



Next Gen NBS

ICIS progress report

2010-19 ICIS2010_CRB_EN

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ICIS DA Sydney – April 2010

Topics

- Concept
- Project management
- Content progress
 - Restructuring
 - Tables and schedules
 - Revising CAWS
- Software progress
 - Authoring environment
 - Software schema
 - Clause linkage
 - Linkage with ArchiCAD
- Sales and marketing

Concept



Concept – a reminder

- Procurement: Build-only, design-build, and design-build-operate-transfer
- Objects of specification: Buildings, systems, products
- Methods of specification: Performance, prescription and proprietary
- New build & work-to-existing
- Automated assembly
- Automated reporting – horizontal, vertical, ‘typed’ phrases, tags
- Fine-grain report granularity (down to item level)



Concept – a reminder

- Improved efficiency, for NBS and customers
- Integration with other RIBAe products
- Integration with other construction documents and softwares
- DIY functionality
- First step towards full project time line toolkits – briefing, compliance, tender, record and facility management



Section structure

- System outline
- System performance
- Products
- Fabrication
- Execution
- System completion
- System FM

CSI/CSC SectionFormat

A	B	C	D	E	F	G	H	I	J
		System outline	System performance	Products	Fabrication	Execution	System completion	System FM	Contract/ Tender/ Prelims
1.15	Maintenance						•	•	
1.15.01	Maintenance service (after Final certificate?)						•	•	
1.15.02	Extra materials for maintenance						•		
2	Part 2 Products			•	•	•			
2.01	Manufacturers – if just one for all products in this section			•					
2.01.01	Specified manufacturer (just one)			•					
2.01.02	Acceptable manufacturers (two+ alternatives)			•					
2.02	Materials			•					
2.03	Manufactured components			•					
2.04	Accessories			•					
2.05	Mixes, e.g. concrete					•			
2.06	Fabrication – in shop or factory				•				
2.06.01	Shop assembly				•				
2.06.02	Shop/factory finishing				•				
2.06.03	Tolerances for fabrication				•				
2.07	Source quality control - fabrication				•				
2.07.01	Tests for fabrication				•				



Project management



Time line so far

Year	Activities
2001	Restructuring proposed, initial concepts implemented in NBS Scheduler & some NBS Building work sections
2002	Solution developed for integration of outline & performance with conventional specification; NBS ES started, implementing this
2003	NBS ES: Structure finalised, initial concepts developed, but not necessarily implemented, e.g. linkage, interdependency, 'author once'
2004	NBS ES launched, republishing of NBS Building formally proposed, persuasion begins
2005	Persuasion continues, concept developed further
2006	Persuasion continues, concept developed further, prototype developed
2007	Prototype presented, work halted, CEO go-ahead; NBS Plus underway
2008	Business case developed, whole company engaged, RIBA Board approval ; NBS Plus
2009	Restructuring of content, initial software R&D, concept development continues
2010	New authoring environment delivered, content handed to TAs for review & development, TA training, finalising concepts

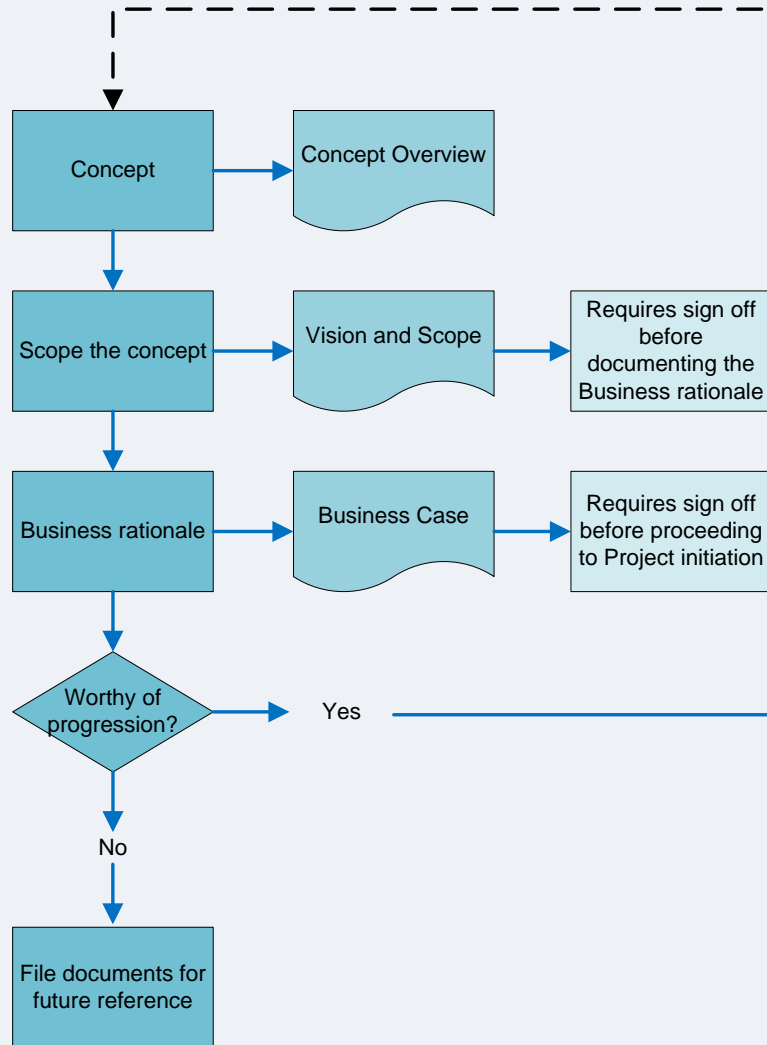


Project management

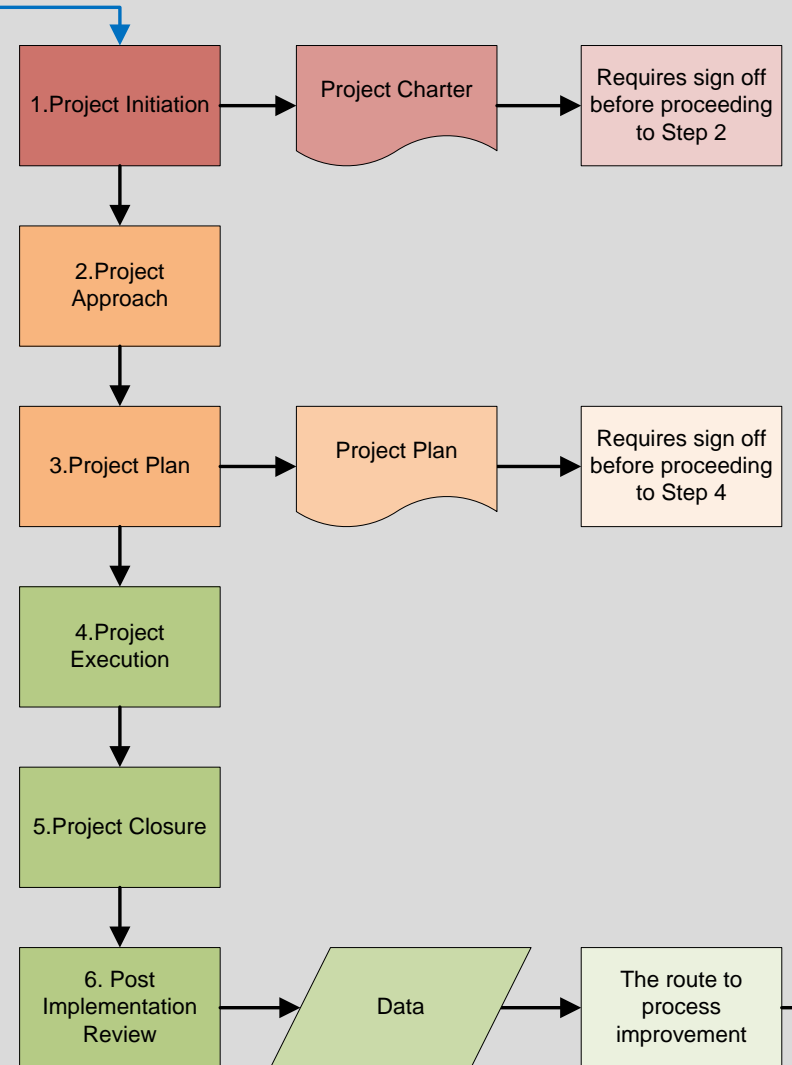
- Project manager appointed
- Project management course
- Standardised project plan and documentation
- Sharepoint
- Company-wide management team
- Fortnightly team meetings, task groups
- Red amber green reports



Pre-Project Stage



Six steps to Project Management



Project Charter


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Sharepoint

Team Documents

Type ▾	Name	Modified By
	19 - User guidance	Clair Hillier
	18 - CAD Integration and Interoperability with other apps	Clair Hillier
	17 - Publishing and Reporting	Clair Hillier
	16 - Preliminaries	Clair Hillier
	15 - Validate	Clair Hillier
	14 - Revisions	Clair Hillier
	13 - NBS Plus	Clair Hillier
	12 - UI	Roger Newbrook
	11 - Authoring Environment	Stephen Hamil
	10 - Schedule editing	Clair Hillier
	09 - Section editing	Clair Hillier
	08 - Specification creation	Clair Hillier
	07 - NBS Guidance	Clair Hillier
	06 - Price Book Data	Stephen Hamil
	00 - Detailed Project Schedule	Stephen Hamil
	05 - Integration with CAD	Stephen Hamil
	04 - Licencing	Stephen Hamil
	03 - Data Schemas	Stephen Hamil
	02 - Platform Independent Version	Stephen Hamil
	01 - Application type	Stephen Hamil

 Add new document

2. New proposed features and functionality

No.	Requirement	Must be done	Should be done	Could be done	Won't be done
	<i>System Requirements</i>				
1	All 'supported' Windows operating systems, 32 and 64 bit (Supported = all operating systems that are supported by Microsoft)	Y			
2	Browsers to be supported (latest and previous version) <ul style="list-style-type: none"> a. Internet Explorer b. Firefox c. Chrome d. Safari 	Y			
3	Screen size <ul style="list-style-type: none"> a. 1280 x 1024 for desktop b. 1280 x 800 widescreen laptop c. Mobile devices should cope gracefully and provide read only access of documents 	Y Y	Y		
4	Support multiple monitors		Y		
5	Users must have a broadband connection of x m.bits per second (to be confirmed nearer launch)	Y			

Red amber green reports

#	Key Milestones/Deliverables	Planned Date	Revised Date	Completed Date		Key Events This Period
	Customer requirements					
	Ensure defined audience needs are met - keep revisiting	ongoing				Customer requirements - regular task - checking customer needs are met
	Ensure assumptions of users needs are never made without checking	ongoing				Finance - regular tasks - tracking the time spent on the project
	Finance					Research & Development - requirements, design and
	Monitor project time recording (for the purposes of WIP accounting) - 2010 reviews 1	Mar 31st 2010				Technical Team - maintenance; authoring and editing policy work; Engineering Services content & schedules
	Production					
	Agree the level of Production's involvement with work section sign-off and agree the process – launch set	June 30th 2010				
	The project team					
	Mark up restructured content with XML	March 1st 2010	sections processed by Liz's team (80-90 to			
	Research and Development					
	Technical team administration tools - Authoring environment - maintenance release	April 1st 2010			complete	
	Technical team administration tools -	April				

Content progress



Content

- NBS Building/ Landscape – restructured over 2009, now with TAs
- NBS Engineering Services – underway
- NBS Preliminaries – ideation late 2009, now underway
- New authoring environment – received, late
- System performance – underway – matrices, specialist TAs, research & training
- Team – new staff – Alan, Neil & Paul
- NBS Plus
- NBS Scheduler
- NBS Minor Works
- Xml-ing



Restructuring

Current NBS section + auth environ



110

See general guidance 1. Use this clause for proprietary mortar tanking systems. For site batched and mixed tanking mortar incorporating a proprietary waterproofing admixture, use clause 120. For proprietary crystallization active mortar tanking systems use clause 130.

Clause heading: Insert, e.g. *TANKING TO BASEMENT*

Substrate: Insert, e.g.

Existing brickwork walls and concrete slab.

In situ concrete.

Manufacturer:

– **Product reference:** Where there is more than one product reference insert, e.g. *Splatter coats, ???, Trowelled coats, ???*. Alternatively, insert *Contractor's choice* and/ or *Agrement certified system*.

Coats (excluding dubbing out): Refer to tanking mortar manufacturer's recommendations.

– **Number (excluding keying mixes):** Recommendations may, for example, be two to three coats for internal/ external surfaces above ground level; three to four coats for basements, swimming pools and other water retaining structures. Insert, e.g. *Walls three; floors three*.

– **Thickness:** Refer to manufacturer's recommendations – typical overall thickness for internal/ external surfaces are 12 mm (two coats); 20 mm (three coats); 25 mm (four coats) and, for floor screeds, 40 mm. Insert, e.g.

Floors 40 mm (overall); walls 6 mm (each coat).

As coating manufacturer's recommendations.

Finish: Insert, e.g.

