

21 Manresa Road

Article by Paul Hanson



The renowned Chelsea architect J. M. Brydon designed the original building located at 21 Manresa Road which was completed in 1895. Starting life as the South-West London Polytechnic, the building became the Chelsea School of Art by the 1930's. Sir Henry Moore also studied there at this time and later in the 1950's the Pop artist Patrick Caulfield. The building became part of the Chelsea campus of King's College in 1985 when it was used as a research facility and in 2002 was acquired for the current development.

The site is in a prime location for a residential property being just a short walk to the fashionable boutiques and cafés of the Kings Road. Theatres and restaurants in the west end are also within easy reach and there is just a short drive to Battersea Heliport.

The building has a private garden 18 x 64 metres, being the longest private garden to be created in Chelsea for the past fifty years, and is exclusive to the fifteen apartments.

An important feature of the development was to retain the façade of the existing building, but this did not limit the design to having a wholly nineteenth century feel. The remainder of the building was replaced with a building which has a twenty first century appeal as can be seen from the above photograph.

Originally the building was to be constructed from a reinforced concrete frame, however it was felt a steel framed construction would allow the omission of internal columns on every residential unit and confined the structure to the party walls thus giving the architects and interior designers greater freedom.

A fire engineered solution allows interconnected access to the car park from each of the residential blocks via ventilated lobbies and fire warning system.

Part E of the Building Regulations has in recent years increasingly addressed the age old concern of sound leakage between apartments. This was a key



Original classroom in 21 Manresa Road c1930

factor which needed to be addressed in the case of a steel framed building as steelwork is a very efficient carrier of sound. This was solved by beams resting on 'Tico' acoustic attenuation pads. The fixing bolts are fitted with sleeves, collars and washers to prevent sound being transmitted through them. Each dwelling is also separated by cavity wall with a 700mm cavity which also serves as a vertical service shaft. Vertical sound transmission through floors was addressed by a composite steel/concrete floor construction. 'Holorib' floor decking provides the base for 150mm of concrete on top. It is also expected that residents will add their own finishes.

21 Manresa Road is an example of the way the traditional features of a nineteenth century building can be blended with a modern design, whilst delivering the benefits of comfortable living conditions in a prime location.



The retained facade fronting Manresa Road, with the new garden facade visible to the right

DESIGN TEAM

Client - Manresa Developments c/o Candy & Candy Ltd.

Architect - Woods Bagot

Structural Engineer - Michael Barclay Partnership

Contractor - Multiplex Constructions UK

Steelwork contractor - Bourne Steel

Mechanical Engineers - Slender Winter

Building Control - Steve Denton - RBKC

Introduction

by John Jackson
Head of RBKC
Building Control



Welcome to the sixth issue of our newsletter and may I first of all say thank you to all those who have wished me well in my new post as Head of Building Control.

A lot has been going on since I was appointed starting with a focus group to find out what some of our clients think about the service we give. This has been followed up with a larger postal survey and so far the feedback has been very encouraging. The results of this survey will be reported in a future newsletter.

The number of partners who use us on projects outside the Borough under the Partner Authority Scheme has risen to 33, the highest number for a local authority in London, with four new partners recently signing up. If you are interested in the scheme that was featured in issue 4 (available on our website), then please give me a call on 020 7361 3822.

We have also started work on a new business plan to prepare ourselves for the next three years. This will be published shortly and will be available to our clients.

On the technical front everyone has been getting to grips with the new Part L and a new Part B has been published. The Government has also recognised that there are some issues with the existing system of Building Regulation,

including concerns about compliance and issues with the guidance provided and the way this is updated. There are also questions about whether they are regulating for the right things in the right way. The DCLG is therefore running an online discussion forum on Achieving Building Standards and would welcome your views. So if you would like to contribute to the debate surrounding building control then go to <http://forum.communities.gov.uk/achievingbuildingstandards>

Terry Ward (the Gov'ner) retired at the end of March 2006, after 40 years in the business, as did two of our stalwarts in the Admin Team, Rani Mangat and Guddi Gill. There have been other staff changes with Bob Silva, well known to those of you who have undertaken work in the north of the Borough, going to greener pastures in leafy Richmond. Dave Edwards has also moved on, as has Tony Sheedy. However, we have a new face in the office, our trainee Hilary Wyatt, who is keen to learn all there is to know about building control.

