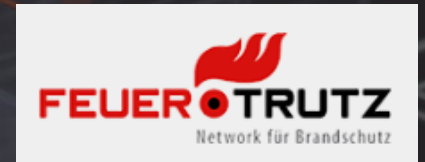


FeuerTRUTZ Trend 2015

Brandschutz International – United Kingdom

Köln, 27. Mai 2015

Dipl.-Ing. CEng Karl Wallasch
Hoare Lea Fire Engineering



- Baurecht
- Bauphasen
- Was macht ein britischer Brandschützer?
- Trends in der Baubranche
- Bauprodukte und Auswahl
- Hilfreiche Webseiten

Einleitung

- Vereinigtes Königreich (England, Schottland, Wales und Nordirland)
- Großbritannien (England, Schottland und Wales)
- Baurecht = Länderrecht (ähnlich wie Situation in Deutschland mit 16 Bundesländern)



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Bauvorschriften (England & Wales)

- Brandschutzkonzept ist gefordert für alle neuen Gebäudetypen, Umnutzung oder umfangreiche Renovierungen
- Anwendung des englischen Baurechts in anderen Ländern (z. B. Channel Islands, Nigeria, Zypern etc.)
- Oberste Bauvorschrift: Building Regulations (2010)
- Definition von allgemeinen (qualitativen) Schutzzielen
- Vergleichbar mit § 14 „Brandschutz“ der MBO:
„Bauliche Anlagen sind so anzuordnen, zu errichten, zu ändern und instand zu halten, dass der Entstehung eines Brandes und der Ausbreitung von Feuer und Rauch (Brandausbreitung) vorgebeugt wird und bei einem Brand die Rettung von Menschen und Tieren sowie wirksame Löscharbeiten möglich sind.“



England

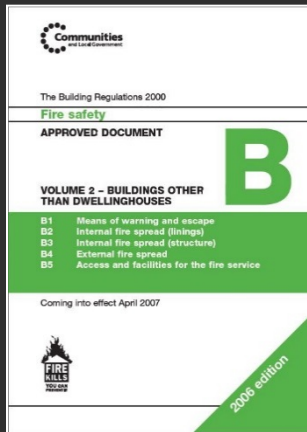


Wales

Bauvorschriften (England & Wales)

Building Regulations (2010)

Stufe 1



AD-B

Deskriptive
Bemessung für
Standardfälle

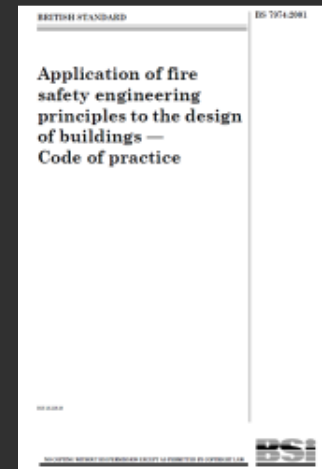
Stufe 2



BS 9999

Deskriptive Bemessung mit
Ansätzen einer
schutzzielorientierten
Auslegung

Stufe 3



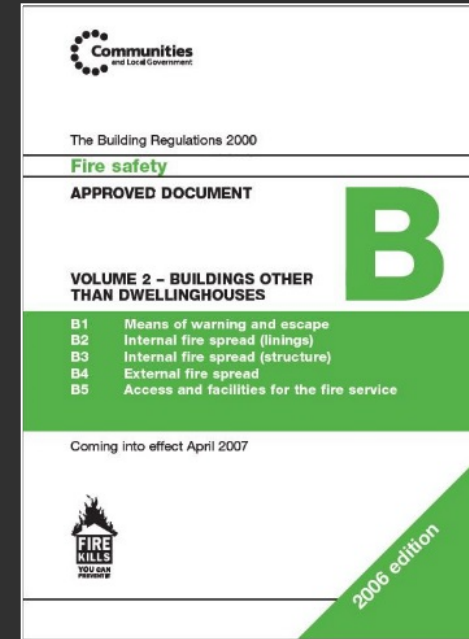
BS 7974

Reine
schutzzielorientierte
Bemessung
(Ingenieurmethoden
des Brandschutzes)