Types of tanking/ damp proofing

110 Proprietary mortar

- Substrate:

Brickwork

Concrete

Concrete *blockwork*

Existing brickwork

Existing brickwork walls and concrete slab

Existing concrete *blockwork*

Existing concrete

- Manufacturer:

Contractor's choice

Submit proposals

- Product reference:

Agrement certified system

Contractor's choice

Submit proposals

- Coats (excluding dubbing out):

- Number (excluding keying mixes):

Two

Three

Four

Floors three

Walls two

Walls three

Walls four

Walls three and floors three

As coating manufacturer's recommendations

Thickness:

In progress in modified auth environ

110	execution	<ul style="list-style-type: none"> Installing the coating material: <ul style="list-style-type: none"> Surface finish: <p>As applied Coarse textured Lightly rolled Tamped and painted</p>
110		<ul style="list-style-type: none"> Applying finishing/ Sealing coat: <p>Thickness (nominal): 3 mm</p>
110 120 130	<p>Qualifications: BSI currently has no register of polyurethane installers. Local Authorities and inspectors are therefore likely to insist on installers being approved by BBA.</p>	<ul style="list-style-type: none"> Installer Qualifications: BSI registered, BUFGA member or approved in accordance with the British Board of <u>Agrément Surveillance Scheme</u>.
110		<p>Preparation Type: Wire brushing</p>

110		<ul style="list-style-type: none"> Survey Timing: Carry out before installation commences.
120	<p>120 Use this clause to specify by proprietary reference. Clause title: Where the coating is required to perform more than one function, decide which is the predominant role and complete the heading accordingly – see general guidance 1–5. Insert the coating function, and</p>	<p>120 Sprayed monolithic coating system</p> <ul style="list-style-type: none"> Survey: Carry out before installation commences. Preparation: <p>Not required</p>

Fully restructured section

	<p>On the relevant drawings, insert, e.g. <i>Roof vents</i> and specify in detail in the 'Products' clauses.</p> <p>In work to existing roofs any outlets, gratings, perimeter trims, etc. which have to be renewed or removed, cleaned and refixed, should be clearly indicated on the drawings.</p>	<p><i>Paving tiles</i></p> <p>Precast concrete paving slabs</p> <p>Precast concrete paving slab supports</p> <p>Sealer</p> <p>Stone ballast</p> <p>UV resistant sealer</p> <p>Walkway protective coating</p> <ul style="list-style-type: none"> Fill to perimeter upstands: <p>Stone ballast</p> <p>Chippings (and dressing compound)</p> <ul style="list-style-type: none"> System (accessories): <p>None</p> <p>Countersunk wood screws, as section Z20</p> <p>Gravel guards</p> <p>Perimeter trims</p> <p>Pipe collars</p> <p>Roof ventilators</p> <p>Sealant to chases, as section Z22</p> <p>Standardized steel screws, as section Z20</p> <p>Timber trims</p>	<p>Comment [JE3]: i have assumed required for all roof types - but not originally flagged in all sections</p> <p>Comment [JE4]: i have assumed used for all roof types with chippings - but not originally cited in J31, J41</p> <p>Comment [JE5]: installation sequence - accessories to, e.g., waterproof coating? affects products & execution sequence too</p> <p>Markup Area</p>
J31/120	<p>Use this clause for new roofs or renewal of existing roofs where the principal insulation is placed above the structural deck but below the waterproof covering. With this type of construction, the temperature of the structural deck and supports are close to that of the building interior.</p> <p>In renewal work, perimeter upstands and rainwater outlets may also require adjustment – show on drawings or describe on a schedule of work.</p> <p>Clause title: Insert, e.g. <i>to office block</i></p> <p>Substrate:</p> <p>– Preparation: On new roofs where the substrate consists of a profiled metal deck, consider including an overlay as a base for the vapour control layer.</p>	<p>115 Warm deck liquid applied roof covering system</p> <ul style="list-style-type: none"> System manufacturer: Substrate: <p>As section B04</p> <p>– Preparation:</p> <p>Not required</p> <p>Make good</p> <p>Oriented strand board overlay</p> <p>Plywood overlay</p> <p>Overlay fasteners</p> <p>– Accessories:</p> <p>None</p> <p>Tape</p>	
	<p>Vapour control layer: See general guidance 5.2. Requirement for a VCL should be established by</p>	<ul style="list-style-type: none"> Vapour control layer: <p>Not required</p>	

Section in new authoring environment

System Outline

110 Deck system

Classification		Previous Clause	Q55/110
----------------	--	-----------------	---------

Guidance

[copied in to 120 – identical]

See [general guidance 1.1](#).

Drawings should show:

- General layout.
- Section sizes and spacing centres of timbers.
- Constructional details of connections, if necessary.
- Details of special features, e.g. subframing, edge details, stairs, handrails, access hatches.

[See general guidance 7.1 regarding BREEM.](#)

Item	Value	Guidance	Flags
• Base preparation	Not required. Polyethylene sheet, as section K80. gravel Residual herbicide, as section Q80.	Weed suppression is advisable unless the base is a sound existing hard surface, the decking/ boardwalk is at a high level or the base is sensitive to disruption.	
• Structure other than surfacing	Composite. Hardwood. Structural Hardwood	Describe briefly the supporting structure, including joists, trimmers	

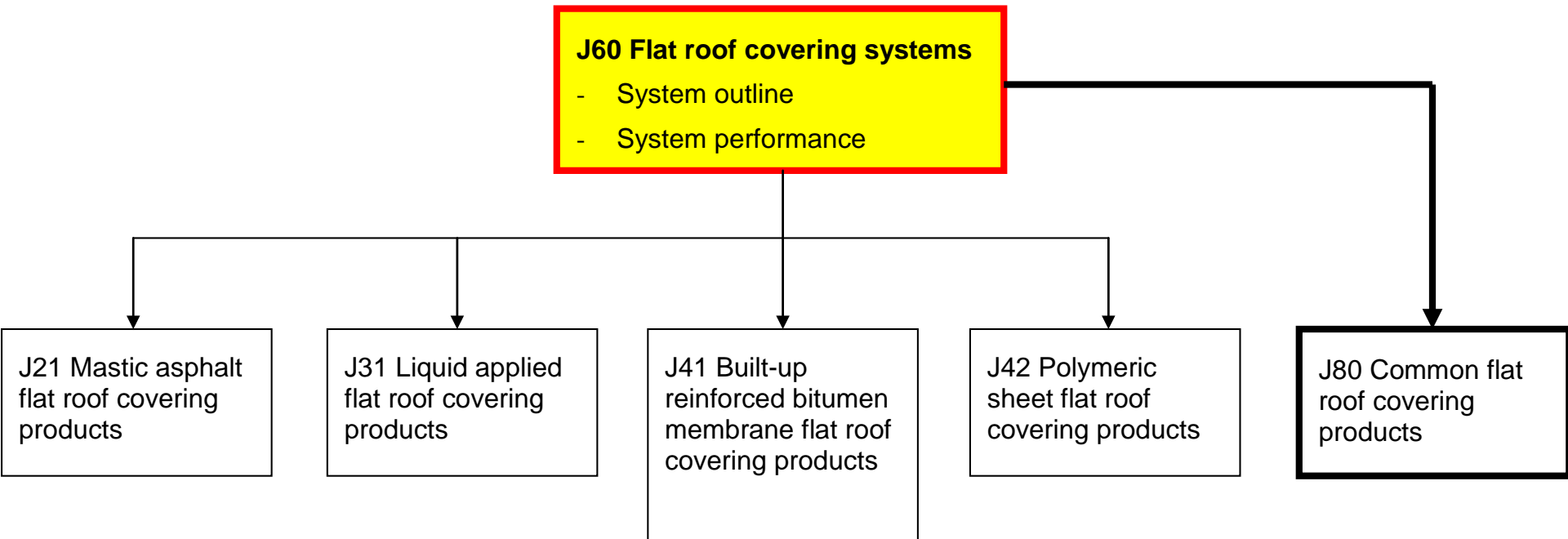


Common products

- One objective for Next Gen NBS is to ‘author it once’ – things like sand:cement mortar are currently authored many times
 - First pass – individual sections restructured
 - Second pass – review of individual CAWS groups for products common to the group, or to subgroups – 80s created to hold these
 - Third pass – review of all groups to identify products common to many groups – shifted to existing common-products sections where they exist, e.g. P10 for insulation, Z20 for fixings



Section interdependency





System performance clauses

- About 60% of system sections have something on system performance, but this varies from solid clauses to just a clause title.
- We will develop consistent content across all sections, aligned to performance requirements in the Building Regulations.
- Authors have been appointed as performance ‘experts’, for the various topics, e.g. fire, acoustics, access.
- They will research and develop ‘framework’ clauses and guidance, and oversee the authoring of section-specific material.
- They will run CPD events for the authors on their topics.

Building Regulations

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
	Building Regulations	Approved Document Section	Clause number and summary	Domestic	Other buildings	Existing buildings	Landscaping	Level surface	Normal soil	Floor Structure	Level surface	Wall structure	Internal wall	External wall	Partitions	Internal panel partitions	Transparent or translucent walls	Roof structure	Glazing
							Q?	Q?	Q?			E?, F?, F11, H10, H11,	E, F, F11, G1?, G2?	E, F, F11, G1, G2	K10, K30	K10, K30		G1?, G2?, T26, V14	L10,
N		Clause 3.2					2	2		2	2								
N		Part a	Height of controls with no obstruction				2	2		2	2								
N		Part b	Height of controls with obstruction				2	2		2	2								
N		Part c	Remote operation				2	2		2	2								
N			Prevention of falls																
N		Clause 3.3	Opening limiters or guarding																
N4 Safe access for cleaning windows, etc.		Section 4: Safe access for cleaning windows, etc.																	
N			Introduction to provisions																
N		Clause 4.1	Complying with the requirement																
N		Clause 4.2	Provisions where glazed surfaces cannot be cleaned safely by a person standing on the ground, a floor or other permanent stable				2	2	1	2	2	2					2	2	1

Building outline sections

		vehicle flow plate system, as section Q42	
	OPENINGS		
New		<p>125 Gate systems</p> <ul style="list-style-type: none"> Description: Systems: <p>Bridle gate systems, as section Q44 Dog gate systems, as section Q44 Field gate system, as section Q44 Kissing gate systems, as section Q44 Stile systems, as section Q44 Vehicular gate systems, as section Q44</p>	<p>Comment [JE2]: The Advisory Panel was keen on the 'super systems' approach, which sometimes will be close to/ same as a room data sheet. I think we must support both flat CAWS as here, and super systems, but some already exist, e.g. Q52 ... I think folk will generally be thinking about the supersystems (e.g. tennis courts) rather than, say, paving systems across the project.</p>
	PAVING = FLOORING		
New	TA: High-level guidance needed throughout on selection of one system	130 Continuous paving systems	
	<p>over another. Some would already exist in general guidance to existing sections, and should be relocated here, where decisions are made on the systems to be used. Generally guidance is there to help folk choose values in clauses. Here, the values are alternative systems. clause guidance should be about selecting system A rather than system B. Some of this guidance already exists elsewhere, e.g. general guidance to Q21, Q22. It must be relocated to here (couldn't be done before since this section didn't exist!!).</p>	<ul style="list-style-type: none"> Description: Systems: <p>Concrete (designated) paving system, as section Q21 Concrete (designed) paving system, as section Q21 Unreinforced concrete (site mixed) paving system, as section Q21 In situ concrete and grass paving system, as section Q21 Asphalt concrete road paving system, as section Q22 Asphalt concrete path paving system, as section Q22 Permeable asphalt concrete sports paving system, as section Q22 Hot rolled asphalt paving system, as section Q22 Hot rolled asphalt sports paving system, as section Q22 Vehicular paving system, as section Q22 Pedestrian paving system, as section Q22 Surface treatment to existing paving system, as section Q22</p>	<p>Comment [JE3]: I am not keen on this free text, but inevitably specifiers will want to add some bump of this kind. Trouble is, it is likely to repeat/conflict with specification material elsewhere. General Guidance should warn of this issue.</p>
New		135 Loose paving systems systems	
		<ul style="list-style-type: none"> Description: 	<p>Markup Area</p>



Guidance revisited

Level of technical expertise	Level of guidance			
	Clause titles, keywords and default text	Value lists	Clause guidance	General guidance
Specialist specifier	This is just a checklist, which you can use or ignore as you please – you know best			
Experienced specifier	Essential	These are the known likely values		
Inexperienced specifier	Essential	Essential	This is how you select one value rather than another	
Novice specifier	Essential	Essential	Essential	Here is general background information



Product clauses revisited

Whole product (~ performance specification)	Standard: To BS 1234 . <ul style="list-style-type: none">- Structural grade:- Thermal grade: Third party product certification: Recycled content:
Product components, if any (~ outline specification)	Frame: <ul style="list-style-type: none">- Material:- Finish:- Colour: Panel: Integral accessories:



Proprietary system outline clauses

110 Plasterboard partition system

- System manufacturer:
[British Gypsum](#).
 - System reference: [...]

GypWall AUDIO

GypWall CLASSIC

GypWall CURVE

GypWall EXTREME

GypWall QUIET

GypWall QUIET IWL

GypWall QUIET SF

GypWall RAPID

GypWall RAPID dB Plus

GypWall ROBUST

GypWall SECURE

GypWall STAGGERED

- Additional steel sheet: [...]

Not applicable

Required

Not required

- Finish: [...]

Thistle Board Finish

Thistle Multi-Finish

System FM

<p>960</p> <p>Health and safety: See general guidance 5.</p> <p>Conservation of fuel and power: See general guidance 6.3.</p> <p>Waste management: This should respond to the Site Waste Management Plans Regulations 2008.</p> <p>Fire management: See BS 9999.</p>	<p>920 Operation</p> <ul style="list-style-type: none"> • Functional: • Health and safety: • Conservation of fuel and power: • Waste management: • Fire management:
<p>970</p> <p>Health and safety: See general guidance 5.</p> <p>Conservation of fuel and power: See general guidance 6.3.</p> <p>Waste management: This should respond to the Site Waste Management Plans Regulations 2008.</p> <p>Fire management: See BS 9999.</p>	<p>930 Maintenance</p> <ul style="list-style-type: none"> • Functional: • Health and safety: • Conservation of fuel and power: • Waste management: • Fire management:
<p>980</p> <p>Health and safety: See general guidance 5.</p> <p>Waste management: This should respond to the Site Waste Management Plans Regulations 2008.</p>	<p>940 Alteration</p> <ul style="list-style-type: none"> • General: • Health and safety: • Waste management:
<p>990</p> <p>Health and safety: See general guidance 5.</p> <p>Waste management: This should respond to the Site Waste Management Plans Regulations 2008.</p>	<p>950 Demolition</p> <ul style="list-style-type: none"> • General: • Health and safety: • Waste management:



NBS Engineering Services

- This needs almost no restructuring since it is built around the new section structure, and the concept of section interdependency.
- Content is being straightened out and loaded into the new authoring environment.
- This will feed current NBS ES up to launch, once we have the ‘back-compiler’ in place (due soon), and Next Gen ES after launch.
- Implementing clause linkage is probably the single biggest bit of work for the ES authors.



