

Using BIM in Fire Engineering

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Founder/co-owner Briab



Briab
The right side of risk







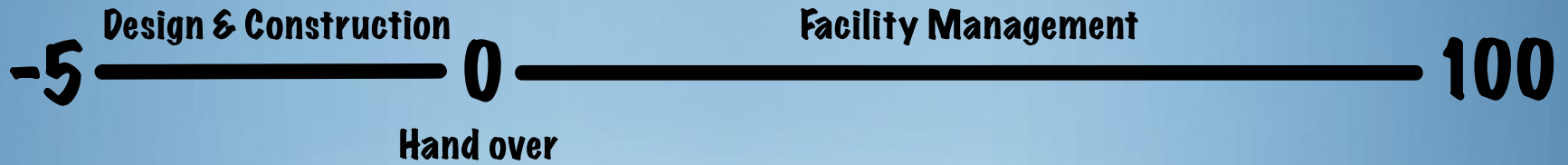
I want information!!



We can't handle the information!



What we wish:



Reality:



Information Management







Let's join the 21st century

- Integral part of the workflow
- Accountability/traceability
- Fully future integrated
- Quality = Sustainability

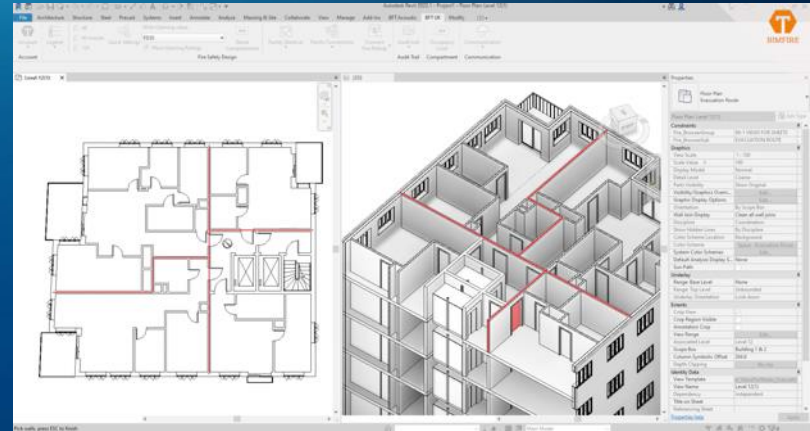


How to join the 21st century

- Get basic
- Information focus
- Keep it simple



Information makes the model



Wall Compartmentation



Autodesk Revit 2022.1 - Project1 - Floor Plan: Level 12(1)

File Architecture Structure Steel Precast Systems Insert Annotate Analyze Massing & Site Collaborate View Manage Add-Ins BFT Acoustic BFT UK Modify

Account Legend 60 60 minute 120 Write Opening value: FD30 Place Opening Ratings Fire Safety Design Dense Compartments Family Shortcut Family Connections Connect Fire Ratings Audit trail Occupancy Load Communication Audit Trail Compartment Communication

Level 12(1) x (BD)

Properties

Floor Plan Evacuation Route

Floor Plan: Level 12(1) Edit Type

Constraints

Fire_BrowseGroup	99-1 VIEWS FOR SHEETS
Fire_BrowseSub	EVACUATION ROUTE

Graphics

View Scale	1:100
Scale Value	1:100
Display Model	Normal
Detail Level	Coarse
Parts Visibility	Show Original

Visibility/Graphics Over... Edit...

Graphic Display Options Edit...

Orientation	By Scope Box
Wall Join Display	Clean all wall joins
Discipline	Coordination
Show Hidden Lines	By Discipline
Color Scheme Location	Background
Color Scheme	Space - Evacuation Route

System Color Schemes Edit...

