing tape for joints | 0.08 lh/m | 22.0 m | 1.76 |
| 8 | Plugs to wall membrane | 0.06 lh/pcs | 720.0 pcs | 43.20 |
| 9 | Fitting floor membrane | 0.12 lh/sqm | 20.00 sqm | 2.40 |
| TOTAL | | | | 89.06 |

| No | Description | Labour [labour hours] | Company rate* excl.VAT | Cost excl. VAT | Cost incl. VAT |
|---|---|---|---|---|---|
| 1 | Labour | 89.06 | £27.00 | £2,404.62 | £2,885.54 |

* gross company rate varies depending on net company rate, overheads, profit margin

## APPLICATION TOOLS AND ANCILLARY COMPONENTS

Tools and ancillary components

| No | Material | Code/dimmensions | Price* excl. VAT | Price incl. VAT |
|---|---|---|---|---|
| 1 | Cutting knive | 18mm | £1.83 | £2.20 |
| 2 | Spare blades | 18mm | £1.25 | £1.50 |
| 3 | Mallet | Maxter | £4.08 | £4.90 |
| 4 | Cutting shears | | £7.08 | £8.50 |
| 5 | Tape measure | 8 m | £9.17 | £11.00 |
| 6 | Spirit level | PN 47 2.5m | £47.49 | £57.50 |
| 7 | Drill bits 8mm | 8*160mm | £2.25 | £2.70 |
| 8 | Trestle staging | Compact A | £337.67 | £405.20 |
| 9 | Lighting – halogen lamp on tripod | 500 W | £22.42 | £26.90 |

* all products available in IBB; prices before discounts

**Notice!**
Above estimation is only an example and you can use it on your own risk. Use PPE – Personal Protection Equipment and establish Health&Safety practice

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# WYKAMOL Tanking System


WYKAMOL produce a wide range of membranes, designed to cope with a variety of structures and waterproofing problems. WYKAMOL's membranes can be used for both below and above ground applications. Correctly installed by approved contractors and with ongoing routine maintenance of drainage channels and pumps, these systems can last the lifetime of the property. There are various solutions available: CM8 - 8mm Waterproofing membrane, CM20 - High Capacity Waterproofing membrane, Kontract Mesh - Plaster membrane, CM Floor - Drainage Waterproofing membrane, Yellow Mesh - Slimline Waterproofing membrane, Geotex External - Waterproofing membrane

### Application:

Wykamol Waterproofing membranes are directly applied to the wall or floor without damage to the existing structure. Minimum preparation is needed to surfaces, what avoids mess and is less time consuming. Before the fitting of membrane the drainage system is installed. Membrane is easy to bend and cut with scissors to form around openings. Membrane plugs, tapes and channels are used to fix the membrane. There is no drying process what enables prompt decoration. Internal finishes of insulation and plasterboard or plaster and render products are applied to the front of the wall membrane to provide a dry and well insulated living area. Various floor finishes can be used on top of the floor membrane.

### Benefits:

- *Little to no damage to existing structure*
- *No delays to decoration as there is no drying process.*
- *Waterproof, salt resistant, root resistant and contaminant resistant*
- *Low and high temperature tolerance*
- *Fast to install and lay*
- *High water movement capacity*
- *Various finishes can be used on top*
- *Can be used with various drainage systems*
- *Can be used with all wall insulation systems*

# IZONIL Waterproof and Breathable Plaster


Izonil Waterproof and Breathable Plaster is a cement-lime based, fibre reinforced mortar for masonry rendering and plastering. It provides the waterproof barrier on brick, stone, blockwork and concrete from 15 to 30mm thickness. It provides solutions for damp proofing and waterproofing of surfaces.

It is one coat solution without a need for a membrane. It is applied directly to walls and perfectly seals and prevents the ingress of water while remaining vapour and air-permeable. It allows moisture to evaporate and it is environmentally friendly. It is supplied as a ready mixed powder that requires only the addition of water on site.

### Application:

Renovating and waterproofing of

- Cellars and basements, bathrooms,
- Showers, wet-rooms, swimming pools
- External walls, facades, plinths
- Old, listed and heritage buildings,

Before application prepare the surface and apply the standard primer. Izonil can be applied by trowel or mortar gun. Final layer can be finished with plastering tools.

### Benefits:

- *10 years guarantee on water resistance*
- *One single layer, no need for membrane*
- *Increase water vapour*
- *Easy to use*
- *Most cost effective*
- *Can be applied as insulation*
- *No toxic ingredients*
- *Environmentally friendly*

# ATLAS Woder S


GO TO PAGE 42 TO COMPARE DIFFERENT PRODUCTS

Atlas Woder S is a water-resistant cement mortar that protects substrates against water pressure. It can be used on both external and internal layers of walls and floors, swimming pools and other. Light, medium or heavy resistance can be achieved and it depends on the thickness of the layer applied.

## Application:

Protects substrates exposed to precipitation and ground water – balconies, terraces, façades, cellar walls, foundations, stairs, plinths (e.g. before tiles fixing or applying decorative render ATLAS DEKO M type).

## Benefits:

- *Flexible, steam permeable*
- *Protects against pressurised water*
- *Allows sealing tapes embedding*
- *High adhesion sets without contraction*
- *For mineral substrates*

# ATLAS Woder Duo


It creates humidity resistant and watertight insulation. The insulation type - lightweight, medium depends on the thickness of the applied layer.

## Application:

Sealing against water

- under pressure – in water tanks, pools (resistant to chlorinated water
- free flow – rain, surface washing, in showers, in washing chambers, or in the form of surface humidity, etc.

## Benefits:

- *For light-, medium- and heavyweight insulation types*
- *Flexible joins scores and cracks*
- *Contains reinforcing polymer microfiber*
- *Under tiles*
- *For pools and water reservoirs*






# SBR Latex (Styrene Butadiene Rubber)

FROM THE OUTSIDE IN PREVENTION

GO TO PAGE 42 TO COMPARE DIFFERENT PRODUCTS

SBR Latex is the waterproof bonding agent used in the cementitious waterproofing. It is a liquid, water-based styrene-butadiene polymer latex additive for cement systems. SBR addition improves the waterproofing properties of concrete or mortars. When water evaporates the SBR form the polymer network inside the cement matrix, which prevents cracks and voids. It enhances the durability, water resistance and strength of cement mortars. It also improves the adhesion of screeds, toppings and renders.

## Application:

- Cementitious waterproofing products and tile adhesives
- Strengthening agent for concrete surfaces
- Adhesion agent in bedding and pointing mixes
- Waterproofer for damp-susceptible paving stones
- Primer or bonding agent for wall cladding and step risers
- Thin, water resisting screeds, toppings, renderings, mortars, etc.
- Waterproof, bonding bridges for mortars and concrete
- Anticorrosion Protection for reinforcements in concrete repairs
- Polymer mortars for repairs of carbonated concrete.
- Preventive treatments against carbonation.

Primer should be applied to the substrate surface and the bonding surface of the brick slip, tile, etc. The sound and dried surface should be damped with water before primer application. Intensive mixing is important and is best carried out using a cement mixer. The addition of Waterproof Bonding Agent is simplest in the form of Waterproof Bonding Agent, water mixture to cement or sand mixture. Priming is with brush or broom. It dries to form a tough, high-quality finish and can be applied to walls under render or plaster as a water barrier. The mortar layer is applied wet on wet while the primer is not yet dried.

## Benefits:

- *Increase strengths*
- *Better durability*
- *Increase flexibility*
- *Increase chemical resistance*
- *Increase crack resistance*
- *Reduce shrinkage*
- *Reduce setting and placement times*
- *Enhance abrasion resistance and reduce bleeding*
- *Increases air entrainment*
- *Improved adhesion and bonding*
- *Easier to work with less water required*
- *Improves resistance to damp and water vapour*
- *Reduce susceptibility to salts/efflorescence*
- *Enables fine mortars to be laid as much thinner layers*
- *Much reduced water: cement ratio improves strength and workability*

# AVAL KT98 Absorptivity reducer


GO TO PAGE 43 TO COMPARE 3 DIFFERENT PRODUCTS

It is an absorptivity reducer designed to protect absorptive surfaces. It is perfect for construction partitions exposed to rainfall – especially roofs covered with cement roof tiles and façades with mineral renders.

Protects against structural contamination – protected surface does not attract and absorb pollution. To be used on stone, brick, plaster and concrete.

## Benefits:

- *Protects against pollution*
- *Resistant to weather conditions*
- *Transparent*
- *Vapour permeable*

GO TO PAGE 43 TO COMPARE DIFFERENT PRODUCTS

# Damp Proof Membrane (DPM)

It is a polyethylene sheet laid under a concrete slab to prevent the concrete from gaining moisture. It prevents any groundwater move upwards through the concrete base. It provides a physical barrier that prevents water and dampness within the wall affecting the internal finish.