Tables and schedules



Type schedules

- All clauses in NBS will be tabulatable. Some will be tabulated as the default. These define types.
- Door hinge schedule

	DH.A	DH.B	DH.C	DH.D
Material	Brass	Plastic & stainless steel	Mild steel	Stainless steel
- Finish	None	None	Galvanized	None
Carrying capacity	20 kg	15 kg	30 kg	5 kg
Throw	0 mm	0 mm	25 mm	0 mm
Pin	Removable	Removable	Removable	Fixed
Fixing	Screw	Recess and screw	Weld	Screw

Instance schedules

- These **link** the specification to the drawings, in the BIM database. NBS will provide these schedules.
- Can be very simple two-column tables, not published:
- Flag pole schedule

Flag pole	Flag pole type
FP.1	FP.A
FP.2	FP.A
FP.3	FP.B
FP.4	FP.C
FP.5	FP.A



Door schedule

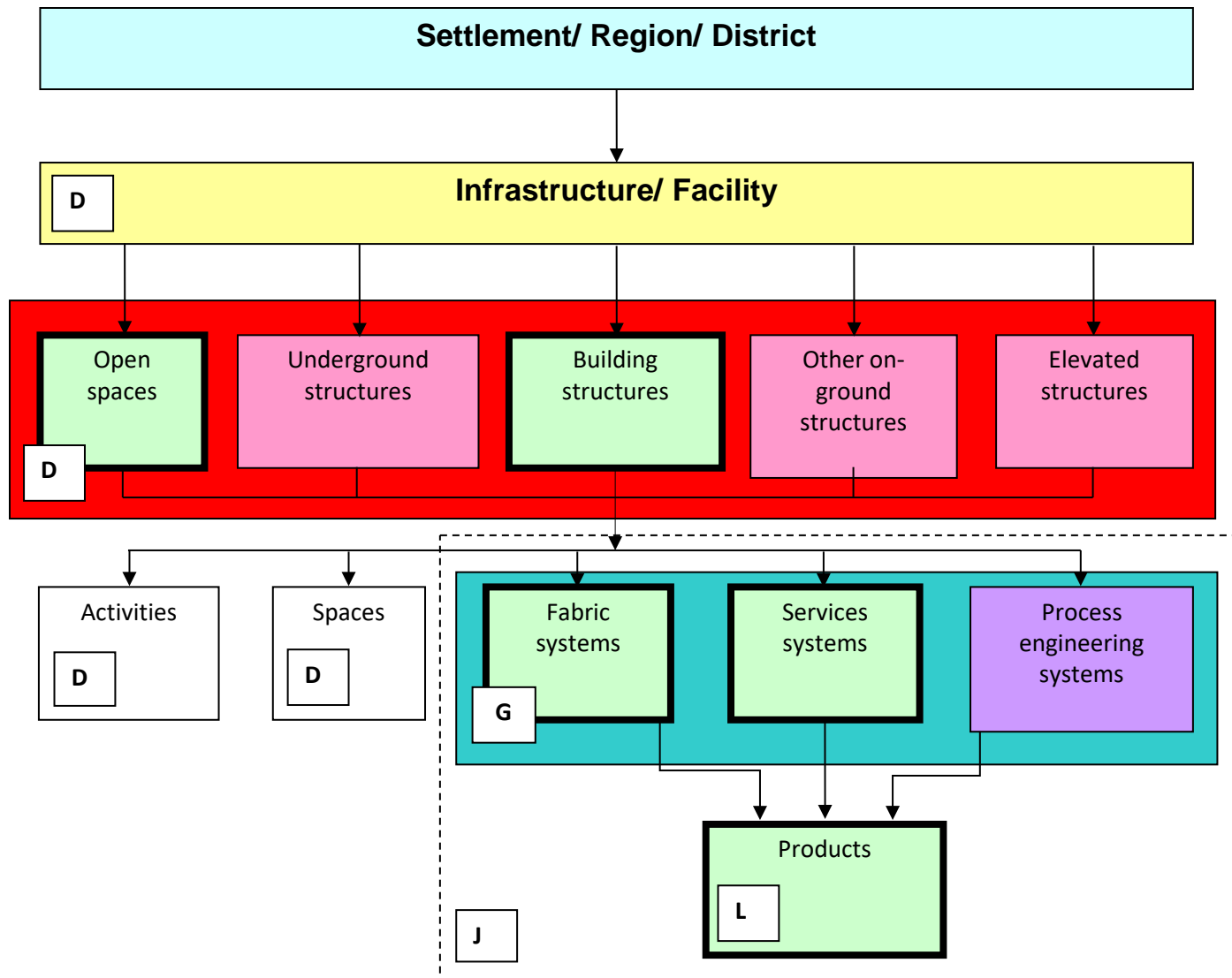
- Can be very complex multi-column tables, published and used for authoring, e.g. of type variants:

Door	Frame type	Leaf type	Hinge type	Structural width	Structural height	Lock type	Colour	Signage
D.01	DF.A	DL.A	DH.A	900 mm	2100 mm	L.A	Red	-
D.02	DF.A	DL.A	DH.C	850 mm	2400 mm	L.B	White	Entrance
D.03	DF.B	DL.A	DH.D	1200 mm	2100 mm	L.B	Blue	Office 1
D.04	DF.C	DL.B	DH.C	900 mm	1200 mm	L.F	Green	Office 2
D.05	DF.A	DL.B	DH.A	910 mm	2110 mm	L.D	Green	Private



Revising CAWS

The Uniclass tables we need



A new CAWS

		0	1	2	3	4	5	6	7	8	9
A	Project management - uses RIBA Plan of work	Appraisal & design brief PM [3 - architecture, civil & process]	Concept PM [3]	Design development PM [3]	Technical design PM [3]	Production information PM [3] <i>General technical</i>	Tender documentation PM [3] <i>Contracts</i>	Tender action PM [3] <i>Tendering</i>	Mobilization PM [3] <i>Preliminaries</i>	Construction PM [3] <i>Contract Administrator</i>	Occupation PM [3]
B	Districts, infrastructure, facilities, spaces, structures & buildings - uses Uniclass table D - see group M	Districts [9]	Infrastructure [9, from table D1 and D2]	Facilities [9]	Open spaces by activities & spaces [9]	Structures by activities & spaces [9, from table D1 and D2]	Buildings by activities & spaces [9]	Open spaces by systems [4]	Structures by systems [4]	Buildings by systems [4] B04 B05 B06 B09	Simple open spaces, structures & buildings [7] B11 B12 B13 B14 B15 + pneumatic

C	Preparatory systems	Site survey systems [3++] C10 C11 C12	Building survey systems [3+] C13 C14 C15	Structure survey systems	Demolition & retention systems [3+] C20 C30 C90	Excavation systems [1+] D20 P30	Earthworks systems [2+] D45	Mining & tunnelling systems	Remediation systems [1+] D21 D22	Common preparatory system products	Simple (e.g. small-scale) preparatory systems [1]
D	Structural systems	Structural [super] systems	Substructure systems [1] D30 D50	Mast frame systems	Pier structure systems	Frame systems G10 G12 G20	Strut & cable systems	Roof frame systems	Deck systems E60 G30	Common structural system products	Simple structural systems
E	Wall and	Wall	Retaining	Existing	Masonry	Framed	Panel wall	Operable	Barrier	Common wall	Simple wall

Software progress



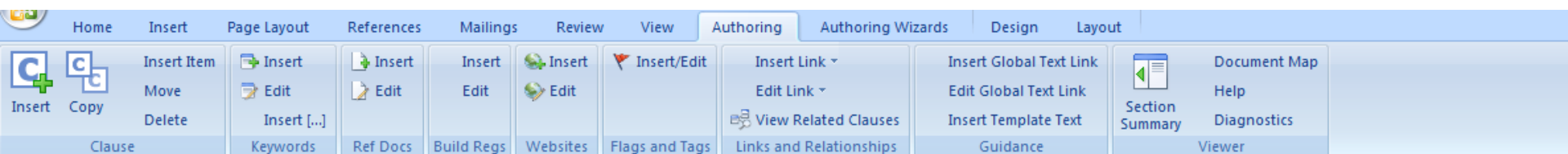
NBS software development

- RIBA E is a member of BuildingSMART.
- We have had a number of consultancy days with AEC3 (Jeff Wix & Nick Nisbett) on the schema.
- We are working on two projects with Prof. Steve Lockley at Northumbria University on automatically querying Building Regulations and on embodied carbon content calculations.



Authoring environment

Word™ plus macros



Security Warning Macros have been disabled. [Options...](#)

385 Frames

Classification		Previous Clause	B12/ 110, 120
Guidance			
Item	Value	Guidance	Flags
• <u>Frame depth</u>	Manufacturer's standard.		
• <u>Integral frame finish</u>	Anodized.		
– <u>Colour</u>	As Finishes schedule.		
Flags			
Related Clauses			
Commentary on latest update			Legacy Validate Flags



230 Aesthetic performance

Classification

Guidance

Item

-

Flags

Related Clauses

Commentary on latest update

Legacy Validate FI

Insert Clause

Clause details

Clause Number: 225

Template: 200 - System Performance.docx

Clause Title: Door performance

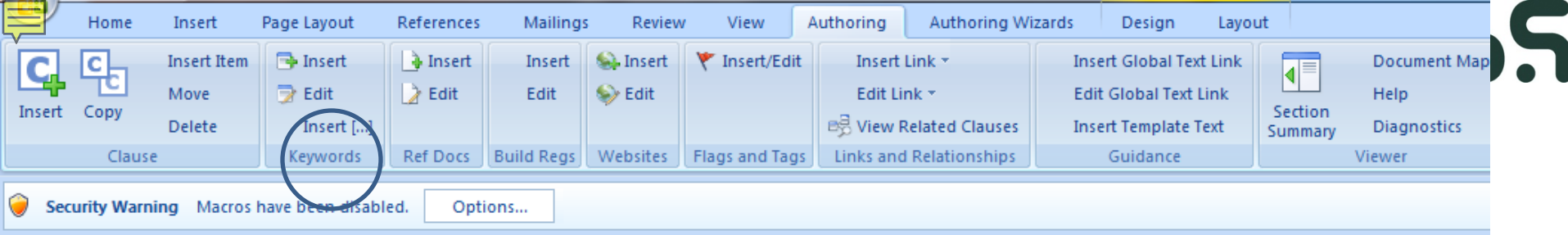
Insert options

☐ Insert Before
☒ Insert After

Number	Title
110	Conservatory system
210	Structural performance
220	Window performance
230	Aesthetic performance
305	Products generally
310	Beaded arch
315	Square head
320	Swept head
325	Aluminium capping over glazing bars, powder coated brown
330	Hardwood beads fixed with brass cups and screws
335	Automatic roof vents with thermostatic control
340	Roof vents with remote manual operation

OK

Cancel



Clause Text

System Outline

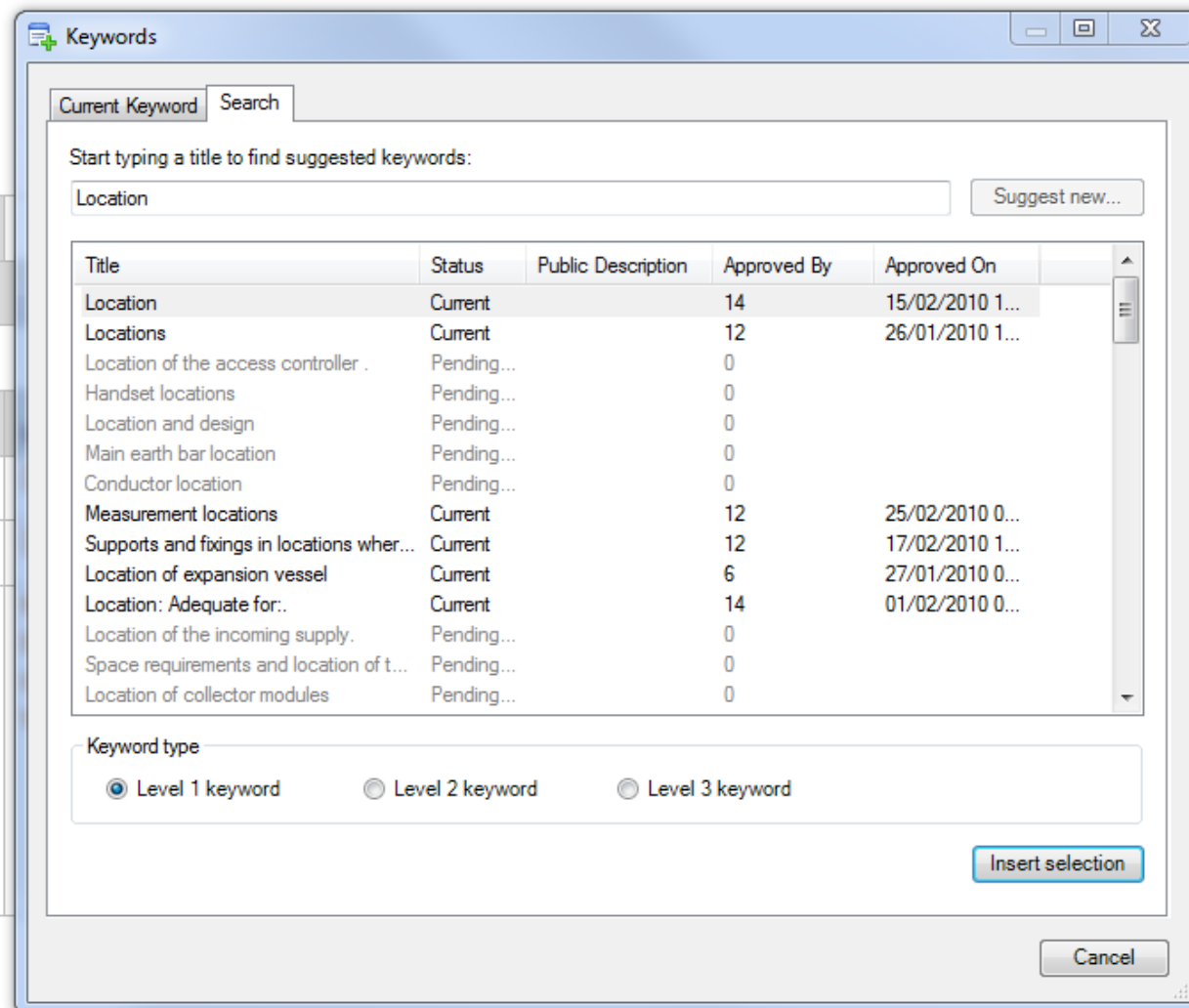
110 Conservatory system

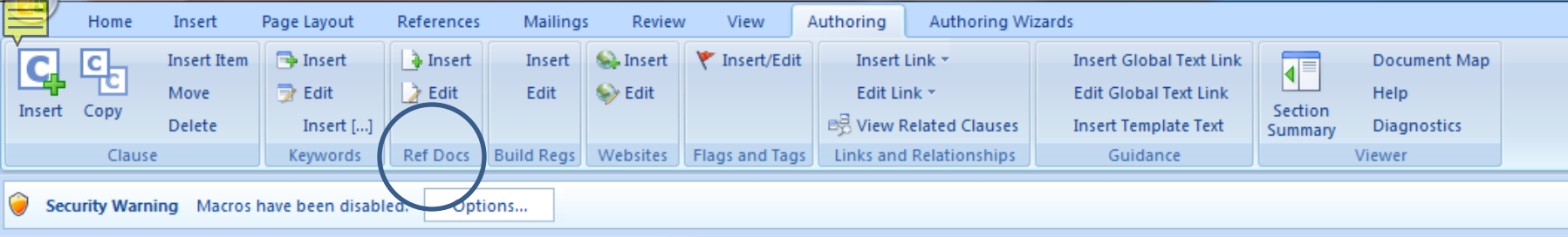
Classification

Guidance

Item

- Location
- System manufacturer
- Style





panels are a popular choice for roofing.

Acetate and PVC clear solid sheets are stronger than flat sheet or thermoformed into a range of profiles.

For additional guidance on types of glazing see [section 4.2](#) considerations for insulating glass units.