Default Analysis Display S... None

Sun Path

Underlay

Range Base Level	None
Range Top Level	Unbounded
Underlay Orientation	Look down

Extents

Crop View	<input checked="" type="checkbox"/>
Crop Region Visible	<input type="checkbox"/>
Annotation Crop	<input type="checkbox"/>
View Range	Edit...
Associated Level	Level 12
Scope Box	Building 1 & 2
Column Symbolic Offset	304.8
Depth Clipping	No clip

Identity Data

View Template	Fire_ViewsForSheets_Evacua
View Name	Level 12(1)
Dependency	Independent
Title on Sheet	
Referencing Sheet	

Properties help Apply

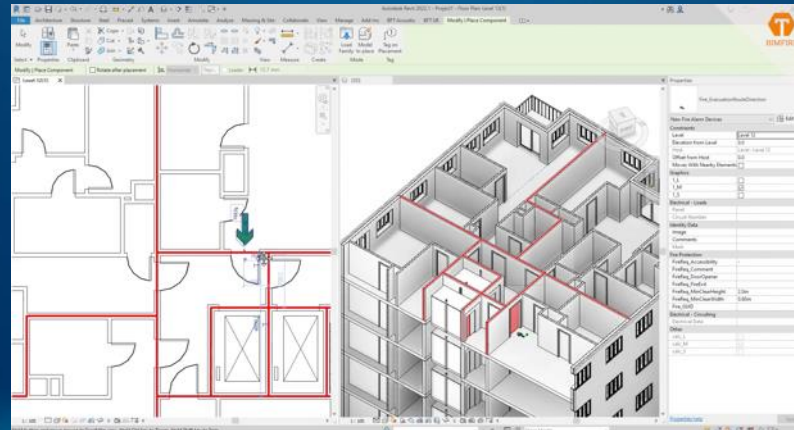
1:100 1:100

Click to select, TAB for alternates, CTRL adds, SHFT unselects.

Main Model



Evacuation Strategies



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Level 12(1) x (3D)

Properties

Floor Plan Evacuation Route

Floor Plan: Level 12(1) Edit Type

Constraints

Fire_BrowserGroup	99-1 VIEWS FOR SHEETS
Fire_BrowserSub	EVACUATION ROUTE

Graphics

View Scale	1:100
Scale Value	1:100
Display Model	Normal
Detail Level	Coarse
Parts Visibility	Show Original

Visibility/Graphics Over... Edit...

Graphic Display Options Edit...

Orientation	By Scope Box
Wall Join Display	Clean all wall joins
Discipline	Coordination
Show Hidden Lines	By Discipline
Color Scheme Location	Background
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System Color Schemes Edit...

Default Analysis Display S... None

Sun Path

Underlay

Range Base Level	None
Range Top Level	Unbounded
Underlay Orientation	Look down

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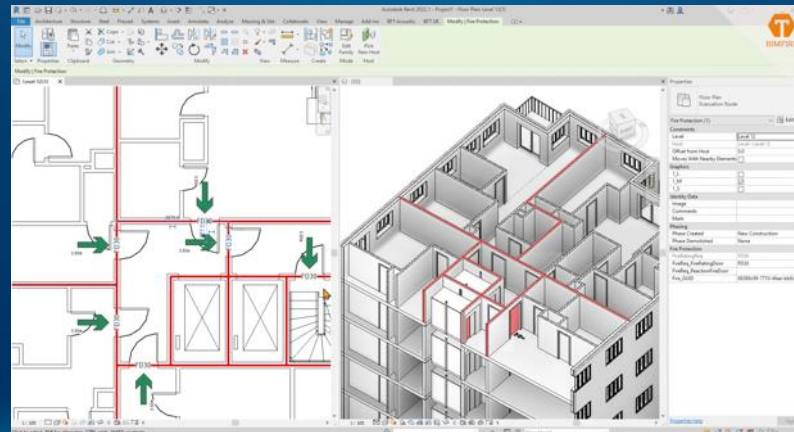
1:100 1:100

Shortcut: (F) 1 Family Shortcut:Fire_FireResistanceDoorCircle-FD30 (BFT UK)-Fire Safety Design

Main Model



Opening Requirements





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Level 12(1) (8D)

Properties

Floor Plan
Evacuation Route

Floor Plan: Level 12(1) Edit Type

Constraints

Fire_BrowserGroup	99-1 VIEWS FOR SHEETS
Fire_BrowserSub	EVACUATION ROUTE

Graphics

View Scale	1:100
Scale Value -1:	100
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Graphic Display Options Edit...