! FROM THE OUTSIDE IN PREVENTION

! FROM THE INSIDE OUT PREVENTION

## Benefits:

- *Allow moisture to evaporate from the wall*
- *Prevent moisture from passing into the internal part of the building*
- *Allows natural evaporation within cavity wall*
- *Inexpensive*
- *Easy appliaction*

GO TO PAGE 43 TO COMPARE DIFFERENT PRODUCTS

# Damp Proof Course (DPC)


It is a preventative barrier of slate, bitumen or plastic membrane built into the walls of a property, about 150mm above ground level to prevent damp rising through the walls. Designed to stop water and dampness from entering the building.

## Benefits:

- *Acts as a physical barrier*
- *Reliable*
- *Inexpensive*
- *Easy application*
- *Quick application*
- *Highly protective*





# WYKAMOL Ultracure cream


GO TO PAGE 43 TO COMPARE DIFFERENT PRODUCTS

It is an unique silicone emulsion cream for injection into the all type of masonry that forms an effective damp proof course. It does not require the high pressure equipment.

## Benefits:

- *Fast, clean installation*
- *No high-pressure injection pump required*
- *Virtually odourless, low hazard*
- *Precise dosing*
- *No pump cleaning required between jobs*

# ATLAS KL51 liquid membrane

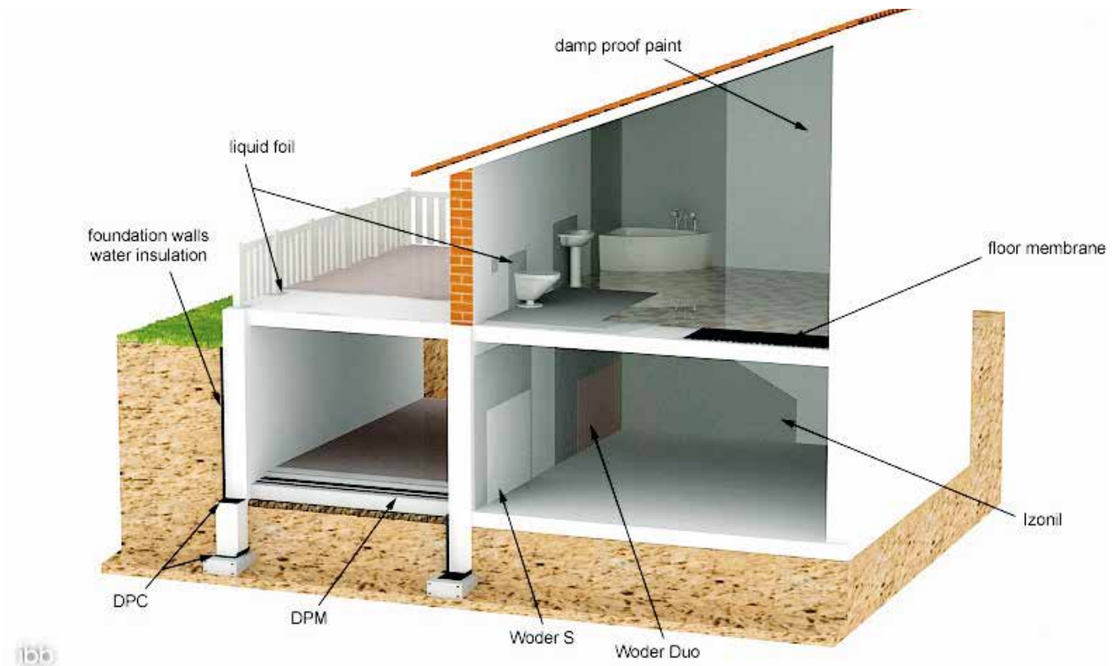
GO TO PAGE 43 TO COMPARE DIFFERENT PRODUCTS


## Benefits:

- *Protects substrates against humidity*
- *Highly flexible*
- *For balconies and terraces*
- *For bathrooms, kitchens and cellars*
- *Element of the sealing system*

It is a water-tight flexible foil that creates lightweight type insulation – seals places where water flows without pressure (free flow).It protects substrates against moisture inside buildings – renders and screeds in wet premises (bathrooms, baths, showers, kitchens and washing rooms), especially in wet areas of those premises – around shower cabins, wash basins, bathtubs, sinks, etc. It also protects substrates exposed to precipitation – balconies, terraces, etc.

# WATERPROOF SOLUTIONS COMPARISON TABLE




| Feature | WYKAMOL tanking system | IZONIL waterproof plaster | ATLAS WODER S | ATLAS WODER DUO | SBR LATEX Bonding agent |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| ***Description*** | Waterproof membrane | Cement-lime based, fibre reinforced mortar | Water resistant cement mortar | Two-component water-tight insulation | Styrene-butadiene polymer latex additive |
| ***Properties*** | Most efficient to prevent humidity and leaking. | Effective if applied in 1,5cm thickness, has to settle and dry | Effective where is a low water pressure | Effective where is a low water pressure, 2-4mm minimum thickness required | Solution required for waterproofing Mix of 3 parts SBR to 1 part water, adding cement and sand. |
| ***Application*** | Internal surfaces below ground level | For masonry rendering and plastering | Surfaces pressurised with water | Surfaces both with free flow water or pressurised water | Waterproofing additive for cementitus plasters or renders |
| ***Use indoor/outdoor*** | Indoor | Indoor / Outdoor | Indoor / Outdoor | Indoor / Outdoor | Indoor / Outdoor |
| ***Usage conditions*** | Cellars, basements and other areas below ground level | Cellars and basements, bathrooms, showers, wet-rooms, swimming pools, external walls, facades, plinths, old listed and heritage buildings | Foundations, cellar walls, floor/wall heating, water reservoirs, swimming pools terraces, balconies | Foundations, cellar walls | Concrete surfaces, screeds, toppings, renderings, mortars |
| ***Type of substrate*** | Bricks, blocks, stone, concrete | Brick, stone, blockwork and concrete | Cement and concrete screeds, cement-lime plasters, concrete, cellular concrete, silicates | Cement and concrete screeds, cement-lime plasters, concrete, cellular concrete, silicates, Plasterboards, OSB boards Galvanized metal sheets | Concrete or mortar |



WATERPROOF SOLUTIONS COMPARISON TABLE




| Feature | DPC | DPM | WYKAMOL Ultracure Cream | ATLAS KL51 | AVAL KT98 |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| ***Description*** | Foi designed to stop water and dampness from entering the building. | Slate, bitumen or plastic membrane | Silicone emulsion cream | Liquid foil | Silicone Hyrdophobic Agent |
| ***Properties*** | Effective physical barrier installed during wall construction | Effective physical barrier installed during construction | Possible application on existing structure | Minimum application of 1,5mm required | On average, 0.1÷0.3 l of preparation is used for 1 m2. |
| ***Application*** | External walls | Under concrete slab | All types of masonry | All types of surfaces | Stone elements, lime-sand materials, concrete and mineral plasters, brick walls |
| ***Use indoor/outdoor*** | Outdoor | Indoor | Indoor / Outdoor | Indoor / Outdoor | Indoor / Outdoor |
| ***Usage conditions*** | Above ground level | Above ground level | Above ground level | Above ground level | Above ground level |
| ***Type of substrate*** | Walls | Floors, Walls, Ceilings | Walls | Walls and floors -Balconies, terraces, bathrooms, kitchens, cellars | Walls and Concrete floors |

BUILDER EDUCATION

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# Demolition works

## as a part of the construction project

**Demolition means to demolish or dismantle part or whole piece of structure related to the physical integrity of the constructed building including sheds, towers, storage, silos, etc.- both fixed and moveable.**

The Health and Safety Executive states that all demolition, dismantling and structural alteration must be carefully planned and carried out in a way that prevents danger by practitioners with the relevant skills, knowledge and experience.

All relevant information, laws and guidance for the demolition can be obtained from for instance:

- Construction (Design and Management) Regulations 2015 (CDM 2015)
- Control of substances hazardous to health (COSHH) 2002
- Party Wall Act 1996
- Health and Safety Executive website and publications
- National Federation of Demolition Contractors

Demolition works are considered high risk and should be based on the collaborative approach of all parties involved in the construction project: clients, designers, contractors, subcontractors and site managers. Health and Safety duties related to the demolition works are mainly on the primary contractor, so Construction Phase Plan and Health and Safety Policy is required after all Pre-construction Information are obtained from the client.

### The Pre-demolition phase

Demolition requires six weeks notice to the Local Authority Building Control prior to works commencement. Building control surveyors inspect the site before demolition stage to ensure the health and safety policy is in place and to impose the control measures, or establish if there will be any remedial works needed on adjoining buildings or what will be the effect on services and the treatment of the site on completion. Anyone who needs to undertake demolition works has to notify the local building control inspectors with formal notice, unless the structure is considered exempt from notice requirement. The notice should describe the building, the demolition work, and the client's name and address. There is a need to supply copies of the Method Statement for the demolition work and Asbestos Type 3 Survey Report. Such notice has to be also given to the occupier of any adjacent building, utility suppliers, Health and Safety Executive, Environment Agency, police and fire service. Moreover, any alteration of a listed building requires a separate formal listed building consent and planning permission. Demolition work must also comply with the Construction (Design and Management) Regulations 2015 and a health and safety plan has to be produced by the principal contractor.