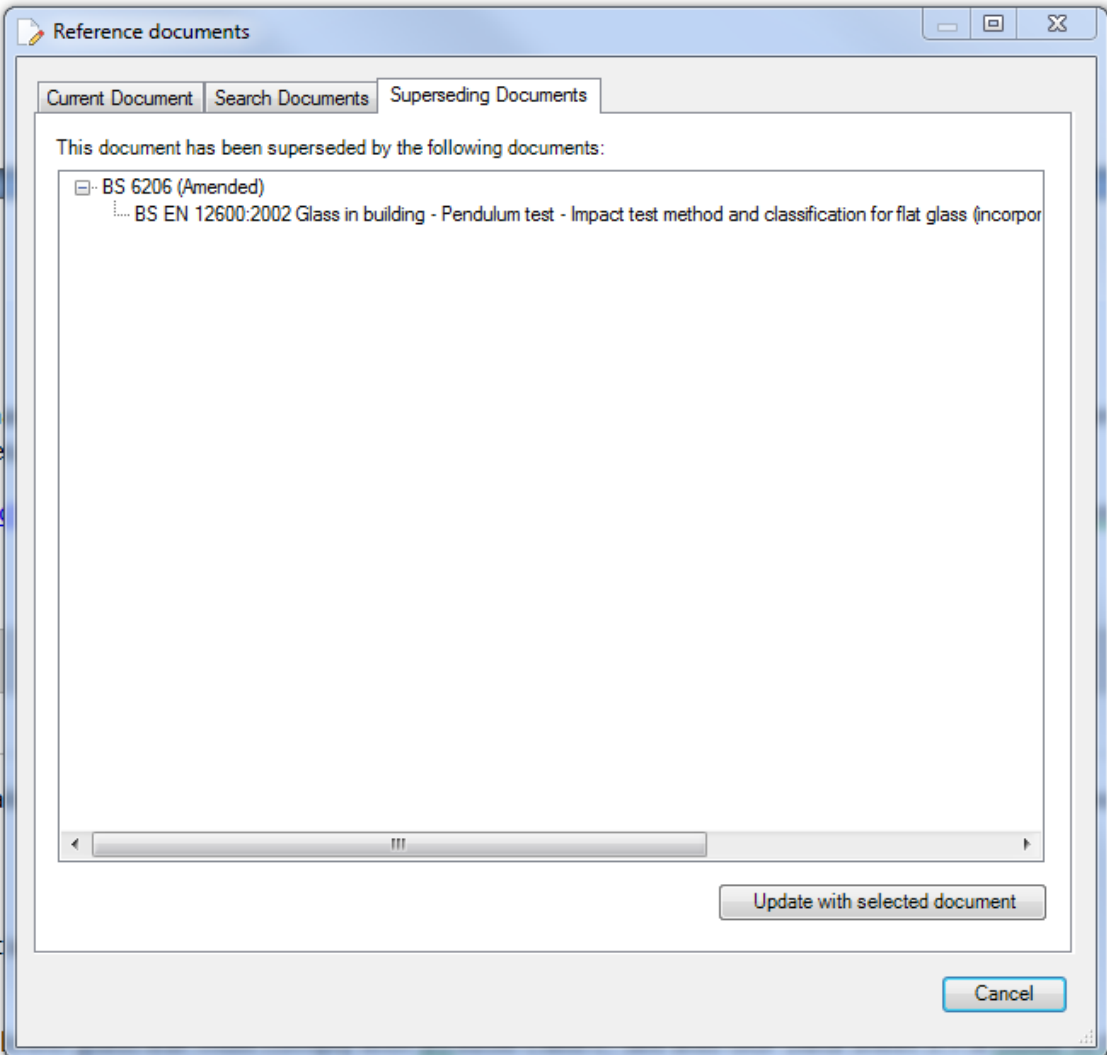
4.2 Overhead glazing

Flags

When tested in accordance with **BS 6206**, materials should be used safely. Suitable materials include:

- Toughened (tempered) glass.
- Laminated glass.
- Polycarbonate and acrylic: Solid flat sheet
- PVC: Solid flat rigid sheet.

If the overhead panes are double glazed then the section plastics glazing sheet in conservatories.



Home Insert Page Layout References Mailings Review View Authoring Authoring Wizards

Insert Copy Move Delete Clause

Insert Edit Insert [...] Keywords

Insert Edit Build Regs Ref Docs Websites

Insert/Edit Insert Link Edit Link View Related Clauses Links and Relationships

Insert Global Text Link Edit Global Text Link Insert Template Text Guidance

Security Warning Macros have been disabled. Options

1.1 England and Wales

Flags

E&W Approved Documents **L1A Conservation of fuel and power - new dwellings and L1B Conservation of fuel and power - existing dwellings** not less than three-quarters of the area of its roof and not less than one half of the area of its external walls made of

Building Regs

Current Building Reg Search

Title: L1A Conservation of fuel and power - new dwellings

URL: http://www.thenbs.com/BuildingRegs/KnowledgeCentre/ShowContents.aspx?section=L1Atopic=L1A_0601TOC=true&url=no

Status: Current

Preview:

nbs Home | About NBS Building Regulations | Contact us | Login/Subscribe

Approved Docs Guides Scotland NB

Part **L1A**

ConservationOfFuelAndPo

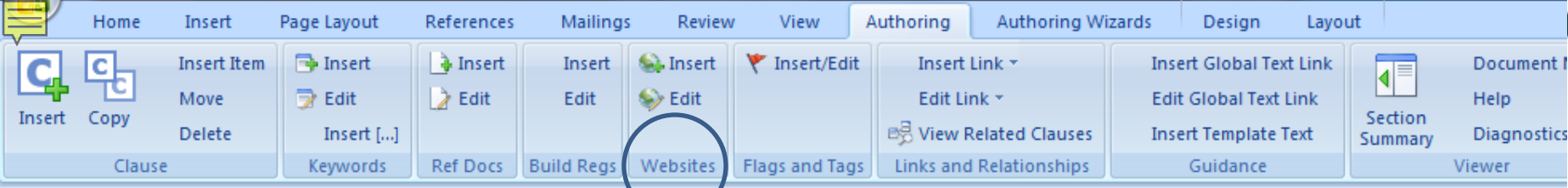
Use of guidance

The Requirements Home > Approved Documents > L1A Conservation of fuel and power - ne

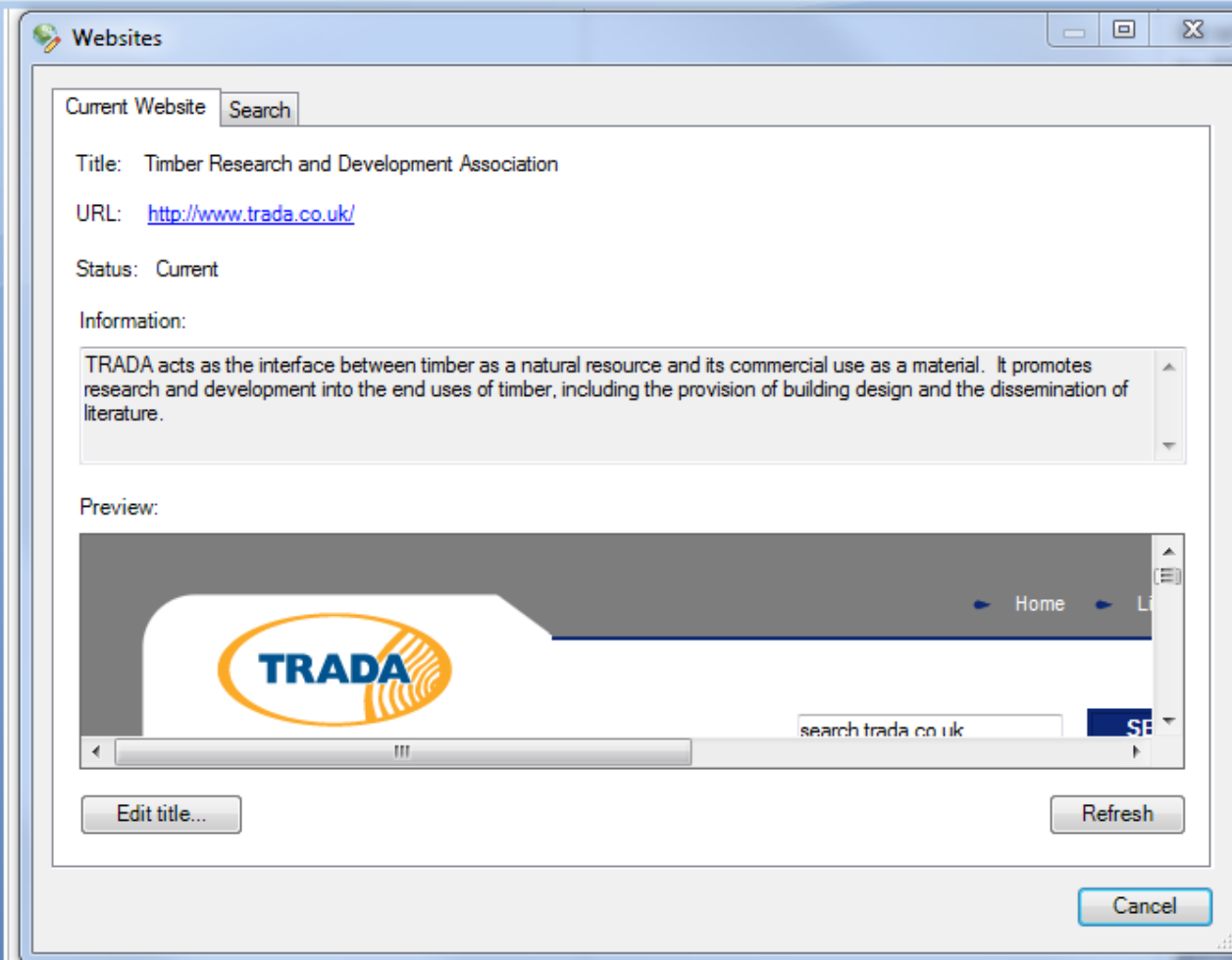
Edit title... Refresh

Cancel

Flags



Security Warning Macros have been disabled. Options...



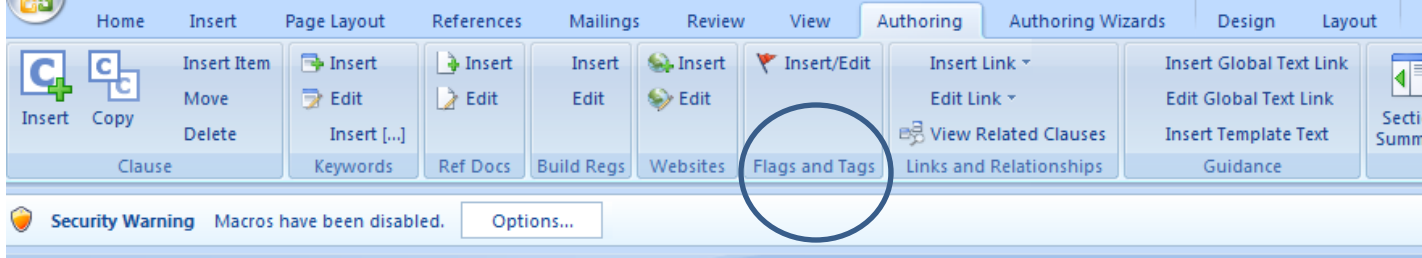
With a backing strip should be used the inner portion of the joint, making the correct joint depth to accommodate the sealant. The sealant should have a minimum depth of 6 mm. Locations of backing strips should be shown on drawings if they are not required for all joints.

For sealants are not recommended for vertical joints between timber beams and the adjacent reveals, because there is a risk that any moisture penetrating behind the seal may be trapped at the back of the frame and absorbed into the timber.

An alternative method, recommended by Timber Research and Development Association, is to replace the sealant with precompressed impregnated tape. The tape expands to fill the joint forming a waterproof but vapour permeable seal. A minimum 5 mm gap is normally required for such tapes. They can be concealed using a cover bead if desired.

Size

Not required



When a conservatory is erected against an existing wall, the outer skin of the wall becomes an internal wall below the conservatory roof line. moisture can gravitate down the wall, causing the internal part of the wall to be

The need for cavity trays depends on the type of wall. The following gives a calculation method for determining the required area of cavity tray.

Building Regulations (E&W) Approved Document Part C covers conservatories, NHBC Standards cover conservatories.

7 Health and safety

Flags

7.1 General

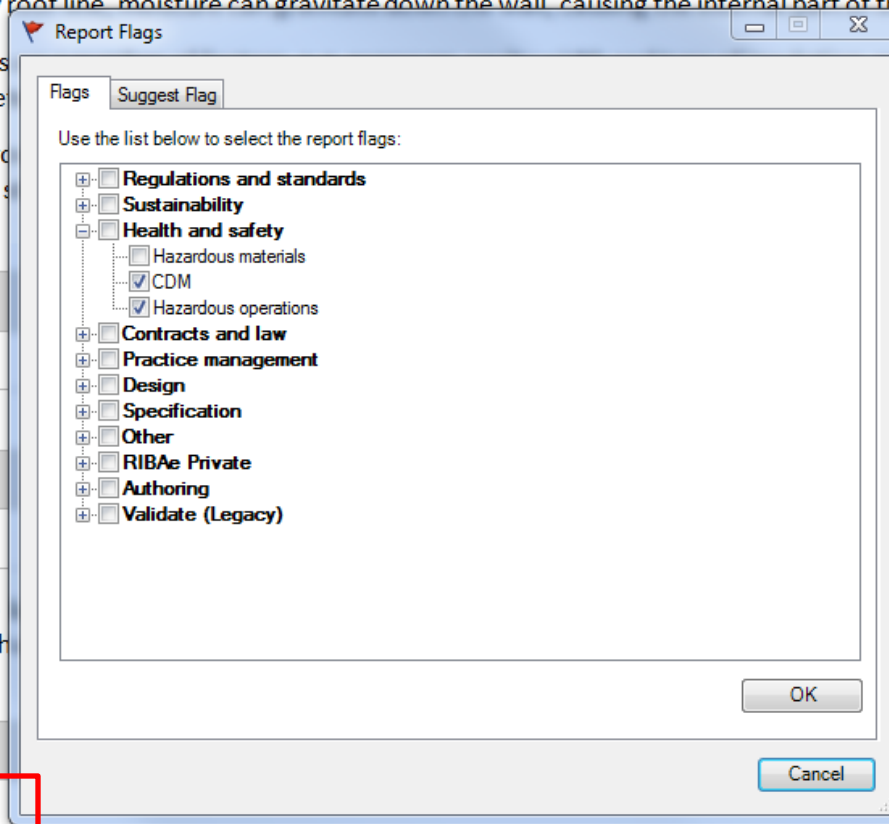
Flags

Health and safety risks should be identified and outlined in the construction phase health and safety plan.