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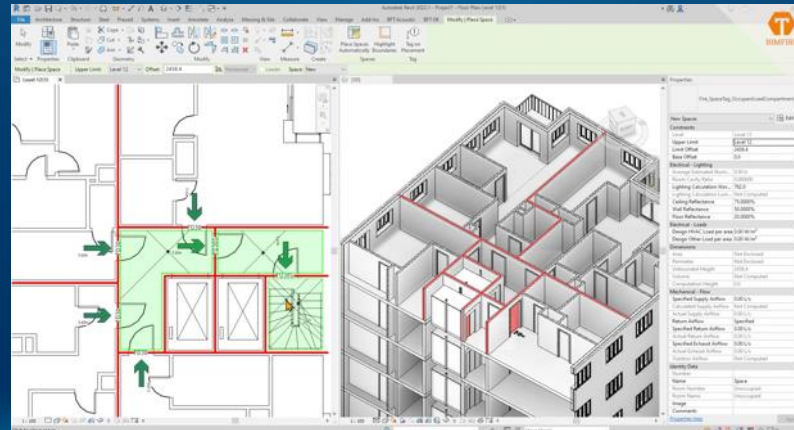
1:100 1:100

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Main Model



Assign Exits Routes



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Level 12(1) x (BD)

Properties

Floor Plan Evacuation Route

Floor Plan: Level 12(1) Edit Type

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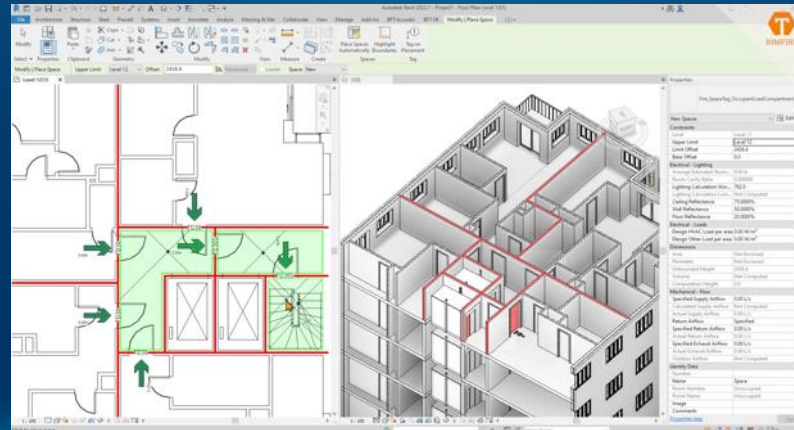
Properties help Apply

1:100 1:100 Main Model

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Create Entire Buildings



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File Architecture Structure Steel Precast Systems Insert Annotate Analyze Massing & Site Collaborate View Manage Add-Ins BFT Acoustic BFT UK Modify

Modify Boundary Conditions Loads Load Cases Load Combinations Supports Analytical Model Analytical Model Tools Consistency Spaces & Zones Space Separator Space Tag Naming Panel Schedules Schedule/ Duct Pressure Loss Report Pipe Pressure Loss Report Check Duct Systems Check Pipe Systems Check Circuits Disconnects Show Duct Legend Pipe Legend Color Fill Legend Energy Optimization Path of Travel Reveal Multiple One Way People Spatial Route Analysis

Level 12(1) x (BD)

Evacuation Route

EXIT CORRIDOR
EXIT STAIRS

Properties

Floor Plan
Evacuation Route

Floor Plan: Level 12(1) Edit Type

Constraints

Fire_BrowserGroup	99-1 VIEWS FOR SHEETS
Fire_BrowserSub	EVACUATION ROUTE

Graphics

View Scale	1:100
Scale Value '1'	100
Display Model	Normal
Detail Level	Coarse
Parts Visibility	Show Original
Visibility/Graphics Over...	Edit...
Graphic Display Options	Edit...
Orientation	By Scope Box
Wall Join Display	Clean all wall joins
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System Color Schemes Edit...

Default Analysis Display S... None

Sun Path

Sun Path

Underlay

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Properties help Apply

1:100 1:100

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Main Model



What's holding us back?

- Cost?
- Competence?
- Customers?
- Liability?



We are holding ourselves back!



These are not holding back:



Sweden



Great Britain



Great Britain



Great Britain



Norway



Germany



Three key take-aways

1. Focus on information
2. Start now!
3. Small steps, and often
4. Fun and appreciated





Time to Lead,
Not Follow