When giving approval for demolition work to take place, the Council will require the owner and contractor to adhere to certain conditions, these include:

- Adequate shoring, repair and weatherproofing of adjacent buildings
- Plan for waste removal
- The disconnection of utilities
- Asbestos control
- Noise control

## The demolition stage

Demolition is the most high-risk construction work. Taking into account all the key information about the particular project the demolition plan should be prepared to enable safe and efficient works.

There is the range of demolition methods that can be used and their choice depends on the type of the building structure and location. Sequential demolition should be undertaken in stages starting from the top of the structure. The distinction can be made between different demolition options. Explosive demolition requires exclusion zones and various inspections before execution. Hand demolition is required in case of more sensitive structures or in case of obstacles like overhead utilities or pedestrian access, etc. Most frequently used machine demolition reduces risk associated with people working at height.

## Building structure to be demolished

The principal designer should agree with the main contractor the scope of works based on plans and specifications. Any building or structure to be demolished and all its components should be maintained in a safe and structurally stable condition to prevent the unexpected collapse of part or all the structure. Temporary propping or shoring may need to be added to ensure that stability of the structure is maintained. The position, depth and type of basements, walls and underground storage tanks should also be determined as should the contents of any storage tanks.

***Structures to be demolished include for instance:***

- Asbestos
- Soft strip – removal of existing structure including windows and doors back to construction material
- Superstructure demolition
- Slab and foundation demolition

## Risk assessment plans for demolition works

Identifying hazards, assessing risks connected with the demolition work and determining effective control measures is an important part of the pre-demolition stage that allows the preparation of the Construction Phase Plan.

***Examples of demolition hazards are:***

- unplanned structure collapse
- falling objects
- exposure to hazardous materials
- possibility of fire or explosion- fire prevention steps
- proximity to the third party properties
- noise- when using explosives
- location of the services- water, gas, electricity, etc.
- safety of workers and public- site preparation
- waste management
- safe use of plant and machinery

## Demolition zones

Securing the work area is the first stage of demolition works and part of the site preparation. Planning for exclusion zones is required to provide safe working conditions for workers during, for instance:

- the stripping, removal or dropping of debris
- the operation of machinery or plant
- the planned controlled collapse of the significant part of the structure
- any structure weakening activities

Control measures to isolate public are necessary. All adequate procedures should be applied during the site preparation stage.

Moreover, no part of demolition process should in any way disturb or cause adverse effects on adjacent buildings. Consideration must be taken to use shoring, underpinning and support for the adjoining structures. Surrounding properties might be affected by the vibration, so special precautions are advised. Demolition works should not cause any flooding or water penetration to any other building.

## Disconnection of services

One of the first works on site connected with demolition projects is the location and disconnection of all essential services including the supply of gas, water, sewage, electricity, IT and communication cables, pipes, etc. The principal contractor must arrange for the temporary services to be used if required while existing should be shut off, capped, or controlled.

## Plant and machinery

Managing the risks of plant usage during the demolition works is the responsibility of the contractor and workers. Most common equipment used during the demolition works include power tools, mobile plant, ladders, scaffolding, concrete saws, jack hammers, electric generators, hand-held plant, etc. Health and Safety Executive rules should be taken into account. Use of cranes, excavators and bulldozers require additional precautions.

## Demolition waste

The contractor has to ensure the health and safety standards connected with the storage and disposal of construction waste at the workplace. Debris can be stored at exclusion zone or confined within a chute.

The efficient use of materials and minimising the waste is the part of the sustainable construction. Designers and contractors are advised to set minimum standards for the recovery of demolition materials, the use of recovered waste and the use of recycled waste. The resource efficiency in demolition can offset project costs by maximising the income, the value of materials recovered from demolition and cut disposal costs. Disposing waste at landfill sites is the least sustainable option in the waste management plan. Moreover, some types of waste are banned from landfill sites.

## Responsibility for preventing pollution

The principal contractor is responsible for preventing pollution from escaping waste during storage- wind-blown litter or leaks. Dust from demolition works should be minimised with the debris screens or sheets. Watering or damping dusty areas may also help. Materials for recycling should be covered or damped down to prevent dust migration. It is recommended to use dust suppression equipment or lower drop heights. Skips and removal vehicles should be protected when leaving the site. Waste burning on site is not allowed.

## Control of substances hazardous to life

Demolition work may involve structures that contain hazardous materials, for instance, lead, asbestos, polychlorinated biphenyls (PCBs), contaminated dust and combustible materials.

Any demolition work that involves or is likely to involve the disturbance of asbestos is a high-risk construction work. Asbestos was banned in the UK in 1999 and can be found in any building built before. It causes around 5000 deaths every year.

Asbestos is classified as licensable or non-licensable in the UK and contractors for licensable removal are in records of the Health and Safety Executive (HSE). For instance, non-licensable asbestos cement panels can be removed by a non-licensed contractor under HSE rules, including the training in asbestos awareness. There is a requirement of 14-day notification period to the HSE before any works related to asbestos can start. The removal of asbestos is under strict conditions with asbestos waste bagged in labelled bags and stored in lockable skips during the transit. Disposal of asbestos and all asbestos containing materials must to the Environment Agency licensed landfill site, carried by specially marked vehicles.

## Noise nuisance

Where construction or demolition works are taking place, noisy works have to be carried out within certain hours. Local authorities impose time restrictions and in general, working hours for noise generating works that disturb nearby residents are Monday to Friday 0730-1800 and Saturday 0800-1300. No noisy works are permitted on Sundays and bank holidays. Operations outside of these times may be agreed if the contractor/developer will demonstrate that any disturbance will be kept to a minimum.

It is advised to use best available technology to ensure that noise and vibration emissions are kept to a minimum. Consideration should be taken for noise from plant and machinery. Blasting and pilling operations should be carefully planned, while vehicle traffic on the site should be kept to a minimum. Tools like compressors and pneumatic percussion equipment should be fitted with some acoustic enclosures.

The demolition is connected with major concerns about noise, pollution, site conditions and safety. Please note this article is a guidance only and compliance with the local authority or HSE rules and other requirements is necessary.

POLONIA LONDON. VC

IBB POLONIA LONDON VOLLEYBALL CLUB

# First victories in 2016

**After an exciting fight, London IBB Polonia volleyball players defeated 3-2 the team from Wessex and maintained the position of a leader in Super 8 Ligue table.**

Steven Smith

Rivals highly challenged Vangelis Koutouleas mentees, Greek coach worked with the team from Bournemouth for several seasons, which always affects motivation of the players from Wessex.

"It's already been a tradition for the players from Wessex to be twice as much motivated for the matches with their former coach. It was so this time", says Koutouleas – "We had a hard struggle with rivals and I am pleased because such meetings create the team".

IBB Polonia players were supported by their fans who set off from London to Bournemouth.

"The Fan Club supported volleyball players with loud cheering which was particularly important during this balanced match being played away from home", says the chairman of IBB Polonia, Bartek Łuszcz.

Wessex – IBB Polonia 2-3 (24-26, 25-16, 23-25, 27-25, 11-15).

After this match IBB Polonia is in first place in the table of Super 8 Ligue – 22 scored points in their account. In second place is Team Northumbria – 21 points. Third place is occupied by London Docklands – 16 points.

"We have won all the meetings since the beginning of the season what makes us very happy, but we know that it is only a part of a larger puzzle that is still being created", sums up B. Łuszcz.

IBB Polonia will play their next match on Saturday, 23rd January. In this away match the rival is Malory Eagles. The beginning of the meeting is at 15.15 at Ernest Bevin College (Beechcroft Road, London, SW17 7DE).

Current information about IBB Polonia to be found on regular basis on the website www.polonia.vc or www.facebook.com/poloniavc.

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# The incredible series of victories

BREAKING NEWS

Cardiff - 30.01.2016 - 10th victory of IBB Polonia London

**Nine matches, nine victories* - a result for volleyball players of IBB Polonia London in Super 8 League competitions. This team has not lost any of the matches since the beginning of the 2015/2016 season.**

This time the team of the coach Vangelis Koutouleas won 3-0 away game with London Malory London.

- Victories always delight, but even more exciting is a good game. This is my motto, and I try to pass it to the players. - says the coach Vangelis Koutouleas. - Today we played a good game, of course, culminated with a definite victory, but we will also analyze it to search and eliminate mistakes so that there are fewer and fewer of them. - adds IBB Polonia coach.

- The deciding stage of games is yet to come. We aren't elated yet but try to work hard in training sessions and play good matches. - says the captain of IBB Polonia Bartek Kisielewicz. - We are glad that our fans are with us on the away matches from the Official Fan Club. This, beside some hard work, is another important piece of the puzzle entitled "IBB Polonia London".