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Allgemein

- Richtlinie für ein Brandschutzkonzept
- Inhalte:
 - Means of Escape [Fluchtwege]
 - Internal fire spread (linings) [baulicher BS]
 - Internal fire spread (Structure) [baulicher, anlagentechnischer BS]
 - External fire spread [baulicher BS]
 - Access and facilities for the fire service [baulicher, anlagentechnischer, betrieblicher BS]
- Weit verbreitet (Basis-) Anwendung
- Zusammenfassung von brandschutztechnischen Anforderungen
- Verweis auf weitere Vorschriften (BS Richtlinien)



Volume 1 and 2 free for download:
<https://www.planningportal.gov.uk/buildingregulations/approveddocuments/partb/bcapproveddocumentsb/>

B

STANDARDS AND OTHER PUBLICATIONS REFERRED TO

BS EN 1366-1:1999

Fire resistance tests for service installations. Fire resistance tests for service installations. Ducts

BS EN 1366-2:1999

Fire resistance tests for service installations. Fire dampers

BS EN 1366-3:2004

Fire resistance tests for service installations. Penetration seals

BS EN 1366-4:2006

Fire resistance tests for service installations. Linear joint seals

BS EN 1366-5:2003

Fire resistance tests for service installations. Service ducts and shafts

BS EN 1366-6:2004

Fire resistance tests for service installations. Raised access and hollow core floors

BS EN 1634-1:2008

Fire resistance tests for door and shutter assemblies. Fire doors and shutters

BS EN 1634-2:2008

Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance characterisation test for elements of building hardware

BS EN 1634-3:2004

Fire resistance tests for door and shutter assemblies. Smoke control doors and shutters

BS EN ISO 1716:2002

Reaction to fire tests for building products. Determination of the heat of combustion

BS 5438:1989

Methods of test for flammability of textile fabrics when subjected to a small igniting flame applied to the face or bottom edge of vertically oriented specimens

BS EN 14604:2005

Smoke alarm devices

BS 5446-2:2003

Fire detection and fire alarm devices for dwellings. Specification for heat alarms

BS 5499-1:2002

Graphical symbols and signs. Safety signs, including fire safety signs. Specification for geometric shapes, colours and layout

BS 5499-1:2002

Graphical symbols and signs. Safety signs, including fire safety signs. Specification for geometric shapes, colours and layout

BS 5588-1:1990

Fire precautions in the design, construction and use of buildings. Code of practice for residential buildings

BS 5588-5:2004

Fire precautions in the design, construction and use of buildings. Access and facilities for fire-fighting

BS 5588-6:1991

Fire precautions in the design, construction and use of buildings. Code of practice for places of assembly

BS 5588-7:1997

Fire precautions in the design, construction and use of buildings. Code of practice for the protection of fire in buildings

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B

FIRE DOORS

ONLINE VERSION

Table B1 Provisions for fire doors

Position of door	Minimum fire resistance of door in terms of integrity (minutes) when tested to BS 476-22 ⁽¹⁾	Minimum fire resistance of door in terms of integrity (minutes) when tested to the relevant European standard ⁽³⁾
1. In a compartment wall separating buildings	As for the wall in which the door is fitted, but a minimum of 60	As for the wall in which the door is fitted, but a minimum of 60

Table 17 Class 3 (National class) or Class D-s3, d2 (European class) plastic limitations on use and boundary distance

Minimum classification on lower surface ⁽¹⁾	Space which rooflight can serve	Minimum distance from any point or to rooflight with an external design AD BD CD (National class) or E _{ROOF} (t4) (European class) CA CB CC or D _{ROOF} (t4) (European class)
Class 3	a. Balcony, verandah, carport, covered way or loading	6m

Table 10 Classification of linings

Location	National class ⁽¹⁾	European class ⁽¹⁾⁽³⁾⁽⁴⁾
Small rooms ⁽²⁾ of area not more than: a. 4m ² in residential accommodation b. 30m ² in non-residential accommodation	3	D-s3, d2
Other rooms ⁽²⁾ (including garages)	1	C-s3, d2
Circulation spaces within dwellings		
Other circulation spaces, including the common areas of blocks of flats	0	B-s3, d2 ⁽⁵⁾