As always, if you have any comments about the service then please contact me.

Terry Ward retired on 3rd March 2006 after 40 Years. (Caricature by Paul Hanson).



MEET THE TEAM

José Anon
Principal Building Control Surveyor

Interviewed By
Paul Hanson



How did you get into building control?

I used to work for a building company owned by my father, who took early retirement, he was fed up with building! I had the option of taking over the company but did not feel I had enough experience. So a colleague at college suggested building control, as there were vacancies at Kensington and Chelsea.

What is the biggest challenge you face everyday as a principal surveyor?

Juggling demands to meet our clients expectations.

As a principal surveyor managing a team covering a quarter of the borough, what makes a good team?

Good knowledge, experience, flexibility and team work. Everybody lending a hand to get the job done.

If you were not working in building control what other profession would you be doing?

Working in the building industry as a building contractor or building surveyor.

What are the best and worst parts of the job?

*Best - Job satisfaction from helping to resolve problems on site.
Worst – Winter and muddy sites.*

What are your hobbies and interests outside of work?

Visiting the countryside with my family, watching TV, films and DIY.

If you were stranded on a desert island and were allowed to have three belongings with you, what would they be?

A very sharp knife to make things, a lighter for fire and a crate of San Miguel.

Are there any particular achievements in your career you are proud of?

Getting professionally qualified and promotion to Principal Surveyor.

What do you see as the main challenges for the future of building control?

Ever changing legislation and lack of new people opting for a building control career.

I like this thinking outside the box!

'I like this thinking outside the box!' Was the Mayor's comment on the use of an Origami model of a house in RBKC Building Control NEWS. Presented as part of RBKC's Arts Week exhibition, the Building Control Department presented a collection of artistic work used for promotional purposes, including, office display photos by Alan de Souza, a picture by Robert Stanbridge of the great fire of London and various graphic works and an origami model by Paul Hanson.



Right - the Mayor holding the Origami house (also shown bottom right) - still available from Issue 3 of Building Control NEWS.

www.rbkc.gov.uk/Planning/buildingcontrol/bcnews0411.pdf



Section 20 of the London Building Acts 1930 - 1978

By Paul Hanson

The Fire Safety Regulatory Reform Order 2005 was intended to consolidate all existing fire safety legislation, repealing all redundant duplicated and unnecessary legislation. This has resulted in amendments to Section 20 of the London Building Act 1930-1978 more commonly known as the London Building Acts (Amendment) Act 1939 (hereafter referred to as "Section 20").

Section 20 applies to large buildings in Inner London boroughs; it was brought into being because of difficulties the fire service face when fighting fires in tall or large volume buildings. Powers are granted to allow local authorities in London to make conditions regarding access, fixed and portable fire extinguishing installations, smoke venting and special fire risk areas.

The type of buildings to which Section 20 applies

Tall Buildings

A building is to be erected with a storey or part of a storey at a greater height than:-