## Malory Eagles - IBB Polonia 0-3 (18-25, 18-25, 22-25)

IBB Polonia is the leader in Super 8 League tables, having 25 points in their account.

## The trip to Cardiff

The team now has an important match ahead in the English Cup games – an away game with the Cardiff Celts 2. The meeting will take place on January, 30th.

- We know that rivals take this match as a very prestigous one. At stake is the semi-final upgrade for English Cup. - says the chairman of IBB Polonia London, Bartek Łuszcz. - The supporters will be at the match in full, also ours. The media will be present and we look forward to a wonderful, full of emotion, sporting spectacle.

Current information about IBB Polonia can be found on Facebook: www.facebook.com/poloniavc and on an official webpage *www.polonia.vc.*

Super 8 Men 29.01.2016

| | | P | W | L | SF | SA | SQ | PF | PA | PQ | PT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | IBB Polonia London | 9 | 9 | 0 | 27 | 6 | 4.50 | 784 | 655 | 1.20 | 25 |
| 2 | Team Northumbria | 8 | 7 | 1 | 21 | 6 | 3.50 | 654 | 517 | 1.26 | 21 |
| 3 | London Docklands | 10 | 6 | 4 | 20 | 18 | 1.11 | 816 | 836 | 0.98 | 17 |
| 4 | Wessex M1 | 11 | 5 | 6 | 22 | 24 | 0.92 | 1024 | 998 | 1.03 | 15 |
| 5 | Sheffield Hallam | 8 | 5 | 3 | 19 | 14 | 1.36 | 715 | 692 | 1.03 | 14 |
| 6 | London Lynx 1 | 9 | 4 | 5 | 18 | 15 | 1.20 | 717 | 712 | 1.01 | 14 |
| 7 | Leeds VC | 9 | 1 | 8 | 6 | 26 | 0.23 | 631 | 770 | 0.82 | 3 |
| 8 | Malory Eagles (London) | 10 | 0 | 10 | 6 | 30 | 0.20 | 691 | 852 | 0.81 | 2 |

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# 3 The Parent's thoughts

# How to train? Often and well.

**At the beginning training is more like having fun in order to be in move and have contact with sport.At this stage you can find many coaches who will develop in a proper way sports and tennis skills of both children and adults who begin their adventure with tennis.**

At this early stage you shouldn't feel stressed about the training, it is important that you train at all. But when the stage of tournaments begins, then the training techniques become important. Here is the first remark. Practising the techniques doesn't help at once. We'll talk about it later.

Training is simply necessary and since this stage you will have to train all the time for many, many years so that 'you know as an adult what you've learnt as a child'.

I saw once an advertisement of a coach who focused on professional training and guaranteed success and high positions in the rankings. I don't think I understand it.

Unless we assume that simply every training improves our technique and efficiency but this is not completely true. Sometimes we have to decide to change techniques or correct them to such an extent that our previous training is worth almost nothing.

That's why, although it's very dificult, you shouldn't cut corners. For example, in the early phase of serving it's good to perfect the ball throw so that it is light and relaxed, like McEnroe's. Later on it will be much more difficult.

At first, much better and effective during the matches are the players with better predispositions for sports, i.e. quick, dynamic and aggressive or calm, well-balanced, thinking and competitive. A little training is enough for them to easily achieve good results.

It is in this stage when the tales about talents start. In fact, the truth lies somewhere else.

If you dream of tennis career for your child you must be patient and do what you should do.

You may not take part in tournaments because they rise your expectations and we have already decided that we should not expect too much for a long time, let's say, 10 years!

No, we shouldn't stop children to play tournaments because they teach them how to deal with pressure, competition, routines. During the tournaments doubts also appear.

We have to bite the bullet and support the player. You also learn it for a long time. Parents' support plays a very important role in the player's career.

History teaches us that it's not always necessary. For example, Ilje Nastase wrote that his parents weren't too much interested in what he was doing. When he won the Great Slam, they commented: 'We've heard you won some tournament'.

It is essential to learn that tournaments and rankings can only serve to evaluate the training, not the players and their abilities.

Here comes the stage of training proper techniques of shooting a ball, usually basic ones. It's good to focus on details in this stage.

There is an obvious conflict between the need for multiple repetitions and focus and a young age of the players, who would rather go to play football or read books, depending on their character.

Training until you reach perfection is, nonetheless, necessary. You must only choose the methods how to achieve it.

You can do what Agassi's father did - he forced him into back-breaking trainings with the ball machine from an early age - or like Federer's father who told him - 'Do what you want to do and we will help'.

Our approach is also dependent on the children's attitude - whether they want to train or they are coerced to do so. It is a very individual and controversial subject.

Who should decide about the form of training? A good observer. It can be a parent or a coach. The basic thing is to decide what kind of player your child should become:

- Defensive player playing a stable, not risky and fully controlled game. Such a player usually plays from the baseline but has no problems with playing from the centre of the court. They are quick, they have to be calm, self-assured and brave. Defence requires great courage - you can't be afraid of your opponents or their aggression, you should resist it with calmness, control and self-confidence, watch the opponent and have good anticipations.
- Offensive player playing in an aggressive and risky way. Such a player moves not only left and right but also forward, backward and diagonal. They are aggressive, fighting and quick, restless and continuously searching for something new, they want to control the course of the game and have an influence on it.
- All-court player – playing all over the court, intelligent, with a good sense of rhythm, imaginative, fond of constant changes. They won't attack from every position but won't waste any situation. They have the traits of character of both defensive and offensive players.

Once we've decided which features our player has or what kind of game they prefer it is enough to remember a simple rule:

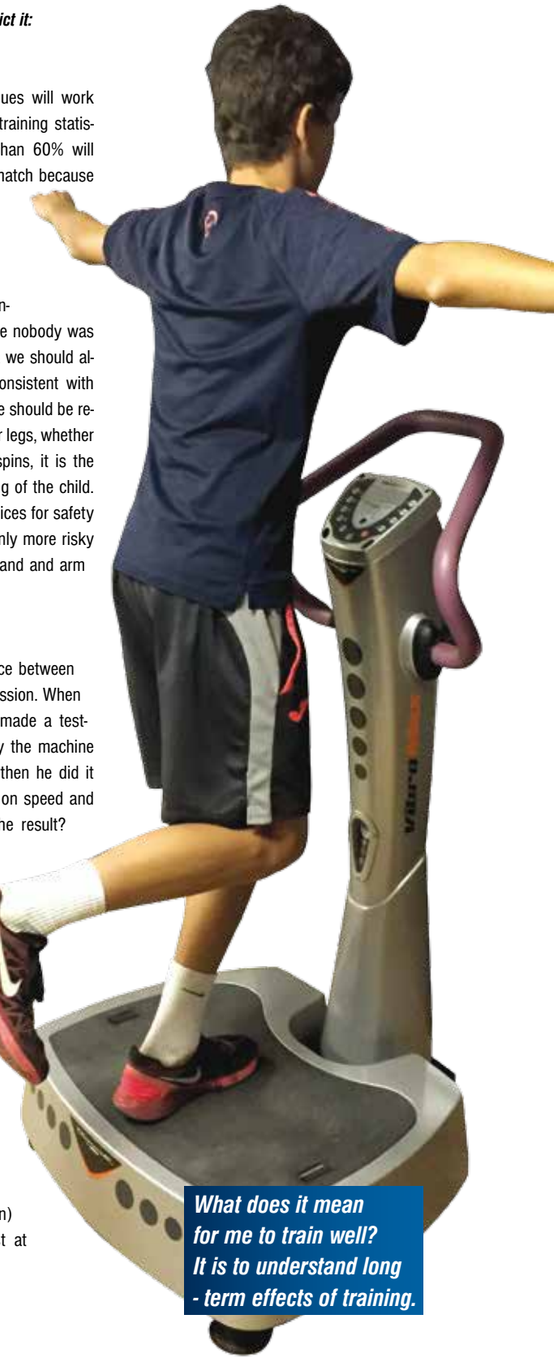
- If you want to be good in attack, be well-trained in it and have more winners than unforced errors - train more attacks
- If you want to be good and effective in defence - train defence, watch the opponents and learn to anticipate their next move
- All-court player must train both like offensive and deffensive players so it's more difficult to train them

***There are many rules which depict it:***

**1.** Not fully trained techniques will work against the player - these in which training statistics shows the effectiveness less than 60% will work against the player during the match because the effectiveness will go below 50%
- regularity is the basis of tennis

**2.** I don't support so-called intuitive or natural movements because nobody was born with the ability to serve. I think we should allow for some natural movements consistent with biomechanics of a shot, e.g. the serve should be returned down but the way you put your legs, whether you join them, use more slices or spins, it is the matter of observation of natural liking of the child. Of course, a child should use more slices for safety reasons and, e.g., flat serve is not only more risky but also causes greater impact on hand and arm which may cause injuries.