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Bauphasen

RIBA	0	1	2	3	4	5	6	7
	Strategic Definition	Preparation and Brief	Concept Design	Developed Design	Technical Design	Construction	Handover and Close Out	In Use
HOAI	I	2	3	4	5	6; 7; 8; 9	-	-
	Grundlagen- ermittlung	Vorplanung	Entwurfs- planung	Genehmigungs- planung	Ausführungs- planung	Vorbereitung der Vergabe; Vergabe; Objekt- überwachung; Objektbetreuung und Dokumentationen		



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Typische Aufgaben eines Fire Engineers

- Brandschutztechnische Beratung (Baurecht; Abweichungen; aber auch: Grundlagen von Feuer, Rauchgasausbreitung und Reaktionen von Personen)
- Weit verbreitet: Anwendung von Ingenieurmethoden (gesamtheitlicher Blick: Zusammenspiel von Anlagentechnischer, Baulicher und Organisatorischer BS)
- Mediator zwischen Design Team und Baubehörden/Feuerwehr
- Weniger: Erstellen von Fire Risk Assessments, Design von Sprinkleranlagen oder Brandmeldematrix, Berater von Bauprodukten
- Weitverbreitet das Konzept: Chartered Engineer [CEng] (vgl. Sachverständiger Brandschutz)

Traditioneller Weg

- 1. Einbindung von s.g. Local Building Control (LBC) Officer (RIBA Stage 2/3)
- 2. Einbindung der Feuerwehr (RIBA Stage 3/4)
- Prüfer: ausschliesslich LBC Officer

Immer mehr:

- 1. Einbindung von s.g. Approved Inspector [„Vetreter für LBC“] (RIBA Stage 1-2/3)
- 2. Einbindung der Feuerwehr (RIBA Stage 3/4)
- Prüfer : ausschliesslich AI Officer

Komplexe Brandschutzkonzepte:

- Fire Engineering Team – LFEPA (London Fire Brigade)
- Third Party Reviewer

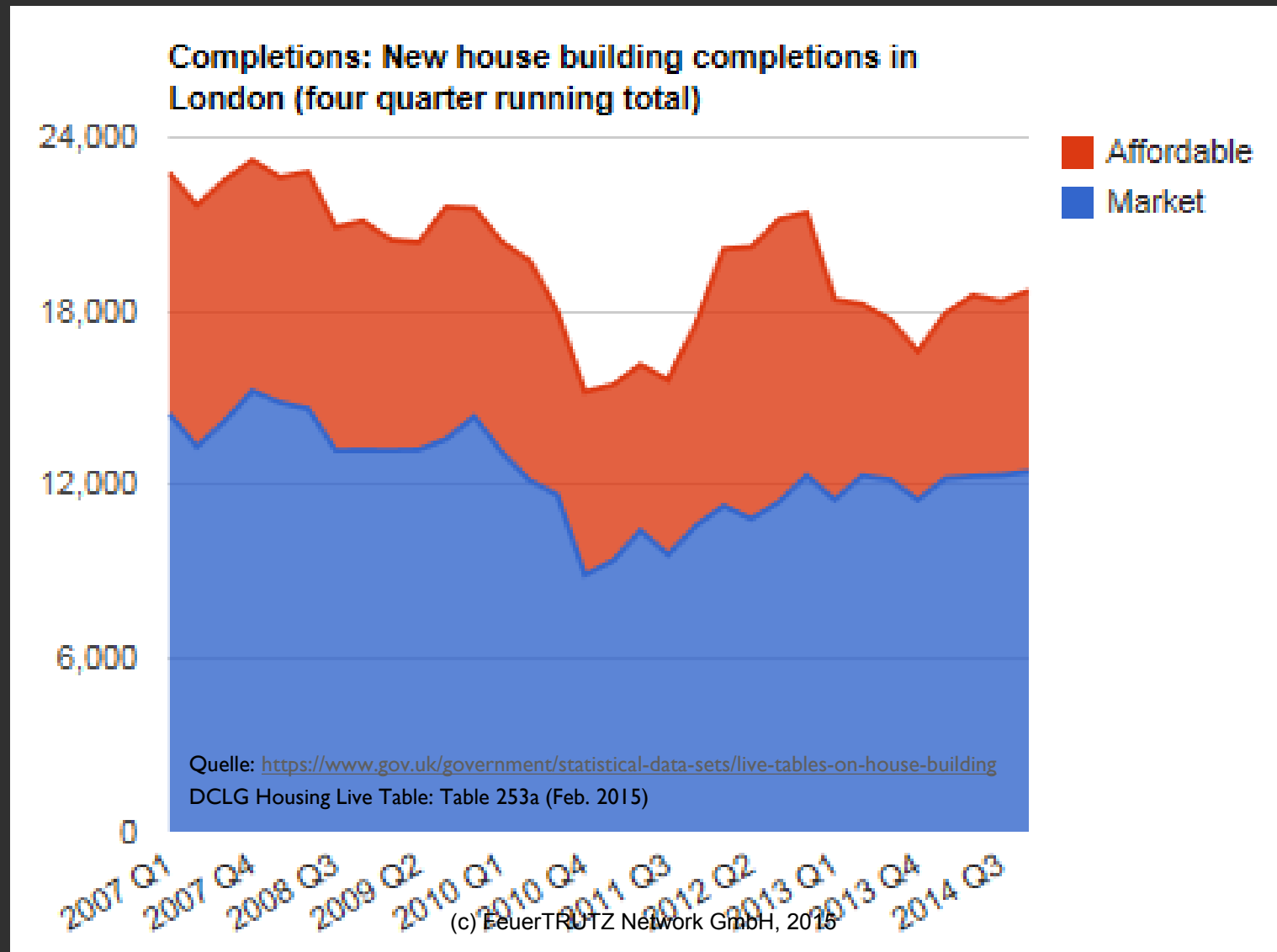
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Trends in der Baubranche

- Neubauten
- Wohnungsbau / Bürobauten / Universitäten
- Umnutzungen und Renovierungen
- Ein Markt für Innovationen im Bausektor
- Nachhaltiges Bauen
- Holzhochhäuser
- Ein mögliches Sprungbrett in die Welt?
- London :The hot market

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Trends in der Baubranche



News > UK > Home News

300,000 extra homes need to be built every year to curb housing crisis, urges report



Quelle: The Independent
Newspaper: 11 May 2015

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Derzeit
werden
jedoch nur
100,000
gebaut!

Trends in London

- 1980: 10% von Londons Grundfläche gehört ausländischen Investoren
- Im Vergleich dazu 2011: >50%
- Highrise Towers
- Mixed-Use Towers: The Shard
 - Wohnen
 - Hotel
 - Arbeiten
 - Restaurants
 - Aussichtsplattform (244m)
- Anspruchsvolle Architektur
- „Iceberg“ Bauten
- Luxus Wohnungen / Penthouse



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Trends in London

2010:
£140m für ein Penthouse
in **One Hyde Park**



Quelle (2010):
<http://www.dailymail.co.uk/news/article-1301918/The-140m-flat-World-record-price-Central-London-penthouse.html>