(i) 30 metres

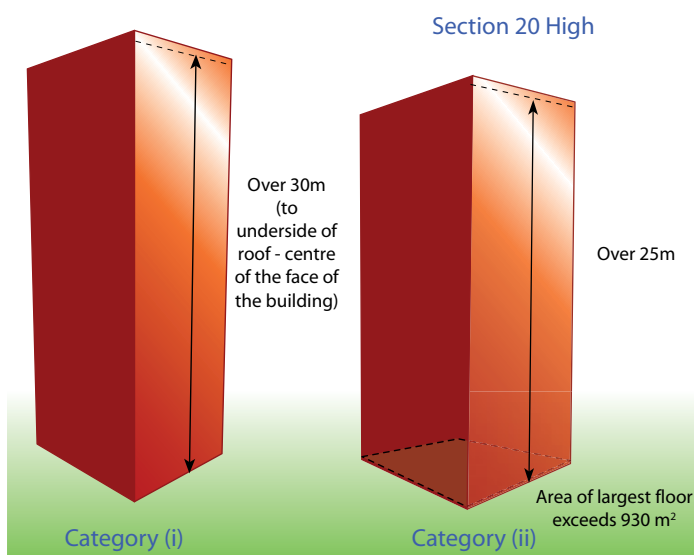
OR

(ii) 25 metres, if the building exceeds 930m² (In any storey).

Buildings of additional cubical extent

A building of the warehouse class, or a building or part of a building used for the purposes of trade or manufacture exceeding 7,100m³. A change of use to one these uses can cause an existing building of this volume, to become section 20. e.g. Office to a shop, (the shop is regarded as trade use).

A 'building of additional cubical extent' exceeding 7,100 m³ would not however be subject to Section 20 if it is divided by division walls so that no division or part exceeds the 7,100m³ with any openings in the wall limited in size and extent and fitted with double doors or shutters. The separation must however be a 4 hour fire resisting wall.



The separation by means of floors in buildings of additional cubical extent was once permitted by the London County Council (General Powers) Act 1908, however one of the affects of the 1939 Act was to withdraw from the Council the power to permit horizontal separations between divisions. It is a well established principle which is still recognised by fire engineers today that a wall separation has a greater degree of fire performance in a 'natural fire' situation than a floor having the same 'furnace tested' fire performance [1].

History of Section 20 control and National standards

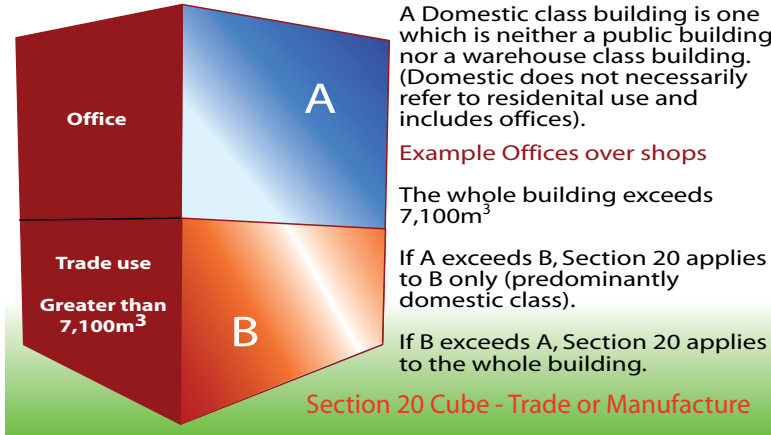
Since the Building Act of 1844, a variety of improving standards have been applied to large buildings in Inner London and similar standards were also later adopted by other large cities across Britain.

The remainder of England however did not have any standards to control fire fighting in large buildings, which is understandable as historically it was only in the large cities that larger buildings were built. However over time larger buildings also began to appear in the smaller towns outside of the major cities bringing similar problems for fire-fighters in these areas. In 1992 it was decided to replicate some of the requirements in section 20 and put these into the National Building Regulations. These requirements included access to buildings for fire appliances, fire fighting stairways and smoke venting for basement fires (although to a lower standard than Section 20). Therefore some of the requirements were now duplicated in national regulations and Section 20. It is interesting to note that the established standards of section 20 were not all immediately migrated in the National Building Regulations; it almost appears that the legislators felt the need to justify these standards before imposing them on to the remainder of England.