7.2 Materials

Flags

CDM - Hazardous operations



The Construction (Design and Management) Regulations 2007 impose requirements with respect to working on or near fragile (anything that may be supporting or carrying). The HSE guide Managing health and safety (Managing health and safety) regulations 2007. Approved code of practice (ACOP) recommends the avoidance of fragile roofing material cladding used as rooflights can be classified as fragile. A drop test simulating the impact of a falling body is the basis of a test ACR[M]001:2005 Test For non-fragility of profiled sheeted roofing assemblies, which classifies a construction's fragility.

	on dabs and plaster section K10.
• <u>Services</u>	[...]
• <u>Framing system</u>	
– <u>Material</u>	Aluminium as section L1 Wood as section L1 PVC-U as section L1
– <u>Head option</u>	Steel as section L1 Not applicable. <u>Beaded arch.</u> Square head. Swept head.
– <u>Site finish</u>	None. Paint system, as section L1 Stain system, as section L1
• <u>Roof glazing</u>	
– <u>Material</u>	As supplied. Insulating glazing L40. Polycarbonate glazing sheet. PVC glazing sheet.
– <u>Beading</u>	As supplied. Aluminium capping Hardwood beads with brass cups and screws.
• <u>Wall glazing</u>	

Clause/guidance relationships

Current Relationship Link to clause / guidance

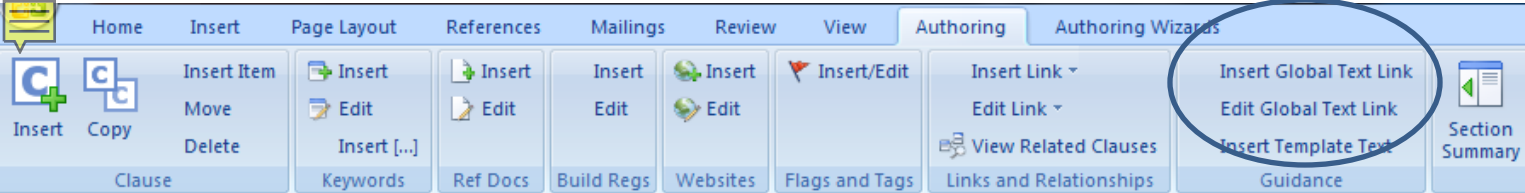
Pick a clause or piece of guidance to create a relationship for:

Current location: Current Change location...

Clauses Guidance

Number	Title
110	Conservatory system
210	Structural performance
220	Window performance
230	Aesthetic performance
305	Products generally
310	Beaded arch
315	Square head
320	Swept head
325	Aluminium capping over glazing bars, powder coated brown
330	Hardwood beads fixed with brass cups and screws
335	Automatic roof vents with thermostatic control
340	Roof vents with remote manual operation
345	Dual turn sashes
350	Fully reversible sashes
355	Side hinged casements

Insert relationship Cancel



Security Warning Macros have been disabled. Options...

- Construction Industry Publications Limited Construction Health and Safety Manual.
- CITB Construction site safety, 2010 edition.

8 Contractual arrangements

Flags

8.1 Contractor's/ Subcontractor's design

Flags

Where responsibility for completion

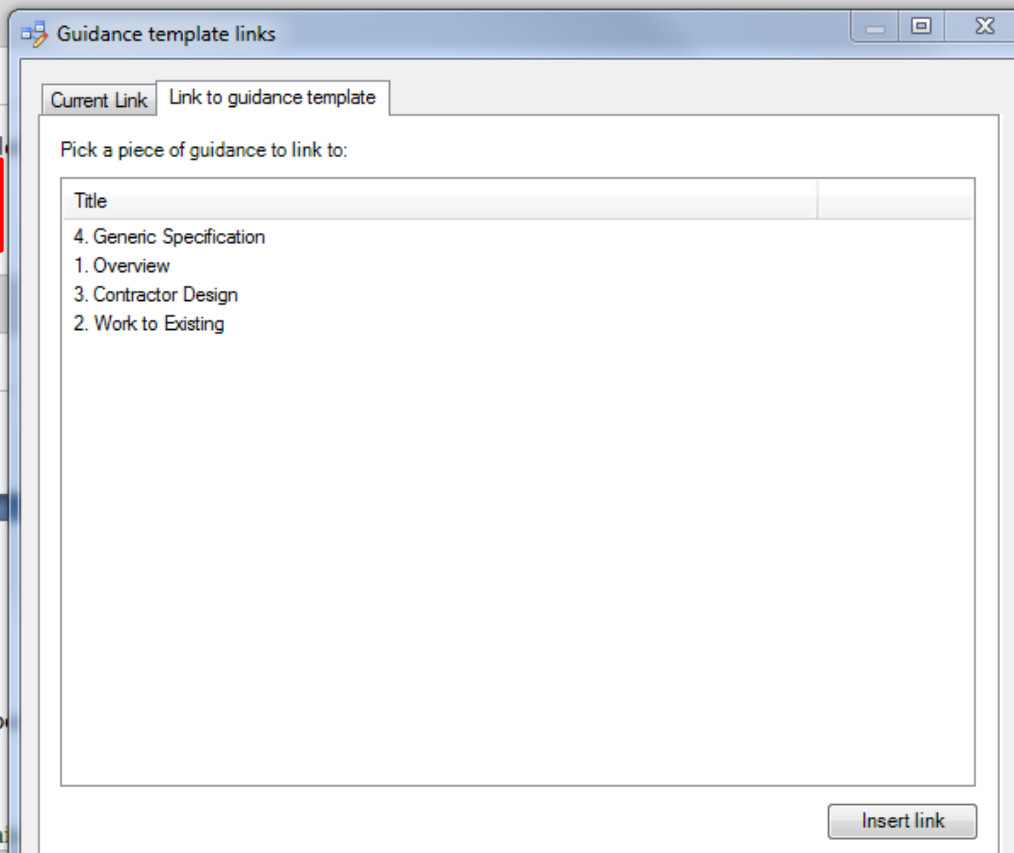
<3. CONTRACTOR DESIGN>

8.2 Subcontracting

Flags

The specifier may choose a sub

8.3 Requirements for submission



Security Warning Macros have been disabled. Options...

Commentary on latest update

385 Frames

Classification

Guidance

Item	Value
• <u>Frame depth</u>	Manufacturer's standard.
• <u>Integral frame finish</u>	Anodized.
– <u>Colour</u>	As Finishes schedule.

Flags

Related Clauses

Commentary on latest update

390 Aluminium alloy framing sections

Classification

Guidance

Section Summary

Section Summary

Last updated: 1 minute ago

Summary

This section contains:

- 92 keywords ([3 require attention](#))
- 64 reference documents ([6 require attention](#))
- 7 building regs
- 1 external website
- 1 guidance link
- 2 report flags
- [18 unknown links require attention](#)

Keywords Requiring Attention (3)

- [Glass, plastics, surround materials, sealers, primers, paints and clear finishes to be used together](#) (Pending editorial approval)
- [Sealant application to prepared joints](#) (Pending editorial approval)
- [Triangular fillets](#) (Pending editorial approval)

Reference Documents Requiring Attention (6)

Amended:

- [BS 6206](#) (Amended)
 - Glass in building - Pendulum test - Impact test method and classification for flat glass (incorporating corrigendum April 2010) (Current) - added 12/04/2010
- [BS 6206](#) (Amended)
 - Glass in building - Pendulum test - Impact test method and classification for flat glass (incorporating corrigendum April 2010) (Current) - added 12/04/2010
- [BS 6206](#) (Amended)
 - Glass in building - Pendulum test - Impact test method and classification for flat glass (incorporating corrigendum April 2010) (Current) - added 12/04/2010
- [BS 6206](#) (Amended)
 - Glass in building - Pendulum test - Impact test method and classification for flat glass (incorporating corrigendum April 2010) (Current) - added 12/04/2010
- [BS 8118-2](#) (Amended)
 - Eurocode 9. Design of aluminium structures. General structural rules (Withdrawn and replaced) - added 27/01/2010
 - Eurocode 9: Design of aluminium structures. General structural rules (Current) - added 12/03/2010

Refresh

Print

Home Insert Page Layout References Mailings Review View Authoring Authoring Wizards

Insert Copy Move Delete Insert Item Edit Insert Edit Insert Link Edit Link View Related Clauses Insert Global Text Link Edit Global Text Link Insert Template Text Section Summary Diagnostics Document Map Help

Clause Keywords Ref Docs Build Regs Websites Flags and Tags Links and Relationships Guidance Viewer

Security Warning Macros have been disabled. Options...

- Document Map
- B12 Conservatory systems
 - General guidance
 - 1 Building regulations – definitions
 - 1.1 England and Wales
 - 1.2 Scotland
 - 1.3 Northern Ireland
 - 1.4 Ireland
 - 1.5 General
 - 2 Planning
 - 3 Frame materials
 - 4 Glazing
 - 4.1 Types of glazing material
 - 4.2 Overhead glazing
 - 4.3 Vertical glazing
 - 5 Ventilation
 - 5.1 Purge ventilation
 - 5.2 Whole building ventilation
 - 5.3 Extract ventilation
 - 6 Cavity trays
 - 7 Health and safety
 - 7.1 General
 - 7.2 Materials
 - 7.3 Design
 - 7.4 Reference documents
 - 8 Contractual arrangements
 - 8.1 Contractor/s/ Subcontractor's design
 - 8.2 Subcontracting
 - 8.3 Requirements for submission of information
 - Clause Text
 - System Outline
 - 110 Conservatory system
 - System Performance
 - 210 Structural performance
 - 220 Window performance
 - 230 Aesthetic performance
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 - 335 Automatic roof vents with thermostatic control
 - 340 Roof vents with remote manual operation
 - 345 Dual turn sashes
 - 350 Fully reversible sashes
 - 355 Side hinged casements
 - 360 Tilt and turn casements
 - 365 Top hinged fanlights
 - 370 Luminaires
 - 375 Overhead fan
 - 380 Overhead fan with integral light
 - 385 Frames**
 - 390 Aluminium alloy framing sections
 - 395 PVC-U framing sections
 - 400 Steel sections
 - 405 Wood framing sections
 - 410 Polycarbonate glazing sheet

Commentary on latest update

385 Frames

Classification		Previous Clause
Guidance		
Item	Value	Guidance
• <u>Frame depth</u>	Manufacturer's standard.	
• <u>Integral frame finish</u>	Anodized.	
– <u>Colour</u>	As Finishes schedule.	