**3.** You must make a difference between speed and relax and force and aggression. When my son was about 12 years old I made a test- first he returned the balls thrown by the machine as strongly as possible with a cry, then he did it as relaxed as possible but focusing on speed and dynamics of the shot. What was the result? Of course, the first returns were quicker and more dynamic. And here you may make a mistake. In a long-term training, strong shots may tense up the muscles of hands and shoulders, cause injuries and the force doesn't equal the speed. When we realize that the speed of a ball depends on torque of the rocket and we train a little the rotary motion, we'll understand why Pudzian (strongmen Champion) wouldn't necessary be the quickest at throwing a tennis ball.



***What does it mean for me to train well? It is to understand long - term effects of training.***

**4.** The number of repetitions is definetely important but there's a danger: if we train a shot which is technically incorrect, e.g. a serve, we'll learn bad serving! And it takes a very long time to eliminate bad habits - at least the same time you spent learning them.

**5.** There are many complex techniques with many important elements, e.g. a serve, which will be the topic of the next article. In order to learn such techniques you need preparatory practice, otherwise you can get confused. We train separately the throw of a ball, some think you should practise serve as a whole but I don't agree with it. In order to be properly relaxed and learn consistency you need to focus only on this one element, etc.

**6.** Some techniques must be learnt through, so-called, drills, i.e. a few successively repeated shots. It polishes the technique of shots by limiting the impulses affecting the player to only a few and not a few hundred like during the match.

**7.** Rallies and training sparings – they are necessary to practise the techniques you've learnt during the game. There is no stress and pressure which appear during the match so they are another step to polish the techniques in a dynamic way. Throwing a ball from the basket, bouncing the ball off the wall or playing with the ball-machine are all very good but won't replace a sparing. Force and skills of your sparing opponents should increase together with your training performance.

**8.** Matches – there are players who are great during the warm-ups but don't play well during the matches - they are weak at the knees. The only thing that will help is the large number of matches and getting used to stress.

**9.** All players have dominant techniques, better and more liked than the others. You should train and develop them because thanks to it the player will win. Unfortunately, at the same time, they limit the development of other techniques. They are good and effective in a short run. We call it Comfort Zone. It is the zone in which the player feels well and wants to be there. Unfortunately, if the opponents notice that, they will do everything to deprive the player of this comfort.

**10.** Statistics – it is so important that it will be the topic of the whole chapter. Now we will say in brief: we may avoid risky shots, e.g. backhand down the line while running and throwing the ball because its effectiveness is like 2:10 but we may train it for such a long time that its effectiveness will rise to 7:10 so instead of avoiding some shots it's better to train them.

**11.** Changes in rhythm- it's quite difficult. If we climb up the stairs it takes just a few steps for a brain to remember the reflex. If one of the steps is higher than the others, we'll stumble. It is the same with the game. After several shots a certain rhythm appears. The aim of the player is to put the opponent off the stride changing the speed of a shot, its rotation, direction, time etc. But you must remember that the change in rhythm puts you off the stride first so you must practise it so that it works well.

**12.** Training match techniques - there are great rules which will make the player more effective e.g. going on the net after throwing slice backhand cross (for right-handed opponents).

**13.** We talk about training techniques but we shouldn't forget about other, equally important, elements of a good training, e.g. a warm-up. Only a few can do it in a right way and many can't do it at all. It is necessary and the best one should last about 15 minutes.





**14.** Another training is routines, i.e. remembering about the details important for the player

- A towel
- Drinking water or isotonic
- Eating bananas or other products with high glycemic index
- Well-chosen shoes, tied shoelaces
- Insoles against flatfoot
- A few racquets
- Good socks if it's getting colder, leggings or tracksuit to protect joints against the cold (injury), Etc.

**15.** Stretching after the training, trot in order to calm the heart rhythm.

**16.** Proper diet - a broad topic - in short, carbohydrates before the training to increase their amount in muscles, proteins after the training in order to rebuild the cells and tissues of the body, for more ambitious, Djoković gluten-free diet

**17.** Another training is fitness; the more grown-up and older you are, the more training is recommended. They help against injuries by strenghtening your joints and ligaments, the flexibility of muscles and fasciae.

**18.** Motorics – the whole set of exercises and running to improve the heart rhythm HR together with functional training, focusing on proper breathing. Periodization of trainings is also important but we'll talk about it next time.

**19.** Mental training:

- Dry training, shadow play
- Playing in thoughts
- Yoga and mindfulness sessions – forms of meditation
- Skipping rope- add 50 jumps every week and be careful not to make a mistake, after some time it will be more mental than physical training. It's the favourite exercise of Jimmy Connors.

*Tennis is a long-term discipline of sport, which is measured in years.*

**20.** Improving the conductivity in the nervous system. Observe the players who almost trip over their own feet, are not especially quick but still they return almost all balls. It's not only the dynamics of legs, good sight, anticipation - it's a good conductivity in the nervous system, good co-operation between two hemispheres of the brain. There are exercises for it, e.g. juggling. In order to understand the topic better try to play with two hands separately, at one side the brain's control over the muscles fails.

**21.** Watch your own and other players' matches on the video, analyze them, use the slow motion option or Coaches Eye mobile application.

**22.** Accept your faults – „faults are here to stay" [feeltennis.net]; you shouldn't ignore your mistakes but also shouldn't be absorbed, distracted or angered by them.

I could write much more about it. But my aim is not to present all (how many?) elements of GOOD training but rather show its complexity and the range of challenges that the players and their parents must face.

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# 4 The Parent's thoughts

# How many types of forehand are there?

**Forehand is a stroke in front of one's body with the inside part of the racquet – but enough with the definition.**

If we want to find answer to the title question, I suggest that those who play tennis conducted a test on the tennis court. The rest of the readers I would like to ask to use their imagination. The best way to make the test is to use a tennis ball machine but you can also do it with another player. We'll be hitting several dozens of balls from the same, repeatable service.

First, hit the ball when its dropping, then try to hit it at its utmost top position, that is at the highest ball point after bounce and finally hit it on the rise. The results will surely leave you thinking – each of those strokes is completely different. And this is just the beginning.

Let's try to hit another shot with the hand retracted backwards (back swing) as fast as possible, in order to hit the ball distinctly in front of oneself, and less from the side. Again a completely different timing and in order to have the hit come out properly one has to practice it at least several times.

## Let's go further.

Now, before the stroke, lower the wrist significantly so that at the contact, the wrist returning upwards will in a natural way add rotation to the ball – just like Federer does. Again, it's completely different.

The strokes are intuitive but you can also add extra rotation, at least by thinking about it with every next stroke. In order to enhance the rotation, one has to think about it and enforce it until it becomes natural.

In the following minutes of the test, let's try to distinctly direct the ball once to the left, once to the right, alternatively. We get quite a number of different strokes, although the ball is serviced at us statistically in the same way.

So now, let's realize what happens when we have to at the same time run up to the ball and attain the appropriate body set up (balance).

But before we reach the classification of forehand shots, a few more observations. The training starts with warm-up and hits usually finishing in the small boxes of the court.

Here, everything goes smoothly both for the professionals and for the beginners. However, the situation changes to a more difficult one when we start backing away in the direction of the base line. Now the ball must be hit with greater speed and thus is starts to accumulate more energy.

## Remember.

Hitting a slow, fast and very fast ball are three different shots and the skill of playing outside the rhythm is a skill certifying one's professionalism.

Now, let's add to our deliberations and tests the flat hit, forward rotation i.e. top spin or backward rotation that is slice.

Let's also include in our matrix of dependencies the surface area of the court and the necessity to run up to the ball and attain the proper contact position, balance and the body set up.

Now we almost have the entire set. Immensity of dependencies. But we'll do one more thing.

We have surely become very tense with all those shots, so we have to make ourselves relax for the next few hits. Let's focus only on the relaxed shot, by looking more at the opponent or the baseline rather than at the ball. This should go very well.

This proves how important for the quality of the hit is relaxation and lack of tensed muscles.

Now it's becoming clear why one has to practice this sport from the very early years and has to make at least 10 million shots, in order to be professional.

From the above solutions it seems that there are as many forehands as there are many ways to hit them, different considering the biomechanics of the strokes.

If we approach the topic like that, then we enter the realm of the Einstein's infinity.

And now it all adds up, because that's how it is – you must have done millions of hits to have a chance to approach professionalism.

Jimmy Connors in his autobiography wrote: „I've never hit a ball in a match in a way that I had not practiced before".

This is a profound truth. However, it is hardly useful in everyday training practice because it only makes you realize you have to practice a lot and this is only part of the truth.

The second necessary aspect of training is – to train correctly.





To come to that we have to put the forehands in order. Classification is necessary to focus on training in some less infinite dimension and also in order to later approach the equally important aspect and that is the awareness of strokes!