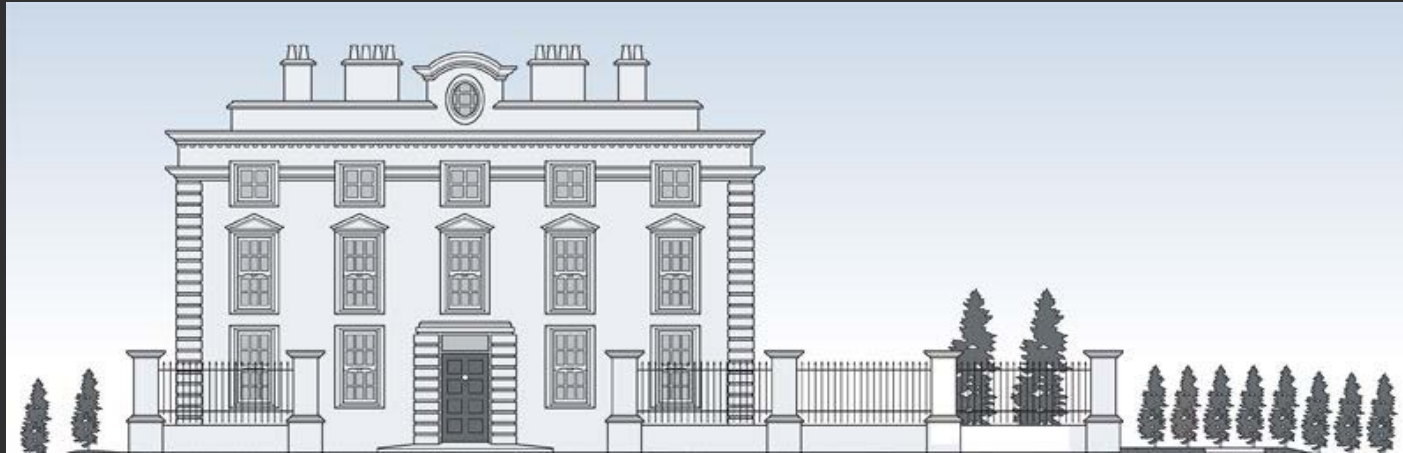
Trends in London

Trend zu Holz-Hochhäuser



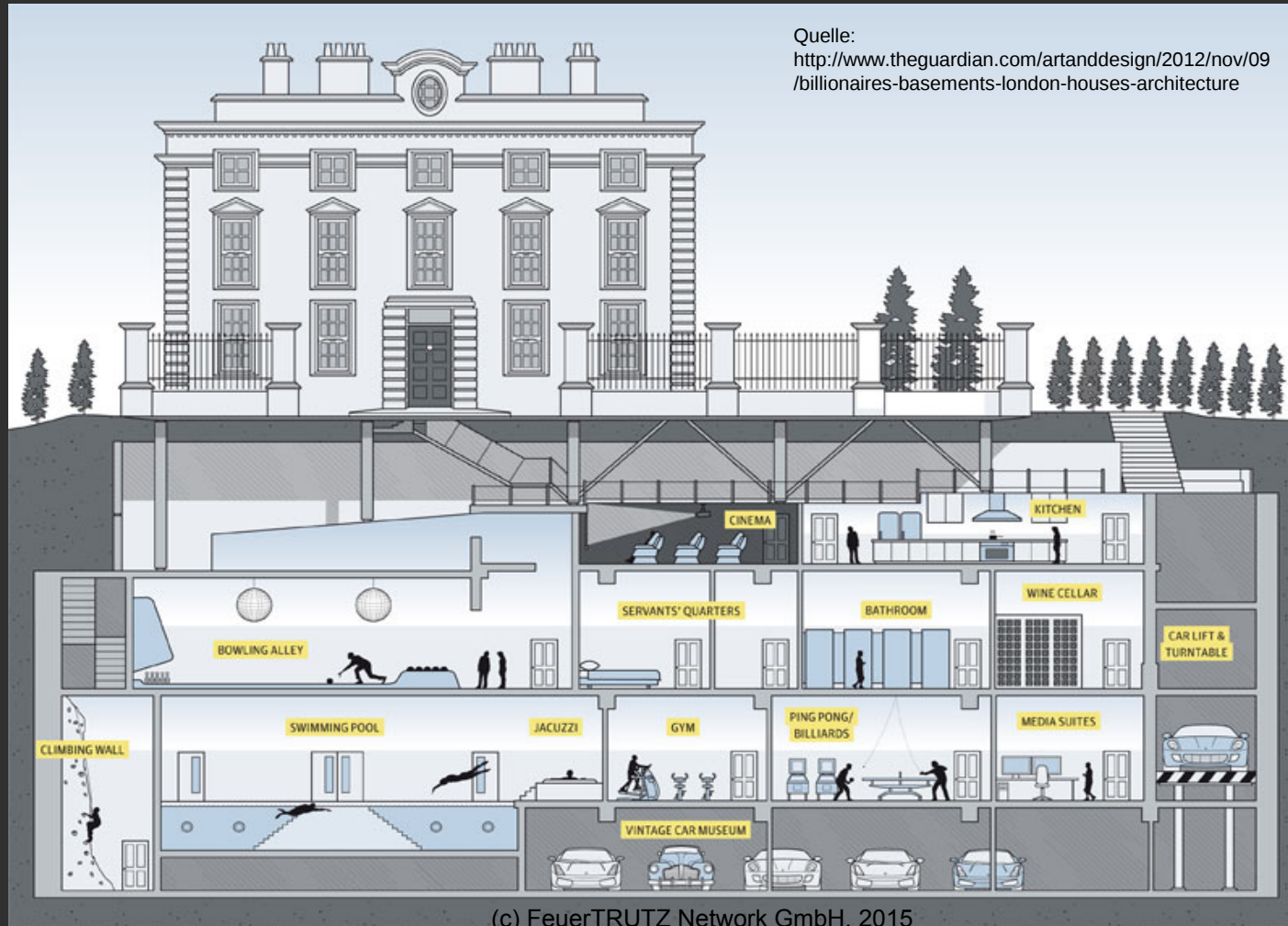
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Ein Wohnunghaus – Ein Eisberg ?