National Building Regulations did not require sprinklers and smoke venting generally and there was a view amongst some fire consultants that Section 20 and other Metropolitan Acts were applying unnecessary outdated standards. A series of fires then caused a further rethinking. Outside of London a major fire occurred in a large volume single storey supermarket and also in a large volume food processing building, the latter leading to the death of a fire fighter. Those drafting the National building Regulations decided to alter the guidance to the Building Regulations to limit the floor area size of large single storey buildings unless fitted with sprinklers. Although large volume cube trade buildings were not covered.

Over the last few years a series of serious fires in warehouse type buildings outside of London caused the Chief Fire Officers Association (CFOA) to set up a working group to investigate the fire fighting difficulties in these buildings. This work has helped formulate the decision to amend the National Building Regulations in 2006 to reduce the size of warehouse buildings

A trade building exceeding 7,100m³ is subject to section 20. The question often arises as to what extent the remainder of a building is subject to section 20, such as offices over shop use. The answer depends upon the class of the building, three are defined under the 1930 Act, being; warehouse, domestic and public.



not fitted with sprinklers, by controlling the cubic capacity of such buildings. Although the size limits are in excess of 60 times the current section 20 limits for unsprinklered buildings.

The Regulatory Reform (Fire Safety) Order 2005

"If you want truly to understand something, try to change it."
 -- Kurt Lewin

This legislation was an opportunity to consolidate all the fire safety legislation and consider whether the provisions, which remained in Section 20, were still necessary. Comments were invited from interested parties and a Parliamentary committee was set up. The result of this review was to remove from Section 20 control all items duplicated in the Building Regulations (access to the exterior and interior of the building, fire alarms and automatic detection). The power to enforce maintenance of Section 20 provisions moves from the Local Authority Building Control to the Fire Brigade under The Regulatory Reform (Fire Safety) Order 2005. This is a sensible move as Local Authority Building Control's main focus in recent years has been upon dealing with the ever-expanding areas now covered by the Building Regulations.

The review identified that the controls for tall and large volume buildings with respect to the provisions of fire extinguishing appliances and installations (normally sprinklers, hose reels and portable extinguishers) and smoke venting should remain. Similarly the power to control 'special fire risk areas' should remain. The standards for the latter are higher than those in the current National Building Regulations and consider standards for installations such as boilers and transformers as well as fire resisting enclosure to such installations.

Why?

Fire extinguishing installations: Tall buildings and large volume buildings not fitted with sprinklers and without smoke venting remain

a challenge to fire fighters. The National Building Regulations permit unsprinklered trade buildings having a volume five times that permitted by Section 20 and unsprinklered tall buildings approximately 8m higher than Section 20.

Smoke venting: The National Building Regulations only cover smoke venting in basements and car parks and only require sprinklers where powered vent is used. Powered vent is calculated on the basis of air change rates, which do not represent the actual smoke generated from a fire and therefore in buildings smaller than 40 x 45m will under estimate the amount of smoke produced. For larger buildings an air change rate will overestimate the amount of smoke produced and will result in an uneconomic fan installation being provided.