In a nutshell this a quick analysis:

- Where is our opponent and what is he/she up to?
- Which of the many hits to use?
- Where, i.e. in what part of the court?

And all this in just half of a second, not including the time for the run up to the ball and balancing of the body. Average ball speed in rally is ca. 100km/h, the average travel the ball makes between hits is 25m.

Calculated on the basis of the above, the time of ball flight after adjusting the units is :25m*3600sec/100000m=0.9sek

Forehand winner has speed of 150km/h and the reaction time is adequately shorter. Let's get back to the topic..

Once I asked one of the trainers that before taking care of my son's forehand he told us as much as possible about this technique. When he started talking about it I didn't even notice when he was already done with the topic and our auxiliary queries were good for nothing. So I had to go about it myself. Everything I wrote so far was just an introduction, and now the classification on the basis of different hitting techniques and different methods of training:

**1.** ***top spin forehand*** - ball is hit mainly when it's dropping. The decreasing energy of the ball requires a stroke of relatively large power. The representative of this type of technique is Rafael Nadal. He receives the ball mainly far behind the baseline, he has a lot of time and is in control of the situation because he is standing far away; but he has to impart high energy onto the ball through a powerful stroke, that's why he is an athlete;

One of the most common strokes on the court, which is being played and trained the longest and nevertheless, very difficult; the difficulty is in maintaining the rotation at the very strong, fast stroke; Without proper rotation the ball will go into the net or outside the baseline.

**2.** ***forehand hit at the top position*** i.e. at the highest point after bounce; the hit requires a very good timing, thus one must move to the front because the ball must be hit before its starts dropping and slices down the gut; this technique is often used, for example, by Novak Djokovic; to a greater or lesser degree, it is hitting the ball downwards

**3.** ***forehand on the rise*** - this is an offensive, rare hit and if it occurs, then this is sporadically because it is perceived as crash, i.e. hitting a ball of very high energy, as if out of control; this is not half volley

**4.** ***approach forehand*** - approach stroke, attack on a shortened ball; difficult especially in the early phase of trainings, because of the fast approach to the shorter ball in combination with an aggressive stroke often becomes a crash and the ball lands in the net

**5.** ***forehand from a short, low, dropping ball*** – difficult to make because apart from the fast approach and catching the balance, one must impart a very strong spin on the ball by "closing the wrist" so that the ball finished in the court

**6.** ***forehand of ball tossed outside the court***, at best a sharp cross; Andy Murray's signature stroke, now being played by very many players; the key to this stroke is to use instead of a defense of a ball attacked by the opponent after cross– the angle counter attack; the best players are now able to foresee this hit and appropriately cross the ball's flight path on the net, therefore we have to slowly start thinking about a more difficult version of the tossed ball stroke, and that is down the line – because one is thrown outside the court, analyzing the geometry of the hit, then one must hit the surface area of slightly more than 2sqm; this is how the tennis players will be playing in a few years

**7.** ***forehand down the line*** - forehand is usually the strongest weapon of every tennis player, practiced the longest; the safest one is cross, so the hit across the court, but the one who first changes the direction, is the one who has bigger chances to win the rally; the change of direction is the "down the line" hit; ball received after cross has a tendency to "escape" from the racquet, the stroke is therefore usually stronger and must close the ball within the court; the hardest one is the one with run up from the opposite corner of the court; this is a winner

**8.** ***forehand on the run*** – the favorite, signature hit of Pete Sampras; usually before the hit one must balance themselves, that is stop or at least hold up in order for the brain to stop protecting the body against a fall and take care of the control of the hit, but it turns out one is able to trick the brain and play on the full run

**9.** ***reverse forehand*** – hit on the more backhand side with finish on the opposite side of the body; used instead of backhand as a more powerful, inside in – on the line or inside out – cross court; it is an offensive technique because after the shot one leaves a lot of open court on one's side and in case of a counter attack one is on a worse position

**10.** ***defensive forehand slice*** – the ball is imparted with backward rotation – backspin through cutting down; most commonly used as a defense after drop shot when the ball must be "dragged" from a low position over the net; sometimes, although rather seldom it is a defensive stroke on a tossed ball but if the opponents is on the net then this shot may end badly; more commonly the slice hit is done as backhand stroke

**11.** ***offensive forehand slice*** - very rarely played, because if the ball is above the net and even slightly below it, is better to make the top spin stroke rather than slice attack; the technique requires a stamp and a short, fast, cutting stroke in order for it to be an attacking technique, it's like a volley after bounce; the second variant is more common, if we have a ball hit high but not above the head for smash, slightly on the side, then only forehand slice can save us – powerful and short cut, with the major role of the wrist

*Teaching tennis is an art of choice.*

**12.** ***forehand drop shot*** – difficult technique because it requires the change of rhythm and at the beginning those changes act against us and only after super practice that stroke can act against the opponent; the difficulty of this technique lies in the fact that many time, it's the ball that decides upon itself and not the actual player; it's because the ball had just come upon the racquet in such a nice style that the player had to make the drop shot :); it is most effective when used by an offensive player against a defender i.e. defensive player; defender is behind the base line and defends 2-3 attacks of the offender and then it is the best time to use this technique; the marking of the attack as long as possible is necessary;

First, one has to create in the opponent's brain the fear of the next powerful attack, only then this technique will be effective

**13.** ***forehand drive volley*** – a hit in the air; depending on what type of player are you, you must either leave the ball and hit it after a bounce or aggressively stroke it in the air with drive volley; one must impart a lot of spin or suppress the ball by hitting it downwards

**14.** ***smash*** – ball hit in the air, from above the head; one hand indicates the approaching ball, and the legs "dancing" position the player for the ball and the second hand raised freely above the head hits fast and steadily; an important remark, if the incoming ball escapes sideways form above the head, one must hit it with slice not smash, because otherwise it won't work; the ball above the head is not tracked by the head but by the legs; it is important to keep the upper body as relaxed as possible

15. volley – approach ball hit near the net; the key is the lock wrist-hand-shoulder and also the forward attack; a fast stroke with possible forward approach, better when it is an offensive rather than defensive stroke; the tennis player's role is not being a goalkeeper

**16.** ***stop volley (drop volley)*** - version as above but with the ball suppressed through amortization

**17.** ***half volley*** – a defensive hit when one receives the ball close to the legs; it may be offensive if ones is able to estimate the ball flight in time and perform a fast hit at the default bounce point

**18.** ***forehand passing shot*** – it's more of a way of playing than a technique, but because it induces the necessity of different training, I classify it as forehand; it's based on "ignoring" the aggressively blocking opponent and finding a corridor for one's passing shot; if there is no place for a passing shot you aim for the body (... and apologize) or you make a lob

**19.** ***forehand top spin lob*** – a very important alternative to the passing shot: when the opponent doesn't leave you a corridor on the net then you can use this hit; it should rather be done after the opponent's first volley when he/she have already strongly entered the net; it is a spin stroke because it allows for a better control of height and distance; Ilie Năstase trade mark shot

**20.** ***push*** – it is the pushing of the ball; most commonly it occurs during the fight at the net where the reaction must be fast and does not allow for the performance of a stroke and the direction, usually deep, is obtained by a kind of a push of the ball. I left the offensive forehands, less or totally unknown and less or not played at all for the end.

**21.** ***"forehand walking step"*** – see series of images No. 1. Classic forehands can be hit in the so-called open stance position or with the leg forward so in the so-called close stance; this stroke involves entering forward into the ball with the leg behind coming to the front; timing is very important because you will get a crash otherwise, it is therefore better to perform it on a higher and shorter ball with less energy; the intention of the hit is for it to be a winner; the stroke must be strongly supported by the whole body

**22.** ***"forehand hopping step"*** – see series of images No. 2

A hit with an approach forward but instead of entering the ball with the leg behind, there is a hop on the front leg and stroke of the ball also with the strong support of the whole body; in this way one can attack a lower ball; a difficult hit so it's better, similarly as in "walking step", to attack a shortened ball, what's left after that is the defense of the net

**23.** ***forehand of a bounce*** – played by no one and never during the matches; the reason for this is that it is a totally intuitive stroke, it involves hitting of ball one doesn't see, one must in a way guess the point of the hitting and lead the stroke "blindly"; you have to practice it since you were a child and until now there were no volunteers to do it – the first known player to me is my son Filip; everyone who saw us practicing that stroke, were shaking their heads deprecatingly; this is just the confirmation for me that we are the only ones doing it;

The idea behind this hit is simple. The aim of the player in offensive is to shorten the reaction time of good defenders; this can be done by training the speed of hits, angle game, consistency, which forces a mistake or by approaching the ball faster and deeper into the court, of course it is not suitable for every ball; however, almost 50% of balls can be attacked with this hit.