Flags

Related Clauses

Commentary on latest update

390 Aluminium alloy framing sections

Classification		Previous
Guidance		

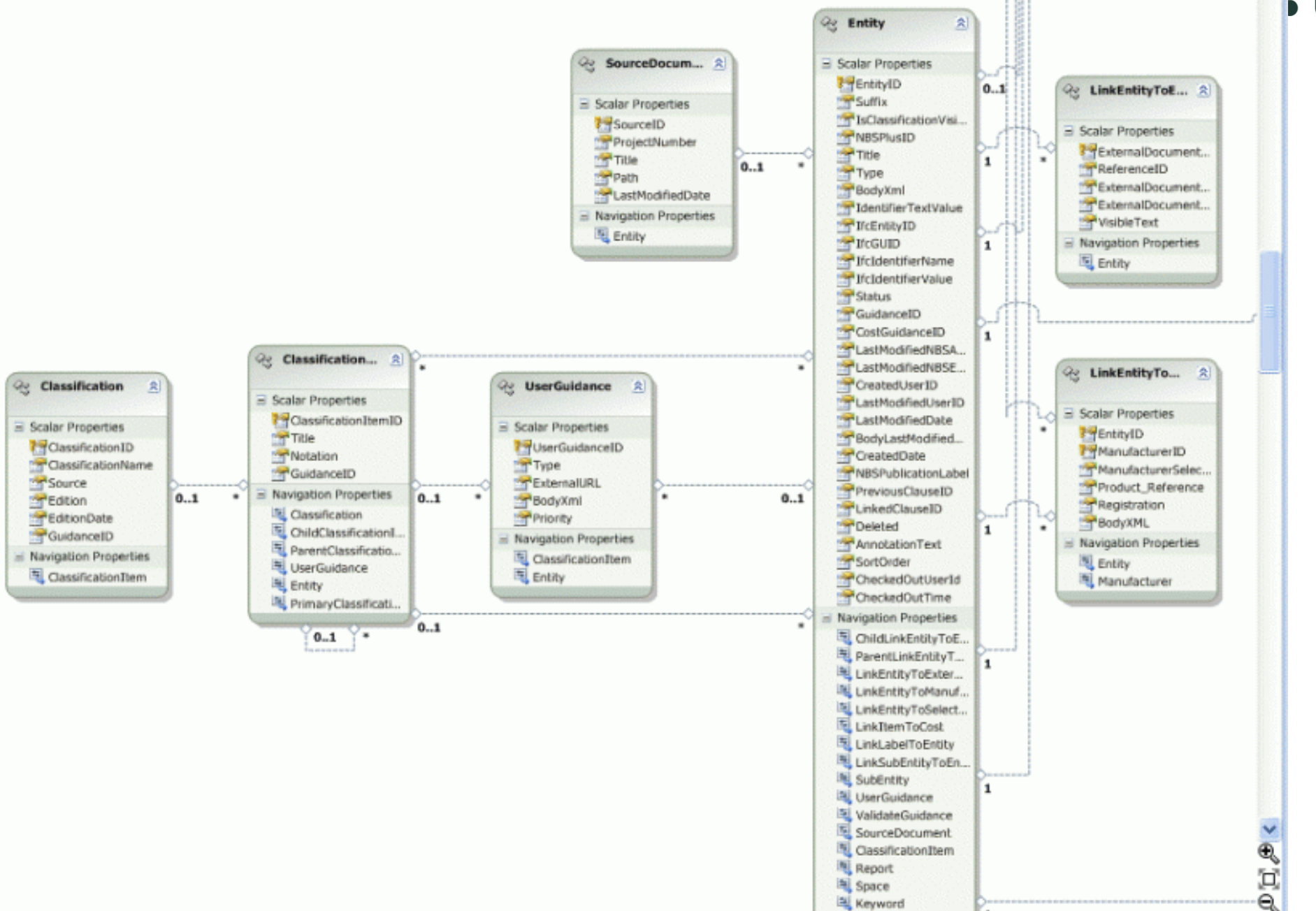
Software schema

Schema

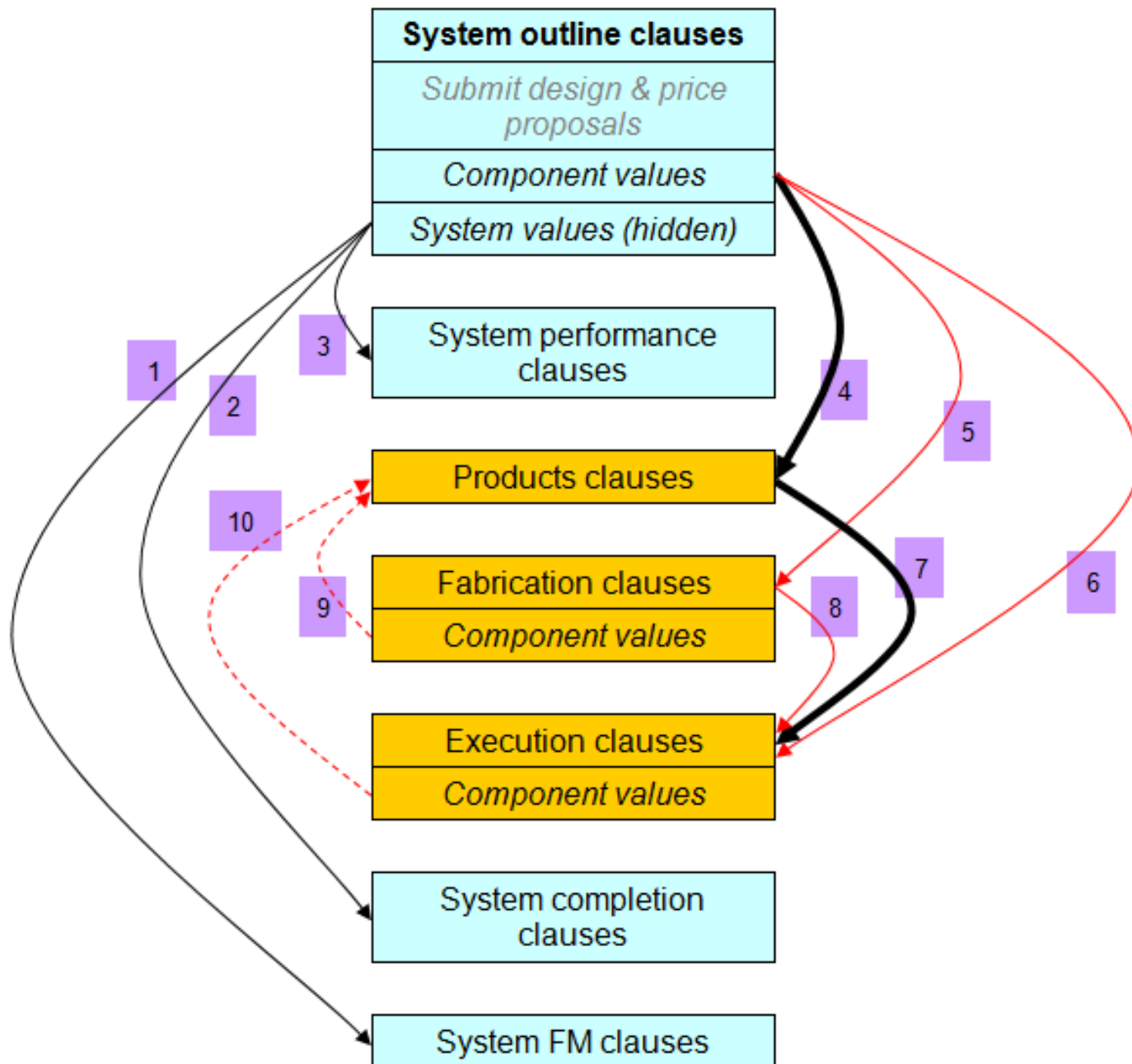
- Clauses in the authoring environment allow (e.g.):
 - Three levels of item.
 - Guidance at item level.
 - Flags at item level.
 - Linkage from clause to clause.
 - Linkage from item value to clause.
 - The rich text content of item values allows mark up (bold, italic, underline), tables, links to external documents (in our own controlled database) and images.

Schema

- The in-house R&D team can take all of this highly structured data from MS Word and put it into our own defined Building Information Model. See next slide.
- Putting this much effort into the data provides us with huge potential for functionality. There's loads of stuff specifiers will be able to do within 'our world'.
- It also makes it possible to export to and import from any structured and documented data model such as an Autodesk Revit database, an IFC model, a gbXML model.



Clause linkage





Editor

System Outline

✓ 110 Portable Music System: [TO ALL DIRECTOR BOX SEATS]▼

- System manufacturer: [Contractor's choice]▼
 - System reference: [Contractor's choice].
- Main unit: 310 MP3 Player; [Add further text]▼
- Power supply: Submit design and [Add further text]▼
- Accessories: 330 Carry Case; 350 Headphones; 211 315 Cleaning C [Plus client require

[Show dependencies](#)☒ Select product

310 MP3 Player

315 Digital Radio

[Add additional product...](#)☐ Submit design and cost proposals

OK

System Performance

✓ 210 Design

- Design: Complete the design of the portable music device.
- Standards: To BS 6259▼.
- Proposals: Submit drawings (showing equipment positions and pipeline routes), technical information, calculations and manufacturers' literature.

Products

✓ 310 MP3 Player

- Manufacturer: [System manufacturer]▼.
- File capacity: [8 GB]▼.
- Colour: [Black]▼.
- Type: [Nano]▼.

✗ 315 Digital Radio

- Manufacturer: []▼.
- Colour: []▼.
- Type: []▼.

- Capacity:

✗ 350 Headphones

- Manufacturer:
- Colour:
- Cable length:
- Type:

✓ 350A Earbud Style Headphones

- Manufacturer: Sony
 - Website: <http://www.sony.com>
 - Product reference: MDR-EX700LP
- Parent: [110 Portable Music Device](#)
- Execution:
- Completion:

[Hide dependencies](#)

Edited by Stephen H 22/09/08

Completion



910 Testing and Commissioning

- Standard: To BS EN 81-1 and -2.
- Test certificates: Submit.
 - Number of copies:



920 Equipment Labelling

- Portable music devices: Clearly and indelibly label, describing their purpose. Identify the off position.



930 Battery Euro-Test

- Standard: To BS EN 71-1 and -2.
- Test certificates: Submit.

Sony Earbud Style Headphones

Relax to your favorite music with these high-precision, vertical style earbud headphones with comfortable silicone fittings.



Featuring 16mm driver units and a thin magnesium housing, these MDR-EX700LP earbud headphones faithfully reproduce your favorite music with stellar results. The multi-layer diaphragm design makes even the most subtle sounds heard, while the seven included silicon earbuds ensure a proper fit.

350A Earbud Style Headphones

- Manufacturer: Sony
- Website: <http://www.sony.com>
- Product reference: MDR-EX700LP

[Add as T50 350A](#)

Product details

- 16mm driver units for reproducing precision sound faithfully (108dB, 4-28KHz)
- Thin magnesium housing and new closed vertical in



Linkage with ArchiCAD

ICIS Demo Spec - NBS Building - [F10 Brick/ block walling*]

File Edit View Format Clause Insert Go Tools Windows Help

F10 BRICK/ BLOCK WALLING

Revision

110 CLAY FACING BRICKWORK:

110A CLAY FACING BRICKWORK: [TO MAIN BUILDING]

- Bricks: To BS EN 771-1.
 - Manufacturer: [Contractor's choice]
 - Product reference: [n/a]
- Recycled content: [10% (minimum) to BS EN ISO 14021]
- Special shapes: [45° external and internal angles as BS 4729 AN.2.5, AN.3.8]
- Mortar: As section Z21.
 - Standard: [To BS EN 998-2]
 - Mix: [1:5 masonry cement:sand]
 - Additional requirements: [Submit samples of sand for approval]
- Bond: [Flemish garden wall]
- Joints: [Recessed]
- Features: [Brick plinth as detailed]

110B CLAY FACING BRICKWORK: [TO OUT HOUSE]

- Bricks: To BS EN 771-1.
 - Manufacturer: [Agrément certified]
 - Product reference: [n/a]
- Recycled content: [10% (minimum) to BS EN ISO 14021]
- Special shapes: [45° external and internal angles as BS 4729 AN.2.5, AN.3.8]
- Mortar: As section Z21.
 - Standard: [To BS EN 998-2]

Clause Reports Validate

	Src	Clause	G	M	U	Title	Link...	Prev
<input checked="" type="checkbox"/>	user	110B				Clay facing brickwork	110	
<input checked="" type="checkbox"/>	nbss	170				Calcium silicate facing brickwork		

Guidance

clause general scope reference documents

F10 110 Clay facing brickwork

See [general guidance 16](#) for help on completing the clauses.

Clause heading: Insert, e.g.

ABOVE DPC

IN CORRIDORS

Bricks: See [general guidance 2](#) for clay and [3](#) for calcium silicate bricks.

– **Manufacturer/ Product reference:** When a basic BS or BS EN specification is being used, insert, e.g. *To be approved.*

See also Preliminaries section A33.

For recycled content of particular brands, see under '[Recycled content in construction](#)' on the WRAP website.

– **Recycled content (clause 110):** See [general guidance 15.5](#).

Insert, e.g. *10% (minimum) to BS EN ISO 14021* or, if virgin materials are available and are required for product performance, insert *None permitted.*