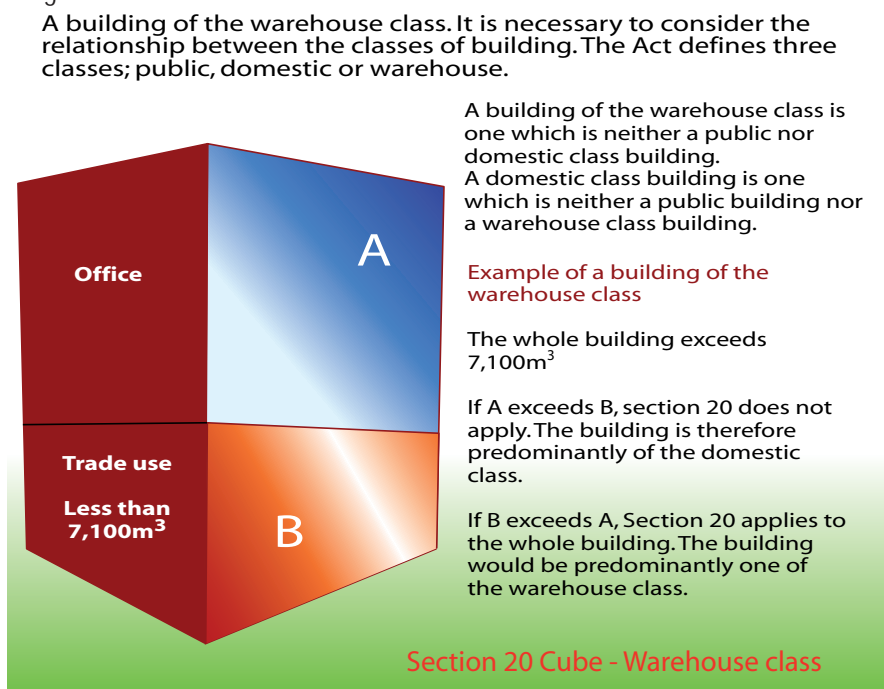
For smoke venting to be effective in large buildings, a sprinkler-controlled fire is needed whether or not natural or powered vent is employed. In trade buildings Section 20 bases the smoke vent on a fire size to allow an effective and efficient design to be employed.

Conclusion

In 1844 the difficulties with fire fighting in large buildings was identified in London and gradually led to the standards in Section 20. Gradually these standards were seen to be of benefit to the remainder of the Country as buildings became larger away from the big cities. The Reform of fire Safety legislation in 2005 has identified two main areas which are not addressed in national Legislation; sprinklers and smoke venting in tall buildings of any use and large volume trade buildings. These concerns are still as valid today as they were in 1844.

References

[1] Structural fire design - Core or specialist subject? By Colin Bailey, form The Structural Engineer 4 May 2004.





The aim of Sudoku puzzles is to enter the digits 1 through 9 in each cell of a 9x9 grid made up of 3x3 subgrids (called "regions") so that each row, column, and region contains exactly one instance of each digit. A set of clues, or "givens", constrain the puzzle such that there is only one way to correctly fill in the remainder.

The name "Sudoku" is the Japanese abbreviation of a longer phrase, 'Sūji wa dokushin ni kagiru', meaning 'the digits must occur only once'.

Easy Sudoku

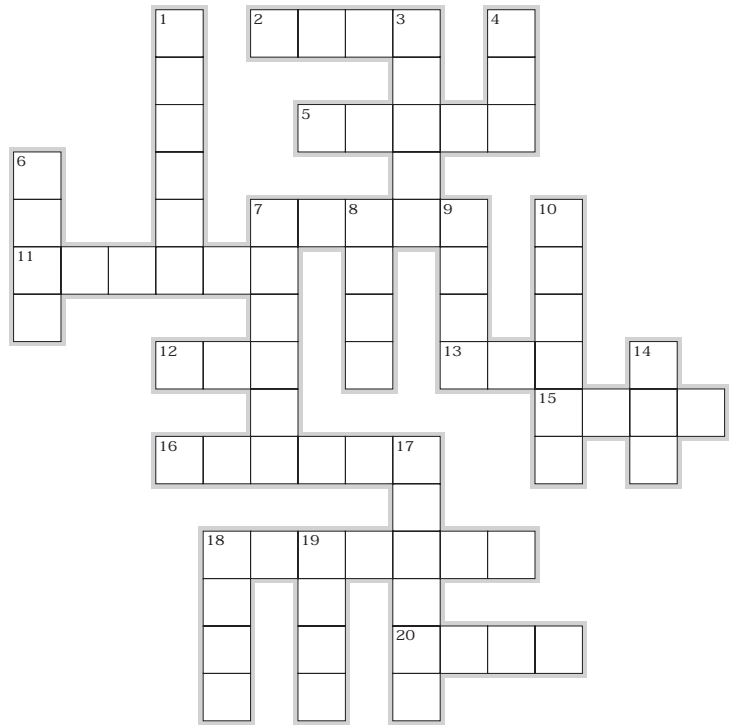
			1					8
	2	3			7	1		
5		6	3	4		2		
9		2	5	1			6	4
					2			
		5			9	7	1	
	4			7	5			1
			6			3		
2		7	8					