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Ein Wohnunghaus – Ein Eisberg ?



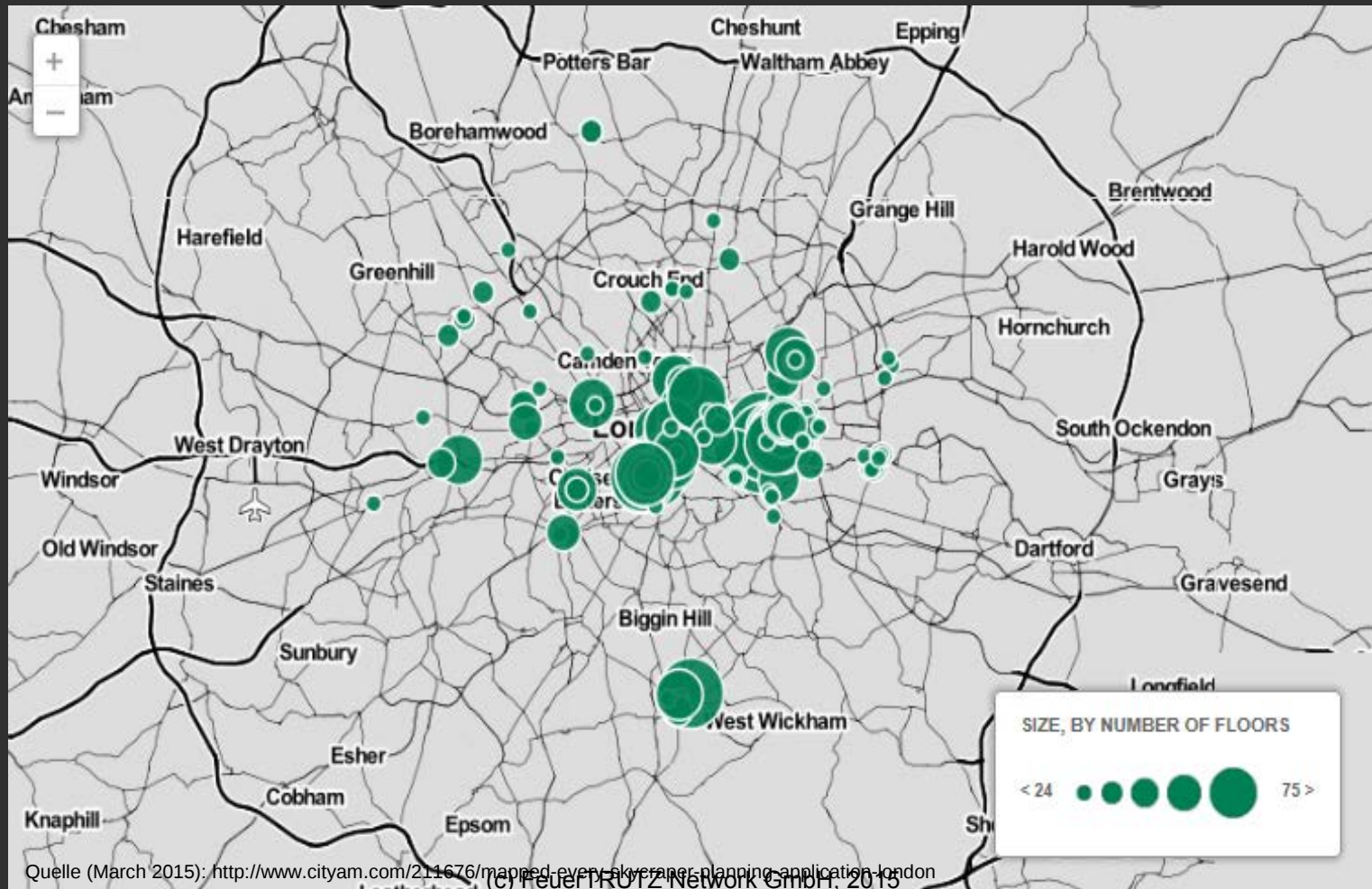
London – Today's Skyline



Quelle (March 2015): <http://www.cityam.com/211666/how-london-trimmed-single-towers>
(c) FeuerTRUTZ Network GmbH, 2015

London – Tomorrow's Skyline

263 Hochhäuser mit 20 oder mehr Geschossen in der Planung oder bereits bewilligt



London – Future Skyline ??



- Auswahl meist durch Generalunternehmen (RIBA Stage 4+)
- Aber auch durch Architekten oder Haustechniker (MEP)
- Kennzeichnung und Produktnachweis erforderlich
- Verbreitet: CE Zulassung, BS oder EN (u. U. DIN)
- Entscheidend dabei: Preis
- Immer: Sinn und Zweck erfüllen
- Architekten: „schöner und einfacher“ (Preis)
- RIBA Product Selector
 - <http://www.ribaproductselector.com/>
- CPD Lunchtime Seminars (Continuing Professional Development)

Bauprodukte und Auswahl

tion knowledge | bim | jobs | books | **product information** | cpd | magazines

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fire detection 🔍 All content

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Company (168)
Literature (96)
Product in NBS (30)
CPD (1)

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 **Banham Fire** (Literature)
by Banham Group
Fire safety in the home and workplace can save lives and money. Banham Fire can provide free advice on fire security solutions of the highest standard at competitive rates. Contact one of our train...

Category: Literature

 **Fire Shutters** (Literature)
by HAG - The Door Specialists