M Manufacturers

U User guidance

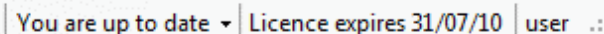
H Help

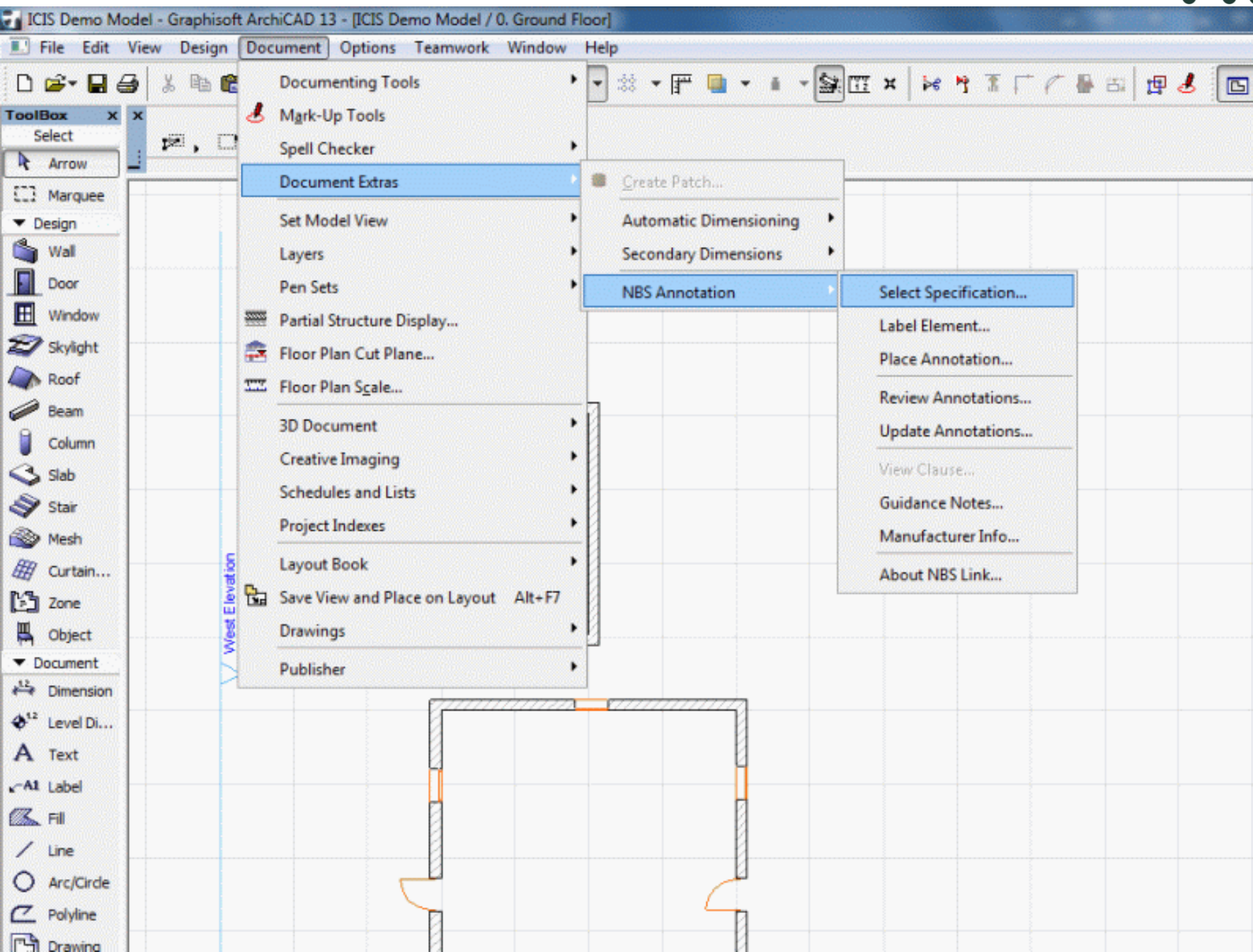
F10 110 CLAY FACING BRICKWORK

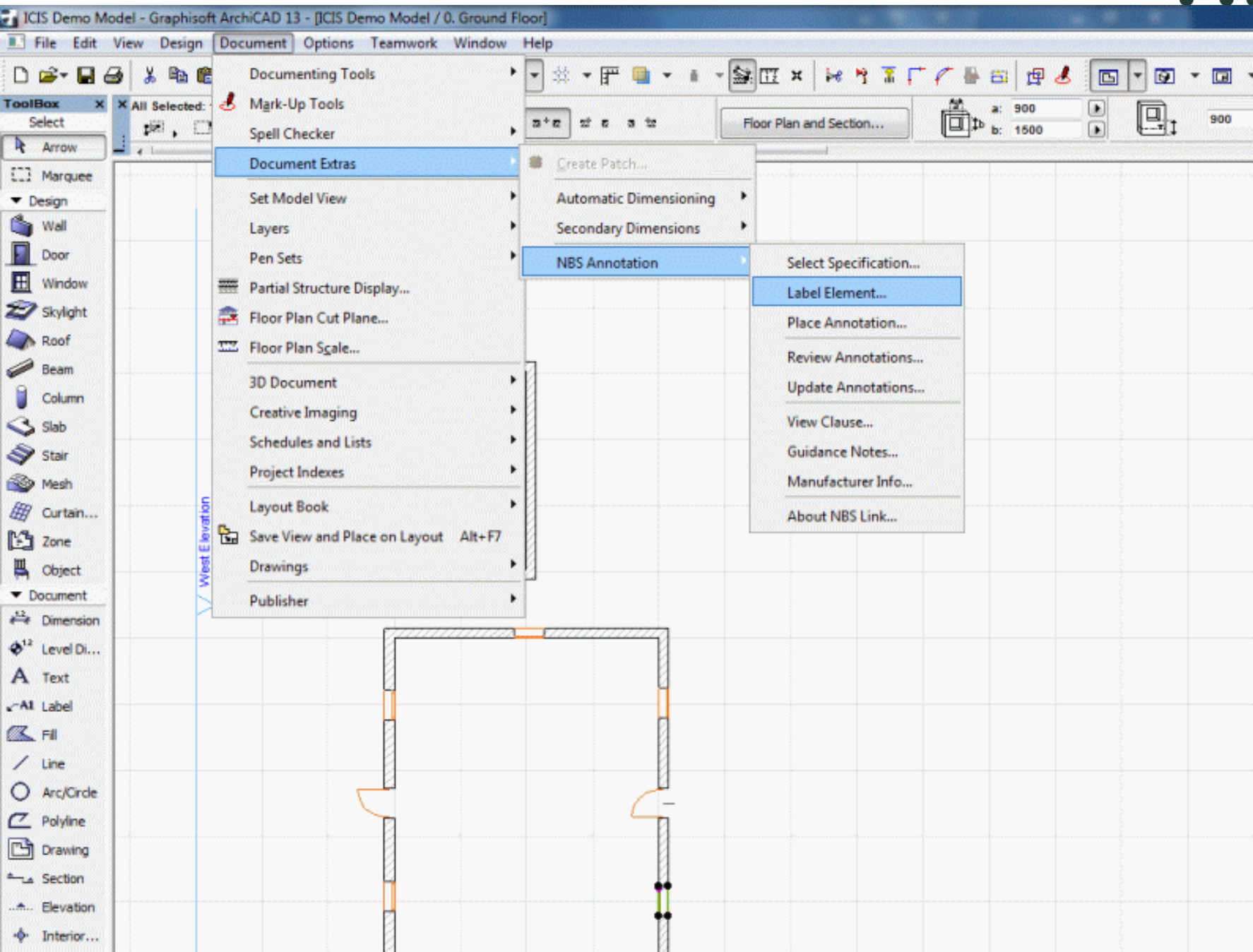
You are up to date

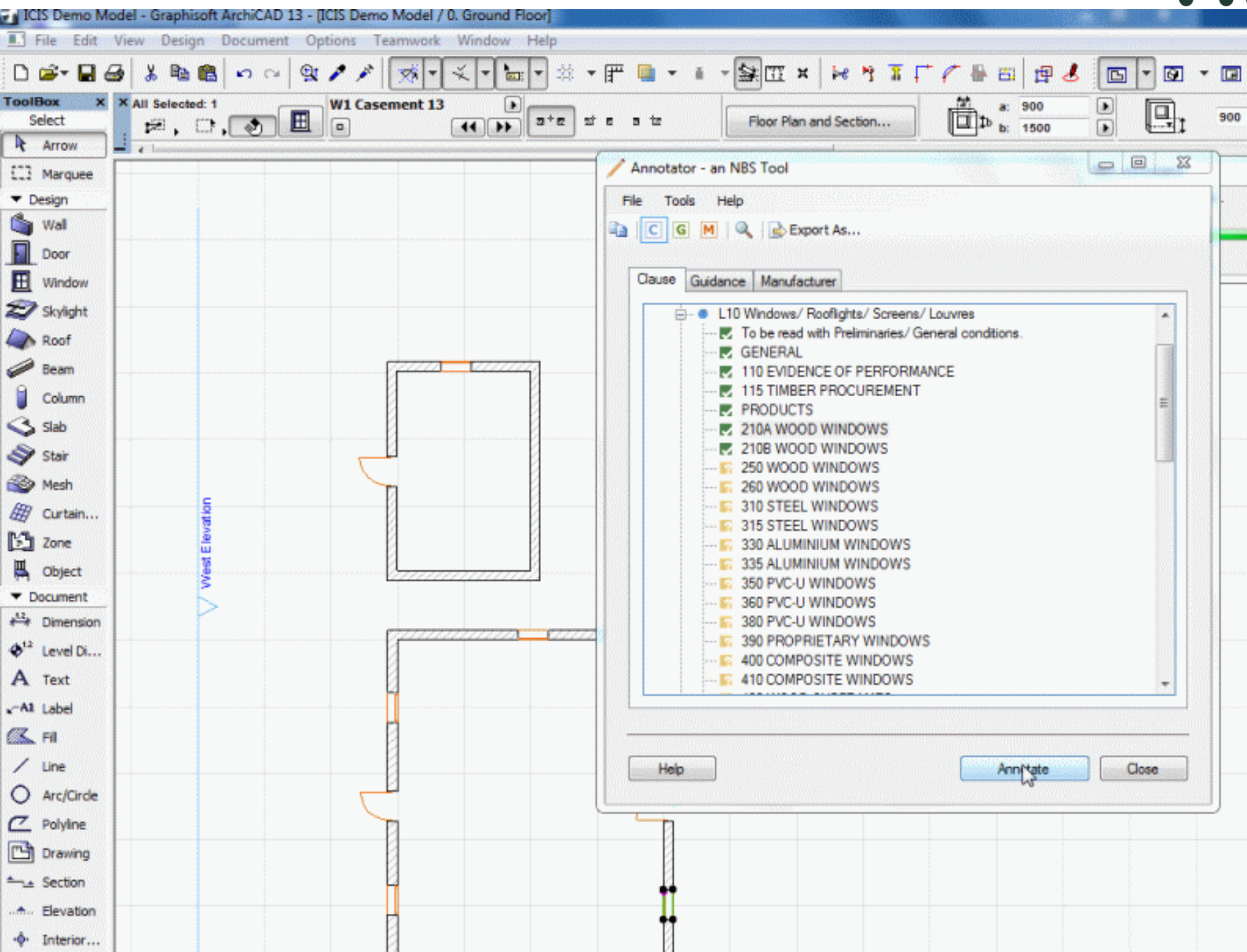
Licence expires 31/07/10

user











ToolBox

Select

Arrow

Marquee

Design

Wall

Door

Window

Skylight

Roof

Beam

Column

Slab

Stair

Mesh

Curtain...

Zone

Object

Document

Dimension

Level Di...

Text

Label

Fill

Line

Arc/Cirde

Polyline

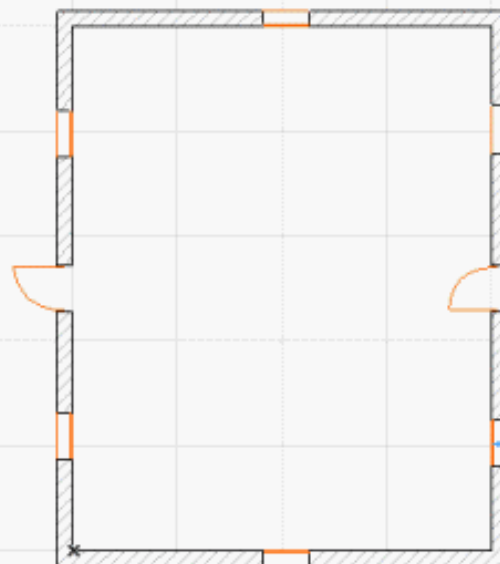
Drawing

Section

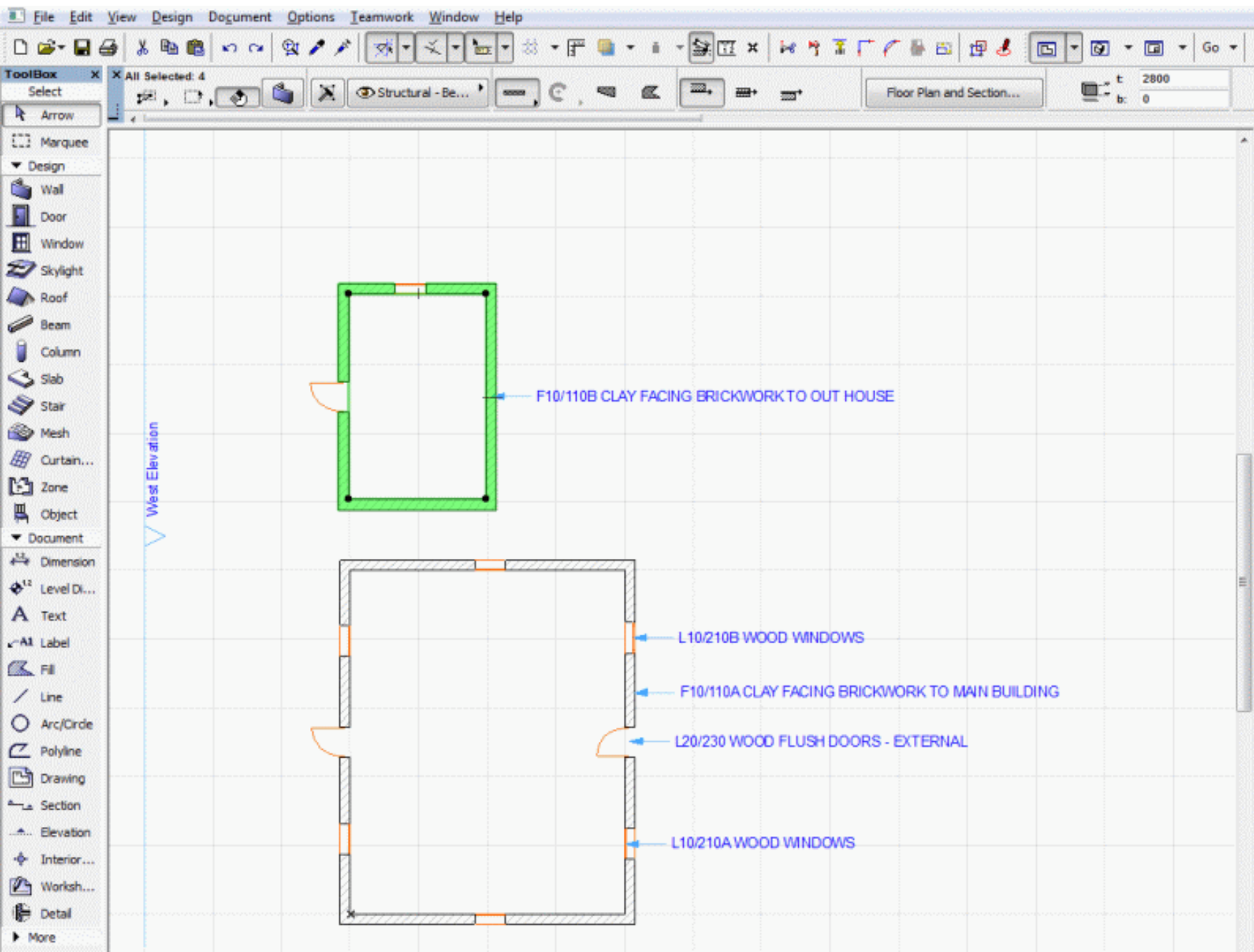
Elevation

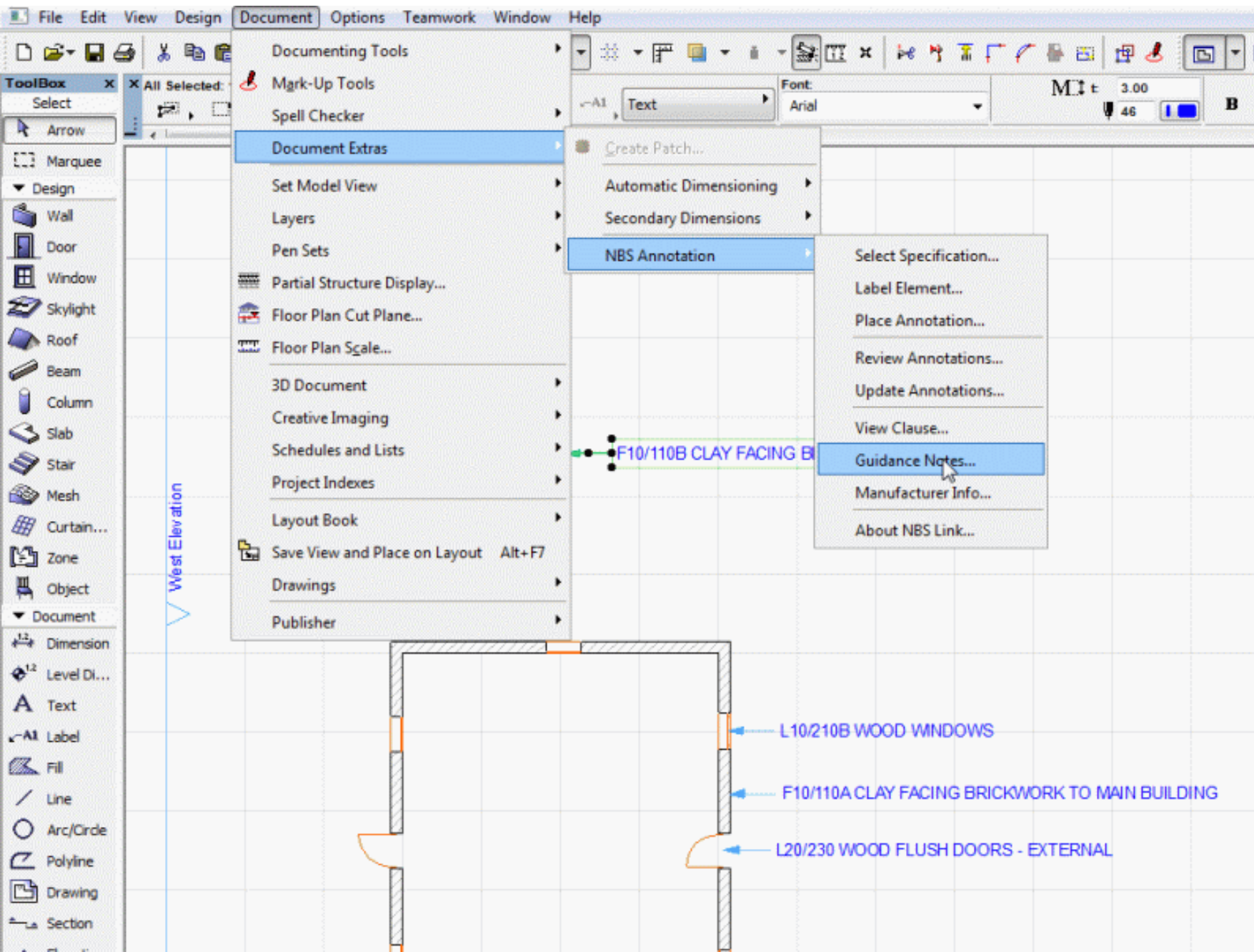
Geometry Methods - Polygonal, Rectangle, Rotated Rectangle