Hard Sudoku

		4	6				7	
	5							4
	6			1	4			3
				2			9	8
				9		1		
		1		5				
9	7		5				3	2
	8					9	6	
1			9		2			7

Crosswall Puzzle

By John Allen



Created with EclipseCrossword - www.eclipsecrossword.com

Across

- 2. Cry continually (4)
- 5. To pursue someone (5)
- 7. Small gaps (5)
- 11. Stretch of land or water for races (6)
- 12. Small prepared area for plants (3)
- 13. To put blame on someone (3)
- 15. Flat board for carrying dishes (4)
- 16. Short large bore cannon (6)
- 18. Support or encourage (7)
- 20. Tool to smooth loose gravel (4)

Down

- 1. Nearer than you think (6)
- 3. Apply thin sheet of metal (5)
- 4. Piece of material worn around the neck (3)
- 6. Dirt (4)
- 7. Shot or pass with the top of the body (6)
- 8. Elevate to a higher plane (4)
- 9. Lose temper quickly (4)
- 10. Points at which two bones fit together (6)
- 14. Mouse like nocturnal flying mammal (3)
- 17. Hit a serve back (6)
- 18. Force that unites (4)
- 19. Single thickness of paper (4)

The answers to all the puzzles on this page appear on our website: www.rbkc.gov.uk/Planning/buildingcontrol

The Experts Column Part H: Drainage

A cause for concern: preventing contamination due to foul water entering drained cavity waterproofing systems

By Michael Winn

There is a growing trend for drained cavity waterproofing systems to be installed in new and existing basements.

Drained cavity waterproofing systems allow any ground water penetrating through a substructure to be channelled into a sump and pumped away. Ideally, ground water should discharge into a natural water course or soakaway. However, this is generally impossible to achieve in heavily built-up areas and is usually discharged into a drain that connects into a public sewer.

Please note: London boroughs are generally served by combined sewers which carry a combination of both surface water and foul water.

Unless a ground water drainage system is separated from a foul water system by means of a separate sump and pumping system, there will always be a risk of foul water (e.g. from WC's, baths, showers, sinks, drains & sewers, etc.) entering a drained cavity waterproofing system. This may occur if a combined sump was to overflow, enabling foul water to enter a drained cavity membrane system. This may be the result of pump failure, blockage, or surcharge from a sewer. This is an extremely undesirable situation and any resulting contamination may be impossible to remove without the need of highly extensive remedial work.

Although additional devices such as stand-by pumps, emergency power supplies, sump overflow alarms, and non-return valves are available, these electrical and mechanical devices are subject to failure and should not be relied upon to prevent foul water from entering a drained cavity waterproofing system.

Therefore, the risks of surcharge and contamination needs to

be taken into consideration when installing a drained cavity waterproofing system that discharges into a drain or sewer.