**24.** ***"mill forehand"*** – is an offensive half volley from a ball received at the baseline; it can be of course a classic half volley, but then it will possible be the last one in a lost exchange; in this hit, similarly to the "of a bounce" one, the stroke is intuitive and aggressive at the expected point of ball hit

**25.** ***different, strange hits*** such as "hot dog", back smash, double-hand forehand a'la Monica Seles, crouch forehand a'la Radwanska, the "frying pan" hit etc. – practicing those hits is also good for your hand feeling and flexibility.

We could differentiate between volley, half volley, lob, drop shot etc. among other hits, but sticking to the definition, I treated them as forehands.

Surely, we could go on and make further classification but what for? Already this quantity is hard to master. Teaching tennis is an art of choice.

Which of the hits will be most useful for this particular player; You won't surely have time to perfectly train them all. And you also need to practice them at tournaments.

What type of game to choose, defensive or offensive? I prefer the offensive one. I enjoy watching it.

Consistency and control or speed and aggression – these are also the decisive aspects in the selection of the techniques to practice.

Training the biggest number of strokes as possible, gives us, so to say, a "full package of tools", the other thing is how to use those tools.

I also omitted here other important aspects of the hitting techniques such as type of grip, type and strength of the gut, racquet size, etc. About this some other time.

You win the matches with techniques but also tactics. I will discuss the matter in another article.

No.1 Forehand "walking step"

No.2 Forehand "hopping step"

# Group Draw

UEFA EURO2016 FRANCE

The Euro 2016 groups have been drawn on 12th December in Germany. The finals will take place in France from 10th June 1016 to 10th July 2016. The tournament will be the largest ever as it has been expanded to 24 teams. The strongest, as official FIFA ranking numbers say, is Group D with Spain, Croatia, Czech Republic and Turkey. Group E is also very strong with Belgium- 1st in the FIFA ranking playing with Italy, Sweden and Republic of Ireland. The hosts always get the easiest group, so France will play with Switzerland, Romania and Albania in Group A.

**Group A**
Albania
France
Romania
Switzerland

**Group B**
England
Russia
Slovakia
Wales

**Group C**
Germany
Ukraine
Poland
Northern Ireland

**Group D**
Spain
Croatia
Czech Republic
Turkey

**Group E**
Belgium
Italy
Sweden
Republic of Ireland

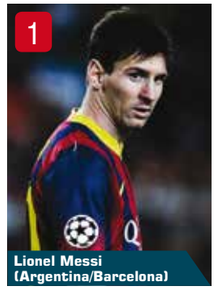
**Group F**
Portugal
Austria
Hungary
Iceland

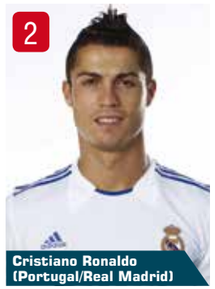




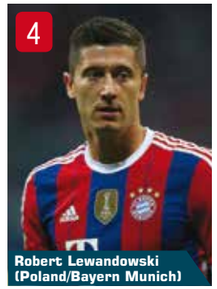
# FIFA Player of the Year 2015

**Lionel Messi was awarded the 2015 Ballon d'Or on 11th January in Zurich. He was named the best player of the year for he fifth time. Barcelona star beat Cristiano Ronaldo (27.76%) and Neymar (7.86%) with 41.33% of the votes. Robert Lewandowski came up as the fourth with 4.17% of the votes.**

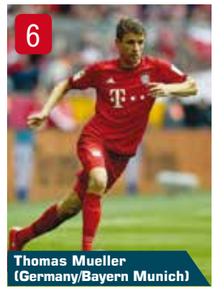

1 Lionel Messi (Argentina/Barcelona)


2 Cristiano Ronaldo (Portugal/Real Madrid)


3 Neymar da Silva (Brazil/Barcelona)

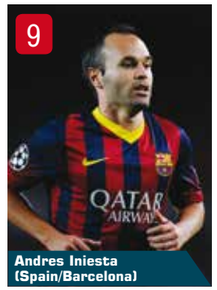

4 Robert Lewandowski (Poland/Bayern Munich)


5 Luis Suarez (Uruguay/Barcelona)


6 Thomas Mueller (Germany/Bayern Munich)


7 Manuel Neuer (Germany/Bayern Munich)


8 Eden Hazard (Belgium/Chelsea London)


9 Andres Iniesta (Spain/Barcelona)


10 Alexis Sanchez (Chile/Arsenal London)

# Zinedine Zidane

## named new Real Madrid manager

The French legend became the Real Madrid new manager after Rafa Benitez was sacked after just few months in charge. According to the board, this is the effect of the weak results the team were having. Zinedine Zidane had been the player in Real Madrid between 2001 and 2006. This is his first serious and individual job. Until now he was the coach of the reserve team Los Blancos. In his managerial debut game, Real Madrid scored 5-0 with Deportivo.

Rating: ★ ☆ ☆ ☆ ☆

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Rating: ★ ★ ☆ ☆ ☆

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Rating: ★ ★ ★ ★ ☆

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Rating: ★ ★ ★ ★ ★

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| 8 | 7 | | | 9 | | | | |
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# SUDOKU

To solve a Sudoku puzzle, every number from 1 to 9 must appear in: Each of the nine vertical columns; Each of the nine horizontal rows; Each of the nine 3 x 3 blocks. Remember no number can occur more than once in any row, column or 3x3 block.

# SET SQUARE

Fill in the missing numbers so that the equations work left to right and top to bottom. Each equation must equal the number indicated at the side or bottom of the grid.

***Note:*** order of operations does not necessarily comply with mathematics conventions.

| | | | | | | |
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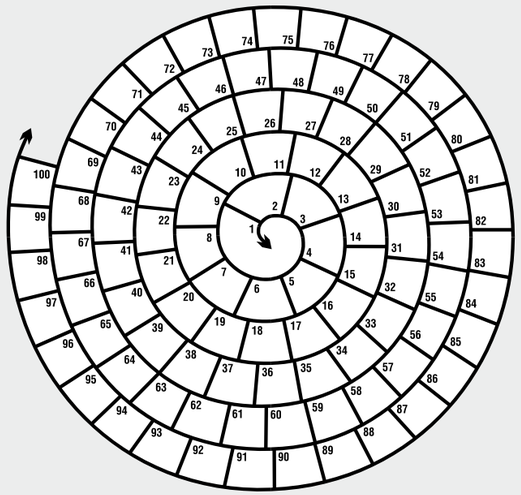
| 9 | - | | - | 2 | = | 1 |
| + | ■ | ÷ | ■ | - | | |
| | x | | + | 2 | = | 5 |
| + | ■ | - | ■ | + | | |
| | x | | - | 7 | = | 3 |
| = | | = | | = | | |
| 22 | | 5 | | 7 | | |

# SPIROGRAM

Tackle this puzzle from the inside out or the outside in. Solve each clue and place the answer into the appropriately numbered squares in the spiral grid, in the order given in the clue.



INSIDE-OUT

1 - 5 Steeple tip
6 - 9 Positive
10 - 12 Pledge
13 - 18 Large property
19 - 22 Rescue
23 - 29 Announce
30 - 33 Resist
34 - 38 Pale violet
39 - 42 Affluent
43 - 47 Rude
48 - 51 Woodwind instrument
52 - 55 Scuba descent
56 - 59 Soil
60 - 64 Beauty shop
65 - 68 Neglect
69 - 72 Nominate
73 - 78 Realm
79 - 82 Prayer's final word
83 - 88 ..., vegetable or mineral
89 - 93 Ledger entry
94 - 97 Seethe
98 - 100 Angry