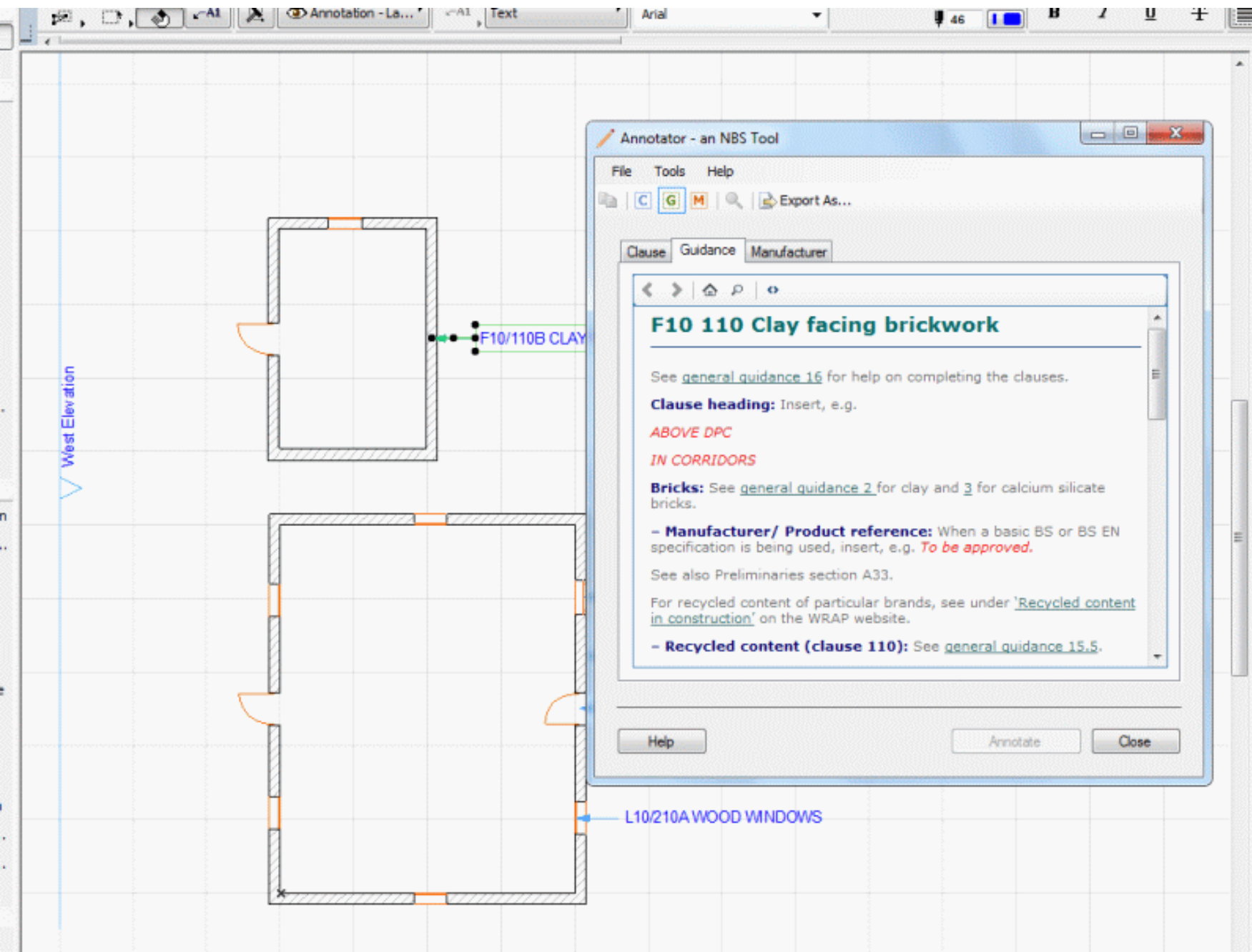
West Elevation

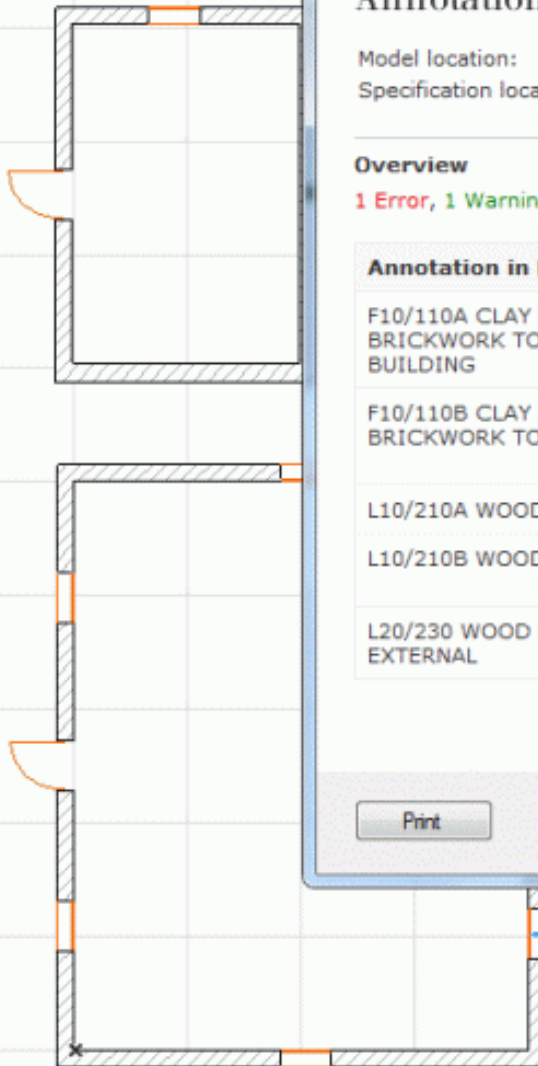


L10/210A WOOD WINDOWS









Annotator - Annotation Report

Annotator nbs

Annotation Report

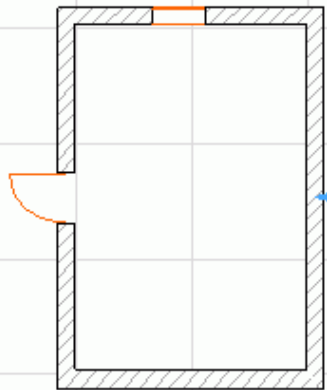
Model location: C:\Specifications\ICIS Demo Model.pln
Specification location: <C:\Specifications\ICIS Demo Spec.spec>

Overview
1 Error, 1 Warning

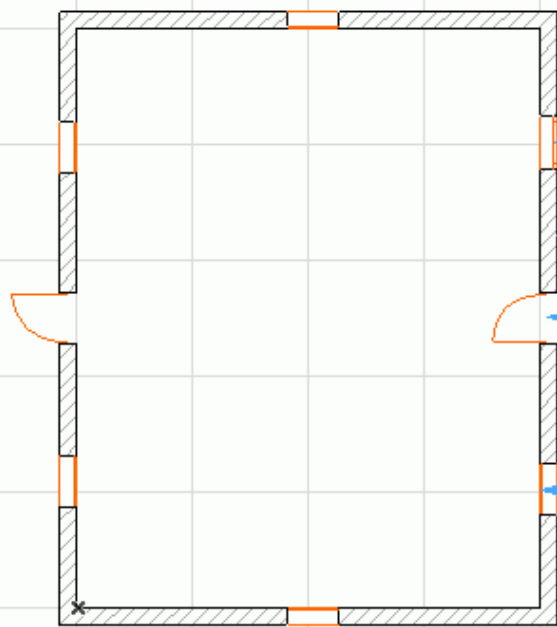
Annotation in Model	Status	Further information
F10/110A CLAY FACING BRICKWORK TO MAIN BUILDING	Valid	
F10/110B CLAY FACING BRICKWORK TO OUT HOUSE	Warning: Title change in specification	New title: F10/110B CLAY FACING BRICKWORK TO OUTHOUSE
L10/210A WOOD WINDOWS	Valid	
L10/210B WOOD WINDOWS	Error: Deleted from specification	
L20/230 WOOD FLUSH DOORS - EXTERNAL	Valid	

Print Close

L10/210A WOOD WINDOWS



F10/110B CLAY FACING BRICKWORK TO OUTHOUSE



L10/210A WOOD WINDOWS

F10/110A CLAY FACING BRICKWORK TO MAIN BUILDING

L20/230 WOOD FLUSH DOORS - EXTERNAL

L10/210A WOOD WINDOWS



Sales and marketing



Proposition

- 4 levels of service proposed:
 - One: Pay-per-spec – online – (small) architects only
 - Two: Subscription – simple – architects only
 - Three: Subscription – full + pay-per-section – core service
 - Four: Bespoke service – negotiated bespoke, and standard product and service, add-ons – large documentation offices



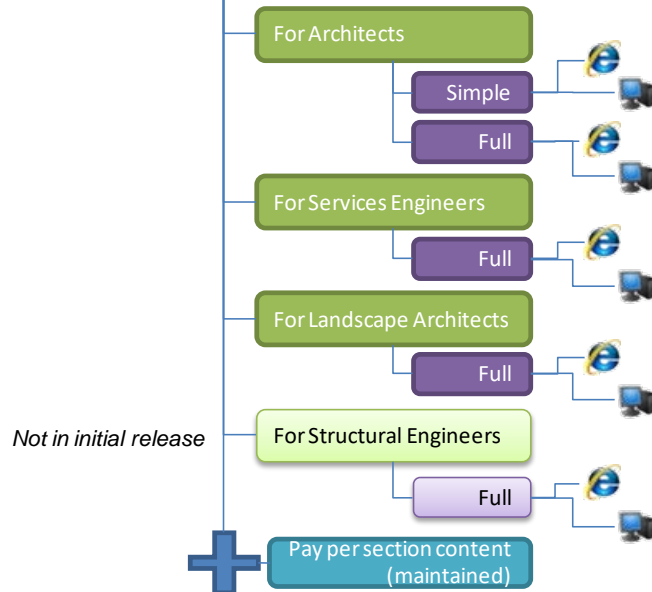
Self Serve Product (entry tier)



Self-serve, small project product

Payment: *Pay per spec*
Delivered: *Online*
Content: *Online*
Libraries: *Selected from B-Z90s and contract prelims*
Customer Data: *Online*
Functionality: *Simple*
Customer Service: *Online*

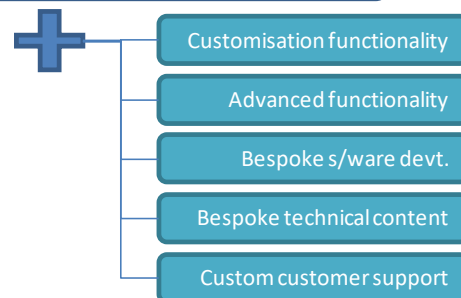
Core Product (middle tier)



Out-of-the-box core product

Payment: *Annual Sub, no. of concurrent users*
Delivered: *Options: Local install or online*
Content: *Online*
Content: *Selected for the discipline*
Customer Data: *Local*
Functionality: *Core*
Customer Service: *Core*

Advanced add-ons to Core (top tier)



Consultative sell add-ons to Core

Payment: *Add-on to Core Subscription. Life and licensing of add-on will match Core subscription*
Delivered: *Options: Local install or online (?)*
Content: *Online*
Content: *Custom*
Customer Data: *Local*
Functionality: *Niche / Advanced*
Customer Service: *Bespoke*

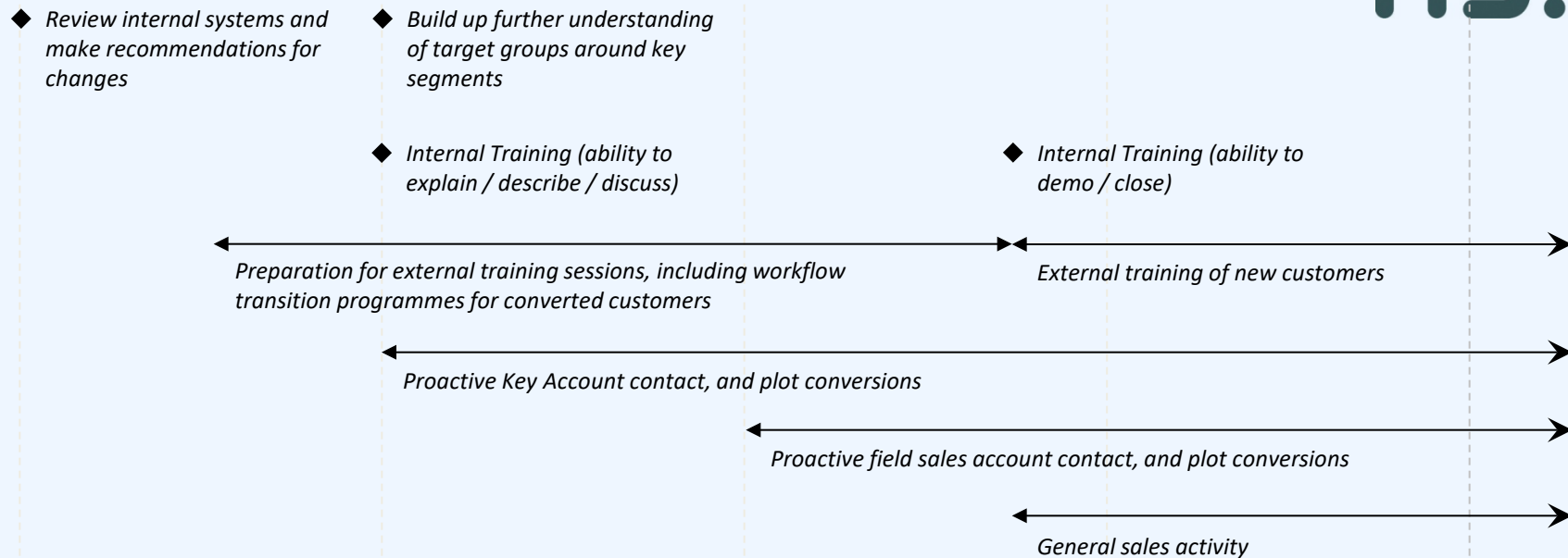


Transition

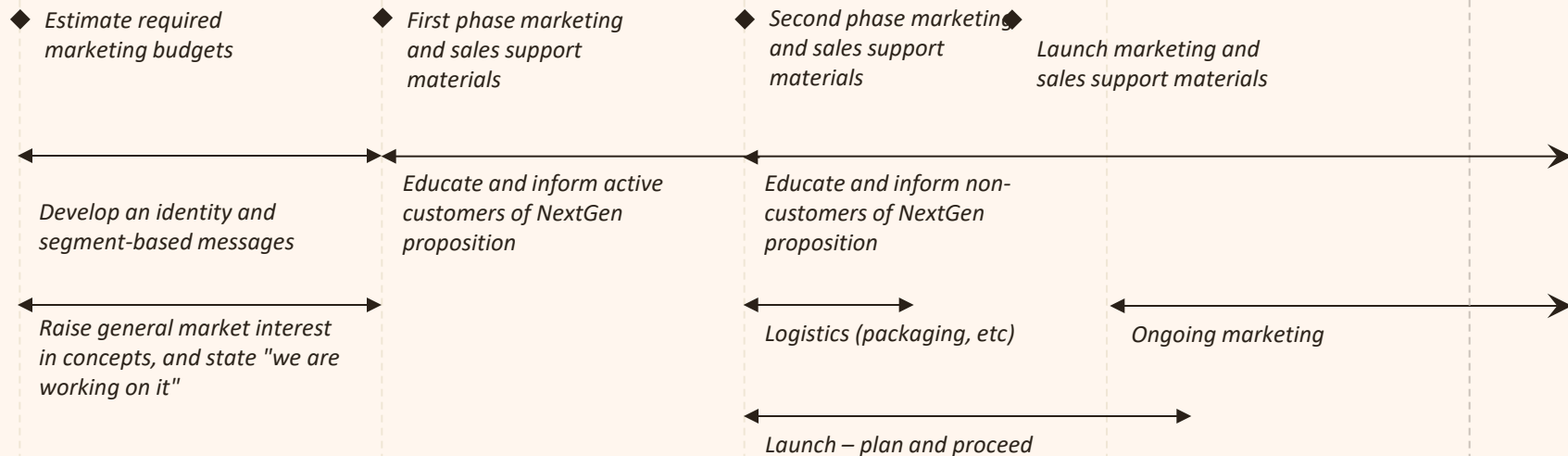
- NBS ES: Proposal is that transition is a ‘simple’ software update
- NBS Architecture: Currently we will let the market decide when to drop current NBS Building/ Landscape – could co-exist for 5 years or more!



converting the market



preparing the market



-20 mths

-12 mths

-6 mths

Launch

+6 mths



Time line

- Next Gen NBS Engineering Services now due out late 2011
- Next Gen NBS Architecture now due out mid-2012 – was early 2013
- Board *et al* want it all out asap – to best serve industry rising out of recession and looking for efficiencies