Generally, the following matters should be considered:-

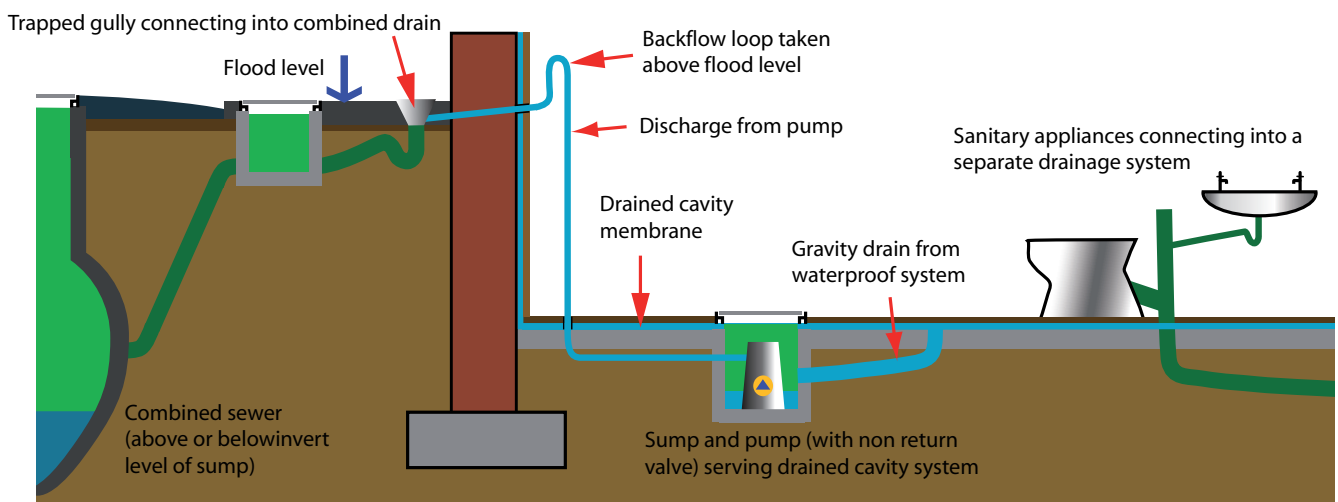
1. Pumping systems for use inside buildings should be designed in accordance with BS EN 12056-4. Professional advice should be obtained before any work is carried out.
2. A drained cavity waterproofing system should only discharge into a sump & pump system that is separate and distinct from any other drainage system.
3. A backflow loop should be installed in the discharge pipe between the pump and its connection with the outfall drain or sewer. A backflow loop should rise above flood level before it connects into the outfall drain or sewer.
4. WC's, baths, showers, wash basins, kitchen sinks, etc. should discharge into a separate drainage system.

Notes:

- a) Only a backflow loop will provide a high degree of protection against surcharge.
- b) If no other information is available, in generally flat areas the level of the highway at the point where the drain connects to the sewer may be assumed to be the flood level.

Further information is given in Approved Document H: Drainage and waste Disposal e.g. 'Surcharging of drains': paras 2.8 to 2.12 and 'Pumping installations' paras 2.36 to 2.39. See also CIRIA Publication C506.

The sewerage undertaker should be consulted in order to determine the extent and possible frequency of any likely surcharge. Note: It may be necessary to obtain a written consent in order to discharge ground water into a public sewer.



Twenty Years at Your Service



Richard Beddoe (centre left) received a long service award for his continued service with the Royal Borough on 12th July 2006. Richard commenced his career in the building industry in 1972 and was site based until 1985 when he joined the Royal Borough's Drainage Department, under the expert guidance of Mr. Ken Smyth and Mr. John Joslin. He remained in that department until 1989 when he joined the Building Control Department. He is member of the Association of Building Engineers and in 2006 he was promoted to a senior building control surveyor. The Mayor, Councillor Tim Ahern, and Leader of the Council Councillor Merrick Cockell presented the award.



27 Wrights Lane

Architect Morey Smith Ltd
Struct Engineer Sinclair Knight Merz
Builder Interior Plc
Building Control Dave Edwards and Paul Hanson

Gallery

15 Bury Walk

Architect Anouska Hempel Design
Struct Engineer Paul Owen Associates
Builder David Stocks
Building Control Michael Winn



47-53 Kensington High Street

Architect Sidell Gibson
Fire Engineers Locke Carey
Builder Kier London
Building Control Dave Edwards, Paul Hanson and Dave Gammon

25 Courtfield Gardens

Architect Burgess Mean Architects
Struct Engineer HJP Ltd.
Builder Cosmur Construction (London) Ltd.
Building Control Parvinder Virdee



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 by email, fax or letter

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