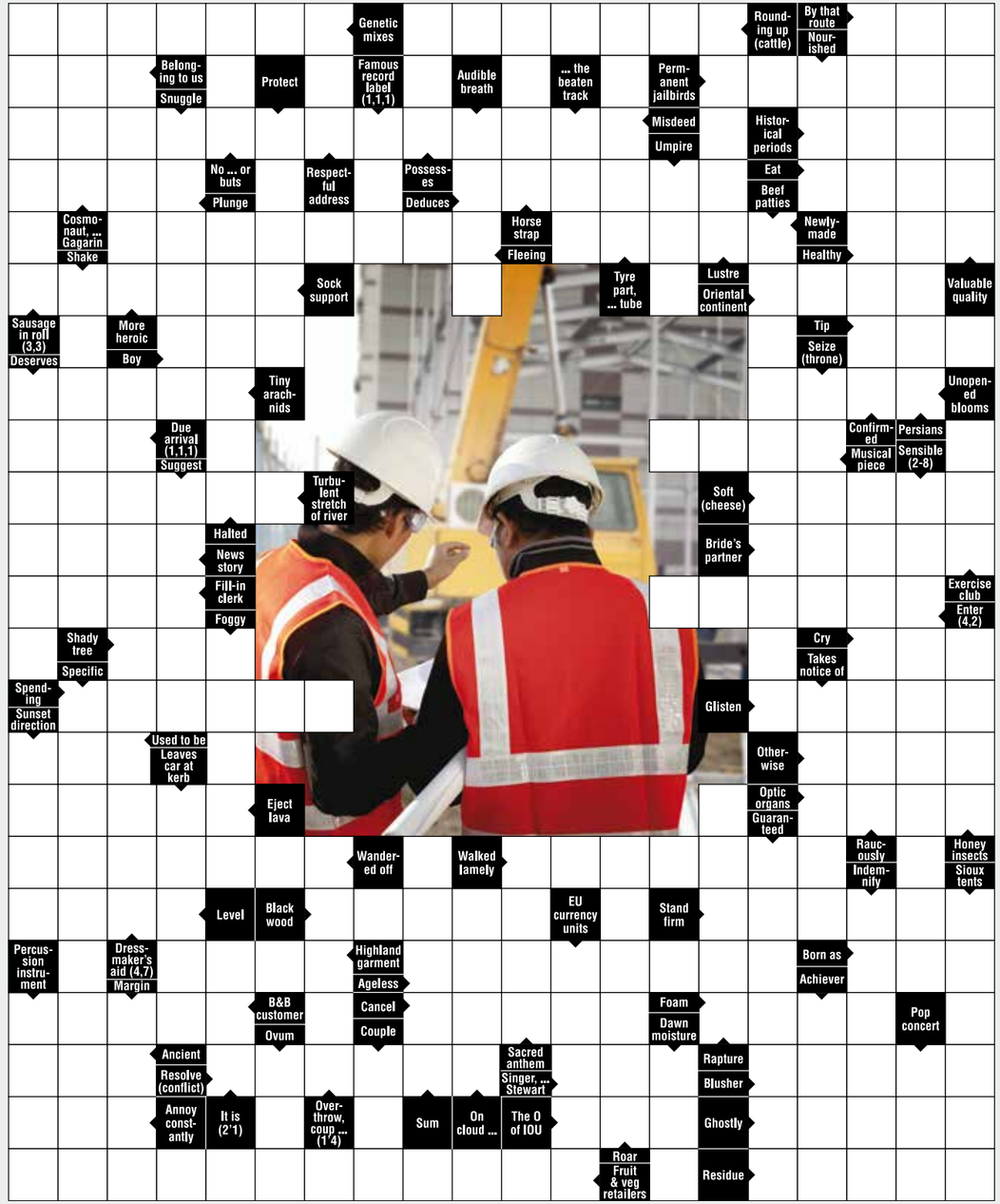
OUTSIDE-IN

100 - 97 Paris cathedral, Notre ...
96 - 92 Civilian clothes
91 - 86 Noisy confusion
85 - 81 Foolish
80 - 76 Craze
75 - 71 Computer/phone link
70 - 67 Against
66 - 63 Single sound system
62 - 59 Endure
58 - 55 Travel on horse
54 - 50 VCR, ... cassette recorder
49 - 46 Company chief
45 - 42 Curved span
41 - 37 Roughly (that date)
36 - 33 Actress, ... Tomlin
32 - 26 Nationwide
25 - 22 Relinquish (land)
21 - 18 Flower container
17 - 15 Revenge, tit for ...
14 - 12 Stitch
11 - 8 Above
7 - 5 Function
4 - 1 Tears





# Crossword with IBB



# Laugh with IBB

by Szczepan Sadurski

## Find 10 differences ...




- What does a Blonde say when she sees a banana peel laying in the ground?
- Ohh great, I'm gonna slip and fall again.

***

- What is it that destroys approximately 14,3% of your life?
- Monday!

***

- How to kill spiderman?
- With a spider shoe.

***

The father enters the room of his teenage daughter. He sees his daughter and her boyfriend sitting politely on the sofa. Their hands nicely on their knees (their own knees), innocent eyes... Father suspiciously looks around the room- the wallpaper with pink teddy bears, dolls on a shelf...

Suddenly he grabs the young man!

- What the hell are you doing here with my daughter, you bastard?
- Yppp...Nothing Sir!
- Well, so why the hamster is smoking a cigarette in the aquarium?!

***

In the US, everything that is not forbidden is allowed. In Germany, everything that is prohibited is not permitted. In Russia, everything is forbidden, even if it is allowed. In France, everything is permitted, even if it is forbidden.In Switzerland everything that is not forbidden it is compulsory.

***

Ringtone. - Hello, police? I want to report that the burglar broke through the window into the library opposite my house!
-Ok and can you tell us what is he reading?

***

Once, Karlik - a miner went down under ground, but he was too lazy to take his heavy pickaxe, so he attached to it a note addressed to his friend: ' Antek, I forgot my pickaxe, please bring it on your way down.'

Antek read the note and replied on the other side: Sorry, I haven't seen your pickaxe.

***

Unemployed men at the JOBCENTRE.

- What is your profession?
- Train station manager
- Where do you live?
- In UpperPalikije
- Well, but as far as I'm concerned there is no train station.
- That's why I'm unemployed.

***

The doctor asks the patient:

- So do you always have to start a day with two glasses of alcohol drink?
- Yes, because when I woke up, I'm thirsty and after one shot I am like a different man. But that different man also is thirsty!

Illustrations by Szczepan Sadurski

BEST VALUE

FEBRUARY 2016

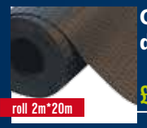
IBB Builder presents below the promotional prices for products offered by IBB POLISH BUILDING WHOLESALE. In February 2016, special discounts are on WYKAMOL products. The technology of waterproofing system is discussed in TECHNOLOGIES section of IBB Builder. The limited time offer is for the current calendar month, for all registered trades only. ***Register online at IBBestimator.co.uk or in App IBBestimator. Don't miss out.***

40% OFF

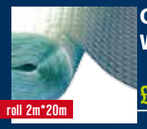
# Monthly deals


**CM20 Floor High Capacity Waterproofing membrane**
£4.82 net (RP £8.04 net) - 1sqm


**GEOTEX EXTERNAL Waterproofing membrane**
£3.95 net (RP £6.58 net) - 1sqm



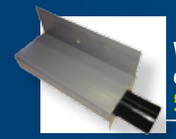

**CM FLOOR drainage waterproofing membrane**
£3.28 net (RP £5.46 net) - 1sqm




**CM8 – 8mm Waterproofing membrane**
£2.75 net (RP £4.58 net) - 1sqm


**Drainage membrain Kontract Mesh**
£5.50 net (RP £9.17 net) - 1sqm


**YELLOW MESH Slimline waterproofing membrane**
£7.75 net (RP £12.92 net) - 1sqm



**Waterguard drain end (right/left)**
£20.78 net (RP £34.63 net)

**Aqua channel outlet**
£32.70 net (RP £54.50 net)

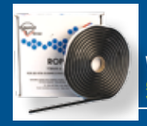
**Aqua channel 2.2m**
£16.90 net (RP £28.17 net) - 1 pc 2.2m

**CM plug**
£0.10 net (RP £0.17 net) - CM plaster plug
£0.17 net (RP £0.29 net) - CM plaster plug with seal
£0.13 net (RP £0.21 net) - Plug seal
£0.28 net (RP £0.47 net) - Surefix brick plug with seal

**Spend £200 net or more and get ... High Visibility Jacket**


**SBR Latex 5ltr**
£11.00 net (RP £18.33 net)


**Ultracure cream**
£9.20 net (RP £15.33 net) - 380ml
£17.50 net (RP £29.17 net) - 1ltr
£44.50 net (RP £74.17 net) - 3ltr



**Waterproof rope**
£6.95 net (RP £11.58 net) - 10mm*5m

**Overseal tape**
£32.35 net (RP £53.92 net) - 75mm*22.5m


**Enviroseal 5ltr Masonry Water Repellent**
£9.95 net (RP £16.58 net)

**Waterproof tape**
£17.80 net (RP £29.67 net) - 28mm*22.5m

**Ultracure noozle**
£16.00 net (RP £26.67 net)

**Ultracure 1ltr cartridge gun**
£22.65 net (RP £37.75 net)


**Technoseal 5ltr DPM**
£19.75 net (RP £32.92 net)

**Mould Eradication Kit**
£18.35 net (RP £30.58 net)

**IBB Park Royal**
18 Gorst Rd,
**London NW10 6LE**
020 8965 7972, sales@ibb.pl

**IBB Croydon**
ZK Park, Unit 6, 23 Commerce Way,
**London, Croydon CR0 ZS**
020 8680 9026, sales@ibb.pl

**IBB Birmingham**
425 Walsall Rd,
**Birmingham B42 1BT**
0121 356 8655, sales@ibb.pl

T&C APPLY

All presented products are subject to availability | Products may vary from those illustrated | All prices are net exclusive of VAT | Some prices shown are for collections only | Some prices are subject to additional delivery charge per item with the minimum £180.00 net value of delivery.

ibb

# QUALITY TREATED TIMBER

## PLYWOODS & OSB BOARDS*

47x50 mm

47x75 mm

47x100 mm

47x125 mm

47x150 mm

47x175 mm

47x200 mm

47x225 mm

* Various sizes available

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