Fire Shutters - Fire protection roller shutter 1-4 hour fire rating. The certified fire guard range offers all-steel construction. Tested to BS EN 1634-1 :2008 and BS 476 Part 22 1987. Max width 12...

Category: Literature

 **Protec Fire Detection plc** (Company)
www.protec.co.uk
[Read more...]

Category: Company

 **Product Selector - Fire Resistant Glass** (Literature)
by Vetrotech Saint-Gobain UK
Designing and building a ship is a dynamic, complex task. Design, manufacture and safety are inextricably linked. Our multifunctional fire resistant glass is just what you need to ensure safety. It buys extra...

Quelle:
<http://www.ribaproductselector.com>

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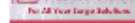

































- Royal Institute of British Architects (RIBA): www.architecture.com
- Website of all government departments: www.gov.uk (www.gov.uk/cemarketing)
- Building Research Establishment (BRE): www.bre.co.uk
- Building Design Construction Directory: www.buildingdesign.co.uk
- Building Products: www.buildinproducts.co.uk
- Institution of Fire Engineers: www.ife.org.uk
- Planning Portal: www.planningportal.gov.uk/buildingregulations
- SFPE UK Chapter: www.sfpe.uk
- RedBook (Passive Fire Protection): www.redbooklive.com

Vielen Dank für Ihre Aufmerksamkeit.

Thank you very much for your attention.

Hoare Lea

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karlwallasch@hoarelealea.